# Flush-mounting installation



# The most important advantages at a glance:

- Complete system for all flush-mounting and masonry applications
- UP-Plus technology with combination connection pieces M20/M25 and up to 15% more installation space
- Installation solutions for insulated external walls (composite thermal insulation systems)
- Air-tight installation in accordance with EnEV energy-saving ordinance
- ECON®-technology: air-tight one-gang boxes and one-gang junction boxes for toolless cable and conduit entries
- Air seal sleeves for air-tight feed-through of cables and conduits
- Fire-protection products for flush-mounting and masonry applications
- Universal installation housing with mineral fibreboard for all standard accessory sizes (e.g. displays, LED luminaires and many more)
- Plasterless mounting with Klemmfix®
- Easy locating of boxes and casings by using signal covers
- International products for accessory installation in accordance with national standards
- Environmentally-friendly installation solutions
- Professional system tools for fast and secure installation
- Wide range of system accessories
- Halogen-free



Product film www.kaiser-elektro.org/flushmounting



### Flush-mounting | Product lines Basic installation p. 16 Electronics box p. 18 Air-tight versions p. 22 Luminaire connection boxes, ceiling exits p. 34 Screened electrical installation p. 35 Sound insulation technology p. 19 Plasterless installation with Klemmfix® p. 37 Sealing sleeves p. 102 p. 38 Accessories p. 41 Junction casings Universal installation housings p. 44 Internal insulation system p. 46 Installation systems for insulated facades p. 50 International products p. 73 Fire-protection products for flush-mounting/ p. 247 masonry applications Tools for flush-mounting installation can be found in the "Tools" section starting on page 300

|   | Basic<br>installation | Energy saving<br>air-tight | Sound<br>Insulation | Insulated interior wall | <b>Screened</b><br>Environmentally-<br>friendly | Fire-<br>protection<br>buildings  |
|---|-----------------------|----------------------------|---------------------|-------------------------|---|---|
|   |                       |                            |                     |                         |   | De la companya della companya della companya de la companya della |
| For installation accessories  | I                     | 1                          |                     |                         |   |   |
| One-gang boxes  | p. 17                 | p. 22                      |                     |                         | -   | -   |
| One-gang junction boxes   | p. 17                 | p. 23                      | p. 21               | p. 48                   | p. 36   | p. 248  |
| One-gang boxes for nailing  | p. 29                 | -                          |                     |                         | -   | -   |
| Two-gang junction boxes   | p. 29                 | p. 25                      |                     |                         | -   | -   |
| Electronics boxes   | p. 18                 | p. 25                      |                     |                         | -   | -   |
| Perilex® one-gang boxes   | p. 31                 | -                          |                     |                         | -   | -   |
| One-gang boxes CEE  | p. 31                 | -                          |                     |                         | -   | -   |
| Universal installation housings   | p. 45                 | -                          |                     |                         | -   | -   |
| For cable exits   |                       |                            |                     |                         |   |   |
| Wall light connection   | p. 34                 | -                          |                     |                         | -   | -   |
| Luminaire connection  | p. 34                 | -                          |                     |                         | -   | -   |
| For cable and conduit feed-th   | roughs                |                            |                     |                         |   |   |
| Sealings  | -                     | p. 102                     |                     |                         | -   | -   |
| Sealing sleeves   | -                     | -                          |                     |                         | -   | p. 262  |
| For cable connections   |                       |                            |                     |                         |   |   |
| Junction boxes  | p. 32                 | -                          |                     |                         | -   | -   |
| Junction casings  | p. 41                 | -                          |                     |                         | p. 36/126                                       | -   |
| Potential equalisation casings  | p. 43                 | -                          |                     |                         | -   | -   |
| Accessories   |                       |                            |                     |                         |   |   |
| Fixing  | p. 38                 | p. 38                      |                     |                         | -   | -   |
| Retrofitting sealing (air-tight)  | p. 26/100             | -                          |                     |                         | -   | -   |
| Sealing of electrical installation conduits (smoke-tight and air-tight) | -                     | p. 27                      |                     |                         | -   | p. 28/101/277   |
| Plaster compensation  | p. 39                 | p. 39                      |                     |                         | -   | -   |
| Plaster protection  | p. 38                 | p. 38                      |                     |                         | -   |   |
| End cover   | p. 39/99/189          | p. 39/99/189               |                     |                         | p. 36/126                                       | -   |

