MENNEKES
MY POWER CONNECTION

# CATALOGUE 2018

INT

INDUSTRIAL PLUGS AND SOCKETS

„Competence, passion and quality.
That's what the MENNEKES brand stands for."

Michael Büenfeld, Managing Director Marketing & Sales

„In international markets, local service, availability, competence, excellent products and the desire to provide tailored solutions are MENNEKES's factors for success. This is what we provide to over 80 countries worldwide."

Frank Weber, Director International Sales

„Working with a highly motivated team of professionals and solution focussed Managers, MENNEKES has a proven track record of providing outstanding levels of service to a broad range of customers."

Frederico Ferreira, Sales Director Intenational Subsidiaries

„In international markets we gain the confidence of customers with close proximity, excellent service and flexibility coupled with solution based advise."

Andrea Garte, Director International Sales

„Internationalisation is vital for MENNEKES. We offer worldwide solutions to our partners and customers on a day to day basis. Gaining new customers is just as important as retaining our existing ones."

Miriam Richard, Area Sales Manager Latin America & Iberian Peninsula

„As a reliable partner to our customers, we promote openness, honesty and trust based on mutual respect. Our aim is that customers are more than satisfied with our brand. Innovative products and individual service are the basis of long term partnerships."

Arda Tünay, Area Sales Manager Middle East & Africa

„High quality combined with global presence and local competence are the pillars and foundation of the MENNEKES brand."

Jörg Schneider, Sales Manager Asia-Pacific

MENNEKES
MY POWER CONNECTION

We like to communicate with you. Do you have special requests and requirements? Talk to us, we like to give you advice and will project individual solutions for you.

# Content










„I am proud to be able to continue this tradition in the third generation.“

Christopher Mennekes, General Management Director

# MENNEKES –
# The company.

When my grandfather, Aloys Mennekes, received his Master Electrician's certificate in 1935, he surely was not aware of what would develop from his commitment to electrical engineering. At that time, he knew only one thing: he wanted to put his ideas into practice and manufacture his own products.

As you leaf through the pages of this catalogue, you get a feeling of how strongly this initial entrepreneurial desire continues to design us today. The variety of the products on display clearly shows that we still have great pleasure in converting our ideas into new products. But marketable ideas are rarely generated behind closed doors. As specialists, we therefore develop individual solutions together with our customers. Hence our product portfolio today consists of more than 10,000 customised products, far more than we can show in this catalogue.

Since it was founded over 80 years ago, MENNEKES has been a wholly owned family business, responsibly managed by members of the owner family throughout. Responsibility for the Company also means responsibility for the people who are at the heart of our thinking and actions at MENNEKES. Through their awareness of the values of diligence, reliability and loyalty, they constitute an important cornerstone of the Company.

I am proud to be able to continue this tradition in the third generation.

These are fascinating times for the preservation of tradition because, due to the digital revolution, many things are going to change in the next decade. In this world flooded with information, MENNEKES wants to be a point of reference on which our customers can rely for quality, safety and functionality. We say with confidence: Our brand is a promise.

Thank you for believing this promise and thus supporting our business philosophy.

Christopher Mennekes
General Management Director

Aloys Mennekes (center) with apprentice and journeymen on their way to work

Plugs and sockets for toughest conditions

Family Mennekes (from left): Petra and Walter, Daniela and Christopher and Michael and Steffen

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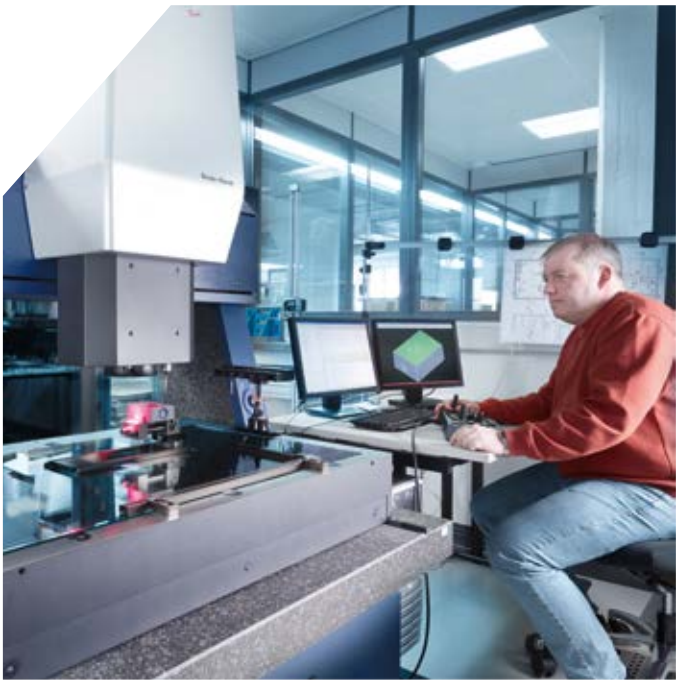
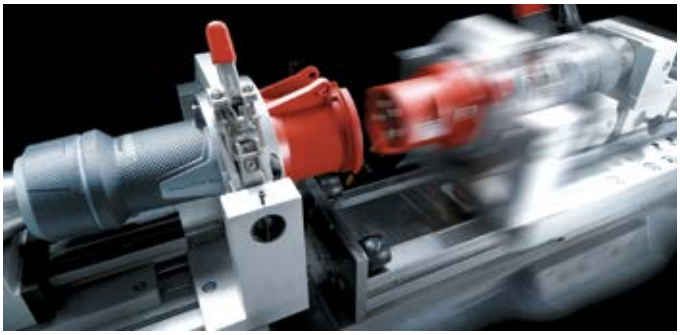
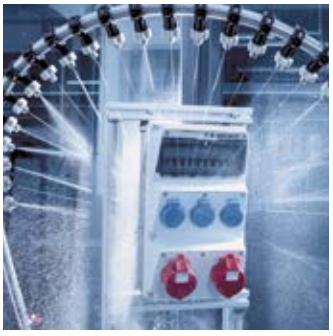
# Quality – tested under extrem conditions.

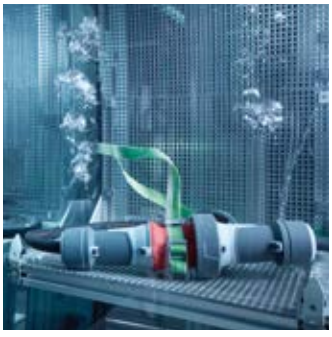


When a MENNEKES product leaves our factory, it has already survived the harshest testing. In our test lab it is exposed to cold, heat, dust and water over and over again. Only the products that withstand these tests are worthy of the name MENNEKES. Our products are of course certified to national and international standards by recognised institutions. Like the MENNEKES company itself:
Our international quality management system is certified to DIN EN ISO 9001.

Independent test organizations ertify that our products offer the highest levels of safety, quality and troublefree use.





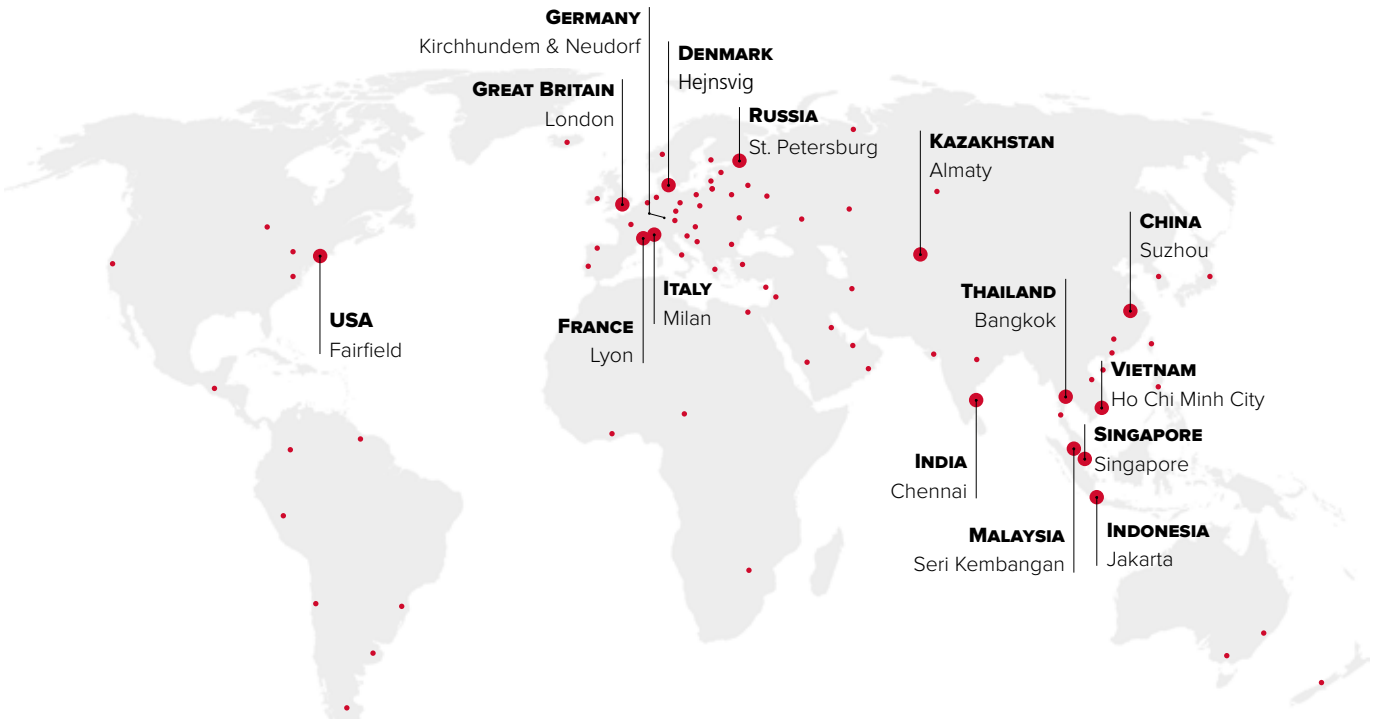
Only the combination of first-class raw materials and advanced manufacturing processes guarantees a premium product. This is why we use only first-grade plastics which are processed by a highly skilled workforce in state-of-the-art production facilities to create certified MENNEKES products.

We guarantee the high quality standard of our products by our own test laboratory. This laboratory is approved and will be used for product tests of our products to get test marks acc. to DIN EN 60309 by approval authorities like the VDE etc.

# Regionally rooted, at home around the world.

Everywhere, close to the customer: Our domestic market, Germany, is supported from our corporate headquarters in Kirchhundem, as well as by sales agencies and our own field service team. With our subsidiaries and sales offices, we are represented by own employees in the most important international growth markets.

You must be able to rely on MENNEKES. This is and remains the motivation of our 1,000 employees worldwide. It is they who, through their efforts on a daily basis, demonstrate the commitment to the MENNEKES brand.




**Subsidiaries:**
- Great Britain
- USA
- China
- Singapore
- Italy
- France
- Russia
- India

**Representative Offices:**
- Thailand
- Indonesia
- Malaysia
- Kazakhstan
- Denmark
- Vietnam

**Commercial agencies:**
- 15 in Germany
- 29 in Europe
- 46 outside of Europe

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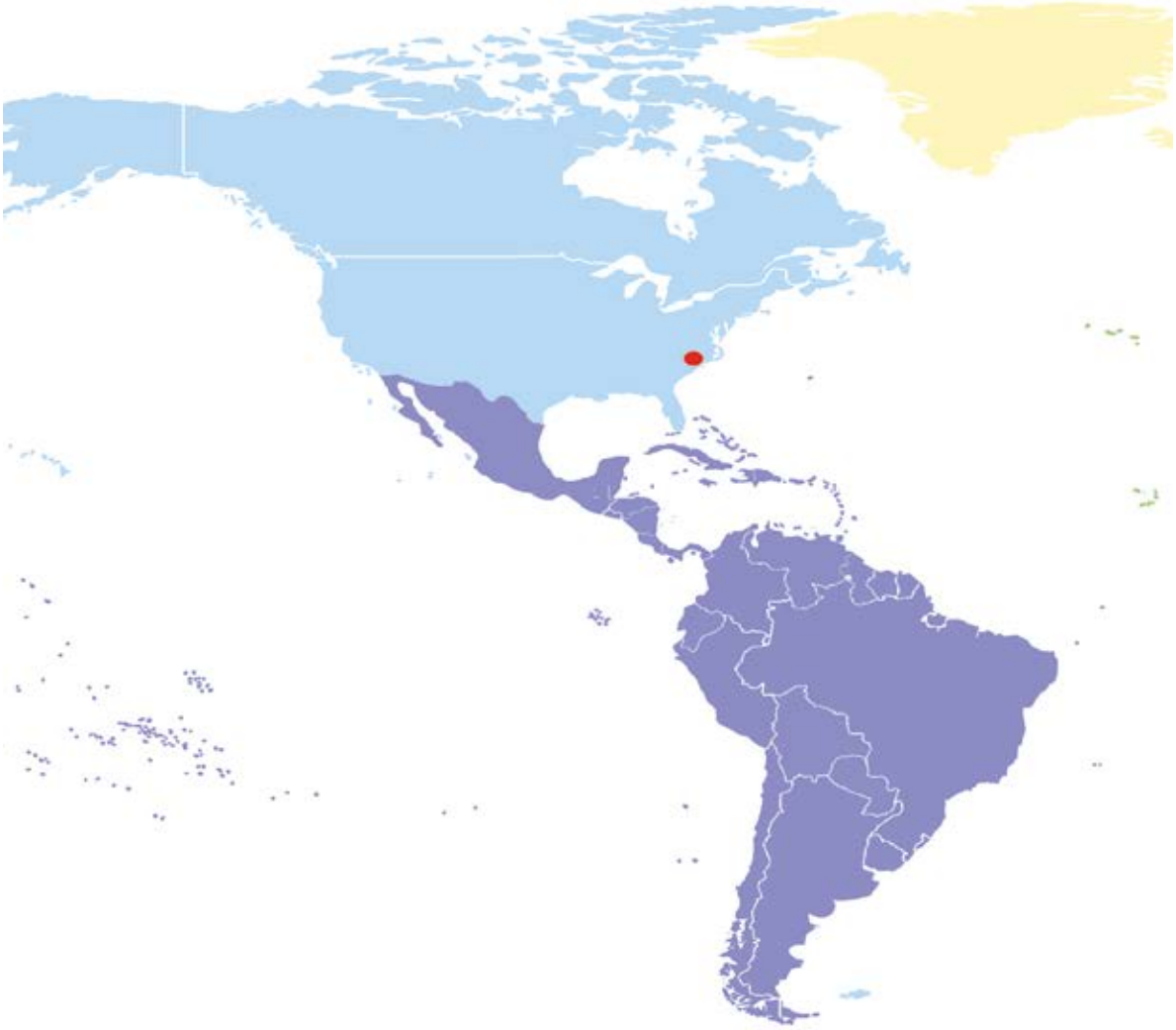
# Contact persons at MENNEKES.

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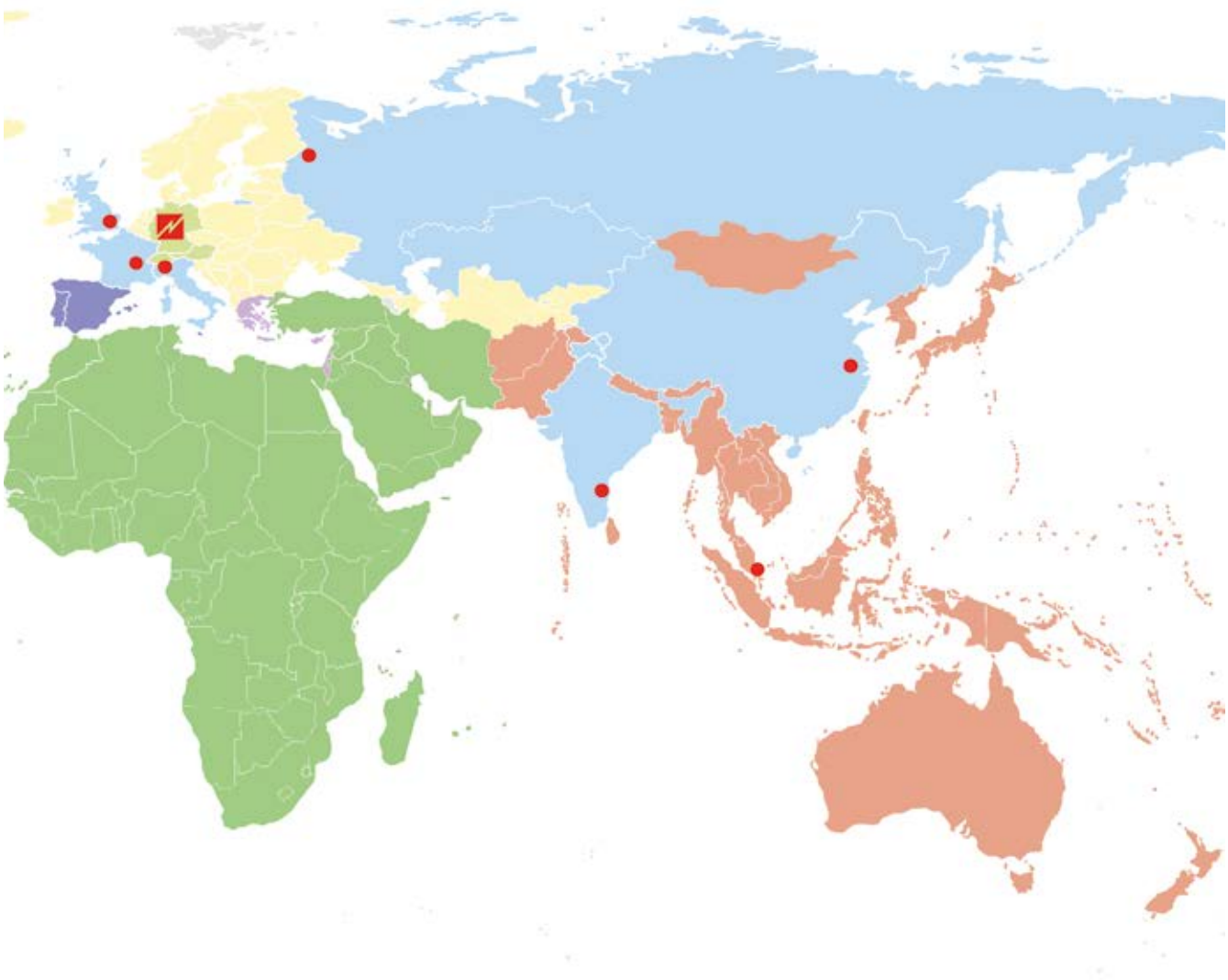

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**Subsidiaries**
You will find the contact information of our subsidiaries on the back page of this catalogue.

NEW

# X-CONTACT

## Future is now.
## The new generation of contact sleeves.

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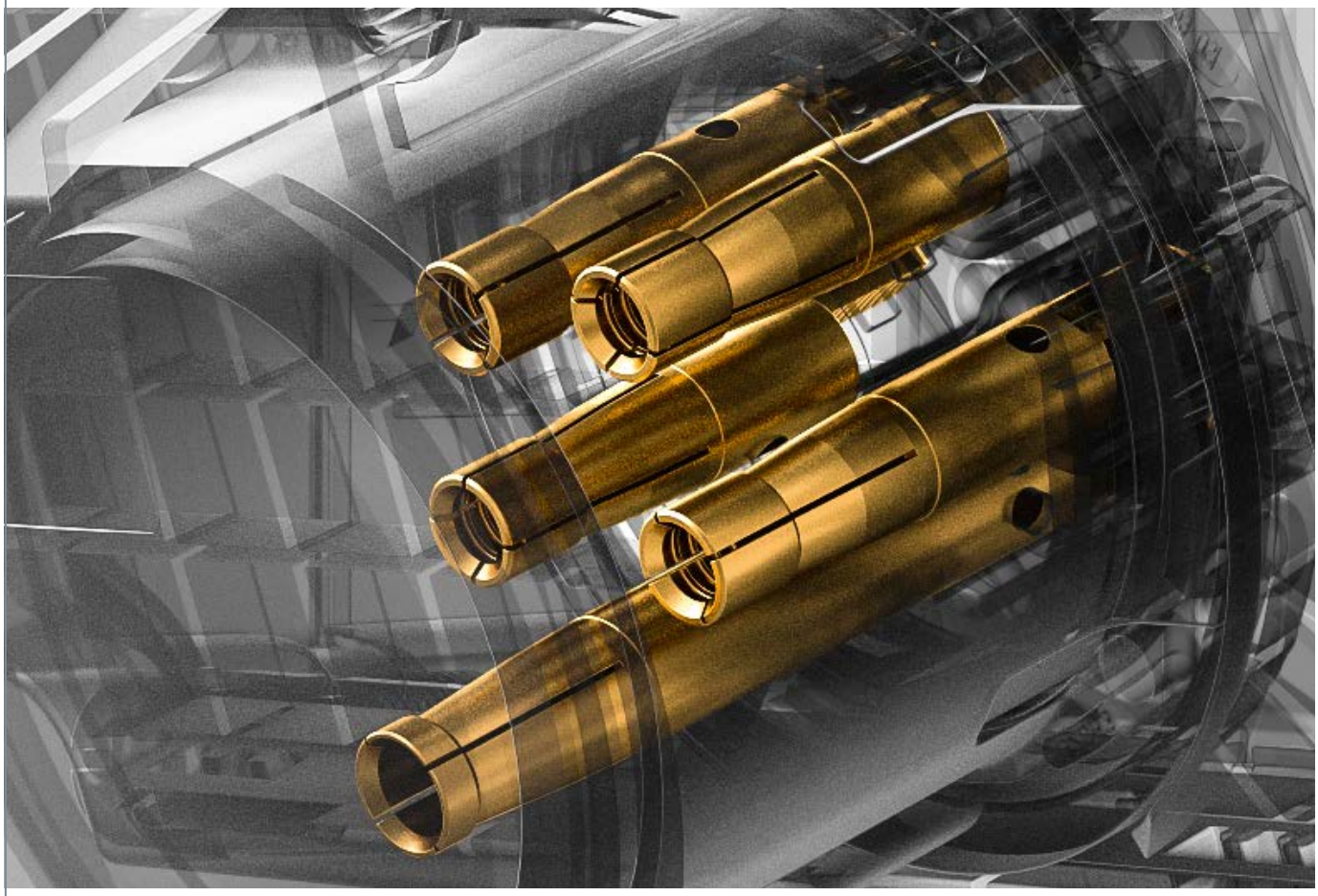

**As a specialist for plugs and sockets MENNEKES is known worldwide for setting standards. In the past few years, we dealt intensively with current requirements of the electric mobility and automotive sectors. We used the know-how gained to develop a completely new contact sleeve solution for industrial connectors and receptacles: X-CONTACT**

### More contact

It is important to achieve the best possible balance between a safe contact closure and ease of insertion. We have successfully implemented this with X-CONTACT in an entirely new way

Due to a completely new manufacturing process, the X-CONTACT sleeve obtains resilient properties based solely on its material characteristics, without the need to use any additional spring elements. Thanks to the shape of the X-CONTACT sleeve, a particularly safe contact closure can be achieved.

### Less effort

The special design of the X-CONTACT reduces the effort of insertion and withdrawal by up to 50 %. An advantage that simplifies work processes and improves safety especially with high electrical currents. With X-CONTACT, MENNEKES creates a safe contact closure and easy handling at a new, equally high level.

But how does X-CONTACT achieve these benefits even with currents of 63 A or 125 A? A glance into the opening of an X-CONTACT sleeve reveals the intelligent functional principle: the X-shaped slot and groove in the inner wall provides four advantages of the new design: innovative, simple, durable and safe. We call it the X principle.

# In all 63 A and 125 A wall mounted and panel mounted receptacles.

X-CONTACT INSIDE



## Innovative

Due to the slotted sleeves with their resilient material properties, X-CONTACT is the simplest possible mechanical solution: the plug pin simply expands the opening of the resilient contact sleeve, which reduces the force needed to connect and disconnect the plug by up to 50 %.
**X-CONTACT – intelligently innovative!**

## Simple

In practice, X-CONTACT simplifies work processes. The connection can now be handled by one person even with a current of 125 A, while conventional contact sleeves required two persons to connect and disconnect.
**X-CONTACT – simply brilliant!**

## Durable

Even in cases when the plug is connected and disconnected frequently, there are no signs of wear and the sleeve material remains fatigue-proof in the long term even after rough handling. Due to the quality of the new sleeves, contamination and surface corrosion is automatically removed by connecting and disconnecting.
**X-CONTACT – lasting solution!**

## Safe

A higher degree of safety of handling is provided by the easier connection and disconnection. The groove within the inner wall in connection with the resilient material of the contact sleeves provides for a safe contact closure.
**X-CONTACT – double safety!**


Get more information on the new generaton of contact sleeves at:
**www.MENNEKES.com**

# TwinCONTACT
## The swift connection.

**Looking for quick and easy connection?**
You can't miss the MENNEKES TwinCONTACT – a spring terminal in a newly designed receptacle. Remove the insulation, insert the conductors, and you're done. The contact is safely in place and it is even approved as a connection terminal – undo the conductor, that's all it takes. Press the red button and remove the conductor – this is our concept of convenient and time-saving handling.

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Colour-coded terminals for unmistakable connections.

Suitable for solid conductors and flexible conductors (with end sleeve for strands, crimped so as to be gas-tight or ultrasonically welded).
Cond. cross section:
at 16 A: 1.5 - 4.0 mm²
at 32 A: 2.5 - 10.0 mm²

Video: mounting instructions

# Receptacles
## with screw terminals.

Removable cover for easy access to wiring space.

All contact screws face the same way. Open terminals.
Terminals visible through slits.

# Receptacles – Wall mounted, with screw terminals

to DIN VDE 0623, EN 60309-2. Highly resistant to chemicals. Other voltages and frequencies available on request.
For drawings and dimensions see page 105 - 117. Products with pilot contact available on request.



**Wall mounted receptacle**
external fixing

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 205

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 27001 | | | | |
| 16 | 4 | | | 27002 | 27003 | | |
| 16 | 5 | | | 27004 | | | |
| 32 | 3 | | 27005 | | | | |
| 32 | 4 | | | 27006 | 27007 | | |
| 32 | 5 | | | 27008 | | | |

**Wall mounted receptacle**
internal fixing, enclosure base can be turned 180°, receptacles are designed for adding an auxiliary contact switch

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 43

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | 3030 | 3034 | 1418 | 3032 | 3035 | 3028 |
| 16 | 5 | 3141 | 3045 | 1419 | 3043 | 3046 | 3039 |
| 32 | 3 | 1420 | 1421 | 1422 | | 3139 | 3134 |
| 32 | 4 | 1423 | 1424 | 1425 | 1426 | 1427 | 1428 |
| 32 | 5 | 1555 | 1556 | 1557 | 3152 | 3154 | 3149 |

**Wall mounted receptacle**
X-CONTACT, suitable for through wiring, internal fixing, enclosure base can be turned 180°

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 213

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 1136A | 1137A | | | | |
| 63 | 4 | | 1140A | 1141A | 1142A | | |
| 63 | 5 | | 1144A | 1145A | | | |

**Wall mounted receptacle**
highly resistant to chemicals, with 2 external fixing points, enclosure base can be turned 180°, receptacles are designed for adding an auxiliary contact switch

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 622

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 9300 | 9301 | 9302 | | | |
| 16 | 4 | 9320 | 9321 | 9322 | 9323 | 9324 | |
| 16 | 5 | 9340 | 9341 | 9342 | | | |
| 32 | 3 | 9350 | 9351 | 9352 | | | |
| 32 | 4 | 9370 | 9371 | 9372 | 9373 | 9374 | |
| 32 | 5 | 9380 | 9381 | 9382 | | | |

**Wall mounted receptacle**
X-CONTACT, internal fixing, enclosure base can be turned 180°, with 6 fixing points to accommodate special terminals

IP 67
Std. Pack. Qty: 5
Drawing: 1 MB 112

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 856 | 128A | 129A | | | |
| 63 | 4 | 130A | 131A | 132A | 133A | | |
| 63 | 5 | 134A | 135A | 136A | 2007A | | |

**Wall mounted receptacle**
X-CONTACT, highly resistant to chemicals, highly heat resistant contact carrier, nickel plated contacts

IP 67
Std. Pack. Qty: 5
Drawing: 1 MB 112

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 4 | | | 3773 | | | |
| 63 | 5 | | | 3774 | | | |

## Receptacles – Wall mounted, with screw terminals

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request.
For drawings and dimensions see page 105 - 117. Products with pilot contact available on request.

2

**Wall mounted receptacle**
X-CONTACT

IP 67
Std. Pack. Qty: 3
Drawing: 1 MB 162

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 125 | 4 | 137 | 138 | 139 | 140 | | |
| 125 | 5 | 141 | 142 | 143 | 2139 | | |

# High resistance to chemicals
## High quality plastics.

For use in industrial premises or place of work where the use of chemicals or other aggressive substances makes it necessary to use other plastic materials, MENNEKES offers products with increased stability against fuel, oil and grease, diluted acids and alkali, cleaner and the most aqueous salt solutions. These products are marked in the catalogue with . Products made of AMELAN (grey RAL 7000 or electric grey RAL 7035) combine high mechanical, thermal and electrical properties with excellent dimensional stability and resistance to chemicals and are fit for action in chemical plants, in refineries, in the food processing industry, in washdown areas and so on

**High resistance to:**

- sea water
- detergents
- edible fat
- aqueous soap solution
- natronloog
- motor oils
- milk
- caustic potash
- fruit juices
- diesel oil
- gasoline
- aqueous ammonia solution

# Receptacles – Wall mounted, screwless, with TwinCONTACT

to DIN VDE 0623, EN 60309-2. Highly resistant to chemicals. Other voltages and frequencies available on request.
For drawings and dimensions see page 105 - 117. Products with pilot contact available on request.



**Wall mounted receptacle**
screwless, with TwinCONTACT, external fixing

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 463

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1340 | 1341 | | | | |
| 16 | 4 | | 1342 | 1343 | 1344 | | |
| 16 | 5 | | | 31 | | | |
| 32 | 3 | 1345 | 1346 | | | | |
| 32 | 4 | | 1347 | 1348 | 1349 | | |
| 32 | 5 | | | 32 | | | |

**Wall mounted receptacle**
screwless, with TwinCONTACT, suitable for through wiring, internal fixing, 4 p and 5 p receptacles the enclosure can be turned 180°

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 209

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1719 | 1720 | 1721 | | | |
| 16 | 4 | | 1723 | 1724 | 1725 | 1726 | 1727 |
| 16 | 5 | | 1730 | 3331 | | | |

**Wall mounted receptacle**
screwless, with TwinCONTACT, suitable for through wiring, internal fixing, enclosure base can be turned 180°

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 43

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | 1750 | 1751 | 418 | 1752 | 1753 | 1754 |
| 16 | 5 | 1755 | 1756 | 419 | 1757 | | |
| 32 | 3 | 1851 | 420 | 1852 | | | |
| 32 | 4 | 1855 | 1856 | 421 | 1857 | 1858 | 1859 |
| 32 | 5 | 1860 | 1861 | 422 | 1862 | | 1864 |

**Wall mounted receptacle**
screwless, with TwinCONTACT, highly resistant to chemicals, suitable for through wiring, with 2 external fixing points, receptacles are designed for adding an auxiliary contact switch, enclosure base can be turned 180°

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 622

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 9104 | 9105 | 9106 | | | |
| 16 | 4 | 9120 | 9121 | 9122 | 9123 | 9124 | 9125 |
| 16 | 5 | 9140 | 9141 | 9142 | | | |
| 32 | 3 | 9150 | 9151 | 9152 | | | |
| 32 | 4 | 9170 | 9171 | 9172 | 9173 | 9174 | 9175 |
| 32 | 5 | 9180 | 9181 | 9182 | | | |

**Double Box**
screwless, with TwinCONTACT, CEE and receptacle SCHUKO® in one enclosure, also available with French/Belgian and Swiss standards

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 354

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | | 1647 | 1648 | | | |
| 16 | 5 | | | 1649 | | | |

**Double Box**
screwless, with TwinCONTACT, CEE and receptacle SCHUKO® in one enclosure, also available with French/Belgian and Swiss standards

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 354

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 5 | | | 1650 | | | |
| 32 | 5 | | | 1651 | | | |

# Receptacles – Wall mounted, switched and interlocked or fused

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

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**Wall mounted receptacle**
switched, with mechanical DUO-interlock

IP 44
Std. Pack. Qty: 1
Drawing: 1 MB 174

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 7010A | 7002A | | | | |
| 16 | 4 | 5457A | 5099A | 5100A | 5101A | | |
| 16 | 5 | 5459A | 5102A | 5103A | | | |
| 32 | 3 | 5743A | 5696A | | | | |
| 32 | 4 | 5460A | 5104A | 5105A | 5106A | | |
| 32 | 5 | 5462A | 5107A | 5108A | | | |

**Wall mounted receptacle**
X-CONTACT, switched, with mechanical DUO-interlock

IP 44
Std. Pack. Qty: 1
Drawing: 1 MB 234

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | | 6571 | | | | |
| 63 | 4 | | 5955A | 5956A | 5957A | | |
| 63 | 5 | | | 5959A | | | |

**Wall mounted receptacle**
switched, with mechanical DUO-interlock

IP 44
Std. Pack. Qty: 1
Drawing: 1 MB 550

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 7602 | 7603 | | | | |
| 16 | 4 | | 7604 | 7605 | 7606 | | |
| 16 | 5 | | | 7607 | | | |
| 32 | 3 | 7611 | 7612 | | | | |
| 32 | 4 | | 7613 | 7614 | 7615 | | |
| 32 | 5 | | | 7616 | | | |

**Wall mounted receptacle**
63 A: X-CONTACT, with DIN rail, optional fitting of Neozed, Diazed, circuit-breakers and RCD´s

IP 44
Std. Pack. Qty: 1
Drawing: 1 MB 168

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 7006 | 7007 | | | | |
| 16 | 4 | | | 5496 | | | |
| 16 | 5 | | | 5495 | | | |
| 32 | 4 | | | 9598 | | | |
| 32 | 5 | | | 5497 | | | |
| 63 | 4 | | | 7153 | | | |
| 63 | 5 | | | 7102 | | | |

**Wall mounted receptacle**
with circuit breaker, K-characteristics

IP 44
Std. Pack. Qty: 1
Drawing: 1 MB 168

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 7119 | | | | |
| 16 | 4 | | | 5010 | | | |
| 16 | 5 | | | 5012 | | | |
| 32 | 4 | | | 5014 | | | |
| 32 | 5 | | | 5016 | | | |

**Wall mounted receptacle**
fused with RCD (0.03 A), other leakage current ratings on request

IP 44
Std. Pack. Qty: 1
Drawing: 1 MB 168

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 7125 | | | | |
| 16 | 4 | | | 7126 | | | |
| 16 | 5 | | | 7312 | | | |
| 32 | 4 | | | 7127 | | | |
| 32 | 5 | | | 7313 | | | |

# Receptacles – Wall mounted, switched and interlocked or fused

to DIN VDE 0623, EN 60309-2. Highly resistant to chemicals. Other voltages and frequencies available on request.
For drawings and dimensions see page 105 - 117. Products with pilot contact available on request.



**Wall mounted receptacle**
switched, with mechanical DUO-interlock

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 207

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 7011A | 7012A | | | | |
| 16 | 4 | | 5599A | 5600A | 5601A | | |
| 16 | 5 | | 5602A | 5603A | | | |
| 32 | 3 | 5924A | 5793A | | | | |
| 32 | 4 | | 5604A | 5605A | 5606A | | |
| 32 | 5 | | 5607A | 5608A | | | |

**Wall mounted receptacle**
highly resistant to chemicals, highly heat resistant contact carrier, nickel plated contacts, with mechanical DUO-interlock

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 207

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 7283 | | | | |
| 16 | 4 | | | 7284 | | | |
| 16 | 5 | | | 7285 | | | |
| 32 | 3 | | 7286 | | | | |
| 32 | 4 | | | 7287 | | | |
| 32 | 5 | | | 7288 | | | |

**Wall mounted receptacle**
X-CONTACT, switched, with mechanical DUO-interlock

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 180

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 5925A | 5911A | | | | |
| 63 | 4 | | 5109A | 5110A | 5111A | | |
| 63 | 5 | | 5112A | 5113A | 5759A | | |

**Wall mounted receptacle**
X-CONTACT, highly resistant to chemicals, highly heat resistant contact carrier, nickel plated contacts, with mechanical DUO-interlock

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 180

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 4 | | | 7289 | | | |
| 63 | 5 | | | 7290 | | | |

**Wall mounted receptacle**
X-CONTACT, switched, with mechanical DUO-interlock

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 177

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 125 | 3 | | 7000 | | | | |
| 125 | 4 | | 5887A | 5691A | 5690A | | |
| 125 | 5 | | 5888A | 5692A | | | |

**Wall mounted receptacle**
switched, with mechanical DUO-interlock

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 551

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 7620 | 7621 | | | | |
| 16 | 4 | | 7623 | 7624 | 7625 | | |
| 16 | 5 | | | 7626 | | | |
| 32 | 3 | 7628 | 7629 | | | | |
| 32 | 4 | | 7633 | 7634 | 7635 | | |
| 32 | 5 | | | 7636 | | | |

# Receptacles – Wall mounted, switched and interlocked or fused

to DIN VDE 0623, EN 60309-2. Highly resistant to chemicals. Other voltages and frequencies available on request.
For drawings and dimensions see page 105 - 117.

2

**Wall mounted receptacle**
with DIN rail, optional fitting of Neozed, Diazed, circuit-breakers and RCD's

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 378

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 7128 | | | | |
| 16 | 4 | | | 7129 | | | |
| 16 | 5 | | | 7130 | | | |
| 32 | 4 | | | 7131 | | | |
| 32 | 5 | | | 7132 | | | |

**Wall mounted receptacle**
fused with circuit breaker, K-characteristics

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 378

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 7143 | | | | |
| 16 | 4 | | | 7144 | | | |
| 16 | 5 | | | 7145 | | | |
| 32 | 4 | | | 7146 | | | |
| 32 | 5 | | | 7147 | | | |

**Wall mounted receptacle**
63 A: X-CONTACT, switched, with mechanical DUO-interlock, DIN rail

IP 44
Std. Pack. Qty: 2/1
Drawing: 1 MB 208

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 7213 | | | | |
| 16 | 4 | | | 5610A | | | |
| 16 | 5 | | | 5613A | | | |
| 32 | 4 | | | 5615A | | | |
| 32 | 5 | | | 5618A | | | |
| 63 | 4 | | | 6059A | | | |
| 63 | 5 | | | 6062A | | | |

**Wall mounted receptacle**
63 A: X-CONTACT, switched, with mechanical DUO-interlock, circuit breaker

IP 44
Std. Pack. Qty: 2/1
Drawing: 1 MB 208

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 7216 | | | | |
| 16 | 4 | | | 7217 | | | |
| 16 | 5 | | | 7218 | | | |
| 32 | 4 | | | 7219 | | | |
| 32 | 5 | | | 7220 | | | |
| 63 | 4 | | | 7221 | | | |
| 63 | 5 | | | 7222 | | | |

**Wall mounted receptacle**
63 A: X-CONTACT, highly resistant to chemicals, highly heat resistant contact carrier, nickel plated contacts, switched, with mechanical DUO-interlock, DIN-rail

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 181/620

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | | | 7291 | | | |
| 16 | 5 | | | 7292 | | | |
| 32 | 4 | | | 7293 | | | |
| 32 | 5 | | | 7294 | | | |
| 63 | 4 | | | 7295 | | | |
| 63 | 5 | | | 7296 | | | |

**Wall mounted receptacle**
63 A: X-CONTACT, switched, with mechanical DUO-interlock, DIN rail

IP 67
Std. Pack. Qty: 2/1
Drawing: 1 MB 181/620

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 7050 | | | | |
| 16 | 4 | | | 5630A | | | |
| 16 | 5 | | | 5633A | | | |
| 32 | 4 | | | 5635A | | | |
| 32 | 5 | | | 5638A | | | |
| 63 | 4 | | | 5640A | 5641A | | |
| 63 | 5 | | | 5643A | | | |

## Receptacles – Wall mounted, switched and interlocked or fused

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

**Wall mounted receptacle**
63 A: X-CONTACT, switched, with mechanical DUO-interlock, circuit breaker

IP 67
Std. Pack. Qty: 2/1
Drawing: 1 MB 181/620

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 7238 | | | | |
| 16 | 4 | | | 7239 | | | |
| 16 | 5 | | | 7240 | | | |
| 32 | 4 | | | 7241 | | | |
| 32 | 5 | | | 7242 | | | |
| 63 | 4 | | | 7243 | | | |
| 63 | 5 | | | 7244 | | | |

**Wall mounted receptacle**
63 A: X-CONTACT, switched, with mechanical DUO-interlock, fused with 1 RCD 0.03 A

IP 67
Std. Pack. Qty: 2/1
Drawing: 1 MB 181/620

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 7245 | | | | |
| 16 | 4 | | | 7246 | | | |
| 16 | 5 | | | 7247 | | | |
| 32 | 4 | | | 7248 | | | |
| 32 | 5 | | | 7249 | | | |
| 63 | 4 | | | 7250 | | | |
| 63 | 5 | | | 7251 | | | |

**Wall mounted receptacle**
X-CONTACT, switched, with mechanical DUO-interlock, 3 pole fuse socket NH 00, upon request with provision for an additional padlock

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 177

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 125 | 4 | | | 5679A | 5693A | | |
| 125 | 5 | | | 5695A | | | |

# Receptacles – Cepex

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

2

**Wall mounted receptacle Cepex**
grey

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 312

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 4101 | 4102 | | | | |
| 16 | 4 | | 4254 | 4103 | 4104 | | |
| 16 | 5 | | | 4105 | | | |
| 32 | 3 | 4106 | 4107 | | | | |
| 32 | 4 | | | 4108 | | | |
| 32 | 5 | | | 4110 | | | |

**Wall mounted receptacle Cepex**
grey, with labelling field

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 317

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 4132 | | | | |
| 16 | 4 | | | 4133 | | | |
| 16 | 5 | | | 4135 | | | |
| 32 | 3 | | 4137 | | | | |
| 32 | 4 | | | 4138 | | | |
| 32 | 5 | | | 4140 | | | |

**Panel mounted receptacle Cepex**
pearl white

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 315

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 4111 | 4112 | | | | |
| 16 | 4 | | 4233 | 4113 | 4114 | | |
| 16 | 5 | | | 4115 | | | |
| 32 | 3 | 4116 | 4117 | | | | |
| 32 | 4 | | | 4118 | 4119 | | |
| 32 | 5 | | | 4120 | | | |

**Flush mounted receptacle Cepex**
pearl white, with flush mounted installation box

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 336

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 4121 | 4122 | | | | |
| 16 | 4 | | 4205 | 4123 | 4124 | | |
| 16 | 5 | | | 4125 | | | |
| 32 | 3 | 4126 | 4127 | | | | |
| 32 | 4 | | | 4128 | | | |
| 32 | 5 | | | 4130 | | | |

**Wall mounted Cepex double receptacle**
grey

IP 44
Std. Pack. Qty: 5/4
Drawing: 1 MB 350

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 4218 | 4219 | | | | |
| 16 | 4 | | 4258 | 4220 | | | |
| 16 | 5 | | | 4204 | | | |
| 32 | 3 | | 4224 | | | | |
| 32 | 4 | | 4259 | | | | |
| 32 | 5 | | | 4226 | | | |

**N.B.: All above mentioned types are available in three designs and with SCHUKO® insert:**
– with smooth cover
– with labelling field
– with labelling field and lockable cover
Also available with data port inserts. For products see page 84.
Distance frame on request.
Cepex range panel receptacles rated 16 A and 32 A have the same dimensions.
It is, therefore, possible to interchange single or 3 phase receptacles on a 2-gang enclosure to suit your own requirements.

# Receptacles – Panel mounted, with screw terminals

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.
Products with pilot contact available on request.