| Installation on or in insulated external walls/ceilings   Product overview |                             |   |                                   |                         |                              |             |                             |
|--|-----------------------------|---|-----------------------------------|-------------------------|------------------------------|-------------|-----------------------------|
|  | Universal equipment carrier | Modular support for dev. /<br>Telescope | Installation housing for external | Telescope<br>switch box | Mini<br>equipment<br>carrier | ISO box set | One-gang junction box ECON® |
|  | p. 50                       | equipment car.<br>p. 54/p. 64           | insulation<br>p. 60               | p. 64                   | p. 67                        | p. 65       | <b>Styro55</b><br>p. 70     |
| Installation option  | ρ. 30                       | p. 547 p. 64                            | ρ. ου                             | p. 04                   | p. 67                        | p. 65       | ρ. 70                       |
| Prepared installation  | •                           | •                                       | •                                 | •                       | -                            | •           | -                           |
| Retrofitting   | -                           | -                                       | -                                 | -                       | •                            | -           | •                           |
| Application  | '                           |   |                                   |                         |                              | '           |                             |
| External accessories   | •                           | •                                       | -                                 | -                       | •                            | -           | -                           |
| Built-in luminaires / accessories  | -                           | -                                       | •                                 | -                       | -                            | -           | -                           |
| External corner accessories*   | -                           | -                                       | -                                 | -                       | •                            | -           | -                           |
| Installation accessories 1-unit combination*                               | •                           | -                                       | -                                 | •                       | -                            | •           | •                           |
| Installation accessories up to 3-unit combinations                         | •                           | -                                       | -                                 | -                       | -                            | •           | •                           |
| Installation accessories up to 5-unit combinations                         | -                           | -                                       | -                                 | -                       | -                            | •           | •                           |

for flush-mounting installation



# **UP-PLUS flush-mounting installation**

UP-PLUS, the new generation of flush-mounting installation with the innovative combination connection piece for quick and non-distorting combinations. With variable conduit entry for M20/M25 conduits and large installation space.

- Variable combination connection piece for conduits up to M25
- Flexible for screw and claw fixing of the accessories
- More installation space
- High torsional strength, guaranteed standard distance of 71 mm for combinations









# Combination entry, interconnecting options



The combination entry permits exact and solid fit for Ø 20 or Ø 25 mm conduits.



Simply break out the reducing bend for  $\varnothing$  25 mm conduits.



The distance support (Art. No. 1159-34) ensures an exact and safe distance of 91 mm.



The tunnel connector (Art. No. 1159-36) permits fully-insulated through-wiring in the floor



## Secure combination with the new combination connection piece

The audibly secure combination with the new combination connection piece. Place the boxes next to each other. Place centering piece in groove and press together until you hear a "click". Now you have a non-distorting combination with a standard distance of 71 mm.









for flush-mounting installation

# One-gang box

- · with 4 screw domes and 2 expanding claw fields
- · dimensions in accordance with German DIN 49073
- · For M20/M25 conduits

## **UPPLUS**





| Depth                              | 46 mm    | 46 mm    |
|------------------------------------|----------|----------|
| Installation opening               | 60 mm    | 60 mm    |
| Device screws                      | -        | 2        |
| Conduit entries M20                | 3        | 3        |
| Conduit entries M25                | 2        | 2        |
| Combination conduit entries M20/25 | 2        | 2        |
|                                    | •        | •        |
| Art. No.                           | 1055-04  | 1056-04  |
| Inner packaging/shipping           | 25 / 500 | 25 / 500 |

# One-gang junction box

- · with 4 screw domes and 2 expanding claw fields
- · dimensions in accordance with German DIN 49073
- · For M20/M25 conduits

## **UP**PLUS





| Depth                              | 66 mm    | 66 mm    |
|------------------------------------|----------|----------|
| Installation opening               | 60 mm    | 60 mm    |
| Device screws                      | -        | 2        |
| Conduit entries M20                | 9        | 9        |
| Conduit entries M25                | 2        | 2        |
| Combination conduit entries M20/25 | 2        | 2        |
| <u></u>                            | •        | •        |
| Art. No.                           | 1555-04  | 1556-04  |
| Inner packaging/shipping           | 25 / 250 | 25 / 250 |