**Panel mounted receptacle**
flange 75 x 75 mm, straight

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 464

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1365 | 1366 | 1367 | | 3054 | 3055 |
| 16 | 4 | 1388 | 1389 | 1390 | 1391 | 1392 | 1393 |
| 16 | 5 | 1384 | 1386 | 1385 | 3057 | 3059 | 3060 |
| 32 | 3 | 1394 | 1395 | 1396 | | | |
| 32 | 4 | 1397 | 1398 | 1399 | 1400 | 1401 | 1402 |
| 32 | 5 | 3449 | 3454 | 3451 | 3452 | 3455 | 3447 |

**Panel mounted receptacle**
X-CONTACT, flange 107 x 110 mm, straight

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 211

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 1260A | 1261A | | | | |
| 63 | 4 | | 1247A | 1248A | 1249A | | |
| 63 | 5 | | | 1252A | | | |

**Panel mounted receptacle**
flange 16 A, 3 p: 73.5 x 64 mm, 16 A, 4 + 5 p, 32 A: 100 x 92 mm, inclination 20°, 32 A: receptacles optional fitted with auxiliary contact

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 260

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1462 | 1463 | 1464 | | 3186 | 3187 |
| 16 | 4 | 1465 | 1466 | 1467 | 1468 | 1469 | 1470 |
| 16 | 5 | 1471 | 1472 | 1473 | 3188 | 3189 | 3190 |
| 32 | 3 | 1491 | 1492 | 1493 | | 3201 | 3202 |
| 32 | 4 | 1494 | 1495 | 1496 | 1497 | 1486 | 1487 |
| 32 | 5 | 1498 | 1499 | 1500 | 3191 | 3192 | 3193 |

**Panel mounted receptacle**
X-CONTACT, flange 110 x 106 mm, inclination 20°

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 297

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 1146A | 1147A | 1148A | | | |
| 63 | 4 | 1149A | 1150A | 1151A | 1152A | | |
| 63 | 5 | 1153A | 1154A | 1155A | | | |

**Panel mounted receptacle**
63 A: X-CONTACT, standard flange dimensions, uniform fixing hole spacing, 15° inclination for 16 A and 32 A, 20° inclination for 63 A

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 453

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 5 | | | 20146A | | | |
| 32 | 5 | | | 20147A | | | |
| 63 | 5 | | | 21160A | | | |

**Panel mounted receptacle**
miniflange: 68 x 62 mm, inclination 20°

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 472

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 858 | 857 | | | | |

# Receptacles – Panel mounted, with screw terminals

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.
Products with pilot contact available on request.

2

**Panel mounted receptacle**
flange 16 A: 75 x 75 mm,
32 A: 85 x 75 mm, straight

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 141

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 217A | 218A | 219A | | | |
| 16 | 4 | 220A | 221A | 222A | 223A | 224A | 225A |
| 16 | 5 | 226A | 227A | 228A | | | |
| 32 | 3 | 229A | 230A | 231A | | | |
| 32 | 4 | 232A | 233A | 234A | 235A | 236A | 237A |
| 32 | 5 | 238A | 239A | 240A | | | |

**Panel mounted receptacle**
X-CONTACT,
flange 63 A: 107 x 100 mm,
125 A: 130 x 130 mm, straight

IP 67
Std. Pack. Qty: 5
Drawing: 1 MB 212/258

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 1263A | 1264A | 1265A | | | |
| 63 | 4 | 1122A | 1123A | 1124A | 1125A | | |
| 63 | 5 | 1126A | 1127A | 1128A | | | |
| 125 | 3 | | 3380 | | | | |
| 125 | 4 | 1455 | 1456 | 1457 | 1458 | | |
| 125 | 5 | 1459 | 1460 | 1461 | 3283 | | |

**Panel mounted receptacle**
flange 16 A, 3 p: 73.5 x 64 mm,
16 A, 4 + 5 p, 32 A: 100 x 92 mm,
inclination 20°,
32 A receptacles optional fitted with auxiliary contact

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 251

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1474 | 1475 | 1476 | | | |
| 16 | 4 | 1477 | 1478 | 1479 | 1480 | 1481 | 1482 |
| 16 | 5 | 1483 | 1484 | 1485 | | | |
| 32 | 3 | 1501 | 1502 | 1503 | | | |
| 32 | 4 | 1504 | 1505 | 1506 | 1507 | 1567 | 1568 |
| 32 | 5 | 1489 | 1490 | 1551 | | | |

**Panel mounted receptacle**
X-CONTACT,
flange 63 A: 110 x 106 mm,
inclination 20°,
125 A: 114 x 110 mm,
inclination 15°

IP 67
Std. Pack. Qty: 5
Drawing: 1 MB 298/601

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 2179A | 2180A | 2181A | | | |
| 63 | 4 | 203A | 204A | 205A | 206A | | |
| 63 | 5 | 207A | 208A | 209A | 3507 | | |
| 125 | 3 | | 3575 | | | | |
| 125 | 4 | 210A | 211A | 212A | 213A | | |
| 125 | 5 | 214A | 215A | 216A | | | |

**Panel mounted receptacle**
standard flange dimensions
85 x 85 mm, inclination 20°,
optional fitted with auxiliary contact

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 452

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 903 | 905 | | | | |
| 16 | 4 | | | 1081 | 1082 | | |
| 16 | 5 | | | 1103 | | | |
| 32 | 3 | 3197 | 3200 | | | | |
| 32 | 4 | | | 3254 | 3256 | | |
| 32 | 5 | | | 3524 | | | |

**Auxiliary contact**
for standard receptacles and panel mounted receptacles 16 A and 32 A

Std. Pack. Qty: 10

| Part no. |
|---|
| 41000 |

# Receptacles – Panel mounted, screwless, with TwinCONTACT

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.



**Panel mounted receptacle**
screwless, with TwinCONTACT,
flange 75 x 75 mm, straight

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 464

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1667 | 1668 | 1669 | | | 1671 |
| 16 | 4 | 1672 | 1673 | 1674 | 1675 | 1676 | 1677 |
| 16 | 5 | 1678 | 1679 | 3385 | 1680 | | 1682 |
| 32 | 3 | 1786 | 1787 | 1788 | | | |
| 32 | 4 | 1789 | 1790 | 1791 | 1792 | 1793 | 1794 |
| 32 | 5 | 1795 | 1796 | 1797 | 1798 | | 1800 |

**Panel mounted receptacle**
screwless, with TwinCONTACT,
flange 16 A, 3 p: 73.5 x 64 mm,
16 A, 4 + 5 p, 32 A: 100 x 92 mm,
inclination 20°, 32 A: optional fitted
with auxiliary contact

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 465

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1631 | 1632 | 1633 | | | 1635 |
| 16 | 4 | 1636 | 1637 | 1638 | 1639 | 1640 | 1641 |
| 16 | 5 | 1642 | 1643 | 3473 | 1644 | | 1646 |
| 32 | 3 | 1733 | 1734 | 1735 | | | 1737 |
| 32 | 4 | 1738 | 1739 | 1740 | 1741 | 1742 | 1743 |
| 32 | 5 | 1744 | 1745 | 1746 | 1747 | | 1749 |

**Panel mounted receptacle**
screwless, with TwinCONTACT,
standard flange dimensions
85 x 85 mm, 20° inclination,
optional fitted with auxiliary contact

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 519

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 3004 | 3008 | | | | |
| 16 | 4 | | | 3048 | 3049 | | |
| 16 | 5 | | | 3070 | | | |
| 32 | 3 | 3124 | 3126 | | | | |
| 32 | 4 | | | 3155 | 3157 | | |
| 32 | 5 | | | 3171 | | | |

**Panel mounted receptacle**
screwless, with TwinCONTACT,
miniflange: 55 x 55 mm, straight

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 426

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1618 | 1619 | | | | |

**Panel mounted receptacle RAPIDO**
screwless, with TwinCONTACT,
with central locking system,
round flange for central fixing,
diam. 61 mm

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 468

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1132 | 997 | | | | |

**Panel mounted receptacle RAPIDO**
screwless, with TwinCONTACT,
with central locking system,
round flange for central fixing,
diam. 70 mm

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 468

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | | 1133 | 998 | 1134 | | |
| 16 | 5 | | | 907 | | | |
| 32 | 3 | 1135 | 987 | | | | |
| 32 | 4 | | 1166 | 988 | 1167 | | |
| 32 | 5 | | | 989 | | | |

## Receptacles – Panel mounted receptacles, screwless, with TwinCONTACT

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

**Panel mounted receptacle**
screwless, with TwinCONTACT,
flange: 16 A: 75 x 75 mm,
32 A: 85 x 75 mm, straight

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 467

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1707 | 1708 | 1709 | | | |
| 16 | 4 | 1710 | 1711 | 1712 | 1713 | 1714 | 1715 |
| 16 | 5 | 1716 | 1717 | 1131 | | | |
| 32 | 3 | 1809 | 1810 | 1811 | | | |
| 32 | 4 | 1812 | 1813 | 1814 | 1815 | 1816 | 1817 |
| 32 | 5 | 1818 | 1819 | 1820 | | | |

**Panel mounted receptacle**
screwless, with TwinCONTACT,
flange: 16 A, 3 p: 73.5 x 64 mm,
16 A, 4 + 5 p, 32 A: 100 x 92 mm,
inclination 20°, 32 A: optionally fitted
with auxiliary contact

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 466

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1700 | 1701 | 1702 | | | |
| 16 | 4 | | 1703 | 1704 | 1705 | 1706 | |
| 16 | 5 | | | 3485 | | | |
| 32 | 3 | 1801 | 1802 | 1803 | | | |
| 32 | 4 | | 1804 | 1805 | 1806 | 1807 | |
| 32 | 5 | | | 1808 | | | |

**Panel mounted receptacle**
screwless, with TwinCONTACT,
standard flange dimensions
85 x 85 mm, inclination 20°,
optionally fitted with auxiliary contact

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 520

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 1168 | | | | |
| 16 | 4 | | | 1169 | 1171 | | |
| 16 | 5 | | | 1173 | | | |
| 32 | 3 | 3566 | 3573 | | | | |
| 32 | 4 | | | 3581 | 3587 | | |
| 32 | 5 | | | 3590 | | | |

**Auxiliary contact**
for standard receptacles and panel
mounted receptacles 16 A and 32 A

Std. Pack. Qty: 10

| Part no. |
|---|
| 41000 |

# Auxiliary Contact.

Function: Change-over contact = NC/NO
Connected load: 16 A (4 A)*/ ~ 250 V
10 A (3 A)*/ ~ 400 V

*for inductive or motor load

# Receptacles – Panel mounted receptacles, switched and interlocked

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.




**Panel mounted receptacle**
switched, with mechanical DUO-interlock

IP 44
Std. Pack. Qty: 1
Drawing 5 MB 59

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 7502 | 7503 | | | | |
| 16 | 4 | | 7504 | 7505 | 7506 | | |
| 16 | 5 | | | 7507 | | | |
| 32 | 3 | 7511 | 7512 | | | | |
| 32 | 4 | | 7513 | 7514 | 7515 | | |
| 32 | 5 | | | 7516 | | | |


**Panel mounted receptacle**
switched, with mechanical DUO-interlock

IP 67
Conf. Std.: 1
Drawing: 5 MB 57

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 7520 | 7521 | | | | |
| 16 | 4 | | 7523 | 7524 | 7525 | | |
| 16 | 5 | | | 7526 | | | |
| 32 | 3 | 7530 | 7531 | | | | |
| 32 | 4 | | 7533 | 7534 | 7535 | | |
| 32 | 5 | | | 7536 | | | |

# X-CONTACT

## The new generation of contact sleeves

**More contact**

Due to a completely new manufacturing process, the X-CONTACT sleeve obtains resilient properties based solely on its material characteristics, without the need to use any additional spring elements. Thanks to the design of the X-CONTACT sleeve, a particularly safe contact closure can be achieved.

**Less effort**

The special design of the X-CONTACT reduces the effort of insertion and withdrawal by up to 50 %. An advantage that simplifies work processes and improves safety especially with high electrical currents. With X-CONTACT, MENNEKES creates a safe contact closure and easy handling at a new, equally high level.
Get more information on the new generaton of contact sleeves at:
**www.x-contact.info**

3

# The X principle

## Easy handling meets safe connections.

### Innovative

Slotted sleeves with their resilient material properties reduces the force needed to connect and disconnect the plug by up to 50 %.

**X-CONTACT – intelligently innovative!**

### Simple

The connection can now be handled by one person even with a current of 125 A.

**X-CONTACT – simply brilliant!**

### Durable

No signs of wear, permanently fatigue-proof and self-cleaning by connecting and disconnecting.

**X-CONTACT – lasting solution!**

### Safe

A higher degree of safety of handling – for a safe contact closure.

**X-CONTACT – double safety!**

# PowerTOP Xtra

## Extra slip-proof. Extra shock-resistant. Extra protected.

Plugs and connectors for toughest conditions – that's PowerTOP Xtra. The unique rubber coating of the contact surfaces and the ergonomic design guarantees best grip – even with working gloves.

**Tough**
The plugs provide better corrosion protection thanks to nickel plated contacts. More safety through highly heat resistant contact carrier.

**Easy and fast installation**
- Substantially reduced installation times through largely tool-free installation.
- Locking slides instead of screws and especially smooth cable gland with integrated strain relief, seal and protection against kinking.

**Always clean, always safe**
- As the cable glands are in contact with the body of the plug and connector, the areas for the ingress of dirt are reduced and allow for easy cleaning in areas where hygiene is of prime importance.
- Moulded seals in the connector lid and the front part of the plug.
- Integrated opening aid on the connector lid.



- Connectors with highly heat resistant contact carrier; nickel plated contact sleeves also available on request. Pilot contact standard with plugs; optionally available for connectors.

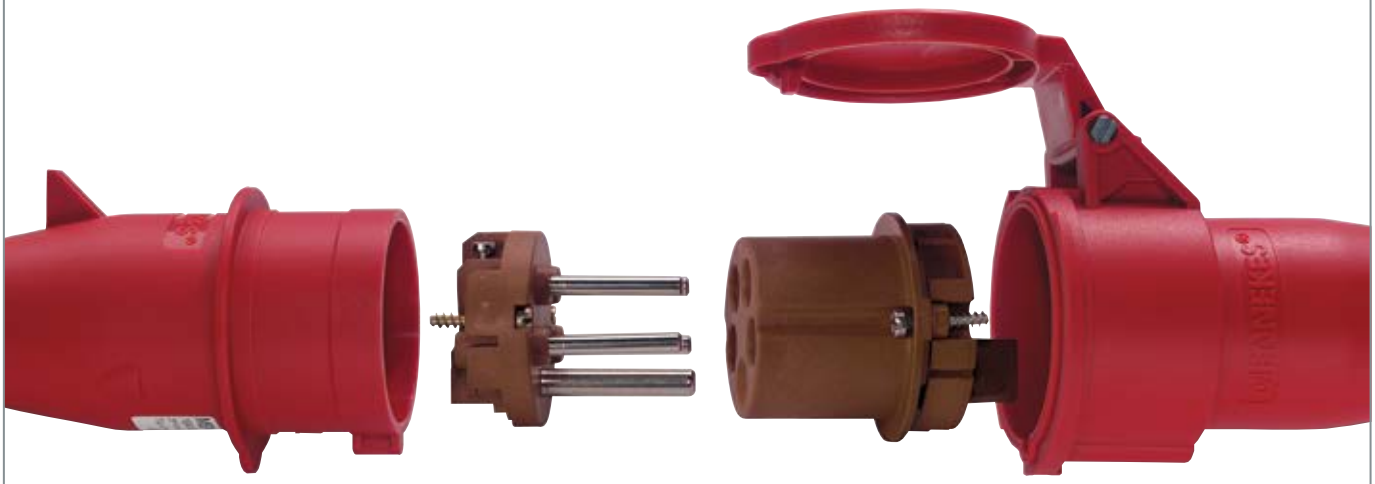
- Comfortable self-locating thread lock between front and back part.

- Stable and fast locking without screws. Unlocking only with just a tool according to the regulations.

- Safe contact: Simply insert and pull by X-CONTACT: At 63 A and 125 A.

## AM-TOP and PowerTOP

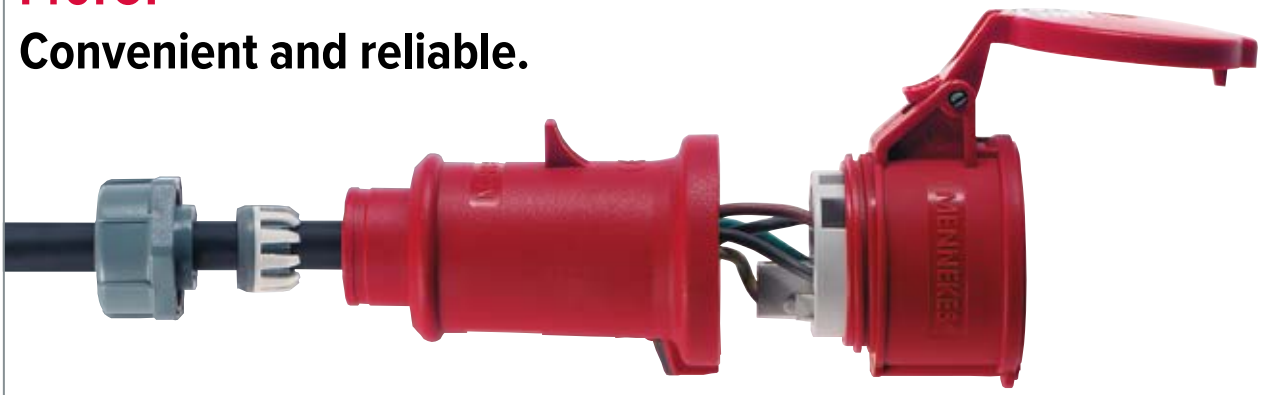
### for use in corrosive environments.



**Highly heat resistant contact carrier and nickel plated contacts.**
These appliances are guaranteed to be resistant to corrosive environments: High humidity, salt or acidic air, corrosive gases and vapours. Accordingly, they are mainly used **in the food processing industry, in breweries, dairies, farms and market gardens, wineries.**

## ProTOP

### Convenient and reliable.



Many handy features, e.g., the self-locating thread for tight and stable connection of cover and front part.
Cable gland with internal strain relief.

## Angled plug VarioTOP

### Ergonomic. Practical. Safe.

The first CEE angled plug with cable entry rotating up to 60° to the left or to the right.

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request.

**Plug ProTOP**
enclosure with thread lock and safety slide

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 147A | 148A | | | | |
| 16 | 4 | | 151A | 152A | 153A | | |
| 16 | 5 | | | 13A | | | |
| 32 | 3 | 159 | 160 | | | | |
| 32 | 4 | | 163 | 164 | 165 | | |
| 32 | 5 | | | 14A | | | |

**Plug StarTOP**
screwless, with SafeCONTACT, enclosure with thread lock and safety slide

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 947 | 948 | | | | |
| 16 | 4 | | 951 | 952 | 953 | 954 | |
| 16 | 5 | | | 33 | | | |
| 32 | 3 | 711 | 712 | | | | |
| 32 | 4 | | 717 | 719 | 723 | | |
| 32 | 5 | | | 34 | | | |

**Plug AM-TOP**
single part body

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 247 | 248 | 249 | | 2168 | 2271 |
| 16 | 4 | 250 | 251 | 252 | 253 | 254 | 255 |
| 16 | 5 | 256 | 257 | 3 | 2014 | 2189 | 2243 |
| 32 | 3 | 259 | 260 | 261 | | 2195 | 2341 |
| 32 | 4 | 262 | 263 | 264 | 265 | 266 | 267 |
| 32 | 5 | 268 | 269 | 4 | 2015 | 2244 | 2178 |

**Plug PowerTOP Xtra**
rubberised grip area, highly heat resistant contact carrier, frame terminals, nickel plated contacts, cable gland and sealing, strain relief and protection against kinking

IP 44
Std. Pack. Qty: 5

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 13101 | 13102 | | | | |
| 63 | 4 | | 13105 | 13106 | 13107 | | |
| 63 | 5 | | 13111 | 13112 | | | |

**Plug PowerTOP**
highly heat resistant contact carrier, nickel plated contacts, cable gland and external cable grip

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 3918 | 3919 | 3920 | | | |
| 16 | 4 | 3925 | 3927 | 3926 | 3928 | | |
| 16 | 5 | 3934 | 3936 | 3935 | | | |
| 32 | 3 | 3942 | 3943 | 3944 | | | |
| 32 | 4 | 3945 | 3946 | 3947 | 3948 | | |
| 32 | 5 | 3951 | 3952 | 3977 | | | |

**Angled plug VarioTOP**
cable entry hood rotating up to 60° to the left or the right,
3981 and 3980: in colour code
3983 and 3982: in electric grey

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 5 | | 3981 | 3980 | | | |
| 16 | 5 | | 3983 | 3982 | | | |

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request.

**Angled plug**
with grommet, nickel plated, contacts

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 1410 | 1411 | | | | |

**Angled plug**
with grommet, nickel plated, contacts

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | 1410 | 891 | 315 | | | |

**Angled plug**
with grommet, nickel plated, contacts

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 32 | 3 | 3312 | 3306 | | | | |
| 32 | 4 | | 3646 | 3987 | | | |
| 32 | 5 | | 3424 | 3266 | | | |

**Plug AM-TOP**
single part body, cable gland and sealing, strain relief and protection against kinking

IP 67
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 277 | 278 | 279 | | | |
| 16 | 4 | 280 | 281 | 282 | 283 | 284 | 285 |
| 16 | 5 | 286 | 287 | 288 | | | |
| 32 | 3 | 289 | 290 | 291 | | | |
| 32 | 4 | 292 | 293 | 294 | 295 | 296 | 297 |
| 32 | 5 | 298 | 299 | 300 | | | |

**Plug PowerTOP**
with external cable grip, highly heat resistant contact carrier and nickel plated contacts

IP 67
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 3794 | 3796 | 3799 | | | |
| 16 | 4 | 3807 | 3811 | 3809 | 3810 | | |
| 16 | 5 | 3819 | 3823 | 3821 | | | |
| 32 | 3 | 3829 | 3830 | 3832 | | | |
| 32 | 4 | 3839 | 3844 | 3841 | 3842 | | |
| 32 | 5 | 3851 | 3855 | 3853 | | | |

**Plug PowerTOP Xtra**
rubberised grip area, highly heat resistant contact carrier, frame terminals, nickel plated contacts, cable gland and sealing, strain relief and protection against kinking

IP 67
Std. Pack. Qty: 5

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 13201 | 13202 | 13203 | | | |
| 63 | 4 | 13204 | 13205 | 13206 | 13207 | 13208 | 13209 |
| 63 | 5 | 13210 | 13211 | 13212 | 13213 | | 13214 |
| 125 | 3 | 13215 | 13216 | | | | |
| 125 | 4 | 13217 | 13218 | 13219 | 13220 | | |
| 125 | 5 | 13223 | 13224 | 13225 | 13226 | | 13227 |

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

**Wall mounted inlet**
for internal and external fixing, for hinged lids for retrofit see part no. 41482 and 41489

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 213

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 843 | 844 | | | | |

**Wall mounted inlet**
with hinged lid, for internal and external fixing

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 212

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 846 | 847 | | | | |

**Wall mounted inlet**
for external fixing, for hinged lids for retrofit see part no. 41482 and 41489

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 221

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | | | 800 | | | |
| 16 | 5 | | | 801 | | | |
| 32 | 3 | | 802 | | | | |
| 32 | 4 | | | 803 | | | |
| 32 | 5 | | | 804 | | | |

**Wall mounted inlet**
enclosure base with stamped recess for quick cutting out

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 32

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 331 | 332 | 333 | | | |
| 16 | 4 | 334 | 335 | 336 | 337 | 921 | 922 |
| 16 | 5 | 340 | 341 | 342 | 2359 | 2668 | 2400 |
| 32 | 3 | 343 | 344 | 345 | | | |
| 32 | 4 | 346 | 347 | 348 | 349 | | |
| 32 | 5 | 352 | 353 | 354 | 2386 | | |

**Wall mounted inlet**
for a suitable watertight protective cover for 63 A see part no. 40434

IP 67
Std. Pack. Qty: 5/3
Drawing: 2 MB 36

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 1216 | 1107 | 1217 | | | |
| 63 | 4 | 355 | 356 | 357 | 358 | | |
| 63 | 5 | 359 | 360 | 361 | | | |
| 125 | 4 | 362 | 363 | 364 | 365 | | |
| 125 | 5 | 366 | 367 | 368 | | | |

**Hinged lid for retrofitting for wall** mounted inlets

Std. Pack. Qty: 10

| Description | Part no. |
|---|---|
| for part no. 843 and 844 | 41482 |
| for part no. 800, 801 and 3517 | 41489 |

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

**Panel mounted inlet**

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 73

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | 371 | 372 | 373 | | | |
| 16 | 5 | | | 379 | | | |
| 32 | 3 | 380 | 381 | 382 | | | |
| 32 | 4 | 383 | 384 | 385 | 386 | | |
| 32 | 5 | | | 391 | | | |

**Panel mounted inlet**
with hinged lid

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 43

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | 392 | 393 | 394 | 395 | | |
| 16 | 5 | 398 | 399 | 400 | | | |
| 32 | 3 | 401 | 402 | 403 | | | |
| 32 | 4 | 404 | 405 | 406 | 407 | | |
| 32 | 5 | 410 | 411 | 412 | | | |

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

**Panel mounted inlet**
16 A: flange 66 x 66 mm, fixing distance 52 x 52 mm, 32 A: flange 72 x 72 mm, fixing distance 60 x 60 mm, a retaining nose to hold the hinged lid of the connector must be provided by the customer in order to ensure satisfactory locking

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 68

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 5 | | | 1408 | | | |
| 32 | 5 | | | 1409 | | | |

**Panel mounted inlet**
flange 75 x 75 mm, fixing distance 60 x 60 mm, a retaining nose to hold the hinged lid of the connector must be provided by the customer in order to ensure satisfactory locking

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 68/853

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 5 | | | 853 | | | |

**Panel mounted inlet**
nickel plated contacts, a retaining nose to hold the hinged lid of the connector must be provided by the customer in order to ensure satisfactory locking

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 173/2

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 812 | | | | |
| 16 | 4 | | 837 | 813 | 814 | | |
| 16 | 5 | | | 815 | | | |
| 32 | 3 | | 817 | | | | |
| 32 | 4 | | 838 | 819 | 820 | | |
| 32 | 5 | | | 821 | | | |

**Panel mounted inlet**
highly heat resistant contact carrier, nickel plated contacts, a retaining nose to hold the hinged lid of the connector must be provided by the customer in order to ensure satisfactory locking

IP 44
Std. Pack. Qty: 5
Drawing: 2 MB 155

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | | 1981 | | | | |
| 63 | 4 | | 1984 | 1982 | 824 | | |
| 63 | 5 | | | 1688 | | | |

**Panel mounted inlet**
nickel plated contacts, a retaining nose to hold the hinged lid of the connector must be provided by the customer in order to ensure satisfactory locking

IP 67
Std. Pack. Qty: 10
Drawing: 2 MB 187/2

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 825 | 826 | | | | |
| 16 | 4 | | 839 | 827 | 828 | | |
| 16 | 5 | | | 829 | | | |
| 32 | 3 | 830 | 831 | | | | |
| 32 | 4 | | 840 | 832 | 833 | | |
| 32 | 5 | | | 834 | | | |

**Panel mounted inlet**
highly heat resistant contact carrier, nickel plated contacts
63 A: a retaining nose to hold the hinged lid of the connector must be provided by the customer in order to ensure satisfactory locking

IP 67
Std. Pack. Qty: 5
Drawing: 2 MB 166

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 835 | 836 | | | | |
| 63 | 4 | | 3704 | 3656 | 3657 | | |
| 63 | 5 | | | 3658 | | | |
| 125 | 3 | | 3665 | | | | |
| 125 | 4 | | 3413 | 3583 | 3600 | | |
| 125 | 5 | | | 1983 | | | |

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request.

**Phase sequence test plug**
to VDE 0413, part 7,
DIN-EN 61557-7

IP 44
Std. Pack. Qty: 5

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | | 3527 | 3458 | 3459 | | |
| 16 | 5 | | 3231 | 1414 | | | |
| 32 | 4 | | 3528 | 3460 | 3461 | | |
| 32 | 5 | | 3232 | 1415 | | | |
| 63 | 4 | | 3420 | 1436 | 3917 | | |
| 63 | 5 | | | 1437 | | | |

3

# Phase sequence test plug

## Enables safe control of the direction of the rotating field for CEE receptacles.

According to VDE 0100-550 part 4.7 rotary current receptacles must be connected such that a right-hand rotating field is achieved - the receptacles seen from front in clockwise direction.

The test plug differs from a standard plug by its transparent enclosure indicating a right-hand or left-hand rotating field or a missing phase by means of two control lamps.

**Correct rotating field: Green lamp lights up.**

**Incorrect rotating field: Red lamp lights up.**

**Phase missing: Both lamps light up.**

The control lamps inside the transparent enclosure are arranged so as to be perfectly visible from all sides.

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request.

**Phase inverter plug AM-TOP**
single part body, cable gland and sealing, strain relief and protection against kinking

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | | 338 | 339 | | | |
| 16 | 5 | | 318 | 319 | | | |
| 32 | 4 | | 396 | 397 | | | |
| 32 | 5 | | 321 | 322 | | | |

**Phase inverter plug ProTOP**
cable gland and sealing

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 5 | | | 3319A | | | |
| 32 | 5 | | | 3322 | | | |

**Phase inverter plug AM-TOP**
single part body

IP 67
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | | 3338 | 3339 | | | |
| 16 | 5 | | | 325 | | | |
| 32 | 4 | | 3340 | 3341 | | | |
| 32 | 5 | | 327 | 328 | | | |

**Phase inverter plug VarioTOP**
cable entry hood rotating up to 60° to the left or the right

IP 44
Std. Pack. Qty: 5

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 5 | | | 859 | | | |

## Phase inverter plug

# 4- and 5-pole phase inverters – making life easier.

If three phase equipment rotates in the wrong direction the MENNEKES phase inverter plug solves the problem rapidly and safely.

Simply depress the latch with a screw-driver and turn the insulating element in which the two phase pins are fitted and the motor will rotate in the correct direction. Anybody can do this – no specialised knowledge of the workings of electrical equipment is required.

Using a phase inverter to change over the two phase conductors is a recognised technique of “operating electrical equipment“. Two outer conductors rotatable through 180°.

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

**Wall mounted phase inverter inlet**

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 221

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 5 | | | 3517 | | | |
| 32 | 5 | | | 3523 | | | |

**Wall mounted phase inverter inlet**

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 32

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | | 3342 | 3343 | | | |
| 16 | 5 | | | 2511 | | | |
| 32 | 4 | | 3345 | 3346 | | | |
| 32 | 5 | | 3347 | 2478 | | | |

**Panel mounted phase inverter inlet**

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 73

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | | 3357 | 855 | | | |
| 16 | 5 | | | 329 | | | |
| 32 | 4 | | 3367 | 3368 | | | |
| 32 | 5 | | 913 | 330 | | | |

**Panel mounted phase inverter inlet**
with hinged lid

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 43

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 4 | | 3348 | 3350 | | | |
| 16 | 5 | | | 20970 | | | |
| 32 | 4 | | 3355 | 3356 | | | |
| 32 | 5 | | 3717 | 21241 | | | |

**Panel mounted phase inverter inlet**
flange 75 x 75 mm,
fixing distance 60 x 60 mm,
a retaining nose to hold the hinged lid of the connector must be provided by the customer in order to ensure satisfactory locking

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 68/853

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 5 | | | 854 | | | |

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. Products with pilot contact available on request.

**Connector AM-TOP**
single part body

* For use on camping sites, please select type 180AC

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 509 | 510* | 511 | | 2441 | 2517 |
| 16 | 4 | 512 | 513 | 514 | 515 | 516 | 517 |
| 16 | 5 | 518 | 519 | 5 | 2026 | 2193 | 2495 |
| 32 | 3 | 521 | 522 | 523 | | 2196 | 2674 |
| 32 | 4 | 524 | 525 | 526 | 527 | 528 | 529 |
| 32 | 5 | 530 | 531 | 6 | 2027 | 2245 | 2493 |

**Connector ProTOP**
cable gland and sealing

* For use on camping sites, please select type 180AC

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 179A | 180A* | 181A | | | |
| 16 | 4 | | 193A | 194A | 195A | | |
| 16 | 5 | | | 15A | | | |
| 32 | 3 | 121 | 122 | | | | |
| 32 | 4 | | 125 | 126 | 127 | | |
| 32 | 5 | | | 16A | | | |

**Connector StarTOP**
screwless, with insulation displacing technique, SafeCONTACT, cable gland and sealing

* For use on camping sites, please select type 180AC

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 979 | 980* | | | | |
| 16 | 4 | | 993 | 994 | 965 | 996 | |
| 16 | 5 | | | 35 | | | |
| 32 | 3 | 725 | 731 | | | | |
| 32 | 4 | | 761 | 763 | 765 | | |
| 32 | 5 | | | 36 | | | |

**Connector PowerTOP Xtra**
X-CONTACT, rubberised grip area, frame terminals, cable gland and sealing

IP 44
Std. Pack. Qty: 5

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 14101 | 14102 | | | | |
| 63 | 4 | | 14105 | 14106 | 14107 | | |
| 63 | 5 | | 14111 | 14112 | | | |



NEW

X-CONTACT INSIDE

**Get more information on the new generaton of contact sleeves:**
on page 26 or at www.x-contact.info

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. Products with pilot contact available on request.

**Connector PowerTOP**
highly heat resistant contact carrier, cable gland and external cable grip

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 3953 | 3954 | | | | |
| 16 | 4 | 3956 | 3957 | 3958 | 3959 | | |
| 16 | 5 | 3962 | 3963 | 3964 | | | |
| 32 | 3 | 3965 | 3966 | 3967 | | | |
| 32 | 4 | | 3969 | 3970 | 3971 | | |
| 32 | 5 | 3974 | 3975 | 3976 | | | |

**Angled connector**
with grommet

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | | 1438 | | | | |

**Hanging connector PowerTOP**
with highly heat resistant contact carrier, cable gland and external cable grip, hanging clip

IP 44
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 5 | | | 3778 | | | |
| 32 | 5 | | | 3999 | | | |

**Connector PowerTOP**
with external cable grip and highly heat resistant contact carrier

IP 67
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 3859 | 3860 | 3862 | | | |
| 16 | 4 | 3869 | 3873 | 3871 | 3872 | | |
| 16 | 5 | 3879 | 3883 | 3881 | | | |
| 32 | 3 | 3887 | 3888 | 3891 | | | |
| 32 | 4 | 3896 | 3899 | 3897 | 3898 | | |
| 32 | 5 | 3905 | 3909 | 3907 | | | |

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. Products with pilot contact available on request.

**Connector AM-TOP**
single part body, cable gland and sealing, strain relief and protection against kinking

IP 67
Std. Pack. Qty: 10

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 16 | 3 | 539 | 540 | 541 | | | |
| 16 | 4 | 542 | 543 | 544 | 545 | 546 | 547 |
| 16 | 5 | 548 | 549 | 550 | | | |
| 32 | 3 | 551 | 552 | 553 | | | |
| 32 | 4 | 554 | 555 | 556 | 557 | 558 | 559 |
| 32 | 5 | 560 | 561 | 562 | | | |

**Connector PowerTOP Xtra**
X-CONTACT, rubberised grip area, highly heat resistant contact carrier, frame terminals, cable gland and sealing, strain relief and protection against kinking

IP 67
Std. Pack. Qty: 5

| A | P | 110 V 50 a. 60 Hz | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz | >50 - 500 V 100-300 Hz | >50 - 500 V 300-500 Hz |
|---|---|---|---|---|---|---|---|
| 63 | 3 | 14201 | 14202 | 14203 | | | |
| 63 | 4 | 14204 | 14205 | 14206 | 14207 | 14208 | 14209 |
| 63 | 5 | 14210 | 14211 | 14212 | 14213 | | 14214 |
| 125 | 3 | 14215 | 14216 | | | | |
| 125 | 4 | 14217 | 14218 | 14219 | 14220 | | |
| 125 | 5 | 14223 | 14224 | 14225 | 14226 | | 14227 |

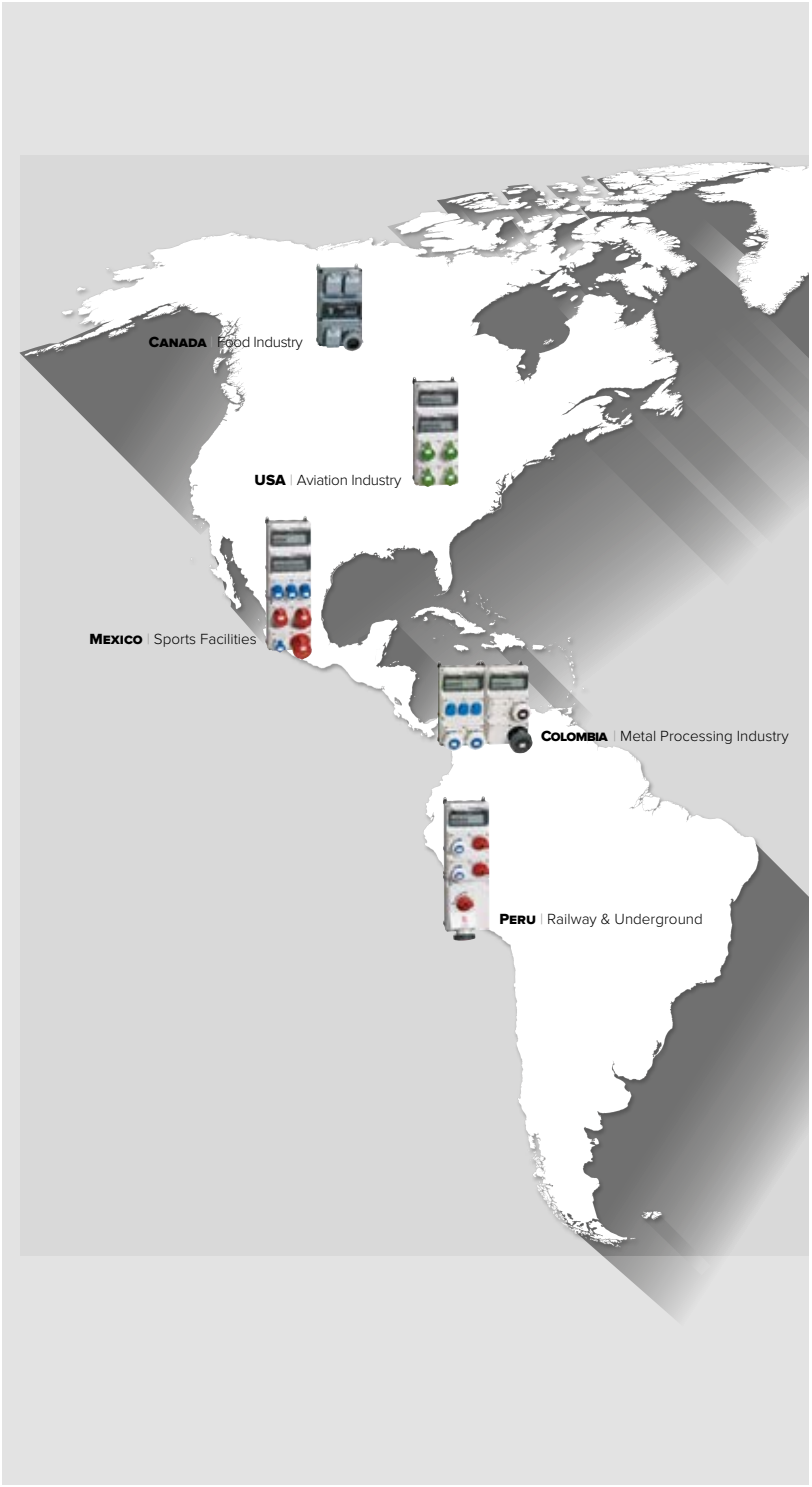
**Hanging clip**
or PowerTOP plugs and connectors

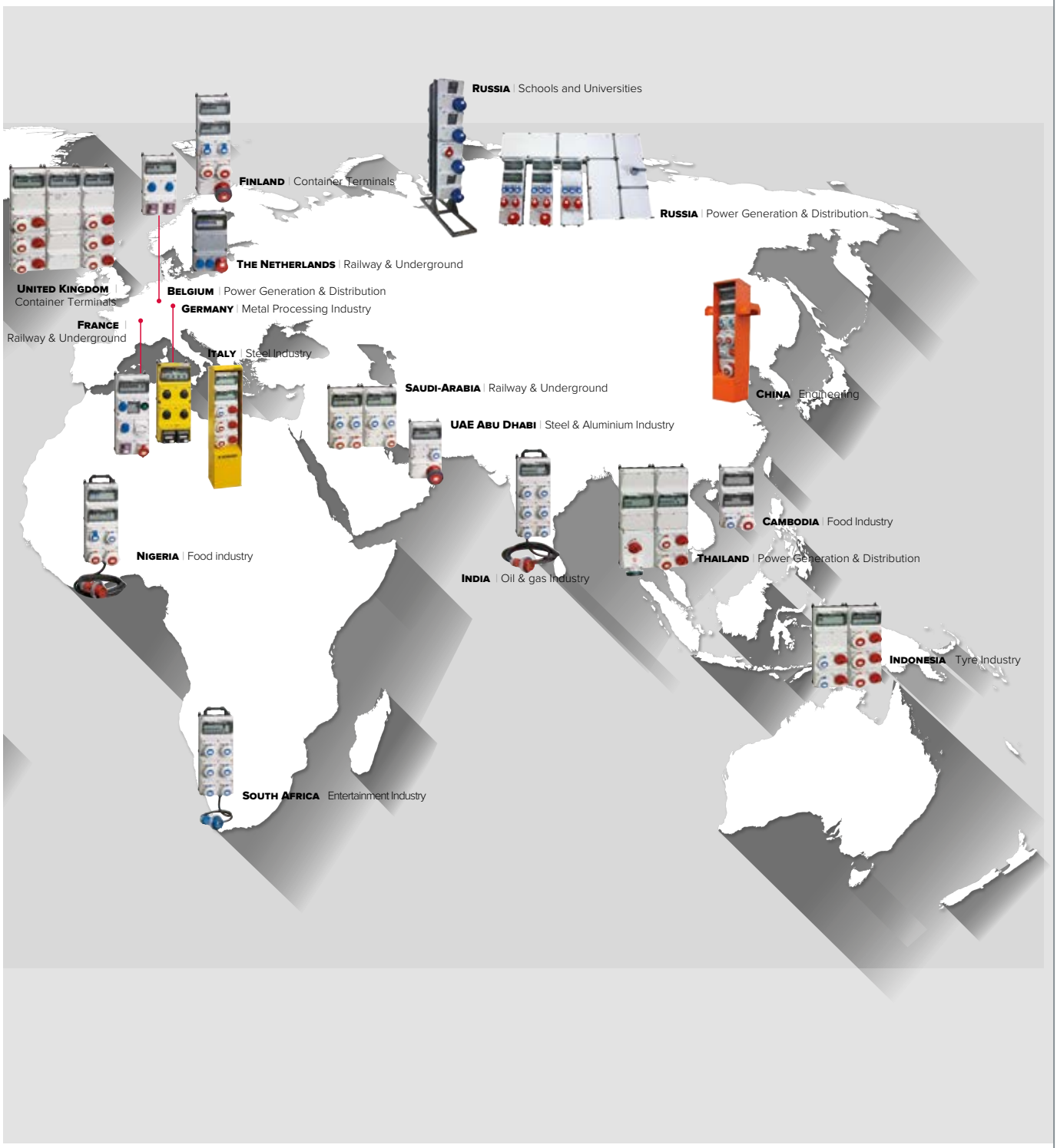
Std. Pack. Qty: 100

| Description | Part no. |
|---|---|
| for 16 A, 3 to 5 p and 32 A, 3 + 4 p | 15453000 |
| for 32 A, 5 p | 15452000 |

# AMAXX® Receptacle combinations
## for worldwide use.

Our AMAXX® receptacle combinations are versatile and highly customisable. Therefore, AMAXX® is in operation worldwide in various fields, even under adverse conditions. Our slogan „AMAXX® your Industry!“ goes round the world. Many international reference projects of satisfied customers are proof.
What could be the reason? MENNEKES is the global specialist for industrial plugs and receptacles with over 80 years of experience. We should also mention the numerous options of the AMAXX® combination programme and our passion to develop customised solutions – right up to one-off production. With new features to meet international requirements, such as UL listed enclosures and components, we are even better positioned in new markets.






AMAXX®
by MENNEKES

## Railway and Underground
Metro Riyadh, Saudi Arabia

**CUSTOMISED PROJECT ENGINEERING**

- according to national standards and specifications of railway operators
- 2 AMAXX® with 3 segments
- **Protection type IP 67**
- **CEE receptacles 16 A**
- Miniature circuit breaker (MCB)

**BENEFITS OF AMAXX®**

- Manufacture based on EN/IEC 60309 and 61439

4

## Entertainment Industry
Lighthouse Chapel, South Africa

**CUSTOMISED PROJECT ENGINEERING**

- AMAXX® with 4 segments Mobile with carrying handle
- **Protection type IP 67**
- **Supply cable of 1 m length with CEE plug 32 A**
- CEE receptacles
- RCD and MCB

**BENEFITS OF AMAXX®**

- Manufacture according to EN/IEC 60309 and 61439

## Food Industry

Nigerian Bottling Company, Nigeria

**CUSTOMISED PROJECT ENGINEERING**

- AMAXX® with 4 segments
  Mobile with carrying handle
- **Protection type IP 67**
- **Supply cable of 20 m length with CEE plug 32 A**
- **Grounding-type receptacle British standard (IP 68)**
- CEE receptacles
- RCD and MCB

**BENEFITS OF AMAXX®**

- Manufacture according to
  EN / IEC 60309 and 61439

4

## Steel & Aluminium Industry

EMAL (Emirates Aluminium), United Arab Emirates, Abu Dhabi

**CUSTOMISED PROJECT ENGINEERING**

- AMAXX® with 3 segments
- **Protection type IP 67**
- **CEE receptacles up to 63 A**
- RCD and MCB

**BENEFITS OF AMAXX®**

- Manufacture based on
  EN / IEC 60309 and 61439

**Variety of versions.**

- Protection type: IP 44 and IP 67
- Enclosure made of high-quality plastic or AMELAN in aggressive atmospheres with high resistance to chemicals as well as highly heat resistant contact carrier and nickel plated contacts
- Equipped with: CEE receptacles from 16 A, 3 p up to 63 A, 5 p, grounding-type receptacles in acc. with many national standards, DUO receptacles switched and interlocked from 16 A, 3 p up to 32 A, 5 p as well as fuse elements



**You can rely on it.**

**MENNEKES quality: tested and certified.**
Like all other MENNEKES combinations, the AMAXX® products are also subject to the extensive MENNEKES quality control. Each AMAXX® combination is thoroughly tested and certified prior to delivery.

**ZERTIFIKAT**

CERTIFICATE

MENNEKES
MY POWER CONNECTION

**für stückgeprüfte Qualität nach DIN EN 61439.**

for individually tested quality according to IEC 61439.

**Hiermit bestätigen wir, dass diese Steckdosen-Kombination einer Stückprüfung unterzogen wurde.**
Herewith we confirm that this receptacle combination has passed a routine test.

**Der MENNEKES-Sicherheitstest berücksichtigt nicht nur die elektrischen Prüfanforderungen nach DIN EN 61439, sondern beinhaltet darüber hinaus auch eine allpolige Hochspannungsprüfung.**
The MENNEKES safety test not just include the requirements for electrical tests acc. to IEC 61439 but also a high voltage test for all poles.

Dietmar Löcker
**Bereichsleiter Qualität** / Division Manager Quality

**MENNEKES**
Elektrotechnik GmbH & Co. KG
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57399 KIRCHHUNDEM / GERMANY

Phone: +49 2723 41-1
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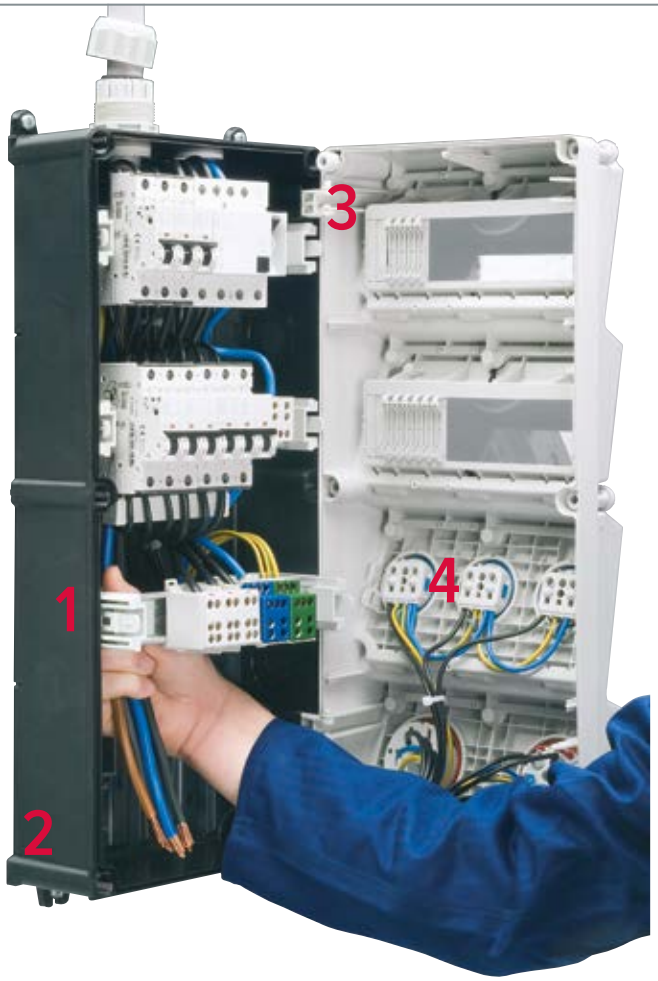
www.MENNEKES.de




**Easy to install. Sophisticated details.**

1

**Liftable DIN rails**
Liftable DIN rails and a large, smooth wiring space significantly ease the insertion as well as connection of large cables

2

**One-man installation**
Shorter installation times with the new, user-friendly external fixing

3

**Hinged cover**
The hinged cover, which opens to one side, eases connection work

4

**Ready for application**
All combinations are pre-wired for installation and tested for electric safety and quality

Video: mounting instructions



- Generally angled insertion direction, also with receptacles SCHUKO®

- Both hands free because inspection windows fold downwards

- Especially fast opening and closing of the enclosure due to captive double-threaded cover screws


- Window can be locked with a padlock, enclosure can be sealed

## Standard for low voltage switchgear and control gear assemblies - IEC 61439.

The standard IEC 61439 replaces IEC 60439 and describes the design and test specifications for low voltage switchgear and control gear assemblies. The new standard has implications for the distribution of electrical energy in industry, domestic electrical installations and on construction sites.

In the future two main standards will be required for each design of a low voltage switchgear and control gear assembly:
- the basic standard that is referenced as „Part 1“ in the specific standards;
- the applicable parts 2 to 7 of the switchgear and control gear assembly standard that deals with the particularities of the application.

The demands imposed on receptacle combinations that must be classified as a switchgear and control gear assembly have changed. Structure and manner of verification have been redefined.

In the Service tab on pages 98 to 101 you will find additional information, excerpts from the standard for low voltage switchgear and control gear assemblies - IEC 61439, and a listing of the agreements between manufacturers of the switchgear and control gear assemblies and users.

### What has changed with the switchgear standard – IEC 61439 and what are the benefits for the MENNEKES customer?

4

- **Product safety**
  In the future, all low voltage switchgear and control gear assemblies must be tested in accordance with IEC 61439. The requirement of design verification is new. Design verification replaces the type test. MENNEKS receptacle combinations are subjected to additional standard-compliant routine tests. The outgoing circuits are individually loaded with the respective rated current.

  Your advantage: This guarantees an even higher standard of safety.

- **Clear documentation**
  Significant rating plate – clearly defined mandatory information, such as rated diversity factor RDF (previously: simultaneity factor).

  Your advantage: The main technical product information is visible on the rating plate at a glance.

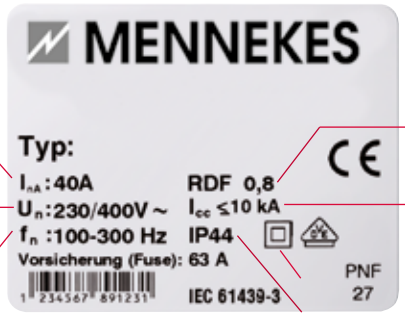
- **Clear specifications**
  Requests for a custom solution require clearly defined specifications by the user (such as installation site, ambient temperatures, etc.).

  Your advantage: You get a need-based solution by MENNEKES tailored to the specific application.

- **Distinction:**
  Original manufacturer – manufacturer
  If a product is modified on site, the company in question is considered to be the manufacturer. In this case a new verification and documentation are required from this company.

  Your advantage: For receptacle combinations that are pre-wired for installation, MENNEKES is the original manufacturer and manufacturer and therefore bears the complete product responsibility.

### Example – rating plate




**$I_{nA}$** Rated current of the switchgear and control gear assembly

**$U_n$** Rated voltage

**$f_n$** Rated frequency

**RDF** Rated diversity factor

**$I_{cc}$** Conditional rated short-circuit current

Protection class

**IP** Ingress protection

## Receptacle combinations – Wall mounted, AMAXX®

Pre-wired for installation, IP 44, enclosure front cover electric grey RAL 7035, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm). Fusing behind a transparent cover. For drawings and dimensions see page 114.



**CEE receptacles**

**CEE receptacles**

**Receptacles SCHUKO®**

2 SCHUKO® 16 A, 230 V

**Fusing**

1 RCD 25 A, 2 p, 0.03 A
2 MCB's 16 A, 1 p, C

**Connection**

For 1 cable up to 3 x 10 mm²

**Connection and load values**

Pre-fuse max. 40 A
$I_{nA}$ 38 A
RDF 0.8

**Enclosure size**

130 x 225 mm (H x W)

**Part no.**

**910001**

**CEE receptacles**

**CEE receptacles**

**Receptacles NF**

2 NF 16 A, 2 p+E, 230 V

**Fusing**

1 RCD 25 A, 2 p, 0.03 A
2 MCB's 16 A, 1 p+N, C

**Connection**

For 1 cable up to 3 x 6 mm²

**Connection and load values**

Pre-fuse max. 25 A
$I_{nA}$ 25 A
RDF 1

**Enclosure size**

130 x 225 mm (H x W)

**Part no.**

**910205**

**CEE receptacles**

**CEE receptacles**

**Receptacles SCHUKO®**

3 SCHUKO® 16 A, 230 V

**Fusing**

1 RCD 40 A, 4 p, 0.03 A
3 MCB's 16 A, 1 p, C

**Connection**

For 1 cable up to 5 x 10 mm²

**Connection and load values**

Pre-fuse max. 16 A
$I_{nA}$ 16 A
RDF 1

**Enclosure size**

260 x 225 mm (H x W)

**Part no.**

**920003**

**CEE receptacles**

**CEE receptacles**

**Receptacles NF**

3 NF 16 A, 2 p+E, 230 V

**Fusing**

1 RCD 40 A, 4 p, 0.03 A
3 MCB's 16 A, 1 p+N, C

**Connection**

For 1 cable up to 5 x 10 mm²

**Connection and load values**

Pre-fuse max. 63 A
$I_{nA}$ 16 A
RDF 1

**Enclosure size**

260 x 225 mm (H x W)

**Part no.**

**920043**

## Receptacle combinations – Wall mounted, AMAXX®

Pre-wired for installation, IP 44, enclosure front cover electric grey RAL 7035, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm). Fusing behind a transparent cover. For drawings and dimensions see page 114.



**CEE receptacles**

**CEE receptacles**
3 CEE 16 A, 3 p, 230 V

**Receptacles SCHUKO®**

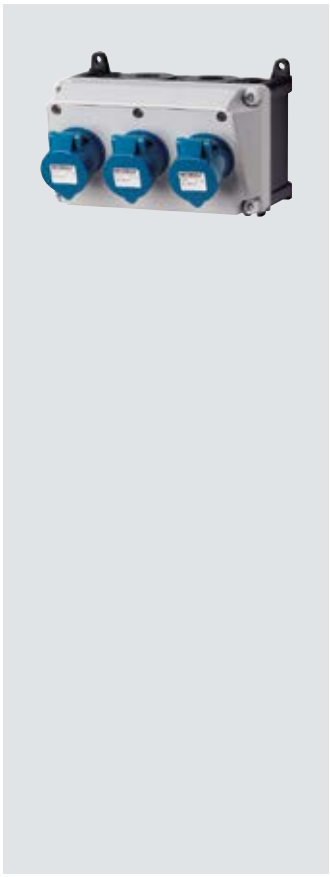
**Fusing**
1 RCD 40 A, 4 p, 0.03 A
3 MCB's 16 A, 1 p, C

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**
Pre-fuse max. 40 A
$I_{nA}$ 40 A
RDF 1

**Enclosure size**
650 x 112.5 mm (H x W)

**Part no.**
**960019**



**CEE receptacles**

**CEE receptacles**
3 CEE 16 A, 3 p, 230 V

**Receptacles SCHUKO®**

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**
Pre-fuse max. 16 A
$I_{nA}$ 16 A
RDF 1

**Enclosure size**
130 x 225 mm (H x W)

**Part no.**
**910015**

**CEE receptacles**
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
2 SCHUKO® 16 A, 230 V

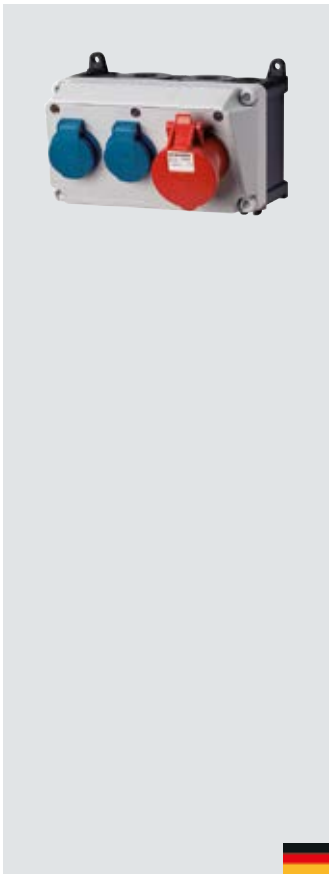
**Fusing**
1 RCD 40 A, 4 p, 0.03 A
1 MCB 16 A, 3 p, C
1 MCB 16 A, 1 p, C

**Connection**
For 1 flex. cable up to 5 x 10 mm²

**Connection and load values**
Pre-fuse max. 63 A
$I_{nA}$ 32 A
RDF 1

**Enclosure size**
650 x 112.5 mm (H x W)

**Part no.**
**960051**



**CEE receptacles**
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
2 SCHUKO® 16 A, 230 V

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**
Pre-fuse max. 16 A
$I_{nA}$ 16 A
RDF 1

**Enclosure size**
130 x 225 mm (H x W)

**Part no.**
**910007**

## Receptacle combinations – Wall mounted, AMAXX®

Pre-wired for installation, IP 44, enclosure front cover electric grey RAL 7035, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm). Fusing behind a transparent cover. For drawings and dimensions see page 114.



**CEE receptacles**
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles British standard**
2 x 13 A, 2 p+E

**Fusing**

**Connection**
For 1 cable up to 5 x 6 mm²

**Connection and load values**
Pre-fuse max. 16 A
$I_{nA}$ 16 A
RDF 1

**Enclosure size**
130 x 225 mm (H x W)

**Part no.**
**910694**

**CEE receptacles**
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
3 SCHUKO® 16 A, 230 V

**Fusing**
1 MCB 16 A, 3 p, C
1 MCB 16 A, 1 p, C

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**
Pre-fuse max. 63 A
$I_{nA}$ 32 A
RDF 1

**Enclosure size**
650 x 112.5 mm (H x W)

**Part no.**
**960004**

**CEE receptacles**
2 CEE 16 A, 5 p, 400 V
switched, with mechanical
DUO-interlock

**CEE receptacles**

**Receptacles SCHUKO®**

**Fusing**
2 MCB's 16 A, 3 p, C

**Connection**
For 2 cables up to 5 x 25 mm²

**Connection and load values**
Pre-fuse max. 100 A
$I_{nA}$ 32 A
RDF 1

**Enclosure size**
390 x 225 mm (H x W)

**Part no.**
**930031**

**CEE receptacles**
2 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
3 SCHUKO® 16 A, 230 V

**Fusing**
2 MCB's 16 A, 3 p, C
3 MCB's 16 A, 1 p, C

**Connection**
For 2 cables up to 5 x 25 mm²

**Connection and load values**
Pre-fuse max. 63 A
$I_{nA}$ 46 A
RDF 1

**Enclosure size**
390 x 225 mm (H x W)

**Part no.**
**930003**

# Receptacle combinations – Wall mounted, AMAXX®

Pre-wired for installation, IP 44, enclosure front cover electric grey RAL 7035, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm). Fusing behind a transparent cover. For drawings and dimensions see page 114.



**CEE receptacles**
2 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles British standard**
3 x 13 A, 2 p+E

**Fusing**
2 MCB's 16 A, 3 p, C
3 MCB's 13 A, 1 p, C

**Connection**
For 2 cables up to 5 x 16 mm²

**Connection and load values**

**Enclosure size**
390 x 225 mm (H x W)

**Part no.**
**930734**

**CEE receptacles**
1 CEE 32 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
2 SCHUKO® 16 A, 230 V

**Fusing**
1 MCB 32 A, 3 p, C
2 MCB's 16 A, 1 p, C

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**
Pre-fuse max. 63 A
$I_{nA}$ 48 A
RDF 1

**Enclosure size**
260 x 225 mm (H x W)

**Part no.**
**920011**

**CEE receptacles**
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**Data port sockets**
2 Cepex RJ45, 2 fold Cat.6

**Receptacles SCHUKO®**
2 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
2 MCB's 16 A, 1 p, C

**Connection**
For 2 cables up to 5 x 25 mm²

**Connection and load values**
Pre-fuse max. 40 A
$I_{nA}$ 40 A
RDF 1

**Enclosure size**
520 x 225 mm (H x W)

**Part no.**
**940018**

**CEE receptacles**
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
3 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
3 MCB's 16 A, 1 p, C

**Connection**
For 2 cables up to 5 x 25 mm²

**Connection and load values**
Pre-fuse max. 40 A
$I_{nA}$ 40 A
RDF 0.8

**Enclosure size**
520 x 225 mm (H x W)

**Part no.**
**940005**

## Receptacle combinations – Wall mounted, AMAXX®

Pre-wired for installation, IP 44, enclosure front cover electric grey RAL 7035, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm). Fusing behind a transparent cover. For drawings and dimensions see page 114.



**CEE receptacles**

1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**

3 SCHUKO® 16 A, 230 V

**Fusing**

1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
3 MCB's 16 A, 1 p, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 63 A
$I_{nA}$ 54 A
RDF 0.85

**Enclosure size**

390 x 225 mm (H x W)

**Part no.**

**930011**

**CEE receptacles**

1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**

6 SCHUKO® 16 A, 230 V

**Fusing**

1 RCD 63 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
6 MCB's 16 A, 1 p, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 63 A
$I_{nA}$ 52 A
RDF 0.65

**Enclosure size**

650 x 225 mm (H x W)

**Part no.**

**950004**

**CEE receptacles**

1 CEE 63 A, 5 p, 400 V
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles NF**

4 NF 16 A, 2 p+E, 230 V

**Fusing**

1 RCD 63 A, 4 p, 0.03 A
1 MCB 32 A, 3 p+N, C
1 MCB 16 A, 3 p+N, C
4 MCB's 16 A, 1 p+N, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 63 A
$I_{nA}$ 63 A
RDF 0.5

**Enclosure size**

650 x 225 mm (H x W)

**Part no.**

**950022**


**CEE receptacles**

1 CEE 63 A, 5 p, 400 V
1 CEE 32 A, 5 p, 400 V
switched, with mechanical DUO-interlock

**CEE receptacles**

**Receptacles SCHUKO®**

4 SCHUKO® 16 A, 230 V

**Fusing**

1 RCD 63 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
4 MCB's 16 A, 1 p, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 63 A
$I_{nA}$ 63 A
RDF 0.75

**Enclosure size**

650 x 225 mm (H x W)

**Part no.**

**950026**

# Receptacle combinations – Wall mounted, AMAXX®

Pre-wired for installation, IP 67, enclosure front cover electric grey RAL 7035, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm). Fusing behind a transparent cover. For drawings and dimensions see page 114.



**CEE receptacles**

1 CEE 16 A, 5 p, 400 V
switched, with mechanical DUO-interlock

**CEE receptacles**

**Receptacles SCHUKO®**

**Fusing**

**Connection**

For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Enclosure size**

130 x 225 mm (H x W)

**Part no.**

**7626**

**CEE receptacles**

1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**

3 SCHUKO® 16 A, 230 V

**Fusing**

1 RCD 40 A, 4 p, 0.03 A
1 MCB 16 A, 3 p, C
3 MCB's 16 A, 1 p, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 100 A
$I_{nA}$ 32 A
RDF 1

**Enclosure size**

390 x 225 mm (H x W)

**Part no.**

**930022**

**CEE receptacles**

1 CEE 16 A, 4 p, 400 V

**CEE receptacles**

**Receptacles NF**

3 NF 16 A, 2 p+E, 230 V

**Fusing**

1 RCD 40 A, 4 p, 0.03 A
1 MCB 16 A, 3 p, C
3 MCB's 16 A, 1 p+N, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 100 A
$I_{nA}$ 26 A
RDF 0.8

**Enclosure size**

390 x 225 mm (H x W)

**Part no.**

**930520**

**CEE receptacles**

1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**

4 SCHUKO® 16 A, 230 V

**Fusing**

**Connection**

For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Enclosure size**

650 x 112.5 mm (H x W)

**Part no.**

**960031**

## Receptacle combinations – Wall mounted, AMAXX®

Pre-wired for installation, IP 67, enclosure front cover electric grey RAL 7035, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm). Fusing behind a transparent cover. For drawings and dimensions see page 114.



**CEE receptacles**

2 CEE 16 A, 4 p, 400 V
switched, with mechanical DUO-interlock

**CEE receptacles**

2 CEE 16 A, 3 p, 230 V switched, with mechanical DUO-interlock

**Receptacles SCHUKO®**

**Fusing**

2 MCB's 16 A, 3 p, C
2 MCB's 16 A, 1 p+N, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 100 A
$I_{nA}$ 38 A
RDF 0.8

**Enclosure size**

650 x 225 mm (H x W)

**Part no.**

**950034**

**CEE receptacles**

1 CEE 32 A, 5 p, 400 V
2 CEE 16 A, 4 p, 400 V

**CEE receptacles**

3 CEE 16 A, 3 p, 230 V

**Receptacles SCHUKO®**

**Fusing**

1 MCB 32 A, 3 p+N, C
1 MCB 16 A, 3 p, C
1 MCB 16 A, 1 p+N, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 100 A
$I_{nA}$ 45 A
RDF 0.45

**Enclosure size**

520 x 225 mm (H x W)

**Part no.**

**940028**

**CEE receptacles**

2 CEE 32 A, 5 p, 400 V
2 CEE 16 A, 4 p, 400 V
switched, with mechanical DUO-interlock

**CEE receptacles**

**Receptacles SCHUKO®**

**Fusing**

1 RCD 63 A, 4 p, 0.03 A
2 MCB's 32 A, 3 p, C
2 MCB's 16 A, 3 p, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 63 A
$I_{nA}$ 36 A
RDF 0.75

**Enclosure size**

390 x 450 mm (H x W)

**Part no.**

**900005**

# Receptacle combinations – Wall mounted, AMAXX®

Pre-wired for installation, IP 67, enclosure front cover electric grey RAL 7035, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm). Fusing behind a transparent cover. For drawings and dimensions see page 114.



**CEE receptacles**

2 CEE 32 A, 5 p, 400 V
switched, with mechanical DUO-interlock
2 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**

**Fusing**

1 RCD 63 A, 4 p, 0.03 A
2 MCB's 32 A, 3 p, C
2 MCB's 16 A, 3 p, C

**Connection**

For 1 cable up to 5 x 16 mm²

**Connection and load values**

Pre-fuse max. 63 A
$I_{nA}$ 58 A
RDF 0.6

**Enclosure size**

650 x 225 mm (H x W)

**Part no.**

**900946**

**CEE receptacles**

3 CEE 32 A, 4 p, 380-440 V, 3 h
For reefer container,
switched, with mechanical DUO-interlock

**CEE receptacles**

**Receptacles SCHUKO®**

**Fusing**

3 MCB's 32 A, 3 p, C
1 earth bolt M 10, V2A

**Connection**

For 1 cable up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 100 A
$I_{nA}$ 58 A
RDF 0.6

**Enclosure size**

520 x 225 mm (H x W)

**Part no.**

**940027**

**CEE receptacles**

1 CEE 63 A, 5 p, 400 V
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**

2 SCHUKO® 16 A, 230 V

**Fusing**

1 RCD 63 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
2 MCB's 16 A, 1 p, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 63 A
$I_{nA}$ 63 A
RDF 0.7

**Enclosure size**

650 x 225 mm (H x W)

**Part no.**

**950031**

**CEE receptacles**

1 CEE 63 A, 5 p, 400 V
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles NF**

2 NF 16 A, 2 p+E, 230 V

**Fusing**

1 RCD 63 A, 4 p, 0.03 A
1 MCB 32 A, 3 p+N, C
1 MCB 16 A, 3 p+N, C
2 MCB's 16 A, 1 p+N, C

**Connection**

For 2 cables up to 5 x 25 mm²

**Connection and load values**

Pre-fuse max. 63 A
$I_{nA}$ 63 A
RDF 0.5

**Enclosure size**

650 x 225 mm (H x W)

**Part no.**

**950033**

# Receptacle combinations – Accessories, wall mounted

**Accessories for AMAXX® receptacle combinations.**

**AMAXX® standard cable glands**

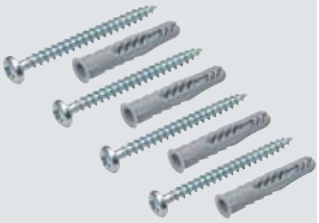
black RAL 9005

**M 20** - for cable from 6-13 mm
IP 44: **Part no. 990607**
IP 67: **Part no. 990611**

**M 25** - for cable from 9-17 mm
IP 44: **Part no. 990610**

**M 32** - for cable from 13-21 mm
IP 44: **Part no. 990608**
IP 67: **Part no. 990612**

**M 40** - for cable from 14-28 mm
IP 67: **Part no. 990609**



**AMAXX® screw set**

consisting of
4 screws 6 x 70 mm
Pozidrive size 3, steel galvanized and
4 dowels 8 x 50 mm, for concrete, porous concrete, solid brick, perforated brick

**Part no. 990606**

**AMAXX® attachment set**

for lateral installation of AMAXX® s combinations, for mounting either on the left or right hand side
(set of 2 for 1 combination)

**Part no. 990620**

**AMAXX® support/carrier frame**

yellow RAL 1003, suitable for AMAXX® receptacle combinations with the sizes:
260 x 225 mm,
390 x 225 mm and
520 x 225 mm
for wall mounting in protection type IP 67 or as mobile combinations with carrying handle and with feeder cable in protection type IP 44 and IP 67

**Part no. 15696**



**AMAXX® membrane cable glands**

black RAL 9005,
incl. blanking plug

**M 25** - for cable from 9-17 mm
**Part no. 990623**

**M 32** - for cable from 13-21 mm
**Part no. 990625**

**M 40** - for cable from 16-28 mm
**Part no. 990627**

**Selection chart for membrane cable glands**

| AMAXX® receptacle combination | Standard cable entries | Recommandation of usage membrane cable gland* | |
|---|---|---|---|
| with 1 segment<br>Enclosure:<br>130 x 225 mm (H x W) | top: 2 x M 25<br>2 x M 20<br>bottom: 2 x M 25<br>2 x M 20 | 1 x M 25 | alternative: 1 x M 20 |
| with 2 segments<br>Enclosure:<br>230 x 225 mm (H x W) | top: 2 x M 32<br>2 x M 20<br>bottom: 2 x M 32<br>2 x M 20 | 1 x M 32 | alternative: 2 x M 20 |
| with 3 segments<br>Enclosure:<br>390 x 225 mm (H x W) | top: 2 x M 40<br>2 x M 20<br>bottom: 2 x M 40<br>2 x M 20 | 1 x M 40 | alternative: 2 x M 20 |
| with 4 segments<br>Enclosure:<br>520 x 225 mm (H x W) | top: 2 x M 40<br>2 x M 20<br>bottom: 2 x M 40<br>2 x M 20 | 1 x M 40 und 1 x M 20 | alternative: 3 x M 20 |
| with 5 segments<br>Enclosure:<br>650 x 225 mm (H x W) | top: 2 x M 40<br>2 x M 20<br>bottom: 2 x M 40<br>2 x M 20 | 1 x M 40 und 2 x M 20 | alternative: 4 x M 20 |

*** At least required for the following ambient conditions:**
Reduction of the ambient temperature by 45 °C through 10-minutes of heavy rain (enclosure, e.g heated to 60 °C through sunlight, subsequent cloudburst with water temperature of 15 °C).
If temperature differentials are greater/less, accordingly more or fewer membrane cable glands must be used.

## Receptacle combinations – Wall mounted, AMAXX®

Highly resistant to chemicals made of AMELAN, pre-wired for installation, IP 44, enclosure front cover grey RAL 7000, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm).
Fusing behind a transparent cover. For drawings and dimensions see page 114.



| CEE receptacles | CEE receptacles | CEE receptacles | CEE receptacles |
|---|---|---|---|
| 1 CEE 16 A, 5 p, 400 V | 1 CEE 16 A, 5 p, 400 V | 1 CEE 32 A, 5 p, 400 V<br>1 CEE 16 A, 5 p, 400 V | 1 CEE 63 A, 5 p, 400 V<br>1 CEE 32 A, 5 p, 400 V<br>1 CEE 16 A, 5 p, 400 V |
| **CEE receptacles** | **CEE receptacles** | **CEE receptacles** | **CEE receptacles** |
| **Receptacles SCHUKO®** | **Receptacles NF** | **Receptacles British standard** | **Receptacles SCHUKO®** |
| 2 SCHUKO® 16 A, 230 V | 3 NF 16 A, 2 p+E, 230 V | 3 x 13 A, 2 p+E, 230 V | 4 SCHUKO® 16 A, 230 V |
| **Fusing** | **Fusing** | **Fusing** | **Fusing** |
| | 1 RCD 40 A, 4 p, 0.03 A | 1 RCD 63 A, 4 p, 0.03 A<br>1 MCB 32 A, 3 p, C<br>1 MCB 16 A, 3 p, C<br>3 MCB's 13 A, 1 p, C | 1 RCD 63 A, 4 p, 0.03 A<br>1 MCB 32 A, 3 p, C<br>1 MCB 16 A, 3 p, C<br>4 MCB's 16 A, 1 p, C |
| **Connection** | **Connection** | **Connection** | **Connection** |
| For 1 cable up to 5 x 10 mm² | For 1 cable up to 5 x 10 mm² | For 1 cable up to 5 x 16 mm² | For 2 cables up to 5 x 25 mm² |
| **Connection and load values** | **Connection and load values** | **Connection and load values** | **Connection and load values** |
| | Pre-fuse max. 16 A<br>$I_{nA}$ 16 A | Pre-fuse max. 63 A<br>$I_{nA}$ 46 A<br>RDF 0.75 | Pre-fuse max. 63 A<br>$I_{nA}$ 63 A<br>RDF 0.65 |
| **Enclosure size** | **Enclosure size** | **Enclosure size** | **Enclosure size** |
| 130 x 225 mm (H x W) | 650 x 112.5 mm (H x W) | 520 x 225 mm (H x W) | 650 x 225 mm (H x W) |
| **Part no.** | **Part no.** | **Part no.** | **Part no.** |
| **910020** | **960042** | **941142** | **950041** |

## Receptacle combinations – Wall mounted, AMAXX®

Highly resistant to chemicals made of AMELAN, pre-wired for installation, IP 67, enclosure front cover grey RAL 7000, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm).
Fusing behind a transparent cover. For drawings and dimensions see page 114.



| CEE receptacles | CEE receptacles | CEE receptacles | CEE receptacles |
|---|---|---|---|
| | 1 CEE 16 A, 5 p, 400 V | 1 CEE 32 A, 5 p, 400 V | 1 CEE 32 A, 5 p, 400 V<br>1 CEE 16 A, 5 p, 400 V |
| **CEE receptacles** | **CEE receptacles** | **CEE receptacles** | **CEE receptacles** |
| 2 CEE 16 A, 3 p, 230 V | | | |
| **Receptacles SCHUKO®** | **Receptacles SCHUKO®** | **Receptacles SCHUKO®** | **Receptacles SCHUKO®** |
| | 3 SCHUKO® 16 A, 230 V | 3 SCHUKO® 16 A, 230 V | 2 SCHUKO® 16 A, 230 V |
| **Fusing** | **Fusing** | **Fusing** | **Fusing** |
| 1 RCD 25 A, 2 p, 0.03 A | 1 RCD 40 A, 4 p, 0.03 A<br>1 MCB 16 A, 3 p, C<br>3 MCB´s 16 A, 1 p, C | 1 RCD 40 A, 4 p, 0.03 A<br>1 MCB 32 A, 3 p, C<br>3 MCB´s 16 A, 1 p, C | 1 RCD 63 A, 4 p, 0.03 A<br>1 MCB 32 A, 3 p, C<br>1 MCB 16 A, 3 p, C<br>2 MCB´s 16 A, 1 p, C |
| **Connection** | **Connection** | **Connection** | **Connection** |
| For 1 cable up to 3 x 10 mm² | For 2 cables up to 5 x 25 mm² | For 2 cables up to 5 x 25 mm² | For 2 cables up to 5 x 25 mm² |
| **Connection and load values** | **Connection and load values** | **Connection and load values** | **Connection and load values** |
| Pre-fuse max. 16 A<br>$I_{nA}$ 25 A<br>RDF 1 | Pre-fuse max. 100 A<br>$I_{nA}$ 30 A<br>RDF 0.95 | Pre-fuse max. 40 A<br>$I_{nA}$ 36 A<br>RDF 0.75 | Pre-fuse max. 100 A<br>$I_{nA}$ 44.8 A<br>RDF 0.7 |
| **Enclosure size** | **Enclosure size** | **Enclosure size** | **Enclosure size** |
| 260 x 225 mm (H x W) | 390 x 225 mm (H x W) | 390 x 225 mm (H x W) | 520 x 225 mm (H x W) |
| **Part no.** | **Part no.** | **Part no.** | **Part no.** |
| **920821** | **930027** | **930028** | **940016** |

# Receptacle combinations – Suspended, AMAXX®

Pre-wired for installation, IP 44, enclosure front cover electric grey, yellow or silver, hinged to the side. Fusing behind a transparent cover.
With suspension eyes on top, grip hooks on the bottom and chain set provided.
* The receptacle combinations can be ordered in electric grey RAL 7035, yellow RAL 1021 or silver RAL 9006. To order in yellow or silver, please add the appropriate colour code to the order number (yellow = GE, silver = SI).
For drawings and dimensions see page 113.



**Set of chains**

are provided with each suspendable AMAXX® receptacle combination.

| | |
|---|---|
| **CEE receptacles** | 2 CEE 16 A, 5 p, 400 V |
| **CEE receptacles** | |
| **Receptacles SCHUKO®** | 4 SCHUKO® 16 A, 230 V |
| **Fusing** | 1 RCD 40 A, 4 p, 0.03 A<br>2 MCB's 16 A, 3 p, C<br>4 MCB's 16 A, 1 p, C |
| **Connection** | For 1 cable up to 5 x 10 mm² |
| **Connection and load values** | Pre-fuse max. 40 A<br>$I_{nA}$ 40 A<br>RDF 0.7 |
| **Enclosure size** | 260 x 225 mm (H x W) |
| **Part no.** | **970004*** |

| | |
|---|---|
| **CEE receptacles** | 1 CEE 32 A, 5 p, 400 V<br>1 CEE 16 A, 5 p, 400 V |
| **CEE receptacles** | |
| **Receptacles SCHUKO®** | 3 SCHUKO® 16 A, 230 V |
| **Fusing** | 1 RCD 40 A, 4 p, 0.03 A<br>1 MCB 16 A, 3 p, C<br>3 MCB's 16 A, 1 p, C |
| **Connection** | For 1 cable up to 5 x 10 mm² |
| **Connection and load values** | Pre-fuse max. 32 A<br>$I_{nA}$ 32 A<br>RDF 1 |
| **Enclosure size** | 260 x 225 mm (H x W) |
| **Part no.** | **970002*** |

## Receptacle combinations – Suspended, AMAXX®

Pre-wired for installation, IP 44, enclosure front cover electric grey, yellow or silver, hinged to the side. Fusing behind a transparent cover.
With suspension eyes on top, grip hooks on the bottom and chain set provided.
* The receptacle combinations can be ordered in electric grey RAL 7035, yellow RAL 1021 or silver RAL 9006. To order in yellow or silver, please add the appropriate colour code to the order number (yellow = GE, silver = SI).
For drawings and dimensions see page 113.

**CEE receptacles**
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**Data port sockets**
1 Cepex RJ45, 2 fold Cat.6

**Receptacles SCHUKO®**
3 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A
1 MCB 16 A, 3 p, C
3 MCB's 16 A, 1 p, C

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**
Pre-fuse max. 32 A
$I_{nA}$ 32 A
RDF 1

**Enclosure size**
260 x 225 mm (H x W)

**Part no.**
**970005***

**CEE receptacles**
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
4 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
4 MCB's 16 A, 1 p, C

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**
Pre-fuse max. 40 A
$I_{nA}$ 40 A
RDF 0.7

**Enclosure size**
260 x 225 mm (H x W)

**Part no.**
**970001***

**CEE receptacles**
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
4 SCHUKO® 16 A, 230 V

**Fusing**
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
4 MCB's 16 A, 1 p, C

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**
Pre-fuse max. 63 A
$I_{nA}$ 63 A
RDF 0.85

**Enclosure size**
260 x 225 mm (H x W)

**Part no.**
**970003***

**Pneumatic connection**

for suspendable AMAXX®

for tube NW 9 mm,
**Part no. 997001**

for tube NW 13 mm,
**Part no. 997000**

## Receptacle combinations – Mobile, AMAXX®

Pre-wired for installation, IP 44 or IP 67, enclosure front cover electric grey RAL 7035, hinged to the side. Fusing behind a transparent cover.
For drawings and dimensions see page 114.



| CEE receptacles |
|---|
| |
| **CEE receptacles** |
| |
| **Receptacles NF** |
| 5 NF 16 A, 2 p+E, 230 V |
| **Fusing** |
| 1 RCD 25 A, 2 p, 0.03 A |
| **Connection** |
| 2 m H07RN-F3G2.5 with NF-plug 16 A, 2 p+E, 230 V |
| **Connection and load values** |
| $I_{nA}$ 16 A<br>RDF 1 |
| **Enclosure size** |
| 260 x 225 mm (H x W) |
| **Part no.** |
| **920046** |

| CEE receptacles |
|---|
| 1 CEE 32 A, 5 p, 400 V<br>1 CEE 16 A, 5 p, 400 V |
| **CEE receptacles** |
| |
| **Receptacles British standard** |
| 3 x 13 A, 2 p+E, 230 V |
| **Fusing** |
| 1 RCD 40 A, 4 p, 0.03 A<br>1 MCB 16 A, 3 p, C<br>3 MCB's 13 A, 1 p, C |
| **Connection** |
| 2 m H07RN-F5G4 with CEE-plug 32 A, 5 p, 400 V |
| **Connection and load values** |
| $I_{nA}$ 32 A<br>RDF 1 |
| **Enclosure size** |
| 390 x 225 mm (H x W) |
| **Part no.** |
| **931237** |

| CEE receptacles |
|---|
| |
| **CEE receptacles** |
| 3 CEE 16 A, 3 p, 230 V, switched, with mechanical DUO-interlock |
| **Receptacles SCHUKO®** |
| |
| **Fusing** |
| 1 RCD 40 A, 4 p, 0.03 A<br>1 MCB 16 A, 3 p+N, C |
| **Connection** |
| 4 m H07RN-F5G2.5 with CEE-plug 16 A, 5 p, 400 V |
| **Connection and load values** |
| $I_{nA}$ 16 A<br>RDF 1 |
| **Enclosure size** |
| 520 x 225 mm (H x W) |
| **Part no.** |
| **940030** |

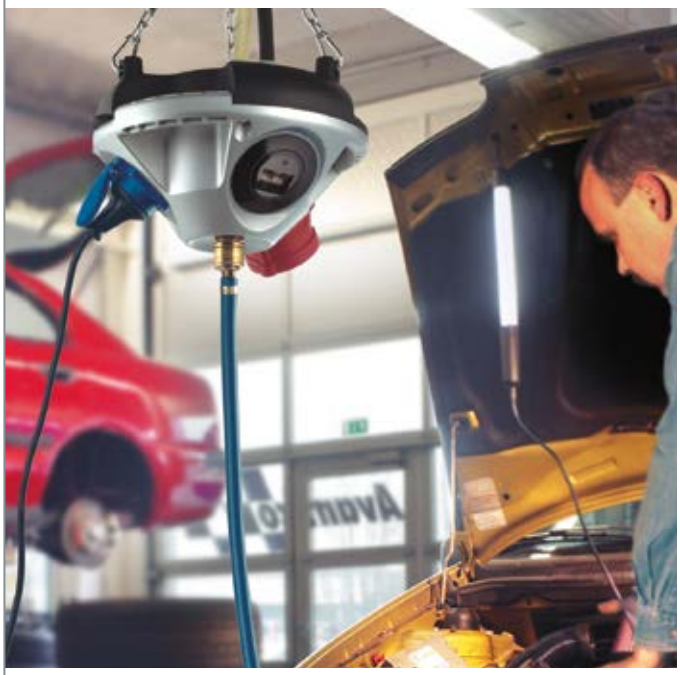
# AirKRAFT und 3KRAFT

## The Team for electrical power. Data. Compressed air.

**For ceiling and floor.**

You need electrical power, compressed air, data? Safe and flexible?

Go for AirKRAFT or 3KRAFT. Characteristic for both: Suspended from the ceiling, attached to the wall, or portable with a supply cable, also available in signal yellow, red or silver. The choice is yours!



Up to four receptacles plus compressed air. Pre-wired for installation or operation, with a supply cable and plug.

**Awards**

AirKRAFT and 3KRAFT have been awarded with many design prizes among the famous reddot award.

DESIGNPREIS 2006 NOMINIERT — DESIGNPREIS DER BUNDESREPUBLIK DEUTSCHLAND

DESIGN PLUS Award 2004

reddot award product design

Bronzemedaille 2004 Deutscher Designer Club

if winner 2005 GOLD — IF PRODUCT design award

4

# DELTA-BOX

## the classic unit.

With cable grip. Each DELTA-BOX comes with a suspension bracket. Available in IP 44, IP 67 and IP 68.

# Receptacle strips

## the versatile units

Suspendable, portable or for wall mounting. Pre-wired for installation. With cable gland. Available in IP 44.

# Receptacle combinations – AirKRAFT and 3KRAFT

Pre-wired for installation, IP 20 or IP 44[1)] [1)] Regarding portable receptacle combinations in IP 44 please see page 106 for further information.
Fusing behind a transparent cover. Colours: Back box in black, cover available in red (RO), yellow (GE) or silver (SI). Other variations on request.
Dimensions page 115.



**Fitted with**
1 CEE 16 A, 5 p, 400 V
3 SCHUKO® 16 A, 230 V

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Protection type**
IP 44

**Part no.**
**94550**

**Fitted with**
2 CEE 16 A, 5 p, 400 V
2 SCHUKO® 16 A, 230 V

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Protection type**
IP 44

**Part no.**
**94552**

**Fitted with**
2 CEE 16 A, 5 p, 400 V
2 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**
Pre-fuse max. 16 A
$I_{nA}$ 16 A

**Protection type**
IP 44

**Part no.**
**94553**

**Fitted with**
1 CEE 16 A, 5 p, 400 V
3 SCHUKO® 16 A, 230 V

**Fusing**
1 MCB 16 A, 3 p, C
1 MCB 16 A, 1 p, C

**Connection**
3 m H07RN-F5G4 with CEE plug 32 A, 5 p, 400 V

**Connection and load values**
Pre-fuse max. 32 A
RDF 1

**Protection type**
IP 44

**Part no.**
**94559**

**Fitted with**
3 SCHUKO® 16 A, 230 V

**Fusing**

**Connection**
For 1 cable up to 3 x 6 mm²

**Connection and load values**

**Protection type**
IP 44

**Part no.**
**94351**

**Fitted with**
2 SCHUKO® 16 A, 230 V
1 RJ45 double data port cat.6, 8/8

**Fusing**

**Connection**
For 1 cable up to 3 x 6 mm²

**Connection and load values**

**Protection type**
IP 20

**Part no.**
**94354**

**Fitted with**
1 CEE 16 A, 5 p, 400 V
1 SCHUKO® 16 A, 230 V
1 RJ45 double data port cat.6, 8/8

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Protection type**
IP 20

**Part no.**
**94355**

**Fitted with**
3 SCHUKO® 16 A, 230 V

**Fusing**

**Connection**
3 m H07RN-F3G1.5 with plug SCHUKO® 16 A, 230 V

**Connection and load values**

**Protection type**
IP 44

**Part no.**
**94357**

## Receptacle combinations – DELTA-BOXES and receptacle strips

Pre-wired for installation, IP 44[1] / 67 [1] Regarding portable receptacle combinations in IP 44 please see page 106 for further information.
With cable grip and installed hanging hook. Other combinations on request. Dimensions page 115.