# One-gang junction box

- · with side cavities for connections
- · with 4 screw domes
- · from above 4 x multi-lead wiring
- $\cdot$  dimensions in accordance with German DIN 49073
- · For M20/M25 conduits

# **UP**PLUS



| Length x Width x Depth             | 110 x 71 x 49 mm |
|------------------------------------|------------------|
| Installation opening               | 60 mm            |
| Device screws                      | 2                |
| Conduit entries M20                | 6                |
| Conduit entries M25                | 4                |
| Combination conduit entries M20/25 | 2                |
| <b></b>                            | •                |
| Art. No.                           | 1069-02          |
| Inner packaging/shipping           | 10 / 100         |

for flush-mounting installation



# **Electronics box**

The electronics box has space for electronic components. The accompanying separator wall also enables you to have different kinds of voltages in one box.

- For accessories and electronic components such as EIB actuators, communication and network technology, radio-controlled elements, alarm modules, etc.
- Can be combined with KAISER one-gang boxes via snap-in connector
- Optimal for use as an entry box for combinations
- The separator wall (supplied) turns it into a twin-chamber box









# **Application**



The range of possibilities is as diverse as their solutions.



Here for example is a relay for central control of several roller blind drives or a flush mounting EIB interface with a conventional button.



For communication equipment, the box volume is ideal for accommodating cable reserves.



Ø60

Concealed installation of electronic components such as radio-controlled modules, EIB actuators, emergency lighting or cable lengths in data network technology.

## **Electronics box**

- · with 4 screw domes
- · Twin-chamber box (with separator wall)
- · dimensions in accordance with German DIN 49073
- · For M20/M25 conduits



### **UPPLUS**

| Length x Depth                     | 149 x 67 mm |
|------------------------------------|-------------|
| Installation opening               | 60 mm       |
| Device screws                      | 2           |
| Conduit entries M20                | 11          |
| Conduit entries M25                | 2           |
| Combination conduit entries M20/25 | 4           |
| <u></u>                            | •           |
| Art. No.                           | 1068-02     |
| Inner packaging/shipping           | 10 / 100    |

for flush-mounting installation

# Flush-mounting one-gang junction box sound insulation box

Sound insulation box for use in solid construction sound insulation walls with stringent sound insulation requirements. The solid box body with additional sound insulation coating absorbs and reflects the sound, so that interference in adjacent rooms is excluded and the sound insulation remains intact as if no installation box were present.

- Maintains the wall's sound insulation protection
- Installation up to 5-unit combinations
- Opposing installation is also possible
- Variable combination connection piece for conduits up to M25
- Flexible for screw and claw fixing of the accessories
- Can be used with sound protection cover as a junction box















# **Examples of use**



Example of installation using a switch-socket combination.



Use of an opposing sound insulation box.



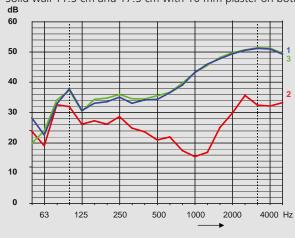
Cables up to Ø 11.5 mm and conduits up to M25 can be fed into the sound insulation box.

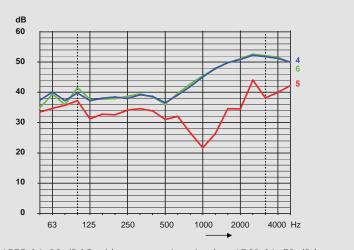


With sound insulation cover it can also be used as junction box

## **Comparison of sound insulation**

Solid wall 11.5 cm and 17.5 cm with 10 mm plaster on both sides.





1 Wall, without installations, 52 dB | 2 with one-gang junction box 1555-04, 32 dB | 3 with one-gang junction box 1569-01, 52 dB | 4 Wall, without installations, 55 dB | 5 with one-gang junction box 1555-04, 41 dB | 6 With one-gang junction box type 1569-01, 55 dB

for flush-mounting installation

### Installation



Cut a Ø 82 mm installation opening using a grinding head (e.g. Art. No. 1088-02).