**Fitted with**
3 CEE 16 A, 5 p, 400 V

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Protection type**
IP 44
**Part no.**
**92917**

**Fitted with**
3 CEE 32 A, 5 p, 400 V

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Protection type**
IP 44
**Part no.**
**90839**

**Fitted with**
1 CEE 16 A, 5 p, 400 V
3 SCHUKO® 16 A, 230 V

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Protection type**
IP 44
**Part no.**
**92658**

**Fitted with**
2 CEE 16 A, 5 p, 400 V
1 CEE 16 A, 3 p, 230 V

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Protection type**
IP 67
**Part no.**
**92893**

**Fitted with**
3 CEE 16 A, 3 p, 110 V

**Fusing**

**Connection**
For 1 cable up to 3 x 10 mm²

**Connection and load values**

**Protection type**
IP 44
**Part no.**
**96227**

**Fitted with**
3 CEE 16 A, 3 p, 230 V

**Fusing**

**Connection**
For 1 cable up to 3 x 10 mm²

**Connection and load values**

**Protection type**
IP 44
**Part no.**
**96489**

**Fitted with**
3 CEE 16 A, 5 p, 400 V

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Protection type**
IP 44
**Part no.**
**96705**

**Fitted with**
2 CEE 16 A, 5 p, 400 V
1 SCHUKO® 16 A, 230 V

**Fusing**

**Connection**
For 1 cable up to 5 x 10 mm²

**Connection and load values**

**Protection type**
IP 44
**Part no.**
**96703**

# EverGUM
## Flexible safety.

With the EverGUM range MENNEKES provide a solid rubber alternative to enclosures in plastics and sheet steel. This is an alternative which is suitable for the most diverse environments, especially when there is likely to be exposure to rough handling or aggressive cleaning agents. These products can also be supplied to conform to the standards of other European countries.

**The outstanding advantages:**

- Resistant to weather and ageing
- High dimensional stability and precision
- Good resistance to acids and alkalis
- High dieletric strength and creep resistance

4

The allround power-packages for mobile use in industry, craft and trade. They can accept quite a knock – neither their design nor their function will be impaired. Additional benefit: they are stackable which allows space-saving storage.

**Tested safety, EverGUM details.**
The closed lower side of the enclosure with a ground clearance of 77 mm prevents ingress of water. The panel mounted receptacles can be replaced from outside. Hinged cover provided with stainless steel quick release clips. MCB's and in RCD´s are immediately accessible after opening the lid. All energised parts even with the lid open are covered so that they are contact safe – in accordance with BGV A3. Screw or padlock offers additional safety.

**Receptacle strip EverGUM.**
Window size for six or eight modules for vertical installation.

# Receptacle combinations – EverGUM

Pre-wired for installation, IP 44[1)] [1)] Regarding portable receptacle combinations in IP 44 please see page 104 for further information.
Fusing behind a transparent cover. Colour: signal yellow. Other variations with CEE receptacles 3, 4 or 5 pole and with grounding-type receptacles of French/Belgian, British, Swiss and US-standards on request. Dimensions page 115 - 116.

**Fitted with**
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V
3 SCHUKO® 16 A, 230 V

**Fusing**
1 MCB 32 A, 3 p, C
2 MCB's 16 A, 3 p, C
3 MCB's 16 A, 1 p, B

**Connection**
for 2 cables up to 5 x 25 mm²

**Connection and load values**
Pre-fuse max. 100 A
$I_{nA}$ 48 A
RDF 0.75

**Protection type**
IP 44

**Part no.**
**70007**

**Fitted with**
1 CEE 63 A, 5 p, 400 V
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V
4 SCHUKO® 16 A, 230 V

**Fusing**
1 MCB 63 A, 3 p, C
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
2 MCB's 16 A, 1 p, B

**Connection**
for 2 cables up to 5 x 25 mm²

**Connection and load values**
Pre-fuse max. 63 A
$I_{nA}$ 63 A
RDF 0.85

**Protection type**
IP 44

**Part no.**
**71062**

**Fitted with**
3 CEE 16 A, 5 p, 400 V

**Fusing**

**Connection**
2 m H07RN-F5G2.5 with
CEE-plug 16 A, 5 p, 400 V

**Connection and load values**

**Protection type**
IP 44

**Part no.**
**70029**

**Fitted with**
1 CEE 16 A, 5 p, 400 V
2 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A
2 MCB's 16 A, 1 p, B

**Connection**
2 m H07RN-F5G2.5 with
CEE-plug 16 A, 5 p, 400 V

**Connection and load values**
Pre-fuse max. 16 A
$I_{nA}$ 16 A
RDF 0.95

**Protection type**
IP 44

**Part no.**
**70033**

**Fitted with**
2 CEE 16 A, 5 p, 400 V
4 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A

**Connection**
with inlet 16 A, 5 p, 400 V

**Connection and load values**
$I_{nA}$ 16 A
RDF 1

**Protection type**
IP 44

**Part no.**
**70350**

**Fitted with**
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V
4 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A
1 MCB 16 A, 3 p, C
2 MCB's 16 A, 1 p, B

**Connection**
2 m H07RN-F5G4 with CEE-plug
32 A, 5 p, 400 V

**Connection and load values**
$I_{nA}$ 32 A
RDF 0.65

**Protection type**
IP 44

**Part no.**
**70351**

**Fitted with**
1 CEE 63 A, 5 p, 400 V
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V
4 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 63 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
2 MCB's 16 A, 1 p, B

**Connection**
3 m H07RN-F5G10 with CEE-plug
63 A, 5 p, 400 V

**Connection and load values**
$I_{nA}$ 63 A
RDF 0.6

**Protection type**
IP 44

**Part no.**
**70025**

**Fitted with**
1 CEE 63 A, 5 p, 400 V
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V
4 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 63 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
2 MCB's 16 A, 1 p, B

**Connection**
with inlet 63 A, 5 p, 400 V

**Connection and load values**
$I_{nA}$ 57 A
RDF 0.4

**Protection type**
IP 44

**Part no.**
**70049**

Pre-wired for installation, IP 44[1] or IP 67. [1] Regarding portable receptacle combinations in IP 44 please see page 104 for further information.
Insulating enclosure IP 67, black (RAL 9005), fusing behind a transparent cover. Other combinations on request. Dimensions page 113.

# EverBOX

## Mobile distributor for events, fairs, emergency services, heavy industries, markets and funfairs.

The new mobile receptacle combinations are available in a variety of assembly fittings. The robust, stackable insulating enclosure are ideally suited for indoor and outdoor use.



### Product details

- Robust, watertight insulating enclosure IP 67, black (RAL 9005)
- Acc. to IEC 61439
- Heat resistant -25 °C up to +40 °C
- Resistant to ageing and weather
- Stackable
- Protection of receptacles and built-in appliances by stable enclosure frame
- Easy handling with integrated handles
- Flexible fitting options up to 125 A
- Protection against condensation in IP 67
- Fitted with receptacles of protection type IP 44 or IP 67
- Fusing behind a transparent cover
- Pre-wired for installation

**For customized solutions which are especially made for your applicaton, please contact us!**

**CEE receptacles**

1 CEE 32 A, 5 p, 400 V
2 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**

6 SCHUKO® 16 A, 230 V

**Fusing**

1 RCD 63 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
2 MCB's 16 A, 3 p, C
6 MCB's 16 A, 1 p, C

**Connection**

2 m H07RN-F5G10 with
CEE-plug 63 A, 5 p, 400 V

**Connection and load values**

$I_{nA}$ 63 A
RDF 0.75

**Enclosure size**

560 x 350 x 340 mm (H x W x D)

**Protection type**

IP 67

**Part no.**

**9500719**

## Receptacle combinations – Mobile, EverBOX

Pre-wired for installation, IP 44[1] or IP 67. [1] Regarding portable receptacle combinations in IP 44 please see page 104 for further information. Insulating enclosure IP 67, black (RAL 9005), fusing behind a transparent cover. Other combinations on request. Dimensions page 113.



**CEE receptacles**
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
12 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A
1 MCB 16 A, 3 p, C, 10 kA
12 MCB's 16 A, 1 p, C, 10 kA
3 Phase control lights green

**Connection**
2 m H07RN-F5G6 with
CEE-plug 32 A, 5 p, 400 V

**Connection and load values**
$I_{nA}$ 32 A
RDF 1

**Enclosure size**
560 x 350 x 340 mm (H x W x D)

**Protection type**
IP 44

**Part no.**
**9500722**

**CEE receptacles**
2 CEE 32 A, 5 p, 400 V
4 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
5 SCHUKO® 16 A, 230 V

**Fusing**
2 RCD´s 63 A, 4 p, 0.03 A
2 MCB's 32 A, 3 p, C
4 MCB's 16 A, 3 p, C
5 MCB's 16 A, 1 p, C

**Connection**
2 m H07RN-F5G10 with
CEE-plug 63 A, 5 p, 400 V

**Connection and load values**
$I_{nA}$ 63 A
RDF 0.75

**Enclosure size**
560 x 350 x 340 mm (H x W x D)

**Protection type**
IP 44

**Part no.**
**9500706**

**CEE receptacles**
1 CEE 63 A, 5 p, 400 V
2 CEE 32 A, 5 p, 400 V
2 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
9 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 63 A, 4 p, 0.03 A
2 MCB's 32 A, 3 p, C
2 MCB's 16 A, 3 p, C
9 MCB's 16 A, 1 p, C

**Connection**
2 m H07RN-F5G10 with
CEE-plug 63 A, 5 p, 400 V

**Connection and load values**
$I_{nA}$ 63 A
RDF 0.6

**Enclosure size**
560 x 350 x 340 mm (H x W x D)

**Protection type**
IP 44

**Part no.**
**9500748**

**CEE receptacles**
1 CEE 125 A, 5 p, 400 V
1 CEE 63 A, 5 p, 400 V
2 CEE 32 A, 5 p, 400 V
2 CEE 16 A, 5 p, 400 V

**CEE receptacles**

**Receptacles SCHUKO®**
3 SCHUKO® 16 A, 230 V

**Fusing**
2 RCD's 63 A, 4 p, 0.03 A
2 MCB's 63 A, 3 p, C
2 MCB's 32 A, 3 p, C
2 MCB's 16 A, 3 p, C
3 MCB's 16 A, 1 p, C

**Connection**
2 m H07RN-F5G25 with
CEE-plug 125 A, 5 p, 400 V

**Connection and load values**
$I_{nA}$ 125 A
RDF 0.35

**Enclosure size**
560 x 350 x 340 mm (H x W x D)

**Protection type**
IP 44

**Part no.**
**9500417**

## Stainless steel
## surface mounted and flush mounted receptacle combinations.

Safe. Practical. Timelessly elegant.

- Protection type IP 43 or IP 44 with closed door, even when plugs are inserted
- The cable guard aperture is sufficiently dimensioned for leading through cables
- Safety lock protects against unauthorised access



## Power posts
## Rugged. Vandalism-proof.

Steel power posts provide a safe means of energy supply, protection against car-crossing. Hot-dip galvanised and powder coated. Available in various sizes.


## CombiTOWER
## Outdoors and indoors.

Short routes to your energy source for industry, workshops, assembly shops, loading platforms, etc.

## Receptacle combinations – Steel and stainless steel

Stainless steel enclosure (material 1.4301). Surface with a flat finish (K240), material 1.4571 on request.
Protection type IP 44 (combination unit for wall fixing) or IP 43 (flush mounted combination unit) with closed door.
For drawings and dimensions see page 116.



**Title**

**Receptacle combination, wall fixing**

**Fitted with**

1 CEE 16 A, 5 p, 400 V
4 SCHUKO® 16 A, 230 V

**Fusing:**
1 RCD 40 A, 4 p, 0.03 A
1 MCB 16 A, 3 p, C
4 MCB's 16 A, 1 p, B

**Enclosure:**
standard door with stop on right, front door with swing handle and cylinder lock – lockable even when plugs are connected.
Cable entry / connection options:
2 x entry nipples M 32 on bottom,
2 x brass screw plugs M 16 on bottom,
terminal shock hazard protected to BGV A3

**Connection:**
for 2 cables up to 5 x 25 mm²

**Connection and load values:**
Pre-fuse max. 40 A
$I_{nA}$ 32 A
RDF 0.8

**Enclosure size**

530 x 400 x 220 mm (H x W x D)

**Part no.**

**83725**

**Title**

**Receptacle combination, wall fixing**

**Fitted with**

1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V
2 SCHUKO® 16 A, 230 V

**Fusing:**
1 RCD 63 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
2 MCB's 16 A, 1 p, B

**Enclosure:**
standard door with stop on right, front door with swing handle and cylinder lock – lockable even when plugs are connected.
Cable entry / connection options:
2 x entry nipples M 32 on bottom,
2 x brass screw plugs M 16 on bottom,
terminal shock hazard protected to BGV A3

**Connection:**
for 2 cables up to 5 x 25 mm²

**Connection and load values:**
Pre-fuse max. 100 A
$I_{nA}$ 44 A
RDF 0.7

**Enclosure size**

530 x 400 x 220 mm (H x W x D)

**Part no.**

**83744**

**Title**

**Receptacle combination, flush mounted**

**Fitted with**

1 CEE 16 A, 5 p, 400 V
4 SCHUKO® 16 A, 230 V

**Fusing:**
1 RCD 40 A, 4 p, 0.03 A
1 MCB 16 A, 3 p , C
4 MCB's 16 A, 1 p, B

**Enclosure:**
front door and trim frame (from flat finished stainless steel): lockable with cylinder, lockable even when plugs are connected, door stop on the right
flush mounted enclosure (from stainless steel):
cable entry bush 3 x top, 2 x bottom,
suitable for cable diameters 13 to 49 mm

**Connection:**
for 2 cables up to 5 x 25 mm²

**Front door and trim frame:**
580 x 420 mm (H x W)

**Connection and load values:**
Pre-fuse max. 40 A
$I_{nA}$ 40 A
RDF 0.8

**Enclosure size**

520 x 360 x 200 mm (H x W x D)

**Part no.**

**84373**

**Title**

**Receptacle combination, flush mounted**

**Fitted with**

1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V
2 SCHUKO® 16 A, 230 V

**Fusing:**
1 RCD 63 A, 4 p, 0.03 A
2 MCB's 16 A, 1 p, B

**Enclosure:**
front door and trim frame (from flat finished stainless steel): lockable with cylinder, lockable even when plugs are connected, door stop on the right
flush mounted enclosure (from stainless steel):
cable entry bush 3 x top, 2 x bottom,
suitable for cable diameters 13 to 49 mm

**Connection:**
for 2 cables up to 5 x 25 mm²

**Front door and trim frame:**
580 x 420 mm (H x W)

**Connection and load values:**
Pre-fuse max. 100 A
$I_{nA}$ 44 A
RDF 0.7

**Enclosure size**

520 x 360 x 200 mm (H x W x D)

**Part no.**

**84374**

# Receptacle combinations – Steel and stainless steel

CombiTOWER from stainless steel (material 1.4301), material 1.4571 on request.
For drawings and dimensions see page 117.

4

| Title |
| --- |
| **CombiTOWER** |
| **Fitted with** |
| with removable cover,<br>painted signal yellow (RAL 1003)<br>or bright finish. |
| **Part no.**<br>for AMAXX® enclosures<br>260 x 225 mm,<br>390 x 225 mm and<br>520 x 225 mm |
| **Enclosure size** |
| 1043 x 254.5 x 250 mm (H x W x D) |
| **Part no.** |
| **15679** yellow<br>**15678** bright finish |

| Title |
| --- |
| **CombiTOWER** |
| **Fitted with** |
| with lockable door<br>and removable cover,<br>painted signal yellow (RAL 1003)<br>or bright finish |
| **Part no.**<br>for AMAXX® enclosures<br>260 x 225 mm,<br>390 x 225 mm and<br>520 x 225 mm |
| **Enclosure size** |
| 1043 x 254 x 415 mm (H x W x D) |
| **Part no.** |
| **15681** yellow<br>**15680** bright finish |

| Title |
| --- |
| **CombiTOWER** |
| **Fitted with** |
| with removable cover,<br>painted signal yellow (RAL 1003)<br>or bright finish. |
| **Part no.**<br>for AMAXX® enclosures<br>650 x 225 mm |
| **Enclosure size** |
| 1043 x 254.5 x 250 mm (H x W x D) |
| **Part no.** |
| **15739** yellow<br>**15738** bright finish |

| Title |
| --- |
| **CombiTOWER** |
| **Fitted with** |
| with lockable door<br>and removable cover,<br>painted signal yellow (RAL 1003)<br>or bright finish |
| **Part no.**<br>for AMAXX® enclosures<br>650 x 225 mm |
| **Enclosure size** |
| 1043 x 254 x 415 mm (H x W x D) |
| **Part no.** |
| **15741** yellow<br>**15740** bright finish |

## Receptacle combinations – Steel and stainless steel

Power posts from steel tube. Receptacles IP 44 or IP 67 can be fitted.
For drawings and dimensions see page 117.



| Title |
|---|
| **Power post** |
| **Fitted with** |
| 1 CEE 16 A, 5 p, 400 V<br>2 SCHUKO® 16 A, 230 V |
| **Fusing:**<br>1 MCB 16 A, 3 p, C<br>1 MCB 16 A, 1 p, B |
| **Enclosure:**<br>Wall thickness 4.0 mm, hot-dip galvanised, powder coated, colour: red, hinged supply aperture with safety lock, weight: approx. 45 kg<br>Aperture at bottom:<br>(H x W) 50 x 40 mm.<br>Fixing flange: Ø 360 mm with 4 fixing holes 15.0 mm.<br>For fixing to an existing fundament. |
| **Cable entry:**<br>2 x M 25 open at the top |
| **Connection:**<br>for 1 cable up to 5 x 6 mm² |
| **Connection and load values:**<br>Pre-fuse max. 63 A<br>$I_{nA}$ 22 A<br>RDF 0.7 |
| **Enclosure size** |
| 1050 x 220 mm (H x Ø, inside) |
| **Part no.** |
| **84335** |

| Title |
|---|
| **Power post** |
| **Fitted with** |
| 1 CEE 32 A, 5 p, 400 V<br>1 CEE 16 A, 5 p, 400 V<br>2 SCHUKO® 16 A, 230 V |
| **Fusing:**<br>1 RCD 40 A, 4 p, 0.03 A<br>1 MCB 32 A, 3 p, C<br>1 MCB 16 A, 3 p, C<br>2 MCB's 16 A, 1 p, B |
| **Enclosure:**<br>Wall thickness 4.5 mm, electro galvanised, yellow chromated and powder coated, colour: anthracite (RAL 7016), hinged supply aperture with safety lock, weight: approx. 60 kg<br>Aperture at bottom:<br>(H x W) 60 x 70 mm.<br>Fixing flange: Ø 390 mm with 4 fixing holes 15.5 mm.<br>For fixing to an existing fundament. |
| **Cable entry:**<br>2 x M 32 open at the top,<br>1 x M 32 pluged at the top |
| **Connection:**<br>for 1 cable up to 5 x 10 mm² |
| **Connection and load values:**<br>Pre-fuse max. 40 A<br>$I_{nA}$ 40 A<br>RDF 0.75 |
| **Enclosure size** |
| 1050 x 273 mm (H x Ø, inside) |
| **Part no.** |
| **83685** |

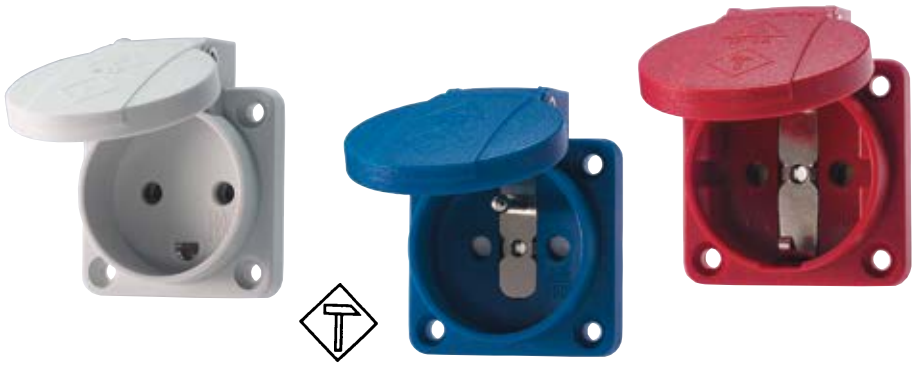
| Title |
|---|
| **Power post** |
| **Fitted with** |
| 1 CEE 63 A, 5 p, 400 V<br>1 CEE 32 A, 5 p, 400 V<br>1 CEE 16 A, 5 p, 400 V<br>2 SCHUKO® 16 A, 230 V |
| **Fusing:**<br>1 RCD 63 A, 4 p, 0.03 A<br>1 MCB 32 A, 3 p, C<br>1 MCB 16 A, 3 p, C<br>2 MCB's 16 A, 1 p, B |
| **Enclosure:**<br>Wall thickness 4.5 mm, hot-dip galvanised, wet painted, colour: anthracite iron glitter DB 703, hinged supply aperture with safety lock, weight: approx. 100 kg<br>Aperture at bottom:<br>(H x W) 50 x 100 mm.<br>Fixing flange: Ø 450 mm with 4 fixing holes 15 mm.<br>For fixing to an existing fundament. |
| **Cable entry:**<br>2 x M 40 at the bottom with glands |
| **Connection:**<br>for 2 cables up to 5 x 25 mm² |
| **Connection and load values:**<br>Pre-fuse max. 63 A<br>$I_{nA}$ 63 A<br>RDF 0.7 |
| **Enclosure size** |
| 1400 x 325 mm (H x Ø, inside) |
| **Part no.** |
| **83722** |

# SCHUKO®

## Plugs and sockets for harsh conditions.

**SCHUKO® by MENNEKES with the hammer symbol.**

Acc. to VDE 0105 part 115. Made of high-grade plastic. Acc. to VDE 0620 for harsh conditions. Application amongst others in agriculture or at construction sites. Resistant against oil, grease and fuel. Long lasting due to high resistance against abrasion and breaking strenght. Durable due to resistance against embrittlement.



**Panel mounted receptacles SCHUKO® with front gasket for portable units.**

The attachment receptacles SCHUKO® with sealing collars, from MENNEKES comply with the requirements in the new standard, IEC 620-1.

With the hinged lid closed, they satisfy the requirements for the IP 54 degree of protection in every position.

Even with the compatible IP 44 plug, plugged-in, the IP 44 protection rating is ensured regardless of the operating position

**Product advantages:**

- retention of the installation dimensions and conditions
- conversion without problems
- flange sealing made of thermoplastic elastomer (TPE)
- captive due to two components technology
- safe against accidental actuation with a finger or the back of the hand according to IEC 60529
- optionally screw or plug-in terminals
- with hammer symbol for toughest conditions
- also available with flange dimensions 75 x 75 mm for cable ducts and flush mounted boxes

**SCHUKO®. Pressure watertight.**

Whether fixed or mobile: in the event of flooding or water jets, pressure watertight plugs and receptacles are the first choice. Protection type IP 68.

## Products with extended versions and special devices – SCHUKO® and grounding-type

SCHUKO® to DIN 49440-1, 2 p+E, 230 V. Other versions available on request. For drawings and dimensions see page 105 - 117.

**Panel mounted receptacle SCHUKO®**

with hinged lid, 3 plug-in terminals or 3 screw terminals as connecting terminals for 1.5 - 2.5 mm²

IP 54
Std. Pack. Qty: 100/20
Drawing: 1 MB 410

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| grey | 16 | 230 | | 11010 | 11030 |
| blue | 16 | 230 | | 11011 | 11031 |
| black | 16 | 230 | | 11012 | 11032 |
| red | 16 | 230 | | 11013 | 11033 |
| grey | 16 | 230 | ✓ | 11060 | |
| blue | 16 | 230 | ✓ | 11061 | 11081 |

**Panel mounted receptacle SCHUKO® with front gasket**

with hinged lid, 3 plug-in terminals or 3 screw terminals as connecting terminals for 1.5 - 2.5 mm²

IP 54
Std. Pack. Qty: 100
Drawing: 1 MB 586

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| grey | 16 | 230 | | 11310 | 11330 |
| blue | 16 | 230 | | 11311 | 11331 |
| black | 16 | 230 | | 11312 | 11332 |
| red | 16 | 230 | | 11313 | 11333 |

**Panel mounted receptacle SCHUKO®**

without hinged lid, 3 plug-in terminals or 3 screw terminals as connecting terminals for 1.5 - 2.5 mm²

IP 20
Std. Pack. Qty: 100
Drawing: 1 MB 450

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| blue | 16 | 230 | | 11511 | 11531 |
| black | 16 | 230 | | 11512 | 11532 |
| blue | 16 | 230 | ✓ | 11561 | 11581 |

**Wall mounted receptacle SCHUKO®**

with hinged lid, 3 plug-in terminals as connecting terminals for 1.5 - 2.5 mm², receptacles can be linked in a row vertically. Slide on top, slot on bottom of enclosure

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 27/30

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| grey | 16 | 230 | | 10081 | |
| blue | 16 | 230 | | 10082 | |
| black | 16 | 230 | | 10083 | |

**Wall mounted receptacle grounding-type**

French/Belgian system (NF) with hinged lid, 3 plug-in terminals as connecting terminals for 1.5 - 2.5 mm², receptacles can be linked in a row vertically. Slide on top, slot on bottom of enclosure

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 27/30

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| blue | 16 | 230 | ✓ | 10092 | |

**Panel mounted receptacle grounding-type**

French/Belgian system (NF), with hinged lid, 3 plug-in terminals or 3 screw terminals as connecting terminals for 1.5 - 2.5 mm²

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 410

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| grey | 16 | 230 | | 11110 | |
| blue | 16 | 230 | | 11111 | 11131 |
| grey | 16 | 230 | ✓ | 11160 | 11180 |
| blue | 16 | 230 | ✓ | 11161 | 11181 |
| black | 16 | 230 | ✓ | 11162 | 11182 |

# Products with extended versions and special devices – SCHUKO® and grounding-type

SCHUKO® to DIN 49440-1, 2 p+E, 230 V. Other versions available on request. For drawings and dimensions see page 105 - 117.

**Panel mounted receptacle grounding-type**

French/Belgian system (NF), without hinged lid, 3 plug-in terminals or 3 screw terminals as connecting terminals for 1.5 - 2.5 mm²

IP 20
Std. Pack. Qty: 100/20
Drawing: 1 MB 450

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| blue | 16 | 230 | ✓ | 11611 | |
| blue | 16 | 230 | | 11661 | 11681 |

**Panel mounted receptacle grounding-type**

British standard, with hinged lid and seal; flange 50 x 50 mm, fixing holes 38 x 38 mm

IP 44
Std. Pack. Qty: 20
Drawing: 1 MB 584

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| blue | 13 | 230 | ✓ | | 10718 |

**Panel mounted receptacle grounding-type**

British standard, matching cover frame, with hinged lid and seal

IP 44
Std. Pack. Qty: 20
Drawing: 1 MB 422

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| black | 13 | 230 | ✓ | | 10713 |

**Panel mounted receptacle NEMA**

USA and Canada, with hinged lid

IP 44
Std. Pack. Qty: 20
Drawing: 1 MB 421

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| blu | 15 | 125 | | | 10087 |

**Plug SCHUKO®**

with combined PE-conductor acc. to German and French/Belgian standards, with grommet, for cables up to 3 x 2.5 mm² up to H07RN-F

IP 44
Std. Pack. Qty: 20

| Colour | Ampere | Voltage | Part no. |
|---|---|---|---|
| grey | 16 | 230 | 10749 |
| black | 16 | 230 | 10754 |
| orange | 16 | 230 | 10837 |
| blue | 16 | 230 | 10838 |
| red | 16 | 230 | 10839 |
| yellow | 16 | 230 | 10840 |
| green | 16 | 230 | 10841 |

**Connector SCHUKO®**

with grommet and lid for cables up to 3 x 2.5 mm² up to H07RN-F

IP 44
Std. Pack. Qty: 10

| Colour | Ampere | Voltage | Part no. |
|---|---|---|---|
| grey | 16 | 230 | 10751 |
| black | 16 | 230 | 10755 |
| orange | 16 | 230 | 10842 |
| blue | 16 | 230 | 10843 |
| red | 16 | 230 | 10844 |
| yellow | 16 | 230 | 10845 |
| green | 16 | 230 | 10846 |

## Products with extended versions and special devices – SCHUKO® and grounding-type

to DIN 49442/43 and DIN VDE 0620. Other versions available on request. For drawings and dimensions see page 105 - 117.

**Wall mounted receptacle SCHUKO®**
with hinged bayonet lock lid

IP 68
Std. Pack. Qty: 10
Drawing: 1 MB 347

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| blue / grey | 16 | 230 | | | 10863 |


**Panel mounted receptacle SCHUKO® or NF**
with hinged bayonet lock lid, rectangular flange, four fixing holes or two stamped recesses for quick perforation

IP 68
Std. Pack. Qty: 10
Drawing: 1 MB 627

| Colour | Ampere | Voltage | with shutter | plug-in terminals | screw terminals |
|---|---|---|---|---|---|
| blue / grey | 16 | 230 | | 17002 | 17006 |
| blue / grey | 16 | 230 | ✓ | | 17014 |
| NF | | | | | |
| blue / grey | 16 | 230 | ✓ | 17060 | 17064 |

**Plug SCHUKO®**
combined PE-conductor acc. to German and French/Belgian standards, with bayonet ring, with protective cap attached by a strap, for cables up to 3 x 2.5 mm², up to H07RN-F

IP 68
Std. Pack. Qty: 10

| Colour | Ampere | Voltage | plug-in terminals | screw terminals |
|---|---|---|---|---|
| blue / grey | 16 | 230 | | 10828 |

**Connector SCHUKO®**
with bayonet lock lid attached by a strap, for cables up to 3 x 2.5 mm², up to H07RN-F

IP 68
Std. Pack. Qty: 10

| Colour | Ampere | Voltage | plug-in terminals | screw terminals |
|---|---|---|---|---|
| blue / grey | 16 | 230 | | 10833 |

# 7 pole

## For multifunctional applications.

5

These 7 pole plugs and sockets provide solutions where there are multifunctional requirements in industry, farming and commerce.

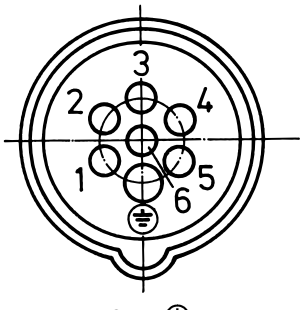
This number of poles provides solutions in the following fields:

- Star-delta start-up
- Closed loop control
- Open loop control
- Monitoring
- Detection and alarms
- Clearing alarms
- Electrical interlocking

Position of ground contact tube with respect to polarisation keyway, designated by clockface position for 6 p + ⏚, 16 A and 32 A.

| Frequency Hz | Rated operating voltage V | Position of ground contact |
|---|---|---|
| 100 to 300 | above 50 | 10 |
| above 300 to 500 | above 50 | 2 |
| 50 | 110 | 4 |
| | 230 | 9 |
| | 400 | 6 |
| | 500 | 7 |
| 50 | 220 to 240 downstream from isolating transformer | 12 |

**6 p+ ⏚**




6 p + ⏚

## Products with extended versions and special devices – 7 pole

to DIN VDE 0623-1, EN 60309-1. Colour: electric grey and/or colour code. Highly resistant to chemicals. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

**Wall mounted receptacle**
with highly heat resistant contact carrier, nickel plated contacts, internal fixing, enclosure base can be turned 180°

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 43/257

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | 733 | 734 | 1035 |
| 32 | 7 | 735 | 736 | 1040 |

**Wall mounted receptacle**
highly resistant to chemicals, highly heat resistant contact carrier, nickel plated contacts, 2 external fixings, enclosure can be turned 180°

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 622

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | 9530 | 9531 | 9532 |
| 32 | 7 | 9590 | 9591 | 9592 |

**Wall mounted receptacle**
switched, mechanical DUO-interlock, highly heat resistant contact carrier, nickel plated contacts, 6 pole switch with 2 auxiliary contacts (1 NO and 1 NC), receptacles can be padlocked

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 382

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| with 6 pole switch: | | | | |
| 16 | 7 | | 7306 | |
| 32 | 7 | | 7307 | |
| with 3 pole switch: | | | | |
| 16 | 7 | | 5785 | |
| 32 | 7 | | 6106 | |

**Panel mounted receptacle**
highly heat resistant contact carrier, nickel plated contacts, 20° inclination

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 260

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | 737 | 738 | 1045 |
| 32 | 7 | 739 | 740 | 1050 |

**Panel mounted receptacle**
highly heat resistant contact carrier, nickel plated contacts, 20° inclination

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 251

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | 2883 | 2459 | 2296 |
| 32 | 7 | 3775 | 2317 | 2212 |

**Plug AM-TOP**
highly heat resistant contact carrier, nickel plated contacts, single part body, cable gland and sealing, strain relief and protection against kinking

IP 44
Std. Pack. Qty: 10

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | 741 | 742 | 1055 |
| 32 | 7 | 743 | 744 | 1060 |

## Products with extended versions and special devices – 7 pole

to DIN VDE 0623-1, EN 60309-1. Colour: electric grey and/or colour code. Other voltages and frequencies available on request.
For drawings and dimensions see page 105 - 117.

**Plug AM-TOP**
highly heat resistant contact carrier, nickel plated contacts, single part body, cable gland and sealing, strain relief and protection against kinking

IP 67
Std. Pack. Qty: 10

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | 3776 | 3777 | 3913 |
| 32 | 7 | 2405 | 2324 | 2213 |

**Wall mounted inlet**
highly heat resistant contact carrier, nickel plated contacts

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 147

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | | 2166 | |
| 32 | 7 | | 2167 | |

**Panel mounted inlet**
highly heat resistant contact carrier, nickel plated contacts

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 71

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | 749 | 750 | 1075 |
| 32 | 7 | 751 | 752 | 1080 |

**Panel mounted inlet**
highly heat resistant contact carrier, nickel plated contacts, with protective cap

IP 67
Std. Pack. Qty: 10
Drawing: 2 MB 203

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | 3779 | 3914 | 3780 |
| 32 | 7 | 3781 | 3915 | 3782 |

**Connector AM-TOP**
with highly heat resistant contact carrier, nickel plated contacts, single part body, cable gland and sealing, strain relief and protection against kinking

IP 44
Std. Pack. Qty: 10

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | 745 | 746 | 1065 |
| 32 | 7 | 747 | 748 | 1070 |

**Connector AM-TOP**
highly heat resistant contact carrier, nickel plated contacts, single part body, cable gland and sealing, strain relief and protection against kinking

IP 67
Std. Pack. Qty: 10

| A | P | 230 V 50 a. 60 Hz | 400 V 50 a. 60 Hz | 500 V 50 a. 60 Hz |
|---|---|---|---|---|
| 16 | 7 | 3783 | 3916 | 3784 |
| 32 | 7 | 2406 | 2255 | 2460 |

## Products with extended versions and special devices – For low voltage

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

**Wall mounted receptacle**

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 294

| A | P | 20 - 25 V 50 a. 60 Hz | 40 - 50 V 50 a. 60 Hz | 20 - 25 V 40 - 50 V 100-200 Hz | 20 - 25 V 40 - 50 V ⎓ |
|---|---|---|---|---|---|
| 16 | 2 | 1825 | 1831 | | 1829 |
| 16 | 3 | 1832 | 1837 | 1835 | |
| 32 | 2 | 1838 | 1844 | | 1842 |
| 32 | 3 | 1845 | 1850 | 1848 | |

**Wall mounted receptacle**

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 137

| A | P | 20 - 25 V 50 a. 60 Hz | 40 - 50 V 50 a. 60 Hz | 20 - 25 V 40 - 50 V 100-200 Hz | 20 - 25 V 40 - 50 V ⎓ |
|---|---|---|---|---|---|
| 16 | 2 | 577 | 578 | | 583 |
| 16 | 3 | 584 | 585 | 586 | |
| 32 | 2 | 590 | 591 | | 596 |
| 32 | 3 | 597 | 598 | 599 | |


**Panel mounted receptacle**
flange 55 x 55 mm, straight

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 136

| A | P | 20 - 25 V 50 a. 60 Hz | 40 - 50 V 50 a. 60 Hz | 20 - 25 V 40 - 50 V 100-200 Hz | 20 - 25 V 40 - 50 V ⎓ |
|---|---|---|---|---|---|
| 16 | 2 | 603 | 604 | | 609 |
| 16 | 3 | 610 | 611 | 612 | |
| 32 | 2 | 616 | 617 | | 622 |
| 32 | 3 | 623 | 624 | 625 | |


**Panel mounted receptacle**
flange 75 x 75 mm, straight

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 292

| A | P | 20 - 25 V 50 a. 60 Hz | 40 - 50 V 50 a. 60 Hz | 20 - 25 V 40 - 50 V 100-200 Hz | 20 - 25 V 40 - 50 V ⎓ |
|---|---|---|---|---|---|
| 16 | 2 | 1602 | 1603 | | 2617A |
| 16 | 3 | 1657 | 1661 | 1823 | |
| 32 | 2 | 1693 | 3290 | | 2488A |
| 32 | 3 | 1594 | 1595 | 1579 | |

**Panel mounted receptacle**
flange 68 x 62 mm, 20° inclination

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 231

| A | P | 20 - 25 V 50 a. 60 Hz | 40 - 50 V 50 a. 60 Hz | 20 - 25 V 40 - 50 V 100-200 Hz | 20 - 25 V 40 - 50 V ⎓ |
|---|---|---|---|---|---|
| 16 | 2 | 1270 | 2855 | | 2841 |
| 16 | 3 | 2845 | 1272 | 2860 | |
| 32 | 2 | 1271 | 2864 | | 2869 |
| 32 | 3 | 2870 | 1273 | 2852 | |

**Panel mounted receptacle**
20° inclination

IP 44
Std. Pack. Qty: 10
Drawing: 1 MB 236

| A | P | 20 - 25 V 50 a. 60 Hz | 40 - 50 V 50 a. 60 Hz | 20 - 25 V 40 - 50 V 100-200 Hz | 20 - 25 V 40 - 50 V ⎓ |
|---|---|---|---|---|---|
| 32 | 3 | | | 2837 | |

## Products with extended versions and special devices – For low voltage

to DIN VDE 0623, EN 60309-2. Other voltages and frequencies available on request. For drawings and dimensions see page 105 - 117.

**Plug**
with cable gland

IP 44
Std. Pack. Qty: 10

| A | P | 20 - 25 V 50 a. 60 Hz | 40 - 50 V 50 a. 60 Hz | 20 - 25 V 40 - 50 V 100-200 Hz | 20 - 25 V 40 - 50 V ⎓ |
|---|---|---|---|---|---|
| 16 | 2 | 655A | 656A | | 661A |
| 16 | 3 | 662A | 663A | 664A | |
| 32 | 2 | 668A | 669A | | 674A |
| 32 | 3 | 675A | 676A | 677A | |

**Wall mounted inlet**

IP 44
Std. Pack. Qty: 10
Drawing: 2 MB 160

| A | P | 20 - 25 V 50 a. 60 Hz | 40 - 50 V 50 a. 60 Hz | 20 - 25 V 40 - 50 V 100-200 Hz | 20 - 25 V 40 - 50 V ⎓ |
|---|---|---|---|---|---|
| 16 | 2 | 1955 | 1961 | | 1959 |
| 16 | 3 | 1962 | 1967 | 1965 | |
| 32 | 2 | 1968 | 1974 | | 1972 |
| 32 | 3 | 1975 | 1980 | 1978 | |

**Connector**
with cable gland

IP 44
Std. Pack. Qty: 10

| A | P | 20 - 25 V 50 a. 60 Hz | 40 - 50 V 50 a. 60 Hz | 20 - 25 V 40 - 50 V 100-200 Hz | 20 - 25 V 40 - 50 V ⎓ |
|---|---|---|---|---|---|
| 16 | 2 | 707A | 708A | | 713A |
| 16 | 3 | 714A | 715A | 716A | |
| 32 | 2 | 720A | 721A | | 726A |
| 32 | 3 | 727A | 728A | 729A | |

5

# Low voltages.

When portable electric appliances are used in environments where conductive materials are present and where movement is restricted, they must be operated at low voltage or they must be electrically isolated, e.g. in or on boilers, containers, pipework systems, steel scaffolding or similar installations. The same applies to rooms containing exposed conductive materials. Portable lamps must be operated at low voltage.

Stationary appliances may be operated at a safe low voltage or they may be electrically isolated, e.g. lamps installed temporarily for maintenance purposes, cleaning or other types of work, which are connected to the power supply by means of movable cables. Only use tools of protection type II or III. Also, lamps for barrels and movable lamps for ovens must be operated at low voltage.

Furthermore, low voltage 25 V AC should be used for all mobile appliances without insulation which are used on animals, e.g. shears, milking machines, etc.

**Requirements on plugs and sockets for low voltages.**
Plugs and sockets must be different from those used at other voltages and must not be provided with an earth contact (VDE 0100 part 410:1997-01).

# 200 A - 400 A

## Heavy duty versions for industry.

The heavy duty range supplements the plugs and sockets currently covered by EN 60309-2, making available rated currents of 200 A, 250 A and 400 A and rated voltages of up to 1000 V.
Their design is based on the following standards: IEC 309-1, EN 60309-1, DIN VDE 0623, part 1.

**Shock hazard protected using contact covers.**

Contact bushings on receptacles and connectors are fitted with covers which positively prevent getting into contact with live bushings. Shockhazard protected in accordance with IEC 309-1 / EN 60309-1.

**Mechanical lock.**

For mobile consumers of rated current > 125 A we have included a heavy duty range with 200 A, 250 A and 400 A in our programme. This can be supplied for rated voltages of 230 V to 1000 V and seawater resistant.

The heavy duty range is suitable for use in very harsh conditions, e.g. building sites:

- drilling rigs
- drilling and conveying systems
- tunnel construction
- quarries
- gravel pits
- strip mining
- container terminals and crane connections in harbours
- airports
- for versatile power supply at large-scale indoor and outdoor events
- power supply to market places
- seawater resistant design are available on request

Connection terminals in plugs and sockets 200 A for conductor cross sections of 70 to 150 $mm^2$, 250 A and 400 A for conductor cross sections of 70 to 185 $mm^2$ or with flexible conductors, and 70 to 240 $mm^2$ with single or multiple strand conductors.

**Surface protection for contacts.**

Contacts 200 A up to 400 A are protected against corrosive atmosphere by silver plating. Contacts (250 A and 400 A) are accessible from the front side so that there is no need to undo the connection cable when exchanging damaged parts.

Plugs, connectors, inlets and wall mounted receptacles are supplied with flared bushings for cables of diameter 45 to 65 mm. The outside cable grip facilitates connection.

Two pilot contacts are a standard fitting in all plugs and sockets. The pilot contacts lag when the plug is inserted and lead when it is withdrawn. If required, plugs and sockets can be electrically interlocked.

## Products with extended versions and special devices – 200 A up to 400 A

Design based on IEC 309-1, EN 60309-1, DIN VDE 0623 part 1. Other voltages and frequencies available on request.
For drawings and dimensions see page 105 - 117.

**Wall mounted receptacle**
with cable gland, seawater resistant design available on request

IP 67
Std. Pack. Qty: 1
200 A Drawing: 1 MB 385
250 + 400 A Drawing: 1 MB 389/1

| A | P | 400 V 50 a. 60 Hz |
|---|---|---|
| 200 | 4 | 75221 |
| 200 | 5 | 75226 |
| 250 | 4 | 75021 |
| 250 | 5 | 75111 |
| 400 | 4 | 75026 |
| 400 | 5 | 75116 |

**Wall mounted receptacle**
switched, mechanical interlock, seawater resistant design available on request

IP 55
Std. Pack. Qty: 1
200 A Drawing: 1 MB 386
250 + 400 A Drawing: 1 MB 403/2

| A | P | 400 V 50 a. 60 Hz |
|---|---|---|
| 200 | 4 | 75231 |
| 200 | 5 | 75236 |
| 250 | 4 | 75031 |
| 250 | 5 | 75121 |
| 400 | 4 | 75036 |
| 400 | 5 | 75126 |

**Wall mounted receptacle**
switched, electrical interlock, seawater resistant design available on request

IP 55
Std. Pack. Qty: 1
200 A Drawing: 1 MB 387
250 + 400 A Drawing: 1 MB 404/2

| A | P | 400 V 50 a. 60 Hz |
|---|---|---|
| 200 | 4 | 75271 |
| 200 | 5 | 75276 |
| 250 | 4 | 75437 |
| 250 | 5 | 75441 |
| 400 | 4 | 75174 |
| 400 | 5 | 75448 |



**Panel mounted receptacle**
seawater resistant design available on request

IP 67
Std. Pack. Qty: 1
200 A Drawing: 1 MB 384
250 + 400 A Drawing: 1 MB 388/1

| A | P | 400 V 50 a. 60 Hz |
|---|---|---|
| 200 | 4 | 75241 |
| 200 | 5 | 75246 |
| 250 | 4 | 75041 |
| 250 | 5 | 75131 |
| 400 | 4 | 75046 |
| 400 | 5 | 75136 |

**Panel mounted receptacle**
15° inclination, seawater resistant design available on request

IP 67
Std. Pack. Qty: 1
200 A Drawing: 1 MB 636
250 + 400 A Drawing: 1 MB 637

| A | P | 400 V 50 a. 60 Hz |
|---|---|---|
| 200 | 4 | 75053 |
| 200 | 5 | 75058 |
| 250 | 4 | 75063 |
| 250 | 5 | 75068 |
| 400 | 4 | 75073 |
| 400 | 5 | 75078 |

**Plug**
with cable gland, seawater resistant design available on request

IP 67
Std. Pack. Qty: 1

| A | P | 400 V 50 a. 60 Hz |
|---|---|---|
| 200 | 4 | 75201 |
| 200 | 5 | 75206 |
| 250 | 4 | 75001 |
| 250 | 5 | 75091 |
| 400 | 4 | 75006 |
| 400 | 5 | 75096 |

## Products with extended versions and special devices – 200 A up to 400 A

Design based on IEC 309-1, EN 60309-1, DIN VDE 0623 part 1. Other voltages and frequencies available on request.
For drawings and dimensions see page 105 - 117.

**Inlet**
with cable gland, seawater resistant design are available on request

IP 67
Std. Pack. Qty: 1
200 A Drawing: 2 MB 197
250 + 400 A Drawing: 2 MB 200/1

| A | P | 400 V 50 a. 60 Hz |
|---|---|---|
| 200 | 4 | 75251 |
| 200 | 5 | 75256 |
| 250 | 4 | 75172 |
| 250 | 5 | 75173 |
| 400 | 4 | 75389 |
| 400 | 5 | 75398 |

**Panel mounted inlet**
seawater resistant design are available on request

IP 67
Std. Pack. Qty: 1
200 A Drawing: 2 MB 196
250 + 400 A Drawing: 2 MB 199/1

| A | P | 400 V 50 a. 60 Hz |
|---|---|---|
| 200 | 4 | 75261 |
| 200 | 5 | 75266 |
| 250 | 4 | 75284 |
| 250 | 5 | 75287 |
| 400 | 4 | 75291 |
| 400 | 5 | 75295 |

**Panel mounted inlet**
15° inclination, seawater resistant design are available on request

IP 67
Std. Pack. Qty: 1
200 A Drawing: 2 MB 247
250 + 400 A Drawing: 2 MB 248

| A | P | 400 V 50 a. 60 Hz |
|---|---|---|
| 200 | 4 | 75311 |
| 200 | 5 | 75316 |
| 250 | 4 | 75321 |
| 250 | 5 | 75326 |
| 400 | 4 | 75331 |
| 400 | 5 | 75336 |

**Connector**
with cable gland, seawater resistant design are available on request

IP 67
Std. Pack. Qty: 1

| A | P | 400 V 50 a. 60 Hz |
|---|---|---|
| 200 | 4 | 75211 |
| 200 | 5 | 75216 |
| 250 | 4 | 75011 |
| 250 | 5 | 75101 |
| 400 | 4 | 75016 |
| 400 | 5 | 75106 |

Protection type IP 44.
The right choice for control stations, storage areas, laboratories, airports, production lines, etc. Cepex data port sockets are operated with standard patch cables and can be combined with Cepex receptacles CEE and/or SCHUKO®. For wall-/panel mounting or installation in cable ducts.

# Cepex data port sockets.


**1** The bottom part of the enclosure can be turned by 180 degrees, which allows cable insertion from above or below without additional work.

**2** Protection type IP 44 with closed cover or with plug inserted.

**3** Suitable for double RJ45 ports, Cat. 3 to Cat. 7 and manufacturerindepen-dent RJ45 Keystones. Openings according to IEC 60603-7.

**4** Lockable even with connected cables. The safety lock prevents unauthorized access.

**5** Visible labeling field.

**Simple:**
All types are equipped with a membrane gland fitting M 25 for two cables 3-9 mm.
Simply push in the cable – done!

**Extra:**
A metric cable gland M 25 / 2 x 8 is optionally available.

| Title |
|---|
| **Compact network distributor** |
| **Fitted with** |
| 1 Cepex data port socket with 2 RJ45 connection modules, type E-DAT module, port, Cat.6, brand: BTR<br><br>2 SCHUKO® 16 A, 230 V |
| **Cable entry:**<br>2 M 25 at the top (closed),<br>1 M 25 at the bottom (with cable gland)<br>1 M 25 2 x 8 at the bottom (with cable gland seal insert for 2 individual cables up to 8 mm Ø) |
| **Compact network distributor**<br>also available with 4 SCHUKO®<br>Enclosure size:<br>160 x 245 mm (H x W)<br>(part no. 25715) |
| **Enclosure size** |
| 118 x 170 mm (H x W) |
| **Part no.** |
| **25705** |

| Title |
|---|
| **Network enclosure AMAXX®** |
| **Fitted with** |
| 2 Cepex enclosures (part no.: 4345G) prepared for 4 RJ45 connection modules, type E-DAT module or OpDAT module LC or ST (brand BTR - Not in scope of supply) |
| **Cable entry:**<br>2 x M 25 at the top (closed),<br>2 x M 25 at the bottom (closed) and<br>2 x M 20 top and bottom (closed) |
| **Network enclosure AMAXX®**<br>also available with<br>1 Cepex enclosure (part no.: 25104, 25104GE) |
| **Enclosure size** |
| 130 x 225 mm (H x W) |
| **Part no.** |
| **25102GE** yellow<br>**25102** grey |

Colours: grey (RAL 7035), alpine white (RAL 9010), silver (RAL 9006), black (RAL 9005). For drawings and dimensions see page 105 - 117.

**Cepex enclosure, grey**
as wall mounted receptacle, for installation of RJ45 data port sockets, 2 keys, identical lock: Part no. + Index “G“

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 313

| Brand | Type | Data module | Part no. |
|---|---|---|---|
| AMP | Twist | — | 4350 [1] |
| AMP | Jack | 2 x 41457 | 4360 |
| AMP | CO Plus | — | 4370 * |
| BTR | E-DAT module | 2 x 41455 | 4340 [3] |
| Rutenbeck | iso-8/8 Up0S | 1 x 41492 | 4320 |
| TKM | KDMF | 1 x 41452 | 4300 [1] |
| Reichle & De-Massari | Module Real 10 | 2 x 25056 | 4375 [2] |

**Cepex enclosure, grey**
as panel mounted receptacle, for installation of RJ45 data port sockets, 2 keys, identical lock: Part no. + Index “G“

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 305

| Brand | Type | Data module | Part no. |
|---|---|---|---|
| AMP | Twist | — | 4352 [1] |
| AMP | Jack | 2 x 41457 | 4362 |
| AMP | CO Plus | — | 4372 * |
| BTR | E-DAT module | 2 x 41455 | 4342 [3] |
| Rutenbeck | iso-8/8 Up0S | 1 x 41492 | 4322 |
| TKM | KDMF | 1 x 41452 | 4302 [1] |
| Reichle & De-Massari | Module Real 10 | 2 x 25056 | 4377 [2] |

**Cepex enclosure, alpine white**
as panel mounted receptacle, for installation of RJ45 data port sockets, 2 keys, identical lock: Part no. + Index “G“

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 305

| Brand | Type | Data module | Part no. |
|---|---|---|---|
| AMP | Twist | — | 4354 [1] |
| AMP | Jack | 2 x 41457 | 4364 |
| AMP | CO Plus | — | 4374 * |
| BTR | E-DAT module | 2 x 41455 | 4344 [3] |
| Rutenbeck | iso-8/8 Up0S | 1 x 41492 | 4324 |
| TKM | KDMF | 1 x 41452 | 4304 [1] |

**Cepex enclosure, silver**
as panel mounted receptacle, for installation of RJ45 data port sockets, 2 keys, identical lock: Part no. + Index “G“

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 305

| Brand | Type | Data module | Part no. |
|---|---|---|---|
| Rutenbeck | iso-8/8 Up0S | | 4326 |

**Cepex enclosure, black**
as panel mounted receptacle, for installation of RJ45 data port sockets, 2 keys, identical lock: Part no. + Index “G“

IP 44
Std. Pack. Qty: 5
Drawing: 1 MB 305

| Brand | Type | Data module | Part no. |
|---|---|---|---|
| AMP | Twist | — | 4366 [1] |
| AMP | Jack | 2 x 41457 | 4365 |
| AMP | CO Plus | — | 4379 * |
| BTR | Module E-DAT | 2 x 41455 | 4345 [3] |
| Rutenbeck | iso-8/8 Up0S | 1 x 41492 | 4367 |
| Reichle & De-Massari | Module Real 10 | 2 x 25056 | 4378 [2] |

[1] Cepex enclosures also suited for data modules of Telegärtner (AMJ 45 Up/O, cat.6a) and Nexans (LANmark-6 Snap-in Connector with fixing ring Modular Outlet 50).

[2] Cepex enclosures also suited for the connection modules Telegärtner (AMJ/UMJ cat.6+, Setec (XKJ), Corning (FutureCOM S10TENe Keystone), Dätwyler (KS-T6A, MS-K, PS-GG45), Rutenbeck (UM real cat.6a, A), LEONI MegaLine, Keystone.

[3] Cepex enclosures also suited for LEONI MegaLine.

* The data inserts/modules AMP CO Plus are not part of the MENNEKES delivery program!

**Overview of mounting options for RJ45 modules in empty Cepex enclosures.**

| RJ45 modules and Keystones | | | Cepex panel mounted receptacle | | | | | | | | | | | | | | | | | | Cepex surface-mounted receptacle | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brand | Type | Part no. data module | Part no. enclosure Grey (RAL 7035) | | | | | | | Part no. enclosure Alpine white (RAL 9010) | | | | | | Part no. enclosure Black (RAL 9005) | | | | | | Part no. enclo-sure Silver (RAL 9006) | Part no. enclosure Grey (RAL 7035) | | | | | | |
| | | | 4302 | 4322 | 4342 | 4352 | 4362 | 4372 | 4377* | 4304 | 4324 | 4344 | 4354 | 4364 | 4374 | 4345 | 4365 | 4366 | 4367 | 4378* | 4379 | 4326 | 4300 | 4320 | 4340 | 4350 | 4360 | 4370 | 4375* |
| **AMP** | **Jack** | **41457** | | | | | ● | | | | | | | ● | | | ● | | | | | | | | | | ● | | |
| AMP | CO Plus | | | | | | | ● | | | | | | | ● | | | | | | | ● | | | | | | | ● | |
| Telegärtner | AMJ 45 Up/O | | ● | | | ● | | | | ● | | | | | | | | ● | | | | | | ● | | | | ● | | |
| Telegärtner | AMJ/UMJ module | | | | | | | | ● | | | | | | | | | | | | ● | | | | | | | | | ● |
| Nexans | LANmark connector | | ● | | | ● | | | | ● | | | ● | | | | | ● | | | | | | ● | | | | ● | | |
| **BTR** | **E-DAT module** | **41455** | | | ● | | | | | | | ● | | | | ● | | | | | | | | | | ● | | | | |
| **Rutenbeck** | **iso-8/8 UP0S** | **41492** | | ● | | | | | | | ● | | | | | | | | ● | | | | ● | | ● | | | | | |
| Rutenbeck | UM real | | | | | | | | ● | | | | | | | | | | | | ● | | | | | | | | | ● |
| **TKM** | **KDMF** | **41452** | ● | | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | |
| **Reichle & De-Massari** | **Module Real 10** | **25056** | | | | | | | ● | | | | | | | | | | | | ● | | | | | | | | | ● |
| Setec | XKJ | | | | | | | | ● | | | | | | | | | | | | ● | | | | | | | | | ● |
| Corning | FutureCom | | | | | | | | ● | | | | | | | | | | | | ● | | | | | | | | | ● |
| Dätwyler | KS-T6A | | | | | | | | ● | | | | | | | | | | | | ● | | | | | | | | | ● |
| LEONI | MegaLine | | | | ● | | | | ● | | | ● | | | | ● | | | | | ● | | | | ● | | | | | ● |

6

* Keystones

Our keystone-variations can be fitted with **supplier independent** modules. Beside RJ45 modules a large variety of electrical and optical connections for data transmission can be fitted.

**Data module**

BTR, type: RJ45 connection module 270° (type E-DAT module 8(8) jack cat.6), suitable for Cepex data port sockets, part no. 4340, 4342, 4344, 4355, strain relief per locking clip directly on the stuffer cap

Std. Pack. Qty: 20

| Part no. |
|---|
| 41455 |

**Data module**

AMP, type: RJ45 connection module (type Cat.6 SL Jack), suitable for Cepex data port sockets, part no. 4360 and versions

Std. Pack. Qty: 12

| Part no. |
|---|
| 41457 |

**Data module**

Reichle & De-Massari, type: data port sockets insert Real 10, Cat.6, screened, including frame for snap-in, suitable for Cepex data port sockets, Part no. 4375 and versions

Std. Pack. Qty: 10

| Part no. |
|---|
| 25056 |

**Data module**

Rutenbeck, type: data port insert 2 x RJ45, Cat.6a, (type UP0S), suitable for Cepex data port sockets, Part no. 4320 and versions

Std. Pack. Qty: 10

| Part no. |
|---|
| 41492 |

**Data module**

TKM, type: data port insert 2 x RJ45, Cat.6, (type KDMF), suitable for Cepex data port sockets, Part no. 4300 and versions

Std. Pack. Qty: 10

| Part no. |
|---|
| 41452 |

**Data module**

RJ45 connection module, type E-DAT module, connector 8(8) 90°, Cat.6 (recommended for improved cable routing), for Cepex data port sockets

Std. Pack. Qty: 10

| Part no. |
|---|
| 25042 |

Pre-wired for installation, IP 44, enclosure front cover electric grey RAL 7035, hinged to the side (except enclosure size 130 x 225 mm and 650 x 112.5 mm). Fusing behind a transparent cover. For drawings and dimensions see page 114.

**CEE receptacles**

**Data port sockets**
1 Cepex RJ45, 2 fold Cat.6

**Receptacles SCHUKO®**
2 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 25 A, 2 p, 0.03 A
2 MCB´s 16 A, 1 p, C

**Connection**
For 1 cable up to
3 x 10 mm²

**Connection and load values**

**Enclosure size**
260 x 225 mm (H x W)

**Part no.**
**921312**

**CEE receptacles**
1 CEE 16 A, 5 p, 400 V

**Data port sockets**
1 Cepex RJ45, 2 fold Cat.6

**Receptacles SCHUKO®**
3 SCHUKO® 16 A, 230 V

**Fusing**

**Connection**
For 1 cable up to
5 x 10 mm²

**Connection and load values**

**Enclosure size**
650 x 112,5 mm (H x W)

**Part no.**
**960005**

**CEE receptacles**
1 CEE 16 A, 5 p, 400 V

**Data port sockets**
1 Cepex RJ45, 2 fold Cat.6

**Receptacles SCHUKO®**
2 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A

**Connection**
For 1 cable up to
5 x 10 mm²

**Connection and load values**

**Enclosure size**
650 x 112,5 mm (H x W)

**Part no.**
**960340**

**CEE receptacles**
1 CEE 32 A, 5 p, 400 V
1 CEE 16 A, 5 p, 400 V

**Data port sockets**
2 Cepex RJ45, 2 fold Cat.6

**Receptacles SCHUKO®**
2 SCHUKO® 16 A, 230 V

**Fusing**
1 RCD 40 A, 4 p, 0.03 A
1 MCB 32 A, 3 p, C
1 MCB 16 A, 3 p, C
2 MCB´s 16 A, 1 p, C

**Connection**
For 2 cables up to
5 x 25 mm²

**Connection and load values**
Pre-fuse max. 40 A
$I_{nA}$ 40 A
RDF 1

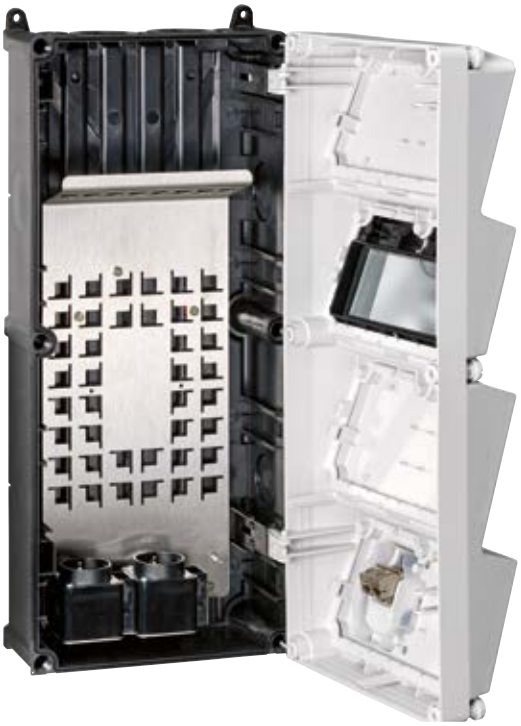
**Enclosure size**
520 x 225 mm (H x W)

**Part no.**
**940018**

6

Protection type IP 44.
Pre-wired for installation, enclosure front cover electric grey RAL 7035, yellow (GE) RAL 1021 also available on request. Enclosure hinged to the side.

# MENNEKES network distributor.



With the new industrial network distributor from the AMAXX® family, MENNEKES offers a product for the expansion of network solutions.

By using a robust plastic enclosure, the installation of standard network components is possible in more demanding environments, such as those that prevail in trade and industry, with regard to protection class, mechanical influences or similar factors.

Existing networks can thus be quickly expanded, while smaller networks can easily be rebuilt. The user can act freely in the selection of active network components and Keystones. Hence the preferred switches or routers can be easily and safely attached to the integrated mounting plate. The patch panel for mounting up to eight Keystones can be equipped with RJ45 sockets or other inserts.

Two SCHUKO® receptacles integrated into the enclosure are used for the power supply of the active network components. Another advantage for the user: After the power supply has been connected by the qualified electrician, the further equipping and manipulation of the enclosure can be performed by laymen in the field of electrical technology.

**Fitted with**

Patch and mounting panel with threaded ground bolt M 6 for the optional connection of an external ground conductor

2 SCHUKO® receptacles for the power supply of active network components

1 Cepex data port socket (black RAL 9005) with 2 RJ45 right angle connector modules for direct connection of patch cables

4 Velcro connectors for fastening installed components on the base plate

2 screw fittings M 40 with multiple seal, 6 openings for a cable diameter of 6-9 mm including 5 each blanking plugs

1 screw fitting M 20

1 screw set

**Enclosure size**

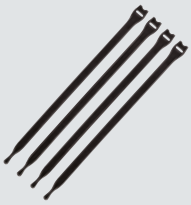
520 x 225 mm (H x W)

**Part no.**

**25405**

**AMAXX®
cable gland set**

enclosed with each media distributor
Black RAL 9005,
2 screw fittings M 40
2 multiple seals with
6 openings for a cable diameter of 6-9 mm
including each 5 blind plugs
1 screw fitting M 20



**Velcro connector**

enclosed with each media distributor
Set of 4 Velcro connectors for fastening installed components on the base plate

# Plugs and sockets for reefer containers

## On ships and in terminals.

**AM-TOP plugs and connectors.**

Stable enclosure consisting of one part. The teeth on the cable gland secure a safe grip and protect against loosening. The cable gland serves as an anti-bend protection for the cables at the same time.

**Wall mounted receptacles, switched and interlocked.**
Receptacles with the patented, mechanical DUO-interlocking ensure that the receptacle can only be switched when inserting a plug.

**Receptacle combinations with receptacles, switched and interlocked.**

7

380-
440V

32 A

3 h

3 p+ ⏚

## Application-specifie solutions – For reefer containers

Ground contact at 3 o'clock position conforming to DIN VDE 0623, EN 60309-2. Highly resistant to chemicals.
Other versions available on request. For drawings and dimensions see page 105 - 117.

**Wall mounted receptacle**
highly resistant to chemicals, with highly heat resistant contact carrier and nickel plated contacts

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 622

| A | P | 380 - 440 V 50 a. 60 Hz |
|---|---|---|
| 32 | 4 | 9562 |

**Wall mounted receptacle**
with highly heat resistant contact carrier and nickel plated contacts, switched, with mechanical DUO-interlock

IP 67
Std. Pack. Qty: 1
Drawing: 1 MB 207

| A | P | 380 - 440 V 50 a. 60 Hz |
|---|---|---|
| 32 | 4 | 5792A |

**Wall mounted receptacle**
with highly heat resistant contact carrier and nickel plated contacts, switched, with mechanical DUO-interlock and DIN rail

IP 67
Std. Pack. Qty: 2
Drawing: 1 MB 181/620

| A | P | 380 - 440 V 50 a. 60 Hz |
|---|---|---|
| 32 | 4 | 5946A |

**Panel mounted receptacle**
with highly heat resistant contact carrier and nickel plated contacts, flange 85 x 75 mm, straight

IP 67
Std. Pack. Qty: 10
Drawing: 1 MB 141

| A | P | 380 - 440 V 50 a. 60 Hz |
|---|---|---|
| 32 | 4 | 2123A |


**Panel mounted receptacle**
switched, with mechanical DUO-interlock, with highly heat resistant contact carrier and nickel plated contacts, horizontal design, with load break switch KH32 3 p

IP 67
Std. Pack. Qty: 5
Drawing: 5 MB 57

| A | P | 380 - 440 V 50 a. 60 Hz |
|---|---|---|
| 32 | 4 | 7538 |

**Plug AM-TOP**
with highly heat resistant contact carrier and nickel plated contacts, with screw terminals and single part body

IP 67
Std. Pack. Qty: 10

| A | P | 380 - 440 V 50 a. 60 Hz |
|---|---|---|
| 32 | 4 | 2175B |

## Application-specifie solutions – For reefer containers

Ground contact at 3 o'clock position conforming to DIN VDE 0623, EN 60309-2. Other versions available on request.
For drawings and dimensions see page 105 - 117.

**Phase sequence test plug**
earthing contact in the 3 o'clock position, conforming to VDE 0413 part 7

IP 44
Std. Pack. Qty: 5

| A | P | 380 - 440 V 50 a. 60 Hz |
|---|---|---|
| 32 | 4 | 3718 |

**Panel mounted inlet**
with highly heat resistant contact carrier and nickel plated contacts, with hinged lid

IP 67
Std. Pack. Qty: 10
Drawing: 2 MB 40

| A | P | 380 - 440 V 50 a. 60 Hz |
|---|---|---|
| 32 | 4 | 2692 |

**Connector AM-TOP**
with highly heat resistant contact carrier and nickel plated contacts, with screw terminals and single part body

IP 67
Std. Pack. Qty: 10

| A | P | 380 - 440 V 50 a. 60 Hz |
|---|---|---|
| 32 | 4 | 2177A |

**Houlder**
for plugs 32 A, 4 p

Std. Pack. Qty: 10

| Part no. |
|---|
| 41342 |

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## Application-specifie solutions – For reefer containers

Protection type IP 67
Ground contact at 3 o'clock position conforming to DIN VDE 0623, EN 60309-2. Other versions available on request. Receptacles switched, with mechanical DUO interlock with highly heat resistant contact carrier and nickel plated contacts. For drawings and dimensions see page 114.
It is self - evident for us to offer customized solutions which are especially made for your demand. Please contact us!

**CEE receptacles**

3 CEE 32 A, 4 p, 380-440 V, 3 h
For reefer containers, switched,
with mechanical DUO-interlock

**CEE receptacles**

**Receptacles SCHUKO®**

**Fusing**

3 MCB's 32 A, 3 p, C
1 earth bolt M 10, V2A

**Connection**

For 1 cable up to 5 x 25 $mm^2$

**Connection and load values**

Pre-fuse max. 100 A
$I_{nA}$ 58 A
RDF 0.6

**Enclosure size**

520 x 225 mm (H x W)

**Part no.**

**940027**

**BMW motorcycle plant**, Berlin, Germany


**KORDSA GLOBAL A.S., Industrial Yarn and Cord Factory**, Izmit, Turkey

**Formula 1 circuit**, Manama, Bahrain

**Shanghai International Circuit (Formula 1 Race Course)**, Shanghai, China


**Yas Marina Circuit (Formula 1 Race Course)**, Abu Dhabi, UAE


**Football Stadium „Signal Iduna Park“**, Dortmund, Germany

**Olympia Stadium**, Berlin, Germany

**Linea 1, Metro de Lima**, Lima, Peru

**Container Terminal**, Le Havre, France


**Port of Salalah,** Oman

**Container Terminal**, Altenwerder, Germany


**Ceramica Marca Corona**, Sassuolo, Italy

**Bauernmarkt (Market Square)**, Hannover, Germany

**Brunnenmarkt (Market Square)**, Vienna, Austria

**Barbara Erzbergbau GmbH (Underground Ore Mining)**,
Porta Westfalica, Germany

**Kali + Salz GmbH (Salt Mine), Plant Zielitz,** Germany

**Internet Data Center,** South Korea

**WIKUS-Sägenfabrik (Sawing factory)**, Spangenberg, Germany

# Service – Regulations and standards

While correct to the best of our knowledge, the information we provide with respect to laws and regulations is in no way binding. Such information is provided purely by way of assistance and makes no claim to completeness. The nature and composition of our appliances are exclusively as quoted in the product description to which the part numbers refer directly.

## Installation guidelines

It is best to proceed carefully with the installation and the use of electrical devices. The valid directives and standards, as well as the legal accident prevention regulations must be complied with. The installer is responsible for compliance with the respective regulations.

MENNEKES CEE plugs and sockets conform to the following standards and regulations:
IEC 60309-1
IEC 60309-2
EN 60309-1
EN 60309-2
IEC 60309-1/VDE 0623 part 1
IEC 60309-2/VDE 0623 part 2

## Applications

CEE plugs and sockets can and, under certain circumstances, must be used in industry, in commerce, in agriculture, in parks, in damp and wet environments, outdoors, on building sites, in caravans, on boats and yachts, on camp sites, for dockside power supply installations (marinas), on works premises where there is a fire hazard, at markets and fairground booths and for trailers and mobile homes.

Using CEE plugs and sockets will usually enable the planners and builders of electrical installations to comply with the „regulations for the construction of low voltage systems as per DIN VDE 0100“.

## Enclosure material

### Plastic material

MENNEKES generally uses high-grade plastic material with the following excellent properties: Excellent electrical insulation, break-proof, wearresistant, abrasion-resistant, dimensionally stable, self-extinguishing, heat-resistant, cold-resistant, stabilised against aging, resistant to seawater, oil, and petrol. For use in industrial premises or place of work where the use of chemicals or other aggressive substances makes it necessary to use other plastic materials, MENNEKES offers products with increased stability against fuel, oil and grease, diluted acids and alkali, cleaner and the most aqueous salt solutions. These products are marked in the catalogue with . Products made of this plastic combine high mechanical, thermal and electrical properties with excellent dimensional stability and resistance to chemicals and are fit for action in chemical plants, in refineries, in the food processing industry, in washdown areas and so on.

### Solid rubber

Solid rubber blends are preferably used wherever products are exposed to high mechanical and/or chemical loads. Solid rubber excels by its outstanding dimensional stability; it is largely resistant to acid and lye and has a high resistance to breakdown and leakage current. Products made from solid rubber blends, e.g. MENNEKES EverGUM, are resistant to weather and ageing. Under UV radiation, colour pigments may fade with time. This is inevitable even to the latest state of the art yet it does not compromise the function in any way.

### Stainless steel

Our high-quality stainless steel products are ideally suited for continuous use in buildings and outdoors. There is a potential risk of corrosion in open air and indoor swimming pools, in coastal regions, offshore and in industrial areas with high air pollution. Subject to location and climatic conditions discoloration and corrosion can arise. Through specific cleaning and maintenance procedures, impairments of the surface can be reduced or avoided. In particularly aggressive ambient conditions we recommend the use of special stainless steels or coating the surfaces to further increase corrosion resistance.

## Contact material, small parts

Female and male contacts are made of brass; screws, springs, etc. are made of rust-proof material or surface-coated steel.

## Characteristics of CEE plugs and sockets

MENNEKES CEE plugs and sockets are distinguished by the following features, which keep maintenance costs to a minimum:

- Easy to install
- Wiring space easily accessible
- Power screwdrivers can be used for installation
- Mostly fitted with Pozidriv screws (size 2)
- High contact pressure
- Low effort required for insertion and withdrawal
- Low transition resistance
- Easy-to-grip plugs

## Application

CEE plugs and sockets with operating voltages up to 1000 V DC or AC, frequencies up to 500 Hz and rated currents up to 800 A, including plugs and receptacles for low voltage systems have become the standard all over the world. Basically suitable for indoor and outdoor applications in industry, they are also used on building sites, farms, commercial premises, for caravans, mobile homes, boats, yachts and in households. CEE plugs and sockets are polarised and non-reversible.

## Ambient temperature

CEE plugs and sockets are suitable for ambient temperatures between -25 °C up to +40 °C.

## Low voltage directive 2014/35/EU

CEE plugs and sockets are subject to the EC low voltage directive and must therefore be provided with the CE mark to ensure free traffic of goods within the EU. A manufacturer‘s declaration is available on request.

# Service – Regulations and standards

## Declaration of Conformity

Current plugs and sockets have been tested by the VDE Test and Certification Institute in Offenbach, Germany. Furthermore, various other certificates from international inspection authorities have been obtained. A copy of test certificates is available on request.
The CE mark is not a compliance mark. MENNEKES CEE plugs and sockets satisfy the requirements specified in the low voltage directive and the device and/or the packaging bears the „CE“ mark „CE“ .

## Cable glands

| Metric | Typical sealing area | Typical capacity of terminal |
|---|---|---|
| M 12 | 2.5 - 6.5 mm | 3.0 - 6.5 mm |
| M 16 | 2.5 - 8.0 mm | 3.5 - 8.0 mm |
| M 20 | 5.0 - 12.0 mm | 6.0 - 12.0 mm |
| M 25 | 9.0 - 18.0 mm | 12.0 - 18.0 mm |
| M 32 | 14.0 - 25.0 mm | 17.0 - 25.0 mm |
| M 40 | 18.0 - 32.0 mm | 20.0 - 32.0 mm |
| M 50 | 24.0 - 38.0 mm | 26.0 - 38.0 mm |
| M 63 | 30.0 - 44.0 mm | 30.0 - 44.0 mm |

## Standard for low voltage switchgear and control gear assemblies - IEC 61439

**The standard, IEC 61439, replaces IEC 60439 and describes the design and the test specifications for low voltage switchgear and control gear assemblies. The new standard has influence on the distribution of electrical energy in industry, the domestic electrical installation and on construction sites.**

In 2012, the restructuring and revision of the safety requirements for low voltage switchgear was finalized with publication of the standard, IEC 61439-1:2012. The preceding standard, IEC 60439-1 will be replaced by IEC 61439-1:2012. The former Standard IEC 60439 was replaced by IEC 61439-1:2012 in September 2014. For all switchgear assemblies comissioned after this date, planning and documentation must be in accordance with IEC 61439-1: 2012 and its parts.

The purpose of this standard is the harmonisation of most of the general regulations and requirements for low voltage switchgear and control gear assemblies to achieve uniform requirements and verifications for switchgear and control assemblies and to avoid the necessity of verifications in accordance with other standards. All requirements of the different switchgear and control gear assemblies have been combined in this fundamental standard, together with topics of broad interest and application, e.g heating, insulation properties, etc.

In the future two main standards will be required for each design of a low voltage switchgear and control gear assembly:
- The basic standard that is referenced as „Part 1“ in the specific standards;
- The applicable parts 2 to 7 of the switchgear and control gear assembly standard that deals with the particularities of the application.

The IEC 61439 consists of the following parts:

| IEC ... | Replaces IEC ... |
|---|---|
| 61439-1: General definitions | 60439-1 |
| 61439-2: Power switchgear and control gear assemblies | 60439-1 |
| 61439-3: Distribution boards | 60439-3 |
| 61439-4: Assemblies for construction sites | 60439-4 |
| 61439-5: Public cable distribution cabinets | 60439-5 |
| 61439-6: Busbar trunking systems | 60439-2 |
| 61439-7: IEC/TS – specific installations on public sites, marinas, campsites, market squares, and EV charging stations (Draft) | 60439-7 |

Requirements in this standard, which are object of an agreement between manufacturer of the switchgear and control gear assemblies and user, are summarized on page 99 - 101. This listing facilitates provision of information concerning basic conditions and supplemental user definitions.

### Design verification

Additionally to the type verification, the producer has to provide an article proof which guarantees a correct set-up acc. to the norm, excludes material failures and the compliance with electrical safety requirements.

### Definition – „original manufacturer“ and „manufacturer of the switchgear and control gear assembly“

**Original manufacturer**
Organisation / enterprise that executed the original design and the associated verifications in accordance with the standard.

**Manufacturer of the switchgear and control gear assembly**
Organisation that completes a device and assembles it into a functional unit. The manufacturer is responsible for piece verification and thus for the product (Declaration of Conformity).

Significance for MENNEKES products:
For pre-wired devices MENNEKES is simultaneously the original manufacturer and the manufacturer. The responsibility and provision of verifications rest with us. We cannot declare partially wired devices that we manufacture as standard compliant. In this case the „finishing entity“ becomes the manufacturer and must declare conformity. It is required to forward information to this organisation so that the device ultimately can get a „Declaration of Conformity“.

## Heating

The max. ambient temperature is +40 °C.
The average value of the ambient temperature over a period of 24 hours must not be higher than +35 °C.
The verification of heating can be provided through various methods. Through testing of the switchgear and control gear combination, or through derivation of a known reference, and through an expert assessment, e.g in accordance with applicable design rules. Regardless of the method that is selected to determine the heat and thus the maximum current load of the combination, compliance with the appropriate temperature limit values must be ensured.
The switchgear and control gear assembly and its electrical circuits must be capable of bearing their rated currents under defined conditions and the rated values of the components, their suitability and application must be taken into account, without exceeding limit values specified in IEC 61439-1 Table 6, Part 1. The limit temperatures in table 6 apply for the average ambient temperature of +35 °C.
▶ The limit temperatures of the installed equipment must be taken into account!

## Heating – replacement of components

A device/component may only be replaced through a similar, identically constructed device a of a series other than the series used in the verification, if the power loss, and thus the heating of the connections is less than or equal to that of the device that is being replaced.

## Load of the largest electric circuit and of all outgoing circuits individually with rated current

The requirement of IEC 61439 is, that all electric circuits must be individually capable to carry their rated current, without exceeding temperature limit values in the process. If additional power circuits are added, a rated load factor can be set.

## Rated values $I_{nA}$, $I_{nc}$, RDF

• Standard definition $I_{nA}$
The rated current of the switchgear and control gear assembly, $I_{nA}$, is the total current that the main busbar can distribute in the respective installation of the assembly, without exceeding the temperature limit values mentioned in IEC 61439-1 section 9.2!

The current, $I_{nA}$, is considered to be the maximum current that the assembly can distribute via its outgoing circuits at 100 % continuous duty (CD).

• Standard definition $I_{nc}$
The rated current of an electric circuit is the value of the current that can be carried by this electric circuit under standard operating conditions when it is operated alone. The assembly must be capable of carrying this current without exceding the max. temperature limits of the individual components specified in IEC 61439-1 section 9.2.

• Standard definition – rated diversity factor RDF
The RDF is the specified percentage value of the rated current with which the (individual) outgoing circuits Inc of a switchgear and control gear assembly can be continuously and simultaneously be used with due consideration of the opposing thermal influences. In this process the $I_{nA}$ must not be exceeded.

## Table 101 from IEC 61439-3 Values for assumed load

| Number of main electric circuits | Assumed load factor |
|---|---|
| 2 and 3 | 0.8 |
| 4 and 5 | 0.7 |
| 6, up to and including 9 | 0.6 |
| 10 (and more) | 0.5 |

This table provides guide values, if in doubt the manufacturer‘s specification always applies.

## MENNEKES standard values in accordance with Table C of IEC 61439

The information below represents specified standard values for MENNEKES catalogue assemblies. If there are deviations from this standard or in the case of special project planning, appropriate coordination must take place beforehand between user and manufacturer. These agreements must be arranged between MENNEKES and the user / customer during the quotation phase (prior to production and prior to sale).
The table below is a „blank“ that is applicable for approximately 98 % of the MENNEKES devices. Special project planning is not covered by the specifications, and must be separately disclosed by the user prior to project planning. In these special cases, it is required that additional details be considered with the aid of the standards cited and their product sub-standards (see Section 7.2, in Part 1).

| Characteristic | Standard value | Normative option | MENNEKES standard |
|---|---|---|---|
| System according to type of earth connection | Design in accordance with the local requirements | TT / TN / IT | TN / TT |
| Rated voltage | In accordance with local installation conditions | max. 1000 V AC or 1500 V DC | 400 V AC |
| Transient overvoltages | determined through the electrical system | Overvoltage category I / II / III / IV | Kat. III / plugs and sockets Kat. II |
| Occasional overvoltages | min. rated voltage + 1200 V | See Table 8 + 9 or 10 for the values | 1890 V (AC) |
| Rated frequency | in accordance with installation conditions | DC / 50 Hz / 60 Hz | 50 Hz |
| Short circuit resistance | determined through the system | N + PE max 60 % of the outer conductor values | $I_{cc}$ max. ≤ 10 kA |

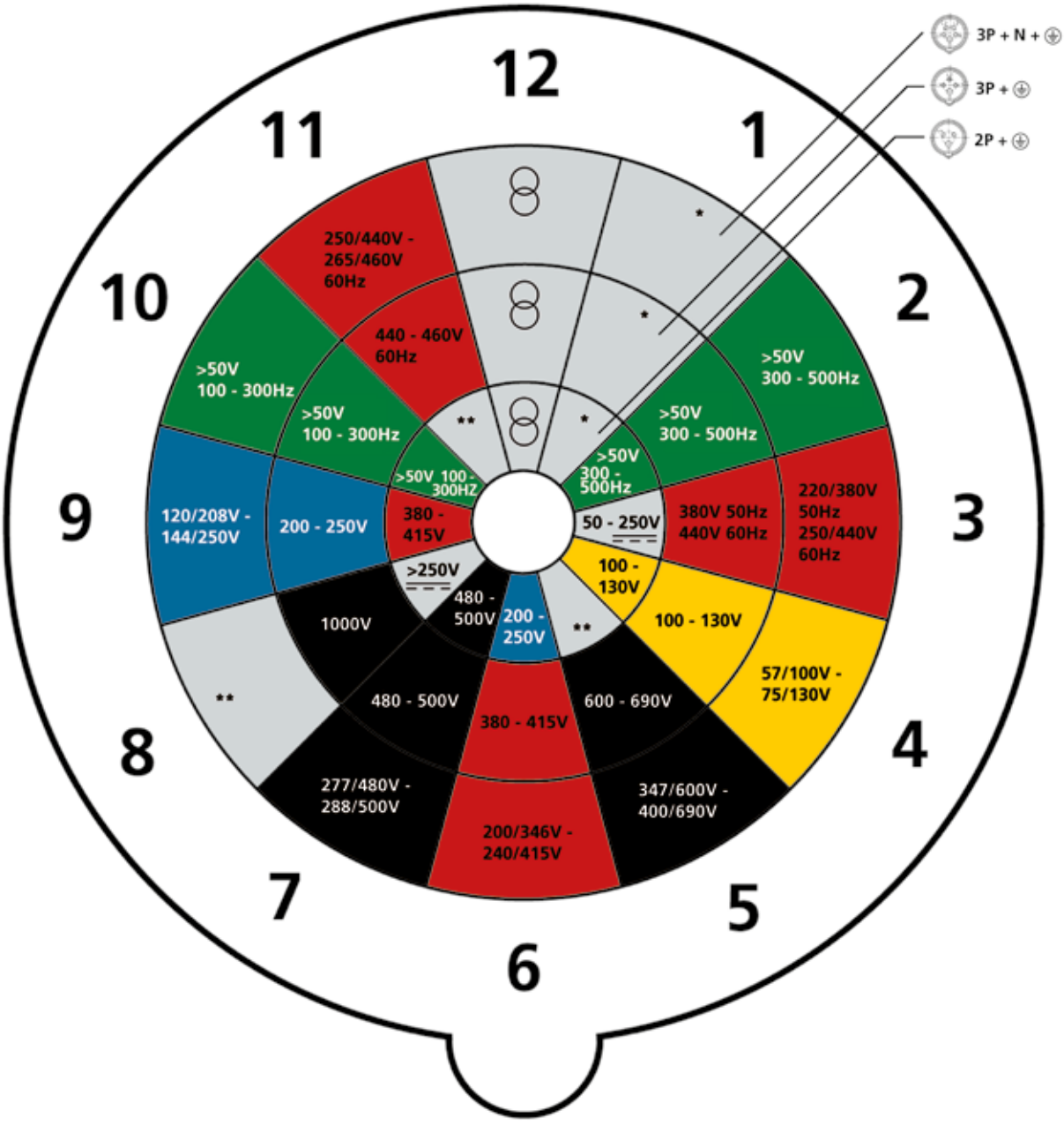
| Characteristic | Standard value | Normative option | MENNEKES standard |
|---|---|---|---|
| SCPD in the supply | in accordance with installation conditions | yes / no | no |
| Coordination between shortcircuit protection devices inside or outside of the switchgear and control gear assembly | in accordance with installation conditions | present / install / integrate | Item-dependent |
| Information of loads that could possibly contribute to short-circuit current | No loads are permitted that could possibly contribute to the shortcircuit current | none | none |
| Type of protection against electric shock – basic insulation | Basic protection | Comply with local requirements | Basic protection |
| Type of protection against electric shock – earth fault protection | Protection against indirect contact / comply with local requirements | Automatic shutdown / protective disconnect / protective insulation | Item-dependent |
| Installation site | Execution of the manufacturer | Indoors / outdoors | Item-dependent |
| Protection type | Indoors min. IP 2x / outdoors min. IP 23 | IP xx (A-D) | IP 44 |
| Protection against mechanical effects | | if necessary specification of the IK code (IEC 62208) | Information on request |
| Resistance to UV radiation | | Required for enclosures in outdoor installation | Information on request |
| Resistance to corrosion | For indoor and outdoor installation | yes / no | Item-dependent |
| Ambient temperature limit values | Indoors: min. -5 °C<br>Outdoors: min. -25 °C<br>High limit (both): +40 °C<br>max. average value (24 h): +35 °C | none | Standard values! see product for deviations |
| Maximum relative humidity | 90 % | Outdoors: 100 % at max. +25 °C<br>Indoors: 50 % bei +40 °C | Standard values! See product for deviations |
| Pollution degree | Industrial environment 3 | 1, 2, 3, 4 | 3 |
| Altitude | ≤ 2000 m | Pay attention to the factors | ≤ 2000 m |
| EMC environment | A or B | A / B | B |
| Special operating conditions (vibration, Ex-area, strong magnetic fields or contamination) | No particular conditions | none | Not defined! |
| External structural design | in accordance with manufacturer‘s specifications | Open / closed / standing / in-wall installation & on-wall installation / console | closed |
| Mobile or stationary | in accordance with manufacturer‘s specifications | yes / no | Item-dependent |
| Dimensions and masses | in accordance with manufacturer‘s specifications | none | Item-dependent |
| Type of conductors introduced from outside | Cables | Cables / busbar trunking systems | Cables |
| Materials of the conductors introduced from the outside | Copper | Copper / aluminum | Copper |
| Cross-sections of the outer conductors, PE, N & PEN conductors | As specified in the standard | none | none |
| Special requirements imposed on the marking of connections | in accordance with manufacturer‘s specifications | none | Manufacturer execution |
| Requirements imposed on storage & transport (type of transport, deviating ambient conditions, max. dimensions, packaging requirements) | Standard of the manufacturer | none | Information on request |
| Operability (access, activation rights, disconnect) | Easy reachability | Authorized persons, ordinary persons, etc. | Item-dependent |
| Requirements imposed on accessibility for operation, inspection, maintenance or extension | Inspection, component replacement, extension, maintenance, etc. only by specialized persons (requirement) | none | Inspection, replacement, extension, maintenance, etc. only through specialized persons |
| Separation of the outgoing electric circuits | in accordance with manufacturer‘s specifications | Individually / in groups / all | Item-dependent |

| Characteristic | Standard value | Normative option | MENNEKES standard |
|---|---|---|---|
| Type of interior subdivision | in accordance with manufacturer's specifications | Form 1, 2, 3, 4 | none |
| Rated current of the switchgear and control gear assembly | Manufacturers standard; in accordance with the application | none | Item-dependent |
| Rated current of the electric circuits ($I_{nc}$) | Manufacturers standard; in accordance with the application | none | Item-dependent |
| Rated diversity factor (RDF) | STANDARD specification | RDF for electric circuits/ RDF for the entire switchgear and control gear assembly | Item-dependent |
| Cross-section ratio between outer conductor and N* | Ø ≤ 16 mm² = 100 %<br>Ø > 16 mm² = 50 %<br>(min. 16 mm²) | For currents in N to 50 % of the outer conductors, otherwise a special agreement is necessary! | Outer conductor = neutral conductor cross-section |

* MENNEKES designs the size of the Neutral conductor accordingly to the max. allowed current for the phases. For special operating conditions (see IEC 61439, section 7.2 and IEC 61439-1 supplement 1, section 13.5) which relate to the ratio of neutral conductor to outer conductor (alternating current consumption with very low and different cosφ or excessive harmonics in the supply voltage or load current) can lead to a different size relation between neutral conductor to external conductor. This must be announced by the user.