Make exact cable and conduit entries with the universal opening cutter Art. No. 1085-80



For combinations, the onegang junction boxes are snapped together.



The sound insulation box is simply fixed with plaster.



Combinations at a standard spacing of 71 mm.



Soundproof and fully insulated through wiring is ensured by the support connectors.



Example of installation using a switch-socket combination.



With the sound insulation cover Art. No.1184-69, the box can also be used as junction box.

# **Processing instructions**



The flush-mounting sound insulation box offers 6 possible entries for conduits up to M25 and cables up to Ø 11.5 mm.



The combination connection piece makes it easier to feed conduits up to M25 in the connection area.



In opposing installation, the sound insulation is guaranteed up to a five-way combination.

# One-gang boxes, One-gang junction boxes for flush-mounting installation

# Allocation table for universal opening cutters

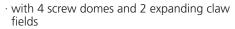


| llation for sound insulation boxes   | Ø setting  |
|--|--|
| 3 x 1.5 mm <sup>2</sup>  | 7.5  |
| 4 x 1.5 mm <sup>2</sup>  | 8.5  |
| 5 x 1.5 mm <sup>2</sup> ; 3 x 2.5 mm <sup>2</sup>                                    | 9.5  |
| 7 x 1.5 mm <sup>2</sup> ; 5 x 2.5 mm <sup>2</sup>                                    | 10.5   |
| Integrated high voltage and MSR-Bus cable (N)Y(YSt)Y)M-J $3 \times 1.5 \text{ mm}^2$ | 10.5   |
| EDV cable, S/STP 4 x 2 AWG23/1   | 7.5  |
| EDV cable, 100 MB S/STP 4 x 2 x AWG23/1  | 6.0  |
| Coaxial cable, double screening  | 6.0  |
| Coaxial cable, single screening  | 5.0  |
| Bus cable YCYM 2 x 2 x 0.8   | 5.0  |
| EDV cable screened, plus outer screening   | 5.0  |
| Cable for telephone and signal transmission with screening                           |  |
| Telephone cable without screening  | 4.0  |
| 9060-98  | Connector  |
| DIN EN 16 - Ø 16 mm  | 14.0   |
| DIN EN 20 - Ø 20 mm  | 17.0   |
| DIN EN 25 - Ø 25 mm  | 21.0   |
|  | 3 x 1.5 mm² 4 x 1.5 mm² 5 x 1.5 mm²; 3 x 2.5 mm² 7 x 1.5 mm²; 5 x 2.5 mm² Integrated high voltage and MSR-Bus cable (N)Y(YSt)Y)M-J 3 x 1.5 mm² EDV cable, S/STP 4 x 2 AWG23/1 EDV cable, 100 MB S/STP 4 x 2 x AWG23/1 Coaxial cable, double screening Coaxial cable, single screening Bus cable YCYM 2 x 2 x 0.8 EDV cable screened, plus outer screening Cable for telephone and signal transmission with screening Telephone cable without screening 9060-98 DIN EN 16 - Ø 16 mm DIN EN 20 - Ø 20 mm |

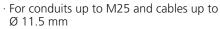
You can create cable entries with the prescribed strain relief easily and to the exact required size with the universal opening cutter (Art No. 1085-80).

# **INNOVATION**

## Flush-mounting sound insulation box







· Combination distance: 71 mm





3D animation

## **SOUND INSULATION**

| Depth                            | 60 mm    |  |
|----------------------------------|----------|--|
| Installation opening             | 60 mm    |  |
| Tube entries up to M25           | 6        |  |
| Cable entries of up to Ø 11.5 mm | 6        |  |
| for sound insulation walls up to | 55 dB    |  |
| Art. No.                         | 1569-01  |  |
| Inner packaging/shipping         | 10 / 100 |  |

## Sound insulation cover

- · for sound insulation box
- · Sound insulation function in conjunction with sound insulation box



| Diameter                 | 92 mm    |
|--------------------------|----------|
| halogen-free             | •        |
| VDE                      | •        |
| Art. No.                 | 1184-69  |
| Inner packaging/shipping | 10 / 100 |

for flush-mounting installation



# Air-tight flush-mounting boxes

Flush-mounting boxes with ECON® technology permit guaranteed airtight installation. They offer a variety of options for air-tight conduit and cable entries and can be either plastered or processed using Klemmfix®.