**Clock positions acc. to EN 60309-2:1999 + A1:2007 + A2:2012, Series I (Europe)**

Position of ground contact sleeve with respect to major keyway for various voltages and frequencies. The colour codes correspond to the nominal voltage.




* Clock positions not normed and free for use for special applications.
** Clock positions not used.

## Colour coding

If the rated operating voltage is indicated by a colour coding in addition to compulsory markings, such colour coding must be in accordance with IEC 60309-1:2013-02, table 2:

| Rated operating voltage and frequency | Colour code | RAL* |
|---|---|---|
| 100 to 130 V | yellow | 1021 |
| 200 to 250 V | blue | 5007 |
| 380 to 480 V | red | 3013 |
| 500 to 1.000 V | black | 9005 |
| above 60 to 500 Hz | green | 6010 |

* RAL determined by MENNEKES, as in EN 60309-1:1999

## CEE plugs and sockets for rated operating voltages above 50 V

### Position of the earth contact

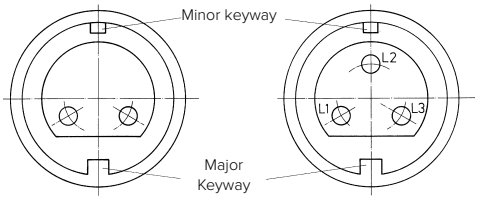
Plugs and sockets with rated voltages above 50 V must have an earth contact. To prevent incorrect insertion, a nose on the plug fits into a keyway in the receptacle, thus ensuring that the earth contact pin or tube is correctly positioned in accordance with the required electrical standard. The earth contact positions for the various frequencies and voltages are assigned a clockface position, in accordance with table 104 taken from EN 60309-2:1999 + A1:2007 + A2:2012 (see below).

## CEE plugs and sockets for rated voltages of up to 50 V (low voltage)

Since no earth contact is required in plugs and sockets of rated voltage up to 50 V, two keyways instead of one are provided the collar. They are accordingly termed the major and minor keyways. The major keyway is always in the 6 o'clock position. Depending on voltages and frequencies, the minor keyway is always in accordance with table 103 taken from EN 60309-2:1999 + A1:2007 + A2:2012, standard sheet 2-VIII (and in the following drawings).

Drawing: receptacles and connectors U = 40 to 50 V, 50 to 60 Hz, minor keyway in 12 o'clock position

16/32 A




### Arrangement of the minor keyway (major keyway 6 o'clock) for various voltages and frequencies using clockface positions in accordance with table 103 taken from EN 60309-2:1999 + A1:2007 + A2:2012

| Rated operating voltage V | Frequency Hz | Clockface position of keyway (major keyway = 6 o´clock) |
|---|---|---|
| 20 to 25 | 50 and 60 | no minor keyway |
| 40 to 50 | 50 and 60 | 12 |
| 20 to 25 and 40 to 50 | 100 to 200 | 4 |
| | 300 | 2 |
| | 400 | 3 |
| | > 400 to 500 | 11 |
| | DC | 10 |
| 25 | DC* | 8 *for portable electrical incubators – use with 12 V or 24 V direct-current voltage in ambulances or helicopters. |

Positions 1 and 9 are reserved for future standards. For design reasons, positions 5, 6 and 7 are not available for use.

### Colour coding

If the rated operating voltage is indicated by a colour coding in addition to compulsory markings, such colour coding must be in accordance with IEC 60309-1:1999, table 2:

| Rated operating voltage | Colour code | RAL* |
|---|---|---|
| 20 to 25 V | violet | 4001 |
| 40 to 50 V | white | 7035 |

* RAL determined by MENNEKES, as in EN 60309-1:1999 no specification is provided for.

## Interlocks and breaking capacity

Plugs and sockets without an interlock must have an adequate breaking capacity, i.e. it must be possible to insert and withdraw plugs in the manner specified and as often as specified. After testing they must exhibit no damage that would impair further use, and the holes for the plug contacts must not show any significant sign of damage. Receptacles and connectors that do not meet the test requirements for breaking capacity and service characteristics must be fitted with an interlock. An interlock is a mechanical or electrical device which ensures that voltage is only applied to the contacts of a plug once they have been inserted into a receptacle or connector as intended, which prevents a plug being withdrawn with the power switched on or which makes contacts voltage-free before disconnecting. A distinction is made between interlocked plugs and sockets with
- mechanical interlocks
- electrical interlocks.

In the case of receptacles and connectors ≥ 63/60 A, EN 60309-2 requires that a distinction is made between products used with or without interlocks. As MENNEKES plugs and sockets have adequate breaking capacity, standard ≥ 63/60 A versions are fitted with short contact tubes without pilot contact. In the 63 A and 125 A versions, the short contact tubes meet the finger-touch requirements of IEC 60529. Receptacles and connectors 63/60 A for electrical interlocking are fitted with long contact tubes and pilot contact for leading and lagging. The interlock makes up for the lack of finger-touch safety.

### Plugs and sockets with mechanical interlocks

Mechanical interlocks for plugs and sockets with a rated operating voltage greater than 50 V must conform to EN 60309-2:1999, standard sheet 2-V. The mechanical switch of a mechanically interlocked receptacle or connector must not be operational until the proper plug has been inserted. Built-in switches for mechanical interlocking of switched AC receptacles must have a breaking capacity conforming at least to IEC 60947-3 (VDE 0660 part 107), utilisation category AC 22. The breaking capacity must be suitable for the appliance connected.

### Plugs and sockets with electrical interlocks

In the case of plugs and sockets ≥ 63/60 A with a rated operating voltage greater than 50 V intended for electrical interlocking (part no. + index „P"), a built-in pilot contact can be used to switch off power to a receptacle or connector. The requisite switch can either be provided in the receptacle or on the corresponding circuit distribution board. In the case of receptacles with an integrated auxiliary switch fitted behind the pilot tube, the switch is triggered by the pilot pin of the plug. The advantage of this solution is that the pilot tube itself is not live (PCS interlock).

## Plugs and sockets for isolating and switching purposes

In accordance with IEC 0100-460, each electrical circuit must be capable of being disconnected from all active conductors of the power supply. This also applies for every piece of electrical equipment, which must be capable of being disconnected from the power supply via an installed or assigned switch. For the term, „disconnect", the term „isolate" is also used. As a rule, electrical equipment must be disconnected from the power grid for mechanical and electrical maintenance tasks. According to DIN VDE 0100-537, plugs and sockets isolating all conductors are suitable for the disconnection of power for maintenance purposes if they are able to switch off the load current in the electrical equipment in question. A plug and socket connection is a simple way of satisfying the requirement for „visible isolation".

### Shock hazard protection

Shock hazard protection must be achieved in accordance with EN 60309-1:1999 section 9 by designing plugs and sockets in such a way that, when engaged properly, no live parts of receptacles, connectors, plugs and inlets are exposed so that they may be touched.

It must also be impossible to establish a connection of plugs and connectors while any of the contacts are exposed to touch.

Neutral contact tubes and pilot contacts of receptacles and connectors are deemed to be live parts.

## Protection type

Plugs and sockets used to be classified according to the degree of protection against the entry of moisture:

– splashproof → drop in a triangle

– watertight → 2 drops

Today, complete IP protection according to IEC 60529, EN 60529 is specified for plugs and sockets, as they are tested in line with this standard.

IP 44 = Protection from solid bodies with a diameter ≥ 1 mm, splashproof
IP 67 = Protection from dust ingress, protection against temporary immersion

Information on IP protection (IP code) can be found in IEC 60529:2014-09 (VDE 0470 part 1).

Having been properly installed, receptacles and connectors must provide the degree of protection defined by the rating, whether the plug is inserted or not.

The protection type for plugs and inlets only applies if they are in contact with the matching piece of the connector or with a fixed cover, if applicable.

CEE plugs and sockets must be IP 44 or IP 67. CEE plugs and sockets with rated currents of 100/125 A must be IP 67.

100/125 A receptacles that are fastened to an enclosure or form a structural unit with the enclosure can be IP 44.

For receptacles IP 67, a bayonet system has been adopted as the standard in order to simplify their use especially under rough working conditions.

IP 44 or IP 67 is indicated on the appliances.

### Notice for the use of mobile power distribution boxes:

Please consider when using SCHUKO® receptacles that due to the construction the degree of protection is achieved only when the lid is closed. Otherwise the ingress of water at the ground contact area may not be prevented (see DIN VDE 0620-1 and DIN 49440 et sqq.)

Degree of protection of SCHUKO® plugs and sockets. Standard change of DIN VDE 620.

For use in mobile devices, in accordance with the current specifications, attachment receptacles that satisfy the IP X4 degree of protection requirements with closed flip-lid cover and with a plugged-in plug in every operating position. Before the standard change in February 2010, the IP X4 degree of protection was considered as fulfilled if the conditions are satisfied with vertical install position of the receptacles. For receptacles for stationary implementation, this also continues to be the case.

Important application instructions concerning the change in the standard.

- The latest amendment of IEC 620 (March 2013) makes a distinction in the case of IP X4 SCHUKO® receptacles, between stationary and mobile implementation conditions
- SCHUKO® IP X4 receptacles for stationary and mobile implementation conditions differ in their design (mobile with additional sealing collar, stationary unchanged).
- SCHUKO® IP X4 connectors, like mobile SCHUKO® IP X4 receptacles likewise have a supplemental sealing collar.

**Attention!**

- SCHUKO® plugs > IP X4 (in accordance with DIN 49442, resistant to pressurised water) when plugged into mobile IP X4 SCHUKO® receptacles or connectors do not achieve adequate contacting due to the design and thus they must not be operated with such receptacles!
- The same applies for AC adapters and angled right angle plugs < IP X4!
- On the appropriate SCHUKO® receptacles or connectors this circumstance is presented with an engraved right angle SCHUKO® plug with IP X4 mark.

**Before processing, ensure that the SCHUKO® articles at hand correspond to the implementation conditions for which they are intended.**

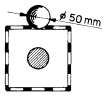
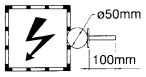
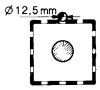
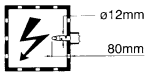
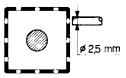
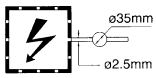
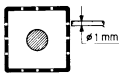
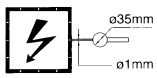
Notice for the use of mobile power distribution boxes with RJ45 data sockets:

The installed data sockets without lid have a degree of protection of IP 20 which is reducing the degree of the whole unit accordingly.

**IP protection types for enclosures in accordance with IEC 60529, EN 60529, IEC 60529 (VDE 0470 part 1)**

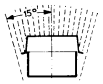
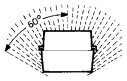
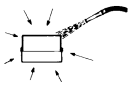
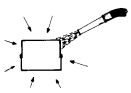
**1st number of the code:**

Protection against the ingress of foreign bodies and shock hazard protection.

| Code | Description | | | |
|---|---|---|---|---|
| | Enclosure protected against ingress of: | Test | Protection against contact with: | Test |
| **0** | | | | |
| **1** | Solid body larger than 50 mm |   Gauge plug diameter Ø 50 mm | Back of hand |   Gauge probe diameter Ø 50 mm |
| **2** | Solid body larger than12.5 mm |   Gauge plug diameter Ø 12.5 mm | Finger |   Jointed metal finger |
| **3** | Solid body larger than 2.5 mm |   Gauge plug diameter Ø 2.5 mm | Tool |   Gauge probe diameter Ø 2.5 mm |
| **4** | Solid body larger than 1 mm |   Gauge plug diameter Ø 1 mm | Wire |   Gauge probe diameter Ø 1 mm |
| **5** | Dust in harmful quantities |  Talc | | |
| **6** | Dust overall |  Talc | | |

**2nd number of the code:**

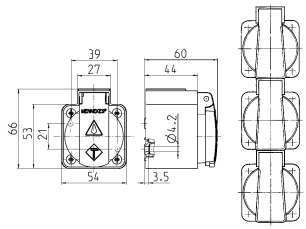
Protection against the ingress of moisture

| Code | Description | |
|---|---|---|
| | Enclosure protected against ingress of: | Test |
| **0** | | |
| **1** | Drop of water falling vertically |  |
| **2** | Drop of water falling vertically on enclosure inclined by up to 15° |   |
| **3** | Water spray |   |
| **4** | Splash water |  |
| **5** | Water jet |  |
| **6** | Strong water jet |  |
| **7** | Temporary immersion |   |
| **8** | Continuous immersion | By arrangement between manufacturer and user. Extra severe test conditions as compared to code 7 |
| **9** | Water at high pressure and steam cleaning | |

# Service – Drawings and dimensions

The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

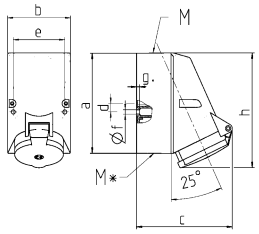
## 1 MB 27/30




**Drawing**
**1 MB 27/30**

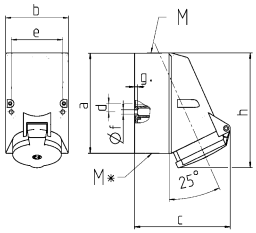
**Dim. in mm**

## 1 MB 43



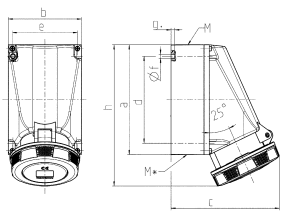

| Drawing | Amp. | 16 | | 32 | | |
|---|---|---|---|---|---|---|
| 1 MB 43 | Poles | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 128 | 128 | 128 | 128 | 128 |
| | b | 84 | 84 | 84 | 84 | 84 |
| | c | 122 | 124 | 136 | 136 | 138 |
| | d | 11 | 11 | 11 | 11 | 11 |
| | e | 68 | 68 | 68 | 68 | 68 |
| | f | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 |
| | g. | 4 | 4 | 4 | 4 | 4 |
| | h | 144 | 145 | 158 | 158 | 160 |
| | M | 25 | 25 | 32 | 32 | 32 |
| | M* | 2x25 (blind) to be cut out | | 2x25 (blind) to be cut out | | |
| Max. cable diam. (mm) | | 18 | 18 | 18/25 | 18/25 | 18/25 |
| Terminal for cond. cross section (mm²) min.-max. | | —4 | —4 | —10 | —10 | —10 |

## 1 MB 43/257



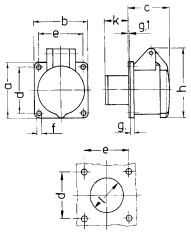

| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 43_257 | Poles | 4 | 5/7 | | 3 | 4 | 5/7 |
| Dim. in mm | a | 128 | 128 | | 128 | 128 | 128 |
| | b | 84 | 84 | | 84 | 84 | 84 |
| | c | 122 | 124 | | 136 | 136 | 138 |
| | d | 11 | 11 | | 11 | 11 | 11 |
| | e | 68 | 68 | | 68 | 68 | 68 |
| | f | 5.3 | 5.3 | | 5.3 | 5.3 | 5.3 |
| | g. | 4 | 4 | | 4 | 4 | 4 |
| | h | 144 | 145 | | 158 | 158 | 160 |
| | M | 25 | 25 | | 32 | 32 | 32 |
| | M* | 2x25 (blind) to be cut out | | | 2x25 (blind) to be cut out | | |
| Max. cable diam. (mm) | | 18 | 18 | | 18/25 | 18/25 | 18/25 |
| Terminal for cond. cross section (mm²) min.-max. | | —4 | —4 | | —10 | —10 | —10 |

## 1 MB 112



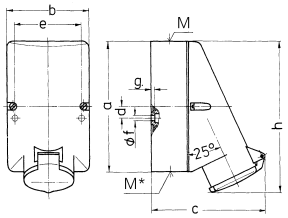

| Drawing | Amp. | 63 | | |
|---|---|---|---|---|
| 1 MB 112 | Poles | 3 | 4 | 5 |
| Dim. in mm | a | 170 | 170 | 170 |
| | b | 118 | 118 | 118 |
| | c | 175 | 175 | 175 |
| | d | 134.5 | 134.5 | 134.5 |
| | e | 103 | 103 | 103 |
| | f | 6.1 | 6.1 | 6.1 |
| | g. | 6 | 6 | 6 |
| | h | 219 | 219 | 219 |
| | M | 40 | 40 | 40 |
| | M* | 2x40 (blind) to be cut out | | |
| Max. cable diam. (mm) | | 27 | 27 | 27 |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —25 | 6 —25 | 6 —25 |

## 1 MB 136



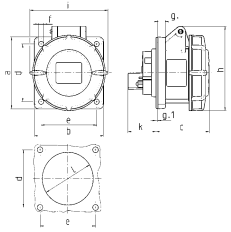

| Drawing | Amp. | 16 | | 32 | |
|---|---|---|---|---|---|
| 1 MB 136 | Poles | 2 | 3 | 2 | 3 |
| Dim. in mm | a | 55 | 55 | 55 | 55 |
| | b | 55 | 55 | 55 | 55 |
| | c | 44 | 44 | 44 | 44 |
| | d | 45 | 45 | 45 | 45 |
| | e | 45 | 45 | 45 | 45 |
| | f | 4.2 | 4.2 | 4.2 | 4.2 |
| | g. | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 |
| | h | 67 | 67 | 67 | 67 |
| | k | 22 | 22 | 22 | 22 |
| | l | 34 | 34 | 34 | 34 |
| Terminal for cond. cross section (mm²) min.-max. | | 4 —10 | 4 —10 | 4 —10 | 4 —10 |

## 1 MB 137



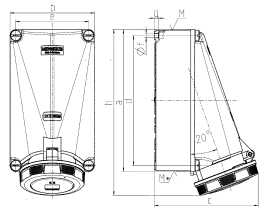

| Drawing | Amp. | 16 | | 32 | |
|---|---|---|---|---|---|
| 1 MB 137 | Poles | 2 | 3 | 2 | 3 |
| Dim. in mm | a | 128 | 128 | 128 | 128 |
| | b | 84 | 84 | 84 | 84 |
| | c | 120 | 120 | 120 | 120 |
| | d | 11 | 11 | 11 | 11 |
| | e | 68 | 68 | 68 | 68 |
| | f | 5.3 | 5.3 | 5.3 | 5.3 |
| | g. | 4 | 4 | 4 | 4 |
| | h | 146 | 146 | 146 | 146 |
| | M | 25 | 25 | 32 | 32 |
| | M* | 2x25 (blind) to be cut out | | 2x25 (blind) to be cut out | |
| Max. cable diam. (mm) | | 18 | 18 | 25 | 25 |
| Terminal for cond. cross section (mm²) min.-max. | | 4 —2x6 | 4 —10 | 4 —2x6 | 4 —10 |

## 1 MB 141



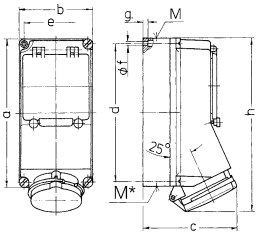

| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 141 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 75 | 75 | 75 | 85 | 85 | 85 |
| | b | 75 | 75 | 75 | 75 | 75 | 75 |
| | c | 60 | 61 | 61 | 70 | 70 | 72 |
| | d | 60 | 60 | 60 | 60 | 60 | 60 |
| | e | 60 | 60 | 60 | 60 | 60 | 60 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 8 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 83 | 88 | 95 | 99 | 99 | 105 |
| | i | 78 | 85 | 96 | 103 | 103 | 110 |
| | k | 31 | 32 | 32 | 39 | 39 | 39 |
| | l | 43 | 52 | 54 | 58 | 58 | 65 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 2.5 —10 |

## 1 MB 162



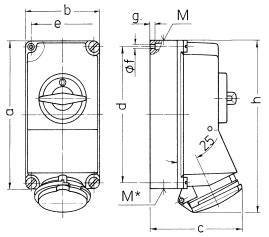

| Drawing | Amp. | 125 | |
|---|---|---|---|
| 1 MB 162 | Poles | 4 | 5 |
| Dim. in mm | a | 264 | 264 |
| | b | 163 | 163 |
| | c | 200 | 200 |
| | d | 240 | 240 |
| | e | 140 | 140 |
| | f | 8.1 | 8.1 |
| | g | 8 | 8 |
| | h | 306 | 306 |
| | M | 50 | 50 |
| | M* | 50 | 50 |
| Max. cable diam. (mm) | | 38 | 38 |
| Terminal for cond. cross section (mm²) min.-max. | | 25 —35 | 25 —35 |

## 1 MB 168



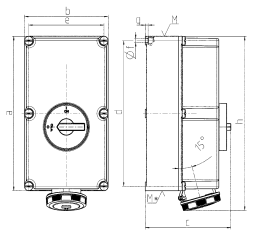

| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 168 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 225 | 225 | 225 | 225 | 225 | 225 |
| | b | 118 | 118 | 118 | 118 | 118 | 118 |
| | c | 141 | 141 | 141 | 146 | 146 | 146 |
| | d | 208 | 208 | 208 | 208 | 208 | 208 |
| | e | 101 | 101 | 101 | 101 | 101 | 101 |
| | f | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | g. | 8 | 8 | 8 | 8 | 8 | 8 |
| | h | 250 | 252 | 254 | 264 | 264 | 264 |
| | M | 1x25 and 1x32 | | | 1x25 and 1x32 | | |
| | M* | 2x25 | 2x25 | 2x25 | 2x25 | 2x25 | 2x25 |
| Max. cable diam. (mm) | | 25 | 25 | 25 | 25 | 25 | 25 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 2.5 —10 |

## 1 MB 174



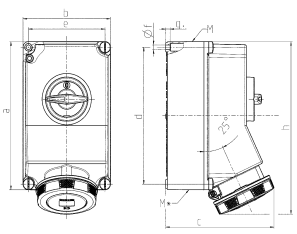

| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 174 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 225 | 225 | 225 | 225 | 225 | 225 |
| | b | 118 | 118 | 118 | 118 | 118 | 118 |
| | c | 141 | 141 | 141 | 146 | 146 | 146 |
| | d | 208 | 208 | 208 | 208 | 208 | 208 |
| | e | 101 | 101 | 101 | 101 | 101 | 101 |
| | f | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | g. | 8 | 8 | 8 | 8 | 8 | 8 |
| | h | 250 | 252 | 254 | 264 | 264 | 264 |
| | M | 1x25 and 1x32 | | | 1x25 and 1x32 | | |
| | M* | 2x25 | 2x25 | 2x25 | 2x25 | 2x25 | 2x25 |
| Max. cable diam. (mm) | | 25 | 25 | 25 | 25 | 25 | 25 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 2.5 —10 |

## 1 MB 177




| Drawing | Amp. | 125 | | |
|---|---|---|---|---|
| 1 MB 177 | Poles | 3 | 4 | 5 |
| Dim. in mm | a | 460 | 460 | 460 |
| | b | 260 | 260 | 260 |
| | c | 270 | 270 | 270 |
| | d | 434 | 434 | 434 |
| | e | 234 | 234 | 234 |
| | f | 11 | 11 | 11 |
| | g. | 9 | 9 | 9 |
| | h | 519 | 519 | 519 |
| | M | 63 | 63 | 63 |
| | M* | 2x63 | 2x63 | 2x63 |
| Max. cable diam. (mm) | | 44 | 44 | 44 |
| Terminal for cond. cross section (mm²) min.-max. | | 25 —70 | 25 —70 | 25 —70 |

## 1 MB 180

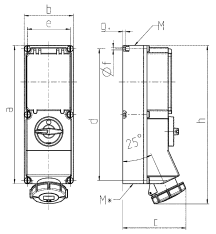



| Drawing | Amp. | 63 | | |
|---|---|---|---|---|
| 1 MB 180 | Poles | 3 | 4 | 5 |
| Dim. in mm | a | 260 | 260 | 260 |
| | b | 160 | 160 | 160 |
| | c | 198 | 198 | 198 |
| | d | 240 | 240 | 240 |
| | e | 140 | 140 | 140 |
| | f | 8.1 | 8.1 | 8.1 |
| | g. | 8 | 8 | 8 |
| | h | 303 | 303 | 303 |
| | M | 40 | 40 | 40 |
| | M* | 2 x 40 | 2 x 40 | 2 x 40 |
| Max. cable diam. (mm) | | 27 | 27 | 27 |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —25 | 6 —25 | 6 —25 |

# Service – Drawings and dimensions

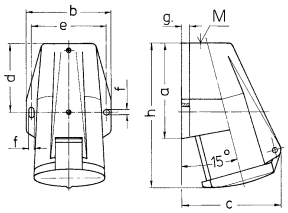
The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 1 MB 181/620



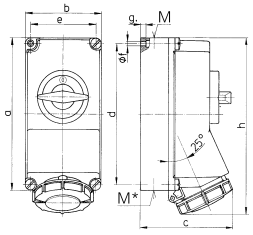
| Drawing | Amp. | 16 | | | 32 | | 63 | |
|---|---|---|---|---|---|---|---|---|
| 1 MB 181/620 | Poles | 3 | 4 | 5 | 4 | 5 | 4 | 5 |
| Dim. in mm | a | 364 | 364 | 364 | 364 | 364 | 460 | 460 |
| | b | 134 | 134 | 134 | 134 | 134 | 180 | 180 |
| | c | 160 | 162 | 163 | 168 | 168 | 202 | 202 |
| | d | 347 | 347 | 347 | 347 | 347 | 440 | 440 |
| | e | 117 | 117 | 117 | 117 | 117 | 160 | 160 |
| | f | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 8.1 | 8.1 |
| | g. | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | h | 391 | 395 | 398 | 408 | 411 | 505 | 505 |
| | M | 32/40 | 32/40 | 32/40 | 32/40 | 32/40 | 40 | 40 |
| | M* | 2x32 | 2x32 | 2x32 | 2x32 | 2x32 | 2x40 | 2x40 |
| Max. cable diam. (mm) | | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 6 —25 | 6 —25 |

## 1 MB 205



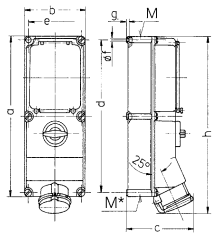
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 205 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 91 | 91 | 91 | 102 | 102 | 102 |
| | b | 73 | 79 | 87 | 89 | 89 | 94 |
| | c | 86 | 93 | 99 | 108 | 108 | 114 |
| | d | 55 | 55 | 56.4 | 62 | 62 | 62 |
| | e | 62 | 68 | 76 | 77.5 | 77.5 | 84 |
| | f | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 |
| | g. | 8 | 8 | 9 | 10 | 10 | 10 |
| | h | 132 | 132 | 132 | 153 | 153 | 153 |
| | M | 20 | 25 | 25 | 25 | 25 | 32 |
| Max. cable diam. (mm) | | 13 | 18 | 18 | 18 | 18 | 25 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 2.5 —10 |

## 1 MB 207



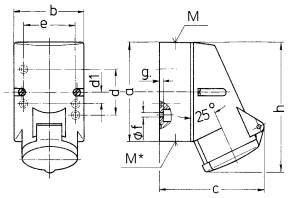
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 207 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 225 | 225 | 225 | 225 | 225 | 225 |
| | b | 118 | 118 | 118 | 118 | 118 | 118 |
| | c | 144 | 146 | 147 | 152 | 152 | 153 |
| | d | 208 | 208 | 208 | 208 | 208 | 208 |
| | e | 101 | 101 | 101 | 101 | 101 | 101 |
| | f | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | g. | 8 | 8 | 8 | 8 | 8 | 8 |
| | h | 252 | 255 | 259 | 268 | 268 | 274 |
| | M | 1xM25 and 1xM32 | | | 1xM25 and 1xM32 | | |
| | M* | 2x25 | 2x25 | 2x25 | 2x25 | 2x25 | 2x25 |
| Max. cable diam. (mm) | | 25 | 25 | 25 | 25 | 25 | 25 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 2.5 —10 |

## 1 MB 208



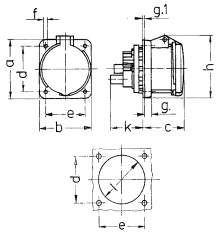
| Drawing | Amp. | 16 | | | 32 | | 63 | |
|---|---|---|---|---|---|---|---|---|
| 1 MB 208 | Poles | 3 | 4 | 5 | 4 | 5 | 4 | 5 |
| Dim. in mm | a | 364 | 364 | 364 | 364 | 364 | 460 | 460 |
| | b | 134 | 134 | 134 | 134 | 134 | 180 | 180 |
| | c | 160 | 162 | 163 | 168 | 168 | 195 | 195 |
| | d | 347 | 347 | 347 | 347 | 347 | 440 | 440 |
| | e | 117 | 117 | 117 | 117 | 117 | 160 | 160 |
| | f | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 8.1 | 8.1 |
| | g. | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | h | 391 | 395 | 398 | 408 | 411 | 502 | 502 |
| | M | 32/40 | 32/40 | 32/40 | 32/40 | 32/40 | 40 | 40 |
| | M* | 2x32 | 2x32 | 2x32 | 2x32 | 2x32 | 2x40 | 2x40 |
| Max. cable diam. (mm) | | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 6 —25 | 6 —25 |

## 1 MB 209



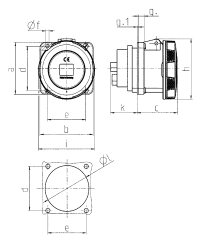
| Drawing | Amp. | 16 | | |
|---|---|---|---|---|
| 1 MB 209 | Poles | 3 | 4 | 5 |
| Dim. in mm | a | 87 | 100 | 100 |
| | b | 64 | 75 | 75 |
| | c | 99 | 110 | 113 |
| | d | 40 | – | – |
| | d1 | – | 11 | 11 |
| | e | 50 | 59 | 59 |
| | f | 4.5 | 5 | 5 |
| | g. | 4 | 4 | 4 |
| | h | 115 | 125 | 128 |
| | M | 20 | 20 | 20 |
| | M* | M20 (blind) to be cut out | | |
| Max. cable diam. (mm) | | 15 | 15 | 15 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 |

## 1 MB 211



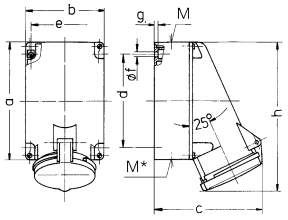
| Drawing | Amp. | 63 | | |
|---|---|---|---|---|
| 1 MB 211 | Poles | 3 | 4 | 5 |
| Dim. in mm | a | 107 | 107 | 107 |
| | b | 100 | 100 | 100 |
| | c | 80 | 80 | 80 |
| | d | 85 | 85 | 85 |
| | e | 77 | 77 | 77 |
| | f | 6 | 6 | 6 |
| | g. | 12 | 12 | 12 |
| | g.1 | 2 | 2 | 2 |
| | h | 113 | 113 | 113 |
| | k | 55 | 55 | 55 |
| | l | 88 | 88 | 88 |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —25 | 6 —25 | 6 —25 |

## 1 MB 212/258



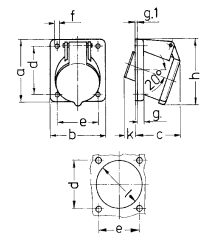
| Drawing | Amp. | 63 | | | 125 | |
|---|---|---|---|---|---|---|
| 1 MB 212/258 | Poles | 3 | 4 | 5 | 4 | 5 |
| Dim. in mm | a | 107 | 107 | 107 | 130 | 130 |
| | b | 100 | 100 | 100 | 130 | 130 |
| | c | 81 | 81 | 81 | 119 | 119 |
| | d | 85 | 85 | 85 | 104 | 104 |
| | e | 77 | 77 | 77 | 104 | 104 |
| | f | 6 | 6 | 6 | 6.5 | 6.5 |
| | g | 12 | 12 | 12 | 18 | 18 |
| | g.1 | 2 | 2 | 2 | 2 | 2 |
| | h | 117 | 117 | 117 | 129 | 129 |
| | i | 113 | 113 | 113 | 126 | 126 |
| | k | 55 | 55 | 55 | 43 | 43 |
| | l | 88 | 88 | 88 | 95 | 95 |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —25 | 6 —25 | 6 —25 | 25 —70 | 25 —70 |

## 1 MB 213



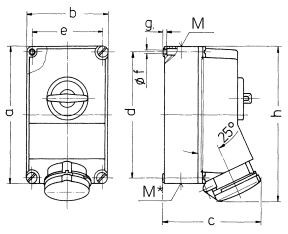
| Drawing | Amp. | 63 | | |
|---|---|---|---|---|
| 1 MB 213 | Poles | 3 | 4 | 5 |
| Dim. in mm | a | 170 | 170 | 170 |
| | b | 118 | 118 | 118 |
| | c | 164 | 164 | 164 |
| | d | 134.5 | 134.5 | 134.5 |
| | e | 103 | 103 | 103 |
| | f | 6.1 | 6.1 | 6.1 |
| | g. | 6 | 6 | 6 |
| | h | 216 | 216 | 216 |
| | M | 40 | 40 | 40 |
| | M* | 2xM40 (blind) to be cut out | | |
| Max. cable diam. (mm) | | 32 | 32 | 32 |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —25 | 6 —25 | 6 —25 |

## 1 MB 231



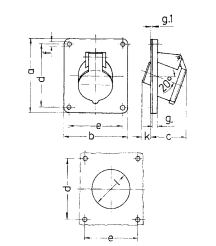
| Drawing | Amp. | 16 | | 32 | |
|---|---|---|---|---|---|
| 1 MB 231 | Poles | 2 | 3 | 2 | 3 |
| Dim. in mm | a | 68 | 68 | 68 | 68 |
| | b | 62 | 62 | 62 | 62 |
| | c | 42 | 42 | 42 | 42 |
| | d | 53 | 53 | 53 | 53 |
| | e | 47 | 47 | 47 | 47 |
| | f | 4.5 | 4.5 | 4.5 | 4.5 |
| | g. | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 |
| | h | 72 | 72 | 72 | 72 |
| | k | 32 | 32 | 32 | 32 |
| | l | 55 | 55 | 55 | 55 |
| Terminal for cond. cross section (mm²) min.-max. | | 4 —10 | 4 —10 | 4 —10 | 4 —10 |

## 1 MB 234



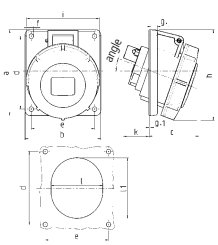
| Drawing | Amp. | 63 | | |
|---|---|---|---|---|
| 1 MB 234 | Poles | 3 | 4 | 5 |
| Dim. in mm | a | 264 | 264 | 264 |
| | b | 163 | 163 | 163 |
| | c | 192 | 192 | 192 |
| | d | 240 | 240 | 240 |
| | e | 140 | 140 | 140 |
| | f | 8.1 | 8.1 | 8.1 |
| | g. | 8 | 8 | 8 |
| | h | 300 | 300 | 300 |
| | M | 40 | 40 | 40 |
| | M* | 2x40 | 2x40 | 2x40 |
| Max. cable diam. (mm) | | 27 | 27 | 27 |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —25 | 6 —25 | 6 —25 |

## 1 MB 236



| Drawing | Amp. | 32 |
|---|---|---|
| 1 MB 236 | Poles | 3 |
| Dim. in mm | a | 100 |
| | b | 92 |
| | c | 42 |
| | d | 85 |
| | e | 77 |
| | f | 5.1 |
| | g. | 8 |
| | g.1 | 2 |
| | k | 31 |
| | l | 60 |
| Terminal for cond. cross section (mm²) min.-max. | | 4 —10 |

## 1 MB 251

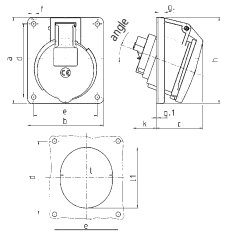


| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 251 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 73.5 | 100 | 100 | 100 | 100 | 100 |
| | b | 64 | 92 | 92 | 92 | 92 | 92 |
| | c | 52 | 60 | 62 | 64 | 64 | 66 |
| | d | 60 | 85 | 85 | 85 | 85 | 85 |
| | e | 52 | 77 | 77 | 77 | 77 | 77 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 8 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 84 | 100 | 105 | 109 | 109 | 113 |
| | i | 78 | 85 | 96 | 103 | 103 | 110 |
| | k | 43 | 32 | 32 | 53 | 53 | 45 |
| | l | 52 | 55 | 65 | 67 | 67 | 72 |
| | l1 | 60 | 63 | 72 | 82 | 82 | 85 |
| | α | 20° | 20° | 20° | 20° | 20° | 20° |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 2.5 —10 |

# Service – Drawings and dimensions

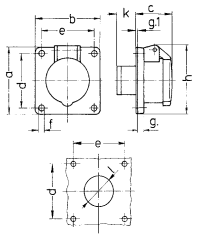
The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 1 MB 260



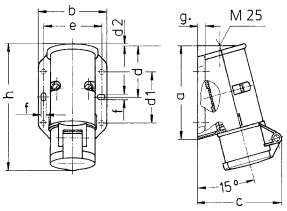
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 260 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 73.5 | 100 | 100 | 100 | 100 | 100 |
| | b | 64 | 92 | 92 | 92 | 92 | 92 |
| | c | 50 | 59 | 58 | 62 | 62 | 61 |
| | d | 60 | 85 | 85 | 85 | 85 | 85 |
| | e | 52 | 77 | 77 | 77 | 77 | 77 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 7 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 79 | 100 | 100 | 103 | 103 | 106 |
| | k | 44 | 34 | 34 | 54 | 54 | 49 |
| | l | 52 | 55 | 65 | 67 | 67 | 72 |
| | l1 | 60 | 63 | 72 | 82 | 82 | 85 |
| | α | 20° | 20° | 20° | 20° | 20° | 20° |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 2.5 —10 |

## 1 MB 292



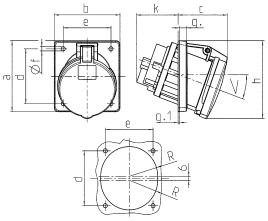
| Drawing | Amp. | 16 | | 32 | |
|---|---|---|---|---|---|
| 1 MB 292 | Poles | 2 | 3 | 2 | 3 |
| Dim. in mm | a | 75 | 75 | 75 | 75 |
| | b | 75 | 75 | 75 | 75 |
| | c | 44 | 44 | 44 | 44 |
| | d | 60 | 60 | 60 | 60 |
| | e | 60 | 60 | 60 | 60 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 |
| | h | 77 | 77 | 77 | 77 |
| | k | 22 | 22 | 22 | 22 |
| | l | 34 | 34 | 34 | 34 |
| Terminal for cond. cross section (mm²) min.-max. | | 4 —10 | 4 —10 | 4 —10 | 4 —10 |

## 1 MB 294



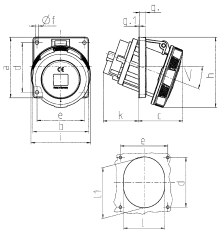
| Drawing | Amp. | 16 | | 32 | |
|---|---|---|---|---|---|
| 1 MB 294 | Poles | 2 | 3 | 2 | 3 |
| Dim. in mm | a | 96 | 96 | 96 | 96 |
| | b | 73 | 73 | 73 | 73 |
| | c | 90 | 90 | 90 | 90 |
| | d | 53 | 53 | 53 | 53 |
| | d1 | 52 | 52 | 52 | 52 |
| | d2 | 2 | 2 | 2 | 2 |
| | e | 62 | 62 | 62 | 62 |
| | f | 5.3 | 5.3 | 5.3 | 5.3 |
| | g | 8 | 8 | 8 | 8 |
| | h | 129 | 129 | 129 | 129 |
| Terminal for cond. cross section (mm²) min.-max. | | 4 —10 | 4 —10 | 4 —10 | 4 —10 |

## 1 MB 297



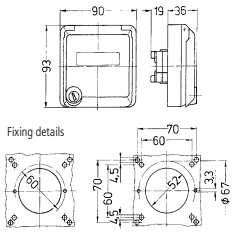
| Drawing | Amp. | 63 | | |
|---|---|---|---|---|
| 1 MB 297 | Poles | 3 | 4 | 5 |
| Dim. in mm | a | 110 | 110 | 110 |
| | b | 106 | 106 | 106 |
| | c | 82 | 82 | 82 |
| | d | 85 | 85 | 85 |
| | e | 77 | 77 | 77 |
| | f | 6.5 | 6.5 | 6.5 |
| | g. | 12 | 12 | 12 |
| | g.1 | 2 | 2 | 2 |
| | h | 122 | 122 | 122 |
| | k | 69 | 69 | 69 |
| | R | 46 | 46 | 46 |
| | α | 20° | 20° | 20° |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —25 | 6 —25 | 6 —25 |

## 1 MB 298/601



| 1 MB 298 / 1 MB 601 | Amp. | 63 | | | 125 | | |
|---|---|---|---|---|---|---|---|
| | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 110 | 110 | 110 | 114 | 114 | 114 |
| | b | 106 | 106 | 106 | 110 | 110 | 110 |
| | c | 85 | 85 | 85 | 75 | 75 | 75 |
| | d | 85 | 85 | 85 | 90 | 90 | 90 |
| | e | 77 | 77 | 77 | 90 | 90 | 90 |
| | f | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 |
| | g. | 12 | 12 | 12 | 13 | 13 | 13 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 128 | 128 | 128 | 133 | 133 | 133 |
| | i | 113 | 113 | 113 | 126 | 126 | 126 |
| | k | 67 | 67 | 67 | 103 | 103 | 103 |
| | l | 92 | 92 | 92 | 94 | 94 | 94 |
| | l1 | 98 | 98 | 98 | 107 | 107 | 107 |
| | < | 20° | 20° | 20° | 15° | 15° | 15° |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —25 | 6 —25 | 6 —25 | 25 70 | 25 70 | 25 70 |

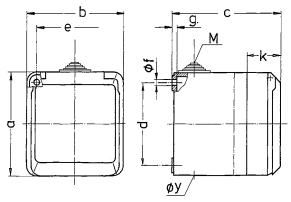
## 1 MB 305



Drawing
1 MB 305

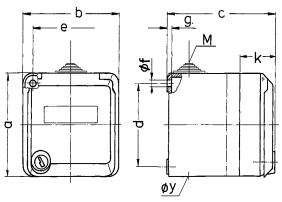
Dim. in mm

## 1 MB 312



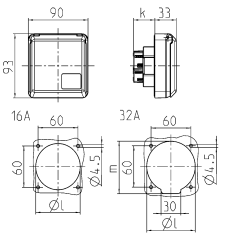
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 312 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 93 | 93 | 93 | 93 | 93 | 93 |
| | b | 90 | 90 | 90 | 90 | 90 | 90 |
| | c | 87 | 87 | 87 | 99 | 99 | 99 |
| | d | 75 | 75 | 75 | 75 | 75 | 75 |
| | e | 73 | 73 | 73 | 73 | 73 | 73 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| | k | 33 | 33 | 33 | 33 | 33 | 33 |
| | y | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |
| | M | 25x1.5 | 25x1.5 | 25x1.5 | 25x1.5 | 25x1.5 | 25x1.5 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 1 MB 313



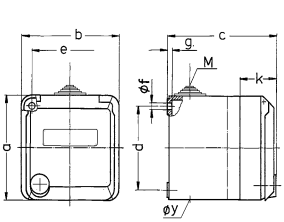
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 313 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 93 | 93 | 93 | 93 | 93 | 93 |
| | b | 90 | 90 | 90 | 90 | 90 | 90 |
| | c | 90 | 90 | 90 | 102 | 102 | 102 |
| | d | 75 | 75 | 75 | 75 | 75 | 75 |
| | e | 73 | 73 | 73 | 73 | 73 | 73 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| | k | 36 | 36 | 36 | 36 | 36 | 36 |
| | y | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |
| | M | 25x1.5 | 25x1.5 | 25x1.5 | 25x1.5 | 25x1.5 | 25x1.5 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 1 MB 315



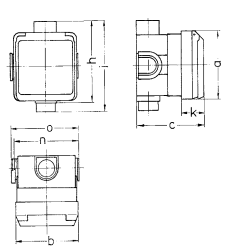
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 315 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | k | 32 | 32 | 32 | 48 | 48 | 48 |
| | l | 50 | 60 | 67 | 65 | 65 | 73 |
| | m | - | - | - | 70 | 70 | 76 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 1 MB 317



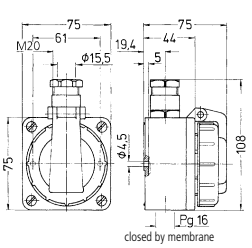
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 317 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 93 | 93 | 93 | 93 | 93 | 93 |
| | b | 90 | 90 | 90 | 90 | 90 | 90 |
| | c | 88 | 88 | 88 | 100 | 100 | 100 |
| | d | 75 | 75 | 75 | 75 | 75 | 75 |
| | e | 73 | 73 | 73 | 73 | 73 | 73 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| | k | 34 | 34 | 34 | 34 | 34 | 34 |
| | y | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |
| | M | 25x1.5 | 25x1.5 | 25x1.5 | 25x1.5 | 25x1.5 | 25x1.5 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 1 MB 336



| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 336 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 93 | 93 | 93 | 93 | 93 | 93 |
| | b | 90 | 90 | 90 | 90 | 90 | 90 |
| | c | 95 | 95 | 95 | 95 | 95 | 95 |
| | h | 111 | 111 | 111 | 111 | 111 | 111 |
| | i | 124 | 124 | 124 | 124 | 124 | 124 |
| | k | 33 | 33 | 33 | 33 | 33 | 33 |
| | n | 91 | 91 | 91 | 91 | 91 | 91 |
| | o | 95 | 95 | 95 | 95 | 95 | 95 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 1 MB 347



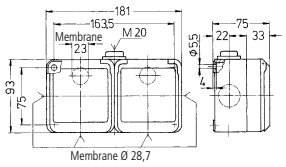
Drawing
1 MB 347

Dim. in mm

# Service – Drawings and dimensions

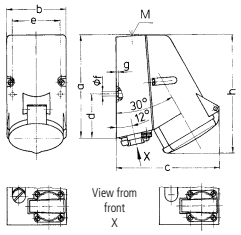
The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 1 MB 350



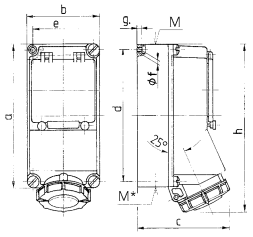

| Drawing | Amp. | 16 | | |
|---|---|---|---|---|
| 1 MB 350 | Poles | 3 | 4 | 5 |
| Dim. in mm | | | | |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 |

## 1 MB 354



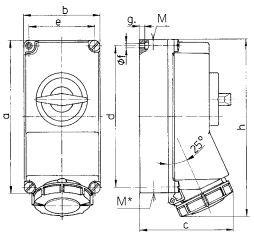

| Drawing | Amp. | 16 | | 32 |
|---|---|---|---|---|
| 1 MB 354 | Poles | 4 | 5 | 5 |
| Dim. in mm | a | 141 | 141 | 141 |
| | b | 85 | 85 | 85 |
| | c | 139 | 139 | 153 |
| | d | 61 | 61 | 61 |
| | e | 68 | 68 | 68 |
| | f | 5.3 | 5.3 | 5.3 |
| | g. | 4 | 4 | 4 |
| | h | 145 | 145 | 162 |
| | M | 25 | 25 | 32 |
| Max. cable diam. (mm) | | 18 | 18 | 25 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 2.5 —10 |

## 1 MB 378



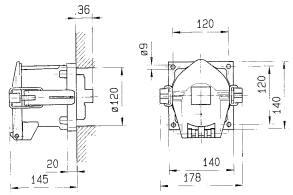

| Drawing | Amp. | 16 | | | 32 | |
|---|---|---|---|---|---|---|
| 1 MB 378 | Poles | 3 | 4 | 5 | 4 | 5 |
| Dim. in mm | a | 225 | 225 | 225 | 225 | 225 |
| | b | 118 | 118 | 118 | 118 | 118 |
| | c | 144 | 146 | 147 | 152 | 153 |
| | d | 208 | 208 | 208 | 208 | 208 |
| | e | 101 | 101 | 101 | 101 | 101 |
| | f | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | g. | 8 | 8 | 8 | 8 | 8 |
| | h | 252 | 255 | 259 | 268 | 274 |
| | M | 1x25 and 1x32 | | | 1x25 and 1x32 | |
| | M* | 2x25 | 2x25 | 2x25 | 2x25 | 2x25 |
| Max. cable diam. (mm) | | 25 | 25 | 25 | 25 | 25 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 |

## 1 MB 382




| Drawing | Amp. | 16 | 32 |
|---|---|---|---|
| 1 MB 382 | Poles | 7 | 7 |
| Dim. in mm | a | 225 | 225 |
| | b | 118 | 118 |
| | c | 147 | 153 |
| | d | 208 | 208 |
| | e | 101 | 101 |
| | f | 6.3 | 6.3 |
| | g. | 8 | 8 |
| | h | 259 | 274 |
| | M | 1x25 and 1x32 | 1x25 and 1x32 |
| | M* | 2x25 | 2x25 |
| Max. cable diam. (mm) | | 25 | 25 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 2.5 —10 |

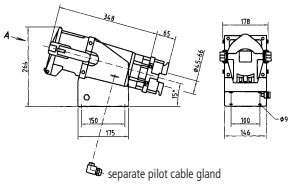
## 1 MB 384




**Drawing**
**1 MB 384**

**Dim. in mm**

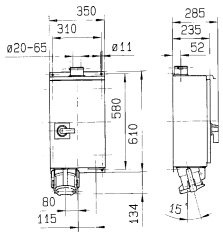
## 1 MB 385




**Drawing**
**1 MB 385**

**Dim. in mm**

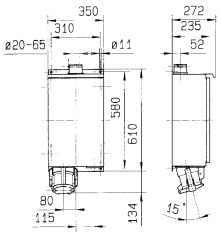
## 1 MB 386




**Drawing**
**1 MB 386**

**Dim. in mm**

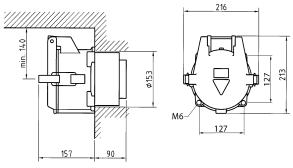
## 1 MB 387




**Drawing**
**1 MB 387**

**Dim. in mm**

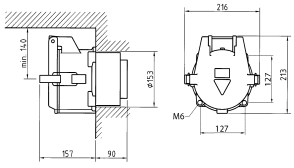
## 1 MB 388/1




**Drawing**
**1 MB 388/1**

**Dim. in mm**

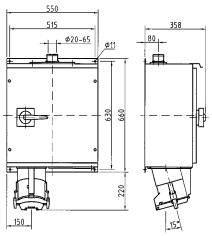
## 1 MB 389/1




**Drawing**
**1 MB 388/1**

**Dim. in mm**

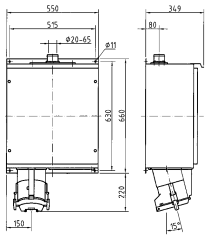
## 1 MB 403/2




**Drawing**
**1 MB 403/2**

**Dim. in mm**

## 1 MB 404/2



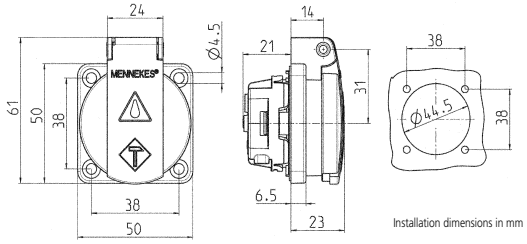

**Drawing**
**1 MB 404/2**

**Dim. in mm**

# Service – Drawings and dimensions

The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 1 MB 410

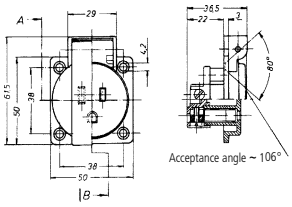



Installation dimensions in mm

**Drawing**
**1 MB 410**

**Dim. in mm**

## 1 MB 421

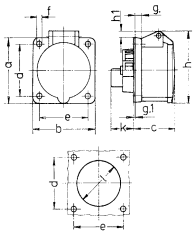



Acceptance angle ~ 106°

**Drawing**
**1 MB 421**

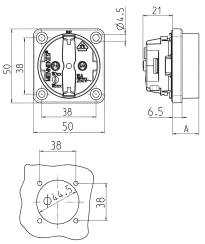
**Dim. in mm**

## 1 MB 426



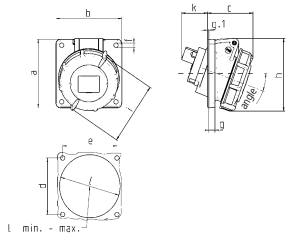

| Drawing | Amp. | 16 |
|---|---|---|
| 1 MB 426 | Poles | 3 |
| Dim. in mm | a | 55 |
| | b | 55 |
| | c | 54 |
| | d | 45 |
| | e | 45 |
| | f | 5.5 |
| | g. | 8 |
| | g.1 | 2 |
| | h | 70 |
| | h1 | 12 |
| | k | 28 |
| | l | 47 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 |

## 1 MB 450



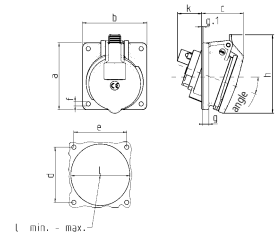

| Drawing | Dim. A |
|---|---|
| 1 MB 450 | |
| Dim. in mm | |
| SCHUKO | 18.3 |
| French/Belgian standards | 15.8 |
| Danish standards | 15.8 |

## 1 MB 452



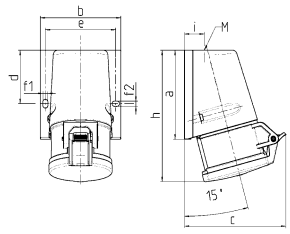

| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 452 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 85 | 85 | 85 | 85 | 85 | 85 |
| | b | 85 | 85 | 85 | 85 | 85 | 85 |
| | c | 57 | 59 | 60 | 68 | 68 | 72 |
| | d | 70 | 70 | 70 | 70 | 70 | 70 |
| | e | 70 | 70 | 70 | 70 | 70 | 70 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g | 8 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 87 | 91 | 99 | 105 | 105 | 110 |
| | i | 78 | 85 | 96 | 103 | 103 | 110 |
| | k | 39 | 34 | 33 | 53 | 53 | 41 |
| | l min. | 57 | 64 | 70 | 78 | 78 | 78 |
| | l max. | 78 | 78 | 78 | 78 | 78 | 78 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 2.5 —10 |

## 1 MB 453



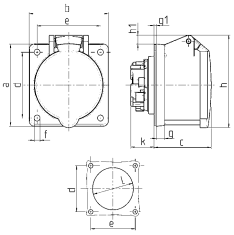

| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 453 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 85 | 85 | 85 | 85 | 85 | 85 |
| | b | 85 | 85 | 85 | 85 | 85 | 85 |
| | c | 53 | 57 | 57 | 60 | 60 | 67 |
| | d | 70 | 70 | 70 | 70 | 70 | 70 |
| | e | 70 | 70 | 70 | 70 | 70 | 70 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g | 8 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 89 | 96 | 101 | 103 | 103 | 110 |
| | k | 39 | 34 | 33 | 53 | 53 | 41 |
| | l min. | 57 | 64 | 70 | 78 | 78 | 78 |
| | l max. | 78 | 78 | 78 | 78 | 78 | 78 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —10 | 2.5 —10 | 2.5 —10 |

## 1 MB 463



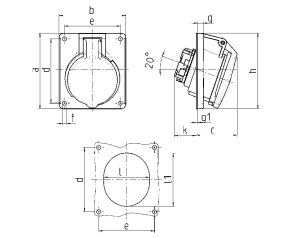

| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 463 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 95 | 93 | 92.5 | 102 | 102 | 102 |
| | b | 73.5 | 87.5 | 87.5 | 94 | 94 | 94 |
| | c | 93 | 107.5 | 110 | 115.5 | 115.5 | 119.5 |
| | d | 55.5 | 55.5 | 55.5 | 62 | 62 | 62 |
| | e | 61 | 76 | 76 | 84 | 84 | 84 |
| | f1 | 5.3 | 5.3 | 5.3 | 5.1 | 5.1 | 5.1 |
| | f2 | 5.3 | 5.3 | 5.3 | 5.1 | 5.1 | 5.1 |
| | h | 139 | 139 | 136.5 | 160 | 160 | 156.5 |
| | i | 19.8 | 21.5 | 21.5 | 26.5 | 26.5 | 26.5 |
| | M | M20x | M25x | M25x | M25x | M32x | M32x |
| | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 1 MB 464



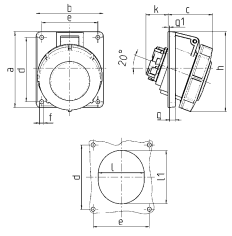

| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 464 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 75 | 75 | 75 | 75 | 75 | 75 |
| | b | 75 | 75 | 75 | 75 | 75 | 75 |
| | c | 53 | 53 | 54 | 64 | 64 | 64 |
| | d | 60 | 60 | 60 | 60 | 60 | 60 |
| | e | 60 | 60 | 60 | 60 | 60 | 60 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 8 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 75 | 80 | 85 | 89 | 89 | 95 |
| | h1 | | 5 | 8 | 10 | 10 | 12 |
| | k | 22 | 22 | 22 | 28 | 28 | 28 |
| | l | 43 | 52 | 57 | 60 | 60 | 64 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 1 MB 465



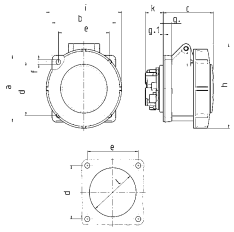

| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 465 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 73.5 | 100 | 100 | 100 | 100 | 100 |
| | b | 64 | 92 | 92 | 92 | 92 | 92 |
| | c | 52 | 58 | 58 | 61 | 61 | 60 |
| | d | 60 | 85 | 85 | 85 | 85 | 85 |
| | e | 52 | 77 | 77 | 77 | 77 | 77 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 7 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 79 | 100 | 100 | 103 | 103 | 105 |
| | k | 31 | 31 | 31 | 44 | 44 | 54 |
| | l | 52 | 55 | 65 | 70 | 70 | 73 |
| | l1 | 60 | 63 | 72 | 82 | 82 | 85 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 1 MB 466



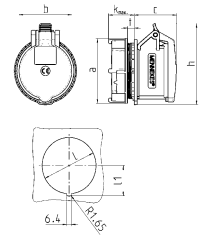

| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 466 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 73.5 | 100 | 100 | 100 | 100 | 100 |
| | b | 64 | 92 | 92 | 92 | 92 | 92 |
| | c | 52 | 60 | 62 | 66 | 66 | 66 |
| | d | 60 | 85 | 85 | 85 | 85 | 85 |
| | e | 52 | 77 | 77 | 77 | 77 | 77 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 7 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 84 | 100 | 106 | 109 | 109 | 113 |
| | k | 31 | 31 | 31 | 44 | 44 | 54 |
| | l | 52 | 55 | 65 | 70 | 70 | 73 |
| | l1 | 60 | 63 | 72 | 82 | 82 | 85 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 1 MB 467




| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 467 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 75 | 75 | 75 | 85 | 85 | 85 |
| | b | 75 | 75 | 75 | 75 | 75 | 75 |
| | c | 60 | 61 | 61 | 69 | 69 | 72 |
| | d | 60 | 60 | 60 | 60 | 60 | 60 |
| | e | 60 | 60 | 60 | 60 | 60 | 60 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 8 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 83 | 88 | 95 | 99 | 99 | 105 |
| | i | 78 | 85 | 96 | 103 | 103 | 110 |
| | k | 21 | 21 | 21 | 28 | 28 | 38 |
| | l | 43 | 52 | 54 | 60 | 60 | 65 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 | 1.5 —4 | 1.5 —4 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 1 MB 468 - 61 mm ø

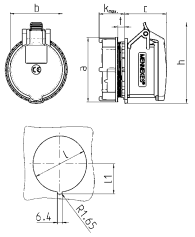



| Drawing | Amp. | 16 |
|---|---|---|
| 1 MB 468 | Poles | 3 |
| Dim. in mm | a | 69 |
| | b | 57 |
| | c | 55 |
| | k | max. 30 |
| | h | 87 |
| | l | 61 |
| | l1 | 33.25 |
| | t | 2-9 |
| Terminal for cond. cross section (mm²) min.-max. | | 1.5 —4 |

# Service – Drawings and dimensions

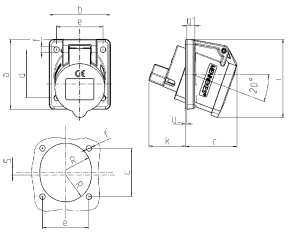
The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 1 MB 468 - 70 mm ø



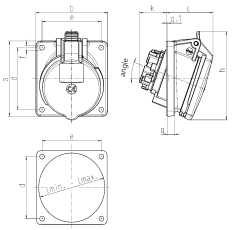
| Drawing | Amp. | 16 | | 32 | | |
|---|---|---|---|---|---|---|
| 1 MB 468 | Poles | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 81 | 81 | 81 | 81 | 81 |
| | b | 66 | 69 | 71 | 71 | 80 |
| | c | 58 | 55 | 66 | 66 | 64 |
| | k | max. 33 | max. 33 | max. 33 | max. 33 | max. 33 |
| | h | 100 | 102 | 101 | 101 | 108 |
| | l | 70 | 70 | 70 | 70 | 70 |
| | l1 | 37.75 | 37.75 | 37.75 | 37.75 | 37.75 |
| | t | 2-9 | 2-9 | 2-9 | 2-9 | 2-9 |
| Terminal for cond. cross | | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 |
| section (mm²) min.-max. | | —4 | —4 | —6 | —6 | —6 |

## 1 MB 472



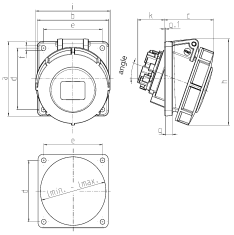
| Drawing | Amp. | 16 |
|---|---|---|
| 1 MB 472 | Poles | 3 |
| Dim. in mm | a | 68 |
| | b | 62 |
| | c | 52 |
| | d | 47 |
| | e | 47 |
| | f | 5.5 |
| | g. | 8 |
| | g.1 | 1.5 |
| | h | 76 |
| | k | 37 |
| Terminal for cond. cross | | 1.5 |
| section (mm²) min.-max. | | —4 |

## 1 MB 519



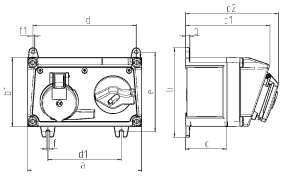
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 519 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 85 | 85 | 85 | 85 | 85 | 85 |
| | b | 85 | 85 | 85 | 85 | 85 | 85 |
| | c | 52 | 57 | 55 | 61 | 60 | 66 |
| | d | 70 | 70 | 70 | 70 | 70 | 70 |
| | e | 70 | 70 | 70 | 70 | 70 | 70 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g | 8 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 86 | 96 | 100 | 96 | 104 | 110 |
| | k | 31 | 32 | 33 | 43 | 44 | 48 |
| | l min. | 57 | 64 | 70 | 78 | 78 | 78 |
| | l max. | 76 | 76 | 76 | 78 | 78 | 78 |
| | ∂ | 20 | 20 | 20 | 20 | 20 | 20 |
| Terminal for cond. cross | | 1.5 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 |
| section (mm²) min.-max. | | —4 | —4 | —4 | —10 | —10 | —10 |

## 1 MB 520



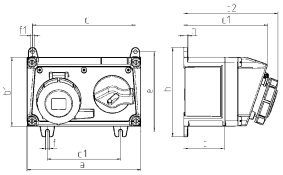
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 520 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 85 | 85 | 85 | 85 | 85 | 85 |
| | b | 85 | 85 | 85 | 85 | 85 | 85 |
| | c | 56 | 59 | 59 | 64 | 64 | 71 |
| | d | 70 | 70 | 70 | 70 | 70 | 70 |
| | e | 70 | 70 | 70 | 70 | 70 | 70 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g | 8 | 8 | 8 | 8 | 8 | 8 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 87 | 91 | 99 | 103 | 103 | 110 |
| | i | 78 | 85 | 89 | 103 | 103 | 106 |
| | k | 32 | 32 | 33 | 44 | 44 | 49 |
| | l min. | 57 | 64 | 70 | 78 | 78 | 78 |
| | l max. | 76 | 76 | 76 | 78 | 78 | 78 |
| Terminal for cond. cross | | 1.5 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 |
| section (mm²) min.-max. | | —4 | —4 | —4 | —6 | —6 | —6 |

## 1 MB 550



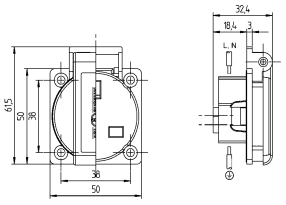
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 550 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 225 | 225 | 225 | 225 | 225 | 225 |
| | b | 168 | 168 | 168 | 168 | 168 | 168 |
| | b1 | 130 | 130 | 130 | 130 | 130 | 130 |
| | c | 80 | 80 | 80 | 80 | 80 | 80 |
| | c1 | 166 | 166 | 166 | 166 | 166 | 166 |
| | c2 | 182 | 183 | 183 | 193 | 193 | 193 |
| | d | 204 | 204 | 204 | 204 | 204 | 204 |
| | d1 | 145 | 145 | 145 | 145 | 145 | 145 |
| | e | 150 | 150 | 150 | 150 | 150 | 150 |
| | f | 7 | 7 | 7 | 7 | 7 | 7 |
| | f1 | Ø7 | Ø7 | Ø7 | Ø7 | Ø7 | Ø7 |
| | g | 8 | 8 | 8 | 8 | 8 | 8 |

## 1 MB 551



| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 551 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 225 | 225 | 225 | 225 | 225 | 225 |
| | b | 168 | 168 | 168 | 168 | 168 | 168 |
| | b1 | 130 | 130 | 130 | 130 | 130 | 130 |
| | c | 80 | 80 | 80 | 80 | 80 | 80 |
| | c1 | 166 | 166 | 166 | 166 | 166 | 166 |
| | c2 | 182 | 185 | 186 | 197 | 197 | 198 |
| | d | 204 | 204 | 204 | 204 | 204 | 204 |
| | d1 | 145 | 145 | 145 | 145 | 145 | 145 |
| | e | 150 | 150 | 150 | 150 | 150 | 150 |
| | f | 7 | 7 | 7 | 7 | 7 | 7 |
| | f1 | Ø7 | Ø7 | Ø7 | Ø7 | Ø7 | Ø7 |
| | g | 8 | 8 | 8 | 8 | 8 | 8 |

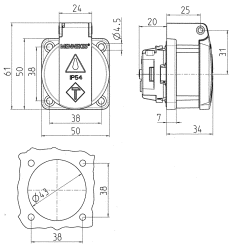
## 1 MB 584



Drawing
1 MB 584

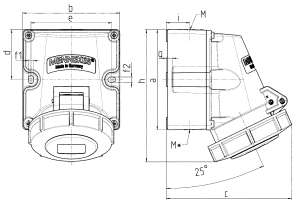
Dim. in mm

## 1 MB 586



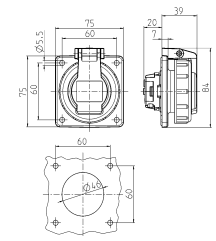
Drawing
1 MB 586

## 1 MB 622



| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 1 MB 622 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 100 | 100 | 100 | 100 | 100 | 100 |
| | b | 101 | 101 | 101 | 109 | 109 | 109 |
| | c | 117 | 125 | 131 | 157 | 157 | 160 |
| | d | 50 | 50 | 50 | 50 | 50 | 50 |
| | e | 84 | 84 | 84 | 92 | 92 | 92 |
| | f1 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 |
| | f2 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 |
| | g | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| | h | 131 | 131 | 132 | 148 | 148 | 148 |
| | i | 24.7 | 24.7 | 24.7 | 27.5 | 27.5 | 27.5 |
| | M | 25 (optional M20) | | | 32 (optional M25) | | |
| | M* | 2x25 (blind) to be cut out | | | 2x25 (blind) to be cut out | | |
| Max. cable diam. (mm) | | 18 (M25) and 15 (M20) | | | 25 (M32) and 18 (M25) | | |
| Terminal for cond. cross | | 1.5 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 |
| section (mm²) min.-max. | | —4 | —4 | —4 | —6 | —6 | —6 |

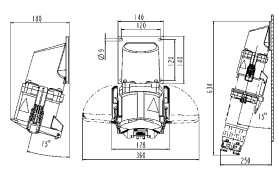
## 1 MB 627



Drawing
1 MB 627

Dim. in mm

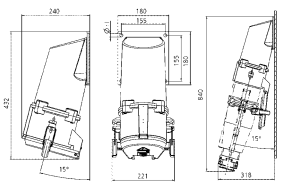
## 1 MB 636



Drawing
1 MB 636

Dim. in mm

## 1 MB 637



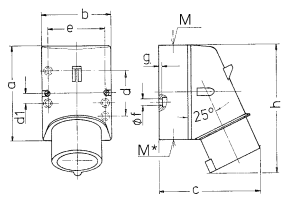
Drawing
1 MB 637

Dim. in mm

# Service – Drawings and dimensions

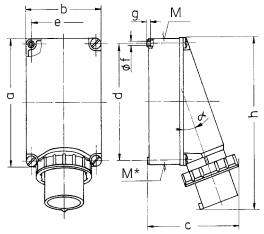
The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 2 MB 32



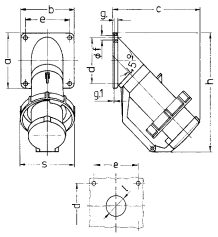
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 2 MB 32 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 87 | 100 | 100 | 128 | 128 | 128 |
| | b | 64 | 75 | 75 | 84 | 84 | 84 |
| | c | 93 | 106 | 110 | 133 | 133 | 135 |
| | d | 40 | — | — | — | — | — |
| | d1 | — | 10.5 | 10.5 | 11 | 11 | 11 |
| | e | 50.5 | 59 | 59 | 68 | 68 | 68 |
| | f | 4,5 | 5 | 5 | 5.3 | 5.3 | 5.3 |
| | g. | 4 | 4 | 4 | 4 | 4 | 4 |
| | h | 122 | 133 | 135 | 169 | 169 | 170 |
| | M | 20 | 20 | 20 | 32 | 32 | 32 |
| | M* | 1x20 (blind) to be cut out | | | 2x25 (blind) to be cut out | | |
| Max. cable diam. (mm) | | 15 | 15 | 15 | 18/25 | 18/25 | 18/25 |
| Terminal for cond. cross section (mm²) min.-max. | | 1 —2.5 | 1 —2.5 | 1 —2.5 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 2 MB 36



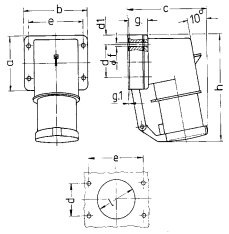
| Drawing | Amp. | 63 | | | 125 | |
|---|---|---|---|---|---|---|
| 2 MB 36 | Poles | 3 | 4 | 5 | 4 | 5 |
| Dim. in mm | a | 170 | 170 | 170 | 264 | 264 |
| | b | 118 | 118 | 118 | 163 | 163 |
| | c | 171 | 171 | 171 | 205 | 205 |
| | d | 134.5 | 134.5 | 134.5 | 240 | 240 |
| | e | 103 | 103 | 103 | 140 | 140 |
| | f | 6,1 | 6,1 | 6,1 | 8,1 | 8,1 |
| | g. | 6 | 6 | 6 | 8 | 8 |
| | h | 250 | 250 | 250 | 355 | 355 |
| | M | 40 | 40 | 40 | 50 | 50 |
| | M* | 2x40 | 2x40 | 2x40 | 50 | 50 |
| | α | 25° | 25° | 25° | 20° | 20° |
| Max. cable diam. (mm) | | 27 | 27 | 27 | 38 | 38 |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —16 | 6 —16 | 6 —16 | 16 —35 | 16 —35 |

## 2 MB 40



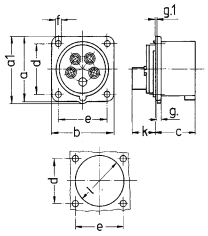
| Drawing | Amp. | 16 | 32 | | | 63 | |
|---|---|---|---|---|---|---|---|
| 2 MB 40 | Poles | 5 | 3 | 4 | 5 | 4 | 5 |
| Dim. in mm | a | 85 | 85 | 85 | 85 | 114 | 114 |
| | b | 85 | 85 | 85 | 85 | 114 | 114 |
| | c | 141 | 141 | 141 | 144 | 180 | 180 |
| | d | 70 | 70 | 70 | 70 | 90 | 90 |
| | e | 70 | 70 | 70 | 70 | 90 | 90 |
| | f | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 |
| | g. | 6 | 6 | 6 | 6 | 6 | 6 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | h | 181 | 181 | 181 | 188 | 242 | 242 |
| | s | 86 | 93 | 93 | 100 | 113 | 113 |
| | l | 30 | 30 | 30 | 30 | 40 | 40 |
| Terminal for cond. cross section (mm²) min.-max. | | 1 —2.5 | 2.5 —6 | 2.5 —6 | 2.5 —6 | 4 —16 | 4 —16 |

## 2 MB 43



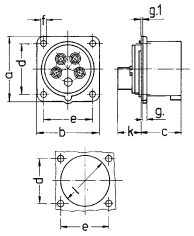
| Drawing | Amp. | 16 | | 32 | | |
|---|---|---|---|---|---|---|
| 2 MB 43 | Poles | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 85 | 85 | 75 | 75 | 75 |
| | b | 85 | 85 | 90 | 90 | 90 |
| | c | 104 | 106 | 115 | 115 | 117 |
| | d | 64 | 64 | 45 | 45 | 45 |
| | d1 | 10 | 10 | 13 | 13 | 13 |
| | e | 64 | 64 | 78 | 78 | 78 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 27 | 27 | 27 | 27 | 27 |
| | g.1 | 2 | 2 | 1 | 1 | 1 |
| | h | 140 | 140 | 150 | 150 | 150 |
| | l | 50 | 50 | 55 | 55 | 55 |
| Terminal for cond. cross section (mm²) min.-max. | | 1 —2.5 | 1 —2.5 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 2 MB 68



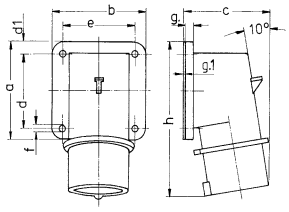
| Drawing | Amp. | 16 | 32 |
|---|---|---|---|
| 2 MB 68 | Poles | 5 | 5 |
| Dim. in mm | a | 66 | 72 |
| | a1 | 69 | 78 |
| | b | 66 | 72 |
| | c | 43 | 52 |
| | d | 52 | 60 |
| | e | 52 | 60 |
| | f | 4.5 | 4.5 |
| | g. | 4.5 | 4.5 |
| | g.1 | 2 | 2 |
| | k | 27 | 32 |
| | l | 59 | 63 |
| Terminal for cond. cross section (mm²) min.-max. | | 1 —2.5 | 2.5 —6 |

## 2 MB 68/853



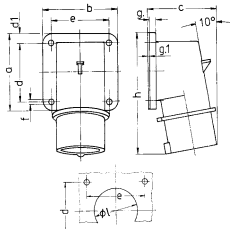
| Drawing | Amp. | 16 |
|---|---|---|
| 2 MB 68/853 | Poles | 5 |
| Dim. in mm | a | 75 |
| | b | 75 |
| | c | 42 |
| | d | 60 |
| | e | 60 |
| | f | 5.5 |
| | g. | 7.3 |
| | g.1 | 2 |
| | k | 13 |
| | l | 52 |
| Terminal for cond. cross section (mm²) min.-max. | | 1 —2.5 |

## 2 MB 71



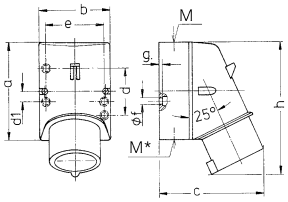
| Drawing | Amp. | 16 | 32 |
|---|---|---|---|
| 2 MB 71 | Poles | 7 | 7 |
| Dim. in mm | a | 85 | 75 |
| | b | 85 | 90 |
| | c | 79 | 90 |
| | d | 64 | 45 |
| | d1 | 10 | 13 |
| | e | 64 | 78 |
| | f | 5.5 | 5.5 |
| | g. | 6 | 6 |
| | g.1 | 2 | 2 |
| | h | 129 | 138 |
| Terminal for cond. cross section (mm²) min.-max. | | 1 —2.5 | 2.5 —6 |

## 2 MB 73



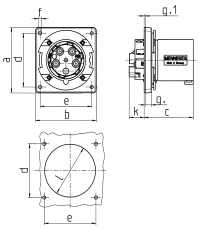
| Drawing | Amp. | 16 | | 32 | |
|---|---|---|---|---|---|
| 2 MB 73 | Poles | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 85 | 85 | 75 | 75 | 75 |
| | b | 85 | 85 | 90 | 90 | 90 |
| | c | 75 | 79 | 87 | 87 | 90 |
| | d | 64 | 64 | 45 | 45 | 45 |
| | d1 | 10 | 10 | 13 | 13 | 13 |
| | e | 64 | 64 | 78 | 78 | 78 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 6 | 6 | 6 | 6 | 6 |
| | g.1 | 2 | 2 | 2 | 2 | 2 |
| | h | 129 | 129 | 137 | 137 | 138 |
| | l | 50 | 50 | 55 | 55 | 55 |
| Terminal for cond. cross section (mm²) min.-max. | | 1 —2.5 | 1 —2.5 | 2.5 —6 | 2.5 —6 | 2.5 —6 |

## 2 MB 147



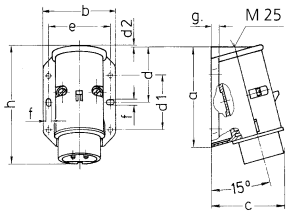
| Drawing | Amp. | 16 | 32 |
|---|---|---|---|
| 2 MB 147 | Poles | 7 | 7 |
| Dim. in mm | a | 100 | 128 |
| | b | 75 | 84 |
| | c | 110 | 135 |
| | d | — | — |
| | d1 | 10.5 | 11 |
| | e | 59 | 68 |
| | f | 5 | 5.3 |
| | g. | 4 | 4 |
| | h | 135 | 170 |
| | M | 20 | 32 |
| | M* | 20 (blind) to be cut out | 2x25 (blind) to be cut out |
| Max. cable diam. (mm) | | 15 | 18 |
| Terminal for cond. cross section (mm²) min.-max. | | 1 —2.5 | 2.5 —4 |

## 2 MB 155



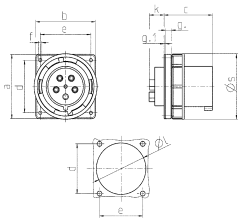
| Drawing | Amp. | 63 | | |
|---|---|---|---|---|
| 2 MB 155 | Poles | 3 | 4 | 5 |
| Dim. in mm | a | 110 | 110 | 110 |
| | b | 106 | 106 | 106 |
| | c | 86 | 86 | 86 |
| | d | 90 | 90 | 90 |
| | e | 90 | 90 | 90 |
| | f | 5.5 | 5.5 | 5.5 |
| | g. | 12 | 12 | 12 |
| | g.1 | 2 | 2 | 2 |
| | k | 28 | 28 | 28 |
| | l | 88.5 | 88.5 | 88.5 |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —16 | 6 —16 | 6 —16 |

## 2 MB 160



| Drawing | Amp. | 16 | | 32 | |
|---|---|---|---|---|---|
| 2 MB 160 | Poles | 2 | 3 | 2 | 3 |
| Dim. in mm | a | 96 | 96 | 96 | 96 |
| | b | 73 | 73 | 73 | 73 |
| | c | 74 | 74 | 74 | 74 |
| | d | 53 | 53 | 53 | 53 |
| | d1 | 52 | 52 | 52 | 52 |
| | d2 | 2 | 2 | 2 | 2 |
| | e | 62 | 62 | 62 | 62 |
| | f | 5.3 | 5.3 | 5.3 | 5.3 |
| | g. | 8 | 8 | 8 | 8 |
| | h | 116 | 116 | 116 | 116 |
| Terminal for cond. cross section (mm²) min.-max. | | 4 —10 | 4 —10 | 4 —10 | 4 —10 |

## 2 MB 166

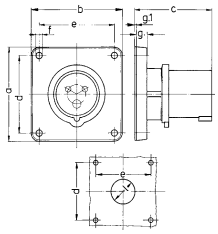


| Drawing | Amp. | 63 | | | 125 | | |
|---|---|---|---|---|---|---|---|
| 2 MB 166 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 110 | 110 | 110 | 130 | 130 | 130 |
| | b | 106 | 106 | 106 | 130 | 130 | 130 |
| | c | 86 | 86 | 86 | 112 | 112 | 112 |
| | d | 90 | 90 | 90 | 104 | 104 | 104 |
| | e | 90 | 90 | 90 | 104 | 104 | 104 |
| | f | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 |
| | g. | 12 | 12 | 12 | 18 | 18 | 18 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | k | 28 | 28 | 28 | 28 | 28 | 28 |
| | l | 88.5 | 88.5 | 88.5 | 95 | 95 | 95 |
| | s | 113 | 113 | 113 | 132 | 132 | 132 |
| Terminal for cond. cross section (mm²) min.-max. | | 6 —16 | 6 —16 | 6 —16 | 25 —70 | 25 —70 | 25 —70 |

# Service – Drawings and dimensions

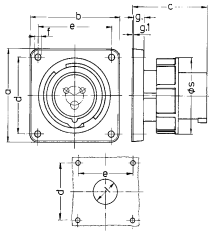
The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 2 MB 173/2



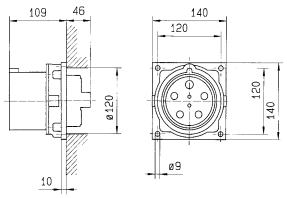
| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 2 MB 173/2 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| | b | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| | c | 72 | 72 | 72 | 90 | 90 | 90 |
| | d | 69.5 | 69.5 | 69.5 | 69.5 | 69.5 | 69.5 |
| | e | 69.5 | 69.5 | 69.5 | 69.5 | 69.5 | 69.5 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 11 | 11 | 11 | 11 | 11 | 11 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | l | 32 | 36 | 36 | 47 | 47 | 47 |
| Terminal for cond. cross | | 1.5 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 |
| section (mm²) min.-max. | | —4 | —4 | —4 | —10 | —10 | —10 |

## 2 MB 187/2



| Drawing | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| 2 MB 187/2 | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| | b | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| | c | 72 | 72 | 72 | 90 | 90 | 90 |
| | d | 69.5 | 69.5 | 69.5 | 69.5 | 69.5 | 69.5 |
| | e | 69.5 | 69.5 | 69.5 | 69.5 | 69.5 | 69.5 |
| | f | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| | g. | 11 | 11 | 11 | 11 | 11 | 11 |
| | g.1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | l | 32 | 36 | 47 | 47 | 47 | 47 |
| | s | 71 | 79 | 89 | 94 | 94 | 102 |
| Terminal for cond. cross | | 1.5 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 |
| section (mm²) min.-max. | | —4 | —4 | —4 | —10 | —10 | —10 |

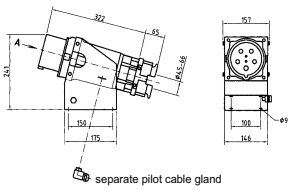
## 2 MB 196



**Drawing**
**2 MB 196**

**Dim. in mm**

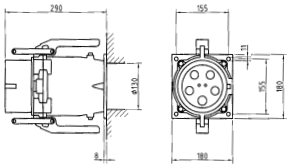
## 2 MB 197




**Drawing**
**2 MB 197**

**Dim. in mm**

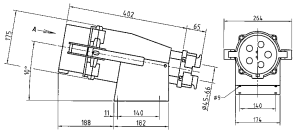
## 2 MB 199/1



**Drawing**
**2 MB 199/1**

**Dim. in mm**

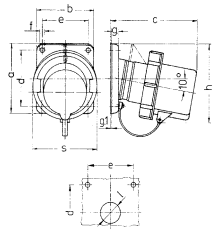
## 2 MB 200/1



**Drawing**
**2 MB 200/1**

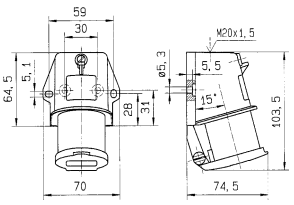
**Dim. in mm**

## 2 MB 203



| Drawing | Amp. | 16 | 32 |
|---|---|---|---|
| 2 MB 203 | Poles | 7 | 7 |
| Dim. in mm | a | 85 | 85 |
| | b | 85 | 85 |
| | c | 132 | 137 |
| | d | 70 | 70 |
| | e | 70 | 70 |
| | f | 6.3 | 6.3 |
| | g. | 11 | 11 |
| | g.1 | 2 | 2 |
| | h | 107 | 111 |
| | s | 86 | 102 |
| | l | 30 | 30 |
| Terminal for cond. cross | | 1 | 2.5 |
| section (mm²) min.-max. | | —2.5 | —6 |

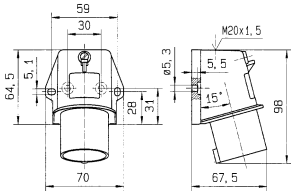
## 2 MB 212



**Drawing**
**2 MB 212**

**Dim. in mm**

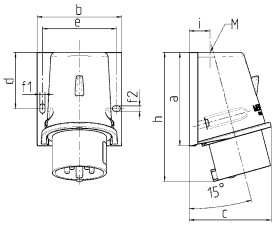
## 2 MB 213



**Drawing**
**2 MB 213**

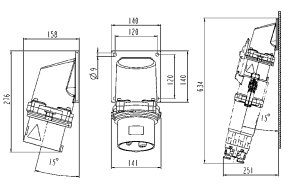
**Dim. in mm**

## 2 MB 221



| Drawing | Amp. | 16 | | 32 | | |
|---|---|---|---|---|---|---|
| 2 MB 221 | Poles | 4 | 5 | 3 | 4 | 5 |
| Dim. in mm | a | 92.5 | 92.5 | 102 | 102 | 102 |
| | b | 87 | 87 | 94 | 94 | 94 |
| | c | 84.5 | 84.5 | 94 | 94 | 94 |
| | d | 55.5 | 55.5 | 62 | 62 | 62 |
| | e | 76 | 76 | 84 | 84 | 84 |
| | f1 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 |
| | f2 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 |
| | h | 128 | 128 | 146 | 146 | 146 |
| | i | 21.5 | 21.5 | 26 | 26 | 26 |
| | M | 25x1.5 | 25x1.5 | 25x1.5 | 25x1.5 | 32x1.5 |

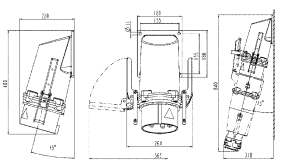
## 2 MB 247



**Drawing**
**2 MB 247**

**Dim. in mm**

## 2 MB 248



**Drawing**
**2 MB 248**

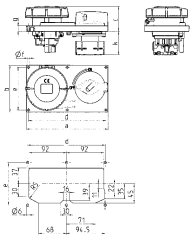
**Dim. in mm**

8

# Service – Drawings and dimensions

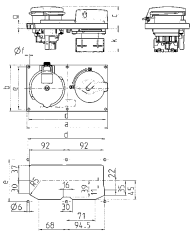
The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 5 MB 57



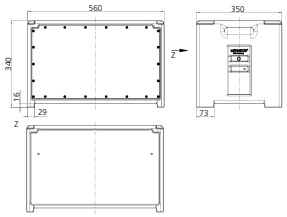
| Drawing 5 MB 57 | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| Dim. in mm | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| | a | 200 | 200 | 200 | 200 | 200 | 200 |
| | b | 110 | 110 | 110 | 110 | 110 | 110 |
| | c | 47 | 50 | 51 | 59 | 59 | 60 |
| | d | 190 | 190 | 190 | 190 | 190 | 190 |
| | e | 100 | 100 | 100 | 100 | 100 | 100 |
| | f | 5 | 5 | 5 | 5 | 5 | 5 |
| | g | 13 | 13 | 13 | 13 | 13 | 13 |
| | k max. | 56 | 56 | 56 | 56 | 56 | 56 |

## 5 MB 59



| Drawing 5 MB 59 | Amp. | 16 | | | 32 | | |
|---|---|---|---|---|---|---|---|
| Dim. in mm | Poles | 3 | 4 | 5 | 3 | 4 | 5 |
| | a | 200 | 200 | 200 | 200 | 200 | 200 |
| | b | 110 | 110 | 110 | 110 | 110 | 110 |
| | c | 46 | 49 | 46 | 56 | 56 | 53 |
| | d | 190 | 190 | 190 | 190 | 190 | 190 |
| | e | 100 | 100 | 100 | 100 | 100 | 100 |
| | f | 5 | 5 | 5 | 5 | 5 | 5 |
| | g | 13 | 13 | 13 | 13 | 13 | 13 |
| | k max. | 56 | 56 | 56 | 56 | 56 | 56 |

## 5 MB 70

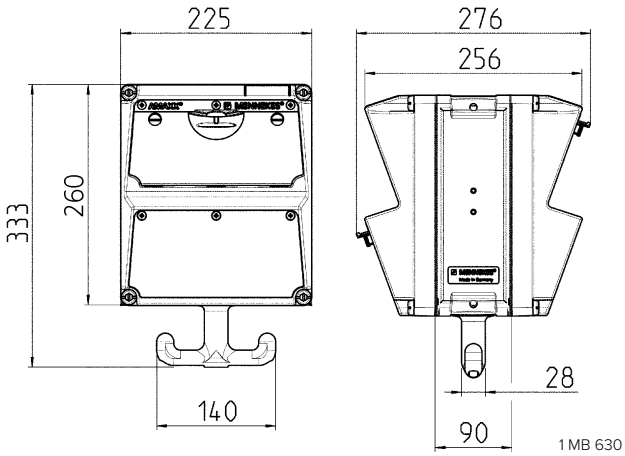


Drawing
5 MB 70

Dim. in mm

## AMAXX® receptacle combinations.

### Suspendable AMAXX®




1 MB 630

Depth dimensions for identical configuration on both sides.

| Receptacles | IP-degrees | Depth |
|---|---|---|
| SCHUKO® 16 A, 230 V | IP 44 | 282 mm |
| | IP 67 | 326 mm |
| CEE 16 A, 3 p, 230 V | IP 44 | 342 mm |
| | IP 67 | 350 mm |
| CEE 16 A, 5 p, 400 V | IP 44 | 354 mm |
| | IP 67 | 362 mm |
| CEE 32 A, 5 p, 400 V | IP 44 | 372 mm |
| | IP 67 | 382 mm |

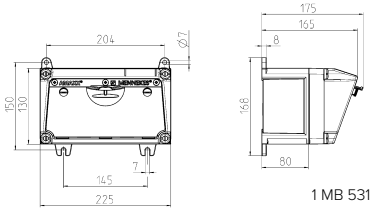
**Cable entries:** closed for cut out

1 x M 32 on top, 1 x M 25 on top and 1 x M 20 on top

The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

# AMAXX® receptacle combinations

## AMAXX® with 1 segment

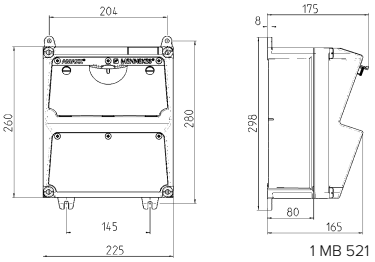



1 MB 531

**Depth dimensions of the AMAXX® enclosures with 1, 2 or 3 segments** and various fittings.

| Receptacles | IP-degrees | Depth |
|---|---|---|
| SCHUKO® 16 A, 230 V | 44 | 175 mm |
| | 67 | 194 mm |
| CEE 16 A, 3 p, 230 V | 44 | 204 mm |
| | 67 | 205 mm |
| CEE 16 A, 5 p, 400 V | 44 | 209 mm |
| | 67 | 213 mm |
| CEE 32 A, 5 p, 400 V | 44 | 221 mm |
| | 67 | 227 mm |
| CEE 63 A, 5 p, 400 V | 44 | 248 mm |
| | 67 | 248 mm |

## AMAXX® with 2 segments




1 MB 521

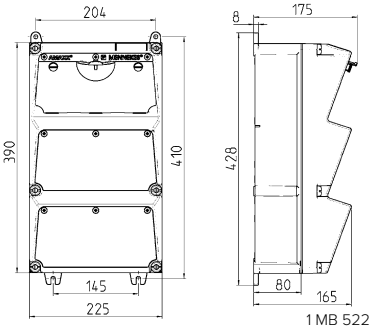
**Cable entries:** closed for cut out.

**single enclosure** 130 mm x 225 mm:
2 x M 25 each on top and bottom

**double enclosure** 260 mm x 225 mm:
2 x M 32 each on top and bottom

**triple enclosure** 390 mm x 225 mm:
2 x M 40 each on top and bottom

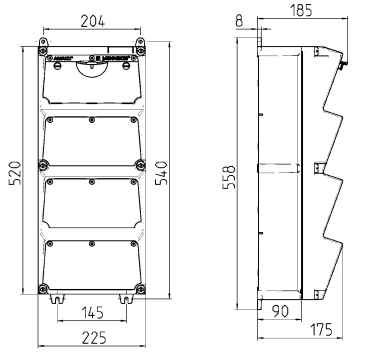
## AMAXX® with 3 segments




1 MB 522

**For all enclosures:** 2 x M 20 each on top and bottom for cut out.

## AMAXX® with 4 segments

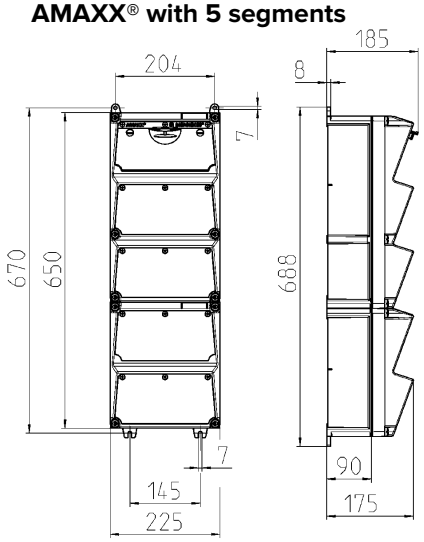



1 MB 523

**Depth dimensions of the AMAXX® enclosures** with 4 or 5 segments and various fittings.

| Receptacles | IP-degrees | Depth |
|---|---|---|
| SCHUKO® 16 A, 230 V | 44 | 186 mm |
| | 67 | 208 mm |
| CEE 16 A, 3 p, 230 V | 44 | 216 mm |
| | 67 | 220 mm |
| CEE 16 A, 5 p, 400 V | 44 | 222 mm |
| | 67 | 226 mm |
| CEE 32 A, 5 p, 400 V | 44 | 231 mm |
| | 67 | 236 mm |
| CEE 63 A, 5 p, 400 V | 44 | 260 mm |
| | 67 | 260 mm |

## AMAXX® with 5 segments



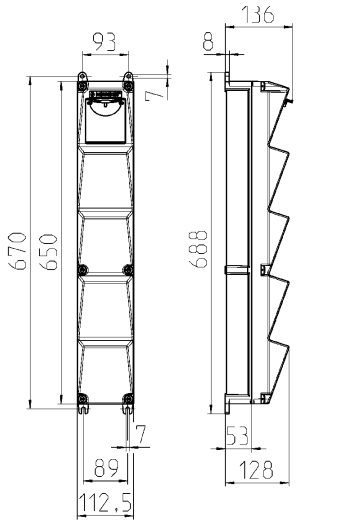

1 MB 540

**Cable entries:** closed for cut out.

**quadruple enclosure** 520 mm x 225 mm:
**quintuple enclosure** 650 mm x 225 mm:
2 x M 40 each on top and bottom

**For both enclosures:** 2 x M 20 each on top and bottom for cut out.

## AMAXX® s (5 segments)




1 MB 541

**Depth dimensions of the AMAXX® s enclosures** with 5 segments and various fittings.

| Receptacles | IP-degrees | Depth |
|---|---|---|
| SCHUKO® 16 A, 230 V | 44 | 140 mm |
| | 67 | 157 mm |
| CEE 16 A, 3 p, 230 V | 44 | 170 mm |
| | 67 | 169 mm |
| CEE 16 A, 5 p, 400 V | 44 | 172 mm |
| | 67 | 174 mm |
| CEE 32 A, 5 p, 400 V | 44 | 182 mm |
| | 67 | 188 mm |

**Cable entries:** closed for cut out.

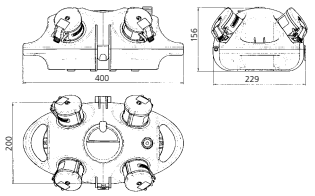
**AMAXX® s** 650 mm x 112.5 mm:
1 x M 25 each on top and bottom or
1 x M 32 each on top and bottom

**Additionally:** 1 x M 20 each on top and bottom to cut out.

# Service – Drawings and dimensions

The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 1 MB 441



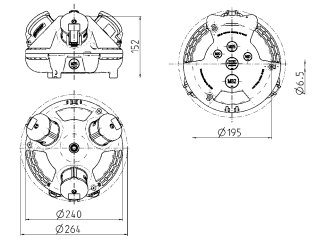

**Drawing**
**1 MB 441**

**Dim. in mm**

DIN rail / fusing for 4 modules beneath transparent operating lid.

Cable entry: at the top: 1 x M 32, 1 x M 25, 2 x M 20 (blind, to be cut out), 1 x cut out for quick pneumatic connection; from the side (for wall fixing or portable version): 1 x M 25 (blind, to be cut out).

## 1 MB 442

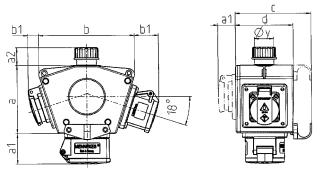



**Drawing**
**1 MB 442**

**Dim. in mm**

Cable entry: at the top: 1 x M 32, 1 x M 25, 2 x M 20 (blind, to be cut out), 1 x cut out for quick pneumatic connection; from the side (for wall fixing or portable version): 1 x M 25 (blind, to be cut out).

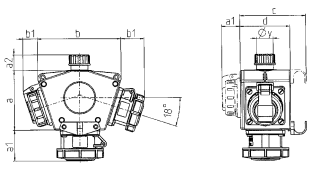
## 3 MB 44




| 3 MB 44 | | | |
|---|---|---|---|
| **Pos.** | **Receptacles** | **IP-degrees** | **Dim.** |
| a | | | 114.0 mm |
| a1 | SCHUKO®, 16 A, 230 V | IP 44 | max. 30.0 mm |
| a1 | CEE 16 A, 3 p, 230 V | IP 44 | 52.7 mm |
| a1 | CEE 16 A, 5 p, 400 V | IP 44 | 50.5 mm |
| a1 | CEE 32 A, 5 p, 400 V | IP 44 | 64.0 mm |
| a2 | | | 30.0 mm |
| b | | | 160.0 mm |
| b1 | SCHUKO®, 16 A, 230 V | IP 44 | max. 18.0 mm |
| b1 | CEE 16 A, 3 p, 230 V | IP 44 | 42.0 mm |
| b1 | CEE 16 A, 5 p, 400 V | IP 44 | 40.0 mm |
| b1 | CEE 32 A, 5 p, 400 V | IP 44 | 53.2 mm |
| c | | | 133.0 mm |
| d | | | 97.0 mm |
| y | | | 17.0 mm |

Cable entry: 1 x with gland diameter,
Ø 17 mm or 27 mm

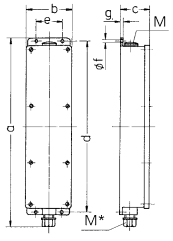
## 3 MB 45




| 3 MB 45 | | | |
|---|---|---|---|
| **Pos.** | **Receptacles** | **IP-degrees** | **Dim.** |
| a | | | 114.0 mm |
| a1 | SCHUKO®, 16 A, 230 V | IP 68 | 35.0 mm |
| a1 | CEE 16 A, 3 p, 230 V | IP 67 | 56.3 mm |
| a1 | CEE 16 A, 5 p, 400 V | IP 67 | 59.0 mm |
| a2 | | | 30.0 mm |
| b | | | 160.0 mm |
| b1 | SCHUKO®, 16 A, 230 V | IP 44 | 24.0 mm |
| b1 | CEE 16 A, 3 p, 230 V | IP 44 | 44.3 mm |
| b1 | CEE 16 A, 5 p, 400 V | IP 44 | 47.0 mm |
| c | | | 133.0 mm |
| d | | | 97.0 mm |
| y | | | 17.0 mm |

Cable entry: 1 x with gland diameter,
Ø 17 mm or 27 mm

## 5 MB 35



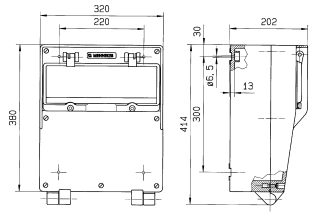

**Drawing**
**5 MB 35**

**Dim. in mm**

| | |
|---|---|
| **a** | 401 |
| **b** | 97 |
| **c** | 63 |
| **d** | 364 |
| **e** | 56 |
| **f** | 5.5 |
| **g.** | 4 |
| **M** | 25 |
| **M*** | 25 |

**Enclosure size:** 401 x 97 mm
Cable entry: 1 x M 20 plugged at the top,
1 x M 20 with gland at the bottom

## 5 MB 41




**Drawing**
**5 MB 41**

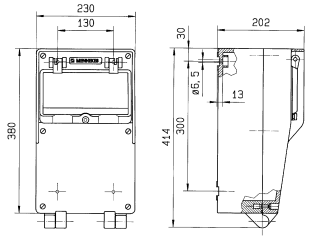
**Dim. in mm**

**Enclosure size:** 380 x 320 mm
Cable entry: 1 x M 40 at the top **with threaded cable gland** and 1 x M 40 plugged at the top
2 x M 40 plugged at the bottom Space for 16 modules

# Service – Drawings and dimensions

The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 5 MB 42

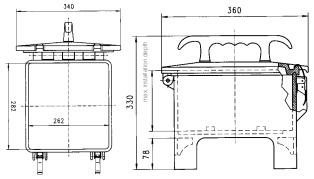



**Drawing**
**5 MB 42**

**Dim. in mm**

**Dimensions:** 380 x 230 mm
Cable entry: 1 x M 40 at the top **with threaded cable gland** and 1 x M 40 plugged at the top
2 x M 40 plugged at the bottom Space for 12 modules.

## 5 MB 43

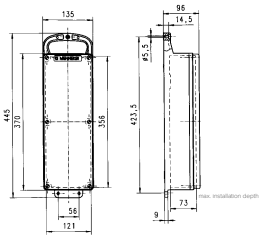



**Drawing**
**5 MB 43**

**Dim. in mm**

**Enclosure size:** 360 x 340 x 330 mm

## 5 MB 44

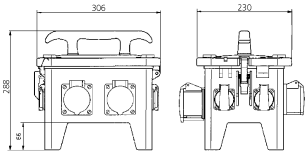



**Drawing**
**5 MB 44**

**Dim. in mm**

**Enclosure size:** 445 x 135 mm

## 5 MB 48a

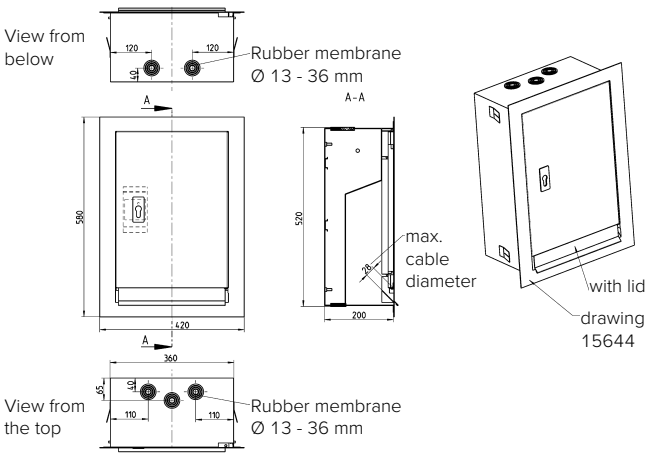



**Drawing**
**5 MB 48a**

**Dim. in mm**

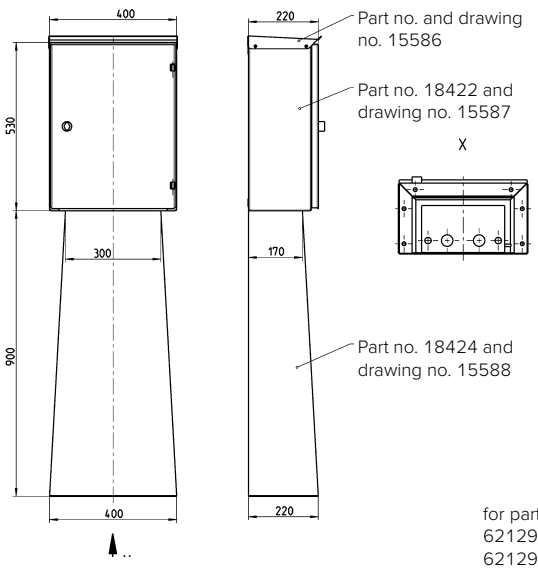
**Enclosure size:** 300 x 230 x 287.5 mm

## 1 MB 430




for part no. 6103180 and 6103196

## 1 MB 437




for part no. 6212980 and 6212993

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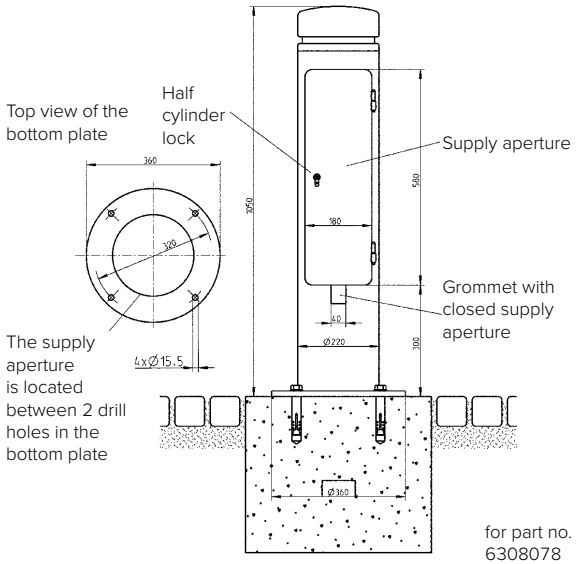
# Service – Drawings and dimensions

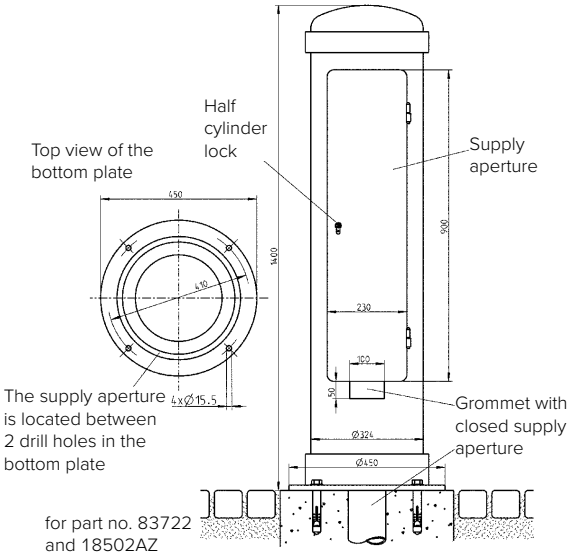
The sizes for the entries on the drawings can be different to the real existing entry sizes. Subject to modification and amendments without prior notice. Errors and omissions excepted.

## 1 MB 443



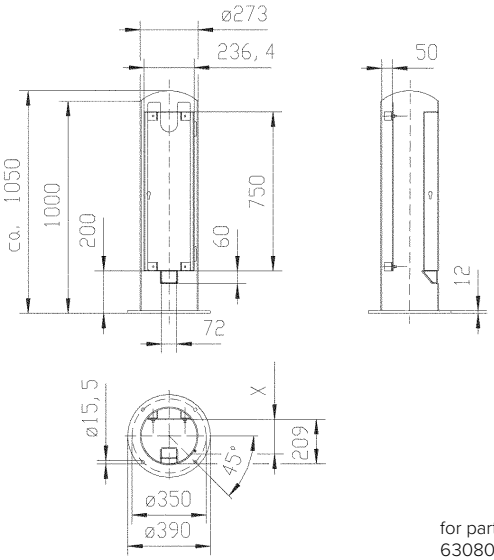

for part no. 6308078

## 1 MB 445



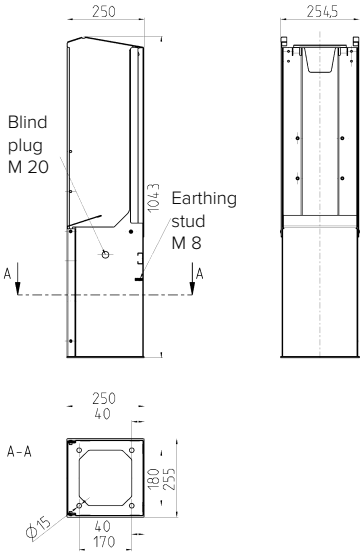

for part no. 83722 and 18502AZ

## 1 MB 473



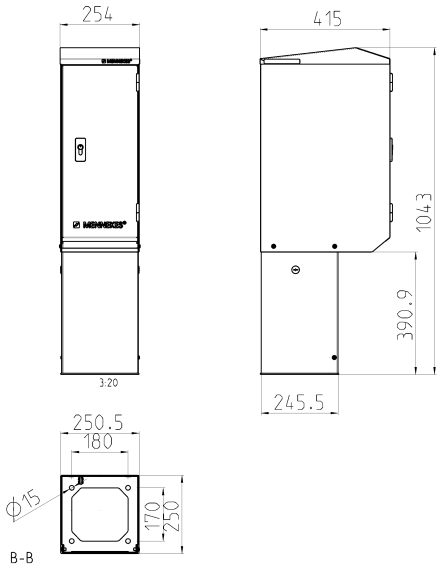

for part no. 6308081

## 1 MB 517




for part no. 15678 and 15679

## 1 MB 518




for part no. 15680 and 15681

# Service – Terms and conditions

**I. Material Conditions, Scope**
**1.** All deliveries, services and offers of the seller shall be exclusively on the basis of these General Terms and Conditions. These shall form an integral part of all contracts concluded by the Seller with its contract partners (hereinafter also referred to as „Principal“ and/or „Buyer“) with respect to the deliveries and services offered by it. They shall apply for all future deliveries, services and offers made or rendered to the Principal, even where such is not separately so agreed.
**2.** Contrary business terms or purchasing conditions of the Principal or any third party shall not apply, even where the Seller does not expressly reject their application in the individual case. Even where the Seller refer to correspondence containing business terms of the Principal or a third party, this shall not indicate the Seller‘s acceptance of these terms.
**3.** The General Terms and Conditions shall only apply with respect to entrepreneurs in the sense of § 14(1) BGB (German Civil Code).

**II. Offer and Conclusion of Contract**
**1.** In the absence of any express indication to the contrary, all offers of the Seller shall remain subject to change and shall be non-binding. The Seller shall be able to accept orders within 14 days of their receipt.
**2.** The order shall be binding upon the Seller (conclusion of contract) once it has provided written confirmation of order or where it begins execution of order.
**3.** The legal relationship between Seller and Buyer shall be governed exclusively by the terms of the contract of sale they conclude, including these General Terms and Conditions. This contract shall render the agreement between the contract parties in full. Oral warranties given by the Seller before conclusion of this contract shall be legally non-binding and any oral agreements between the contracting parties shall be abrogated and replaced by the written contract, except in the case that such oral agreements expressly state that that they shall remain binding.
**4.** Supplements and amendments to agreements made, including these General Terms and Conditions, must be made in writing for their validity. Written form shall include fax and text telecommunication, in particular through e-mail, provided that such declarations are confirmed by the receiving contracting party in the same text form.
**5.** Indications made by the Seller on the object of the delivery or service (e.g. weight, dimensions, utility values, load capacity, tolerance, technical or other service data) as well as corresponding representations of the Seller with respect to these indications (e.g. sketches, illustrations) shall be approximations only unless expressly described in writing by the Seller as binding and/or where the actual purpose of contract require exact agreement with the specific indications. They are not warranted characteristics, but descriptions or features of the delivery or service. Customary deviations and deviations resulting from legal provisions or technical improvements, as well as the replacement of certain components by others of equal quality, shall be permissible insofar as they do not impair the intended contract purpose.
**6.** The Seller shall retain title and/or copyright in all offers and quotes it makes as well as in all sketches, illustrations, invoices, prospectuses, catalogues, models, tools and other documentation and auxiliary materials. The Buyer shall not make these or their contents available to third parties or make them known to third parties without express approval from the Seller, nor shall it use or reproduce them, either personally or with the help of a third party. At the request of the Seller, the Buyer shall return these objects and shall destroy any copies made where these are no longer required in the ordinary course of business or where negotiations have not resulted in the conclusion of contract. The same shall apply for documents provided by the Buyer to the Seller for implementation of contract. The Seller shall be entitled to make these documents available to third parties charged with making deliveries.
**7.** Should the Buyer rescind the contract before delivery of the ordered article, the Seller shall be entitled to invoice the Buyer for all costs incurred up to the point of rescission. These costs shall
include, inter alia, project planning costs, processing costs for the compilation and supervision of order, manufacture planning costs, costs for goods fabricated etc.. Irrespective of this, the Seller shall also be entitled to demand specific performance.

**III. Prices, Right to Amend Prices, Conditions of Payment and Consequences of Default, Set Off and Right of Retention**
**1.** The prices shall apply with respect to the service and/or delivery set out in the confirmation of order issued by the Seller. Additional or special services like trainings, issuing certificates etc. shall be invoiced separately.
**2.** In the absence of any express agreement for a particular currency, prices shall be understood in EUR ex works plus shipping and handling cost (freight incl. packaging) statutory value added tax and, in the case of export deliveries, all customs duties and fees as well as other public dues.
**3.** Insofar as agreed prices are based on the Seller‘s list prices and the delivery is to follow at least 3 months after conclusion of contract, the list price effective at the point of delivery shall apply (minus any agreed percentage or fixed discount).
**4.** Should, in the period between conclusion of contract and performance, a statutory change in sales tax enter into force, the Seller shall be entitled to invoice at the changed rate of sales tax, also with respect to permissible part deliveries.
**5.** With respect to all orders -- also orders on demand and successive delivery contracts -- for which, in accordance with contract or at the request of the orderer, delivery is made later than 3 months after placement of order, the Seller shall be entitled to pass on increases in material and wage costs occurring in this period to the Buyer. These increases shall be passed on to the extent that they are incurred.
**6.** The Seller shall not be bound to maintain the above prices in case of independent follow-on orders. Any price reductions introduced shall not apply with retrospective effect, but shall apply only prospectively as of the date of announcement of the respective reduction.
**7.** Invoice sums shall be payable within 10 days at a 2% discount or within 30 days without discount as of the date of invoice, at the very latest 30 days after maturity and receipt of service without deduction for postage and expenses. Decisive for date of payment shall be receipt by the Seller. Cheques shall be deemed payment upon redemption. Should the Buyer fail to make payment by the invoice maturity date, outstanding sums shall incur interest at a rate of 5% p.a. calculated as per maturity date. The right to assert a higher rate of interest and further damages in case of default, in accordance with statutory provisions, shall remain unaffected.
**8.** Fees and surcharges of any kind, as well as invoiced amounts for additional or special services (see III.1) are not qualifying for discount.
**9.** Set-off against claims of the Buyer or a right of retention with respect to payments on account of these claims shall only be permissible where these claims are undisputed or whose existence has been affirmed in a declaratory judgement.
**10.** The Seller shall be entitled to make deliveries/render services only against prior payment or security where, after conclusion of contract, circumstances become known which are capable of considerably reducing the creditworthiness of the Principal/Buyer and which are likely to jeopardise the payment of sums payable to the Seller by the Principal under the respective contract relationship (including other individual contracts
for which the same framework agreement applies).
**11.** Small orders, under a net invoice value of € 100.00, shall be subject to an administration free of € 25.00 per small order. Replacement orders shall be excluded from this rule.
**12.** The Seller shall be entitled to assign its existing claims against the Buyer for the deliveries made or services rendered to third parties for the purpose of finance.

**IV. Delivery and Delivery Time**
**1.** In the absence of any express agreement to the contrary, all deliveries shall be made ex works (D-57399 Kirchhundem [M6]).
**2.** Deadlines and dates for delivery and services stipulated by the Seller shall be approximate only unless a fixed deadline or date has been expressly promised or agreed. Where dispatch has been agreed, delivery deadlines and dates shall refer to the date of transfer to the logistics provider, freight carrier or other third party charged with transport. In case of subsequent amendment to order, the Seller shall be released from the originally agreed delivery dates.
**3.** Irrespective of rights arising from any default of the Buyer, the Seller shall be entitled to demand an extension of delivery/service deadlines or postponement of delivery/service dates by a period equal in length to the default by the Buyer.
**4.** The Seller shall not be liable in case of frustration of delivery or for delays in delivery where these are caused through force majeure or other events which were not foreseeable at the time of conclusion of contract and for which the Seller is not responsible (e.g. interruption of operations of any kind, difficulties in acquiring materials or energy, transport delays, strikes, lawful lock-outs, lack of labour, energy or raw materials, difficulties in the procurement of necessary official authorisations, official measures or failure or delay in delivery by suppliers). Insofar as such events make it considerably more difficult or even impossible for the Seller to make delivery or render services and where the impairment to performance of contract is not only temporary, the Seller shall be entitled to rescind the contract either in full or in part. A pre-requisite for rescission on these grounds is, however, that the Seller notify the Buyer of the relevant circumstances and that it reimburse any sums paid by the Buyer in relation to any outstanding services of the Seller. In case of temporary impairment to performance, the deadlines or dates for delivery or service shall be extended by a period equal in length to the duration of the impairment plus an appropriate run-up period. Should it be unreasonable to expect the Principal to take delivery or accept the service after such delays, it shall be entitled to rescind the contract by way of immediate issue of written declaration of rescission to the Seller.
**5.** The Seller shall only be entitled to make part deliveries where part deliveries are of value to the Principal within the scope of the contract purpose, the delivery of the remainder is assured and the Principal does not occur considerable additional expense as a result, except in the case that the Seller agree to assume these additional costs. Should the Seller be late with a delivery or service or should it become impossible to make the delivery/render the service, for whatever reason, the Seller‘s liability for damages shall be restricted in accordance with Point VIII. of these General Terms and Conditions.

**V. Place of Performance, Dispatch, Packaging, Transfer of Risk**
**1.** In the absence of any express agreement to the contrary, place of performance for all obligations arising under this contract relationship shall be the Seller‘s works in 57399 Kirchhundem/Germany.
**2.** The type of dispatch and packaging shall be chosen at the reasonable discretion of the Seller. Usual packaging shall be the smallest packaging unit indicated in the catalogue. On ordering different amounts, the nearest packaging unit shall be delivered.

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**3.** Risk shall pass to the Buyer at the very latest upon the object for delivery being passed to the logistics provider, freight carrier or only third party charged with transport. The beginning of loading shall be decisive in determining when the object is passed. This shall also apply with respect to part deliveries or where the Seller has agreed to provide other services (e.g. dispatch). Where dispatch or transfer is delayed as a result of a circumstance whose cause rests with the Principal, risk shall pass to the Principal on the day the delivery object is made available for delivery and the Seller has notified this to the Buyer.
**4.** Storage costs after transfer of risk shall be borne by the Principal. In case of storage provided by the Seller, storage costs shall be 0.25% of the invoice value of the delivery objects to be stored per each full week. It shall remain open to the contracting parties to assert and prove higher or lower storage costs.
**5.** The consignment shall be insured by the Seller only on the express wish of the Buyer. Insurance shall be provided against theft, breakage, damage through transport, fire or water or other insurable risks. The cost of insurance shall be borne by the Buyer.
**6.** With respect to contracts with repeated successive deliveries, the structure of delivery shall be indicated to the Seller in good time. Where deliveries are not called on time, the Seller shall be entitled, after expiry of a suitable grace period indicated to the Buyer, to structure and make the deliveries itself or to withdraw from the relevant part of the contract subject to the further conditions in Point IV. 4. and to claim damages for loss of profits. The right of the Seller to assert further damages shall remain unaffected.
**7.** Returns not based on material defects or defects in title shall be processed in accordance with the Seller‘s conditions of return. These can be read at www.mennekes.de under General Terms and Conditions.

**VI. Warranty, Material Defects**
**1.** Irrespective of the duties of inspection and notification (§ 377 HGB (German Commercial Code)) which exist in respect of any bilateral trade, the Principal shall be bound to inspect the delivery for manifest defects and to issue notices with respect to such manifest defects -- this shall also apply for incomplete or incorrect deliveries. Notice of defect shall be issued within 5 working days after receipt of goods. With respect to latent defects, notice of defect shall be issued within 5 days of the defect becoming apparent. Notice of defect shall be made in writing. Failure to issue notice of defect within the stipulated period shall result in the goods being deemed to have been approved and the Principal losing any right of recourse with respect to the defect against the Seller. At the request of the Seller, the queried delivery object shall be returned to the Seller with carriage paid. In case of legitimate notice of defect, the Seller shall reimburse the cost of cheapest return transport; this shall not apply where costs are higher because the delivery object is being used at a location other than that stipulated for use.
**2.** In case of legitimate notice of defect, the Seller, at its own option, shall be bound and entitled, within a reasonable period, to repair the defect or make a replacement delivery (secondary performance). In case secondary performance fails, that is, it is impossible or unreasonable, the Seller refuses to make secondary performance or secondary performance is subject to unreasonable delays, the Buyer shall be entitled to rescind the contract or make an appropriate reduction to the purchase price.
**3.** Where the defect is the fault of the Seller, the Buyer shall be entitled to assert a claim for damages under the conditions set down in VIII.
**4.** In case of defects in components made by other manufacturers which the Seller cannot remove, either for licence or physical reasons, the Seller shall, at its option, either assert its warranty rights against the manufacturer and supplier on the Principal‘s account, or shall assign these rights to the Principal. Warranty claims against the Seller with respect to such defects shall exist in accordance with these General Terms and Conditions only where legal proceedings against the manufacturer and supplier were unsuccessful or where such legal proceedings have no prospect of success, for instance due to the defendant‘s insolvency. For the duration of the legal dispute, the limitation period of the respective warranty shall be stayed.
**5.** The warranty shall lapse where the Principal tampers with the delivery object without the Seller‘s consent, or where a third party tamper with the delivery object at the Principal‘s behest, and the removal of defect is made impossible or unreasonable to the Seller as a result. The Principal shall bear all additional costs of the removal of defect as may arise as a result of the tampering.
**6.** Claims for defects shall not arise where the error occurs through the non-adherence to operating, storage, maintenance or installation instructions, unsuitable or improper use, wrong or negligent use by the Principal or naturally occurring wear and tear. The same shall apply where the Seller‘s products are improperly mounted, negligently handled or subjected to undue strain, or where disruption arises as a result of unsuitable operating means, substitute materials or mechanical, chemical, electro-chemical or electrical effects.
**7.** Any individual agreement with the Principal to supply used objects shall be to the exclusion of all warranty for material defects except in the case that such defects are maliciously suppressed by the Seller.
**8.** Legitimate defects on only part of the delivery shall not justify a complaint with respect to the entire delivery.

**VII. Protected Rights**
**1.** In accordance with Point VII., the Seller shall warrant that the object of delivery shall be free of third party industrial property rights or copyright in the country (state) or the agreed place of delivery. In the absence of any express written agreement to the contrary, the place of delivery shall be Kirchhundem/Germany. Each contracting partner shall notify the other immediately and in writing in case any claims for infringement of such rights are asserted. The rule in sentence 1 shall form no warranty, but shall represent an agreement as to quality pursuant to applicable warranty regulations.
**2.** In the case that the object of delivery infringe third party property rights or copyright, the Seller shall, at its own option, amend or exchange the object, such that it no longer infringe such rights yet still fulfil the contractually agreed functions, or shall furnish the Principal with the appropriate right of use by way of licence. Should the Seller not be able to resolve the problem within a reasonable period of time, the Principal shall be entitled to rescind the contract or reduce the purchase price accordingly. Any damage claims arising to the Principal against the Seller shall be subject to the restrictions of Point VIII of these General Terms and Conditions.
**3.** In case of legal infringements resulting from products delivered by the Seller but manufactured by other manufacturers, the Seller shall, at its own option, assert claims against the manufacturer or supplier on behalf of the Principal or shall assign these claims to the Principal. In these cases, claims against the Seller shall only exist where legal proceedings against the manufacturer or suppliers were unsuccessful or have no prospect of success, for instance because of the manufacturer‘s/supplier‘s insolvency.
**4.** Where deliveries are made in accordance with specific sketches or other indications made by the Principal and where these deliveries infringe third party rights, the Principal shall bear the responsibility for correctness and for ensuring that third party rights are not infringed. The Principal shall indemnify the Seller against all claims brought for breach of third party property rights. In the case of damage claims, the indemnity shall only be where the Buyer fail to prove that it is not responsible for the deficiency in its indications or the infringement of third party rights. If, in such a case, the Seller is prohibited from manufacturing or delivering the respective goods by a third party asserting its own property rights, the Seller shall be entitled to discontinue works and rescind the contract. Before doing so, the Seller must, however, issue notice to the Buyer setting a grace period during which the Buyer is required to have the prohibition removed by the third party. The assertion of a corresponding claim for damages by the Seller against the Buyer on the basis of other statutory provisions shall remain unaffected.

**VIII. Other Liability (Limitation and Exclusion)**
**1.** Liability of the Seller for damages, for whatever legal reason, in particular for frustration, delay, defective or wrong delivery, breach of contract, breach of duty of care in contractual negotiations and in tort, where fault is established, shall be limited by the following rules.
**2.** The Seller shall not be liable in case of negligence simpliciter of its corporate bodies, legal representatives, employees or other vicarious agents unless this involves a breach of essential contract duties (main duties under contract / cardinal duties). Essential contract duties are those duties which must be fulfilled in order that the contract be performed at all and which may regularly be relied upon by the contracting party.
**3.** Insofar as the Seller is liable for damages under the above sentence, liability shall be limited to damage which the Seller foresaw on conclusion of contract as a possible consequence of breach of contract or which it would have foreseen on exercise of due caution. Indirect or consequential damage resulting from defects in the object of delivery shall only be compensated where such damage can be typically expected on proper use of the object of delivery.
**4.** In case of liability for negligence simpliciter, the Seller‘s duty to pay compensation for property damage and pecuniary damage resulting therefrom shall be limited to damage which is usually and typically insurable by the Seller through liability / product liability insurance on reasonable terms, even where the matter relates to a breach of essential contract duties.
**5.** The above exclusions and limitations of liability shall apply to the same extent to the benefit of corporate bodies, legal representatives, employees and other vicarious agents of the Seller.
**6.** Insofar as the Seller provide technical information or acts in an advisory capacity and this information or advice does not form part of the services agreed and owed under contract, this information or advice shall be provided free of charge and the Seller shall not be liable for the information or advice.
**7.** The limitations on liability contained in this Point VIII shall not apply to liability of the Seller for deliberate acts, for warranted characteristics, for injury to life, body or health or to liability under the German Product Liability Act.
**IX. Limitation Periods**
**1.** Claims arising under Point VI shall be subject to a limitation period of one year beginning on delivery to the Buyer.
**2.** This shall not apply to the following claims which shall be subject to statutory limitation periods
• Claims involving deliberate, malicious or grossly negligent breach of duty by the Seller, its legal representatives or vicarious agents;
• Claims for damage resulting from injury to life, body or health due to a negligent breach of the Seller or from a deliberate or negligent breach of its legal representatives or vicarious agents;
• Claims under a warranty for a certain characteristic;

• Insofar as the supplier is so obliged, claims for reimbursement of costs which the Principal has to bear as against a subcontractor in the supply chain on account of a sale of new goods for the purpose of secondary performance (§ 478(2) BGB);
• In case goods delivered by the Seller have been used in accordance with their instructions for use in a construction project and they have caused a defect in that project and Part B of the German Construction Contract Procedures (Verdingungsordnung für Bauleistungen) do not apply to the contract relationship.
**3.** For all these cases, limitation periods shall be in accordance with statutory provisions. The statutory rules on staying of the limitation periods and new begin of deadlines shall remain unaffected. In case of damage claims under the Product Liability Act, statutory limitation periods shall apply, also in case of deliberate or grossly negligent breach.
**4.** Where the Seller is liable under VIII for damage for which liability insurance at reasonable conditions is usually and typically concluded, the limitation period shall also be one year.

**X. Retention of Title**
**1.** The Seller shall retain title to the object of delivery (conditional goods) until all claims against the Principal arising under the business relationship, including any future claims from concurrent or later contracts, are settled. In case of open invoice, the retention of title and all rights shall form security for the entire outstanding sum plus interest and costs. In case of pledge or other third party acts, the Principal shall notify the Seller immediately.
**2.** The Principal shall be entitled to process and sell on the object of delivery in the course of ordinary business. This authority shall end where the Principal fall into arrears, on suspension of payments or where insolvency proceedings are opened against its assets. It shall be bound to sell on the goods only under retention of title and to ensure that claims from the resale pass to the Seller in accordance with 5. and 6. The use of the conditional goods for the fulfilment of contracts for work and contracts for work and materials shall be deemed a resale for this purpose. Other dispositions with respect to the conditional goods, in particular pledge or transfer by way of security, shall be prohibited. Assignment of claims from transfer of the conditional goods shall be prohibited unless the assignment is by way of a factoring, duly notified to the Seller, and for which the proceeds exceed the value of the secured claim. Upon crediting of the proceeds of the factoring arrangement, the Seller's claim shall immediately become due.
**3.** Processing of the conditional goods shall not result in the Buyer acquiring ownership of the resulting object pursuant to § 950 BGB. Processing or restructuring of the goods shall not obligate the Seller. The processed or restructured goods shall continue to be conditional goods.
**4.** On processing, incorporation or mixing of conditional goods with other goods, the Seller shall become joint owner of the resulting product. The Seller's share shall stand in proportion to the invoice value of the conditional goods to the invoice value of the other goods used. Where the Seller's ownership rights are extinguished by the incorporation, mixing or processing, the Principal shall assign it appropriate ownership rights or liens on the new product in the ratio of the invoice value of the conditional goods to other goods used. Storage of the product shall be free of charge for the Seller. Joint ownership rights in goods shall be sufficient for these goods to be conditional goods.
**5.** Claims of the Principal arising from the resale of conditional goods shall hereby be assigned to the Seller. They shall serve as security to the same extent as retention of title in the conditional goods.
**6.** Where the conditional goods are resold by the Principal together with other goods, the Seller shall be assigned a claim from the resale in the ratio of the invoice value of the conditional goods to the invoice value of the other goods. In case of resale of goods in which the Seller has joint ownership rights pursuant to 4., a corresponding share of the claims shall be assigned.
**7.** At the request of the Seller, the Principal shall be bound to provide it with an exact listing of its claims with names and address of buyers, to notify the buyers of the assignments and to supply the Seller with all information necessary for assertion of its assigned claims. As soon as it fall into arrears with payment or its financial situation deteriorate, the Principal shall authorise the Seller to notify the buyers of the assignment and to recover on its claims itself. The Seller shall be entitled to demand an assessment of its assigned claims carried out by an appointed party using the Principal's accounts. The Principal shall furnish the Seller with a listing of all goods for which the Seller still holds title (conditional goods).
**8.** Should existing securities exceed the value of secured claims by more than 10%, the Seller shall be bound, at the request of the Principal, to release securities at its option, taking into account the interests of the Principal. In case of retention of title, the value of the securities shall be determined with reference to the invoice value of the goods as bought by the Principal from the Seller. In case of extended retention of title, the invoice value for the resale of the goods shall be decisive.
**9.** Since the Seller retains title to the goods, the Seller can demand return of the goods in case of rescission of contract. The Seller shall be entitled to declare rescission of contract, irrespective of the further conditions set down in § 323 BGB and in particular without the requirement of imposition of a grace period for payment, immediately upon the Principal's default. The same shall apply where the Principal suspend its payment or where insolvency proceedings are opened against its assets. All costs arising as a result of repossession of the object of delivery shall be borne by the Principal. The Seller shall be entitled to dispose of the property it has repossessed as it sees fit.

**XI. Authority to Process Data**
The Seller shall be entitled to process all data in connection with the business relationship with the Buyer within the scope of applicable statutory provisions.

**XII. Concluding Provisions**
**1.** Place of jurisdiction for any and all dispute arising in connection with the business relationship between the Seller and the Principal shall be, at the option of the Seller, Kirchhundem or the place of business of the Buyer. For claims against the Seller, exclusive place of jurisdiction shall be 57399 Kirchhundem. Mandatory statutory provisions on exclusive places of jurisdiction shall remain unaffected by this rule.
**2.** The relationship between the Seller and the Buyer shall be governed by the laws of the Federal Republic of Germany. The UN Convention on Contracts for the International Sale of Goods from 11.04.1980 (CISG) shall be excluded.
**3.** Insofar as the contract or these General Terms and Conditions contain lacunae, the parties shall agree the legally effective provision which they would have agreed in light of the economic purpose of contract and the purpose of these General Terms and Conditions had they recognised the lacunae at the time of conclusion of contract or these General Terms and Conditions.

Note pursuant to § 36 of the Consumer Discrimination Act (VSBG)
The seller / contractor is neither obliged nor willing to participate in dispute settlement proceedings in front of a consumer arbitration board as defined by § 36 VSBG.
Printing errors, amendments, errors excepted.
Status of March 2017

# Service – Index of part numbers

# Service – Index of part numbers

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