- Air-tight design with sealing membranes
- Avoids leaks in exterior facades made from hollow chamber blocks
- Variable and tool-free cable and conduit entries
- Torsion-proof, guaranteed standardised combination distance of 71 mm









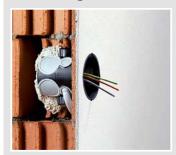








# **Processing instructions**



Vertical draughts occur in hollow chamber blocks. The UP boxes with ECON® technology prevent air from escaping through the one-gang boxes.



The tool-free cable and conduit entries reduce installation time and make processing easier.



The elastic sealing membrane fits air-tight around the conduit or cable.



Each cable and conduit diameter up to Ø 25 mm can be installed quickly and air-tight.

## One-gang box ECON® 10

- · Air-tight design with sealing membranes
- · with 4 screw domes
- · dimensions in accordance with German DIN 49073
- · For M20/M25 conduits







3D animation



| Depth   | 46 mm    | 46 mm    |
|---|----------|----------|
| Installation opening  | 60 mm    | 60 mm    |
| Device screws   | -        | 2        |
| Conduit entries M20   | 2        | 2        |
| Conduit entries M25   | 2        | 2        |
| Tool-free cable and conduit entries in the connector area up to M25 | 2        | 2        |
| Air-tight Air-tight   | •        | •        |
| <u></u>   | •        | •        |
| Art. No.  | 1055-21  | 1056-21  |
| Inner packaging/shipping  | 25 / 500 | 25 / 500 |

# One-gang boxes, One-gang junction boxes for flush-mounting installation

# One-gang junction box ECON® 15

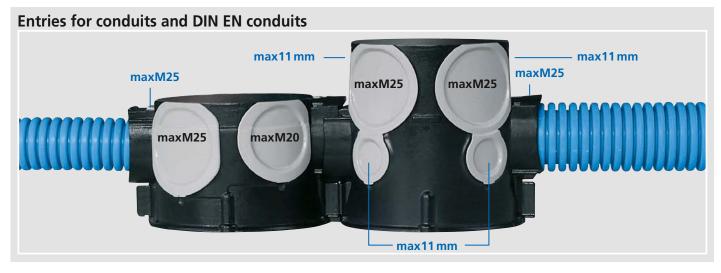
- · Air-tight design with sealing membranes
- · 4 screw domes, 2 expanding claws fields
- · dimensions in accordance with German DIN 49073
- · For M20/M25 conduits





# UPPLUS ECON AIR-TIGHT

| Depth   | 66 mm    | 66 mm    |
|---|----------|----------|
| Installation opening  | 60 mm    | 60 mm    |
| Device screws   | -        | 2        |
| Tool-free cable and conduit entries up to 11 mm around the box      | 4        | 4        |
| Tool-free cable and conduit entries up to 11 mm below the connector | 2        | 2        |
| Tool-free cable and conduit entries up to M25 around the box        | 4        | 4        |
| Tool-free cable and conduit entries in the connector area up to M25 | 2        | 2        |
| Air-tight   | •        | •        |
| <u></u>   | •        | •        |
| Art. No.  | 1555-21  | 1556-21  |
| Inner packaging/shipping  | 25 / 250 | 25 / 250 |



for flush-mounting installation



# **Electronics box ECON® Two-gang junction box ECON®**

The electronics box and two-gang junction box using ECON® technology are ideal for installation in masonry walls in which the interior plaster forms the air-tight closure on the room side. The ECON® electronics box provides a generously-sized accessory installation compartment and additional space for fitting small switch actuators, etc. The matching separator wall allows the standardised installation of bus and operating voltage in one box. The ECON® two-gang junction box makes it easier than ever to install special accessories. The large installation opening and the very large installation compartment make it possible to install block and pre-wired accessories, and they create space for the configuring of cables for multi-media connections.

- Elastic sealing membrane for guaranteed air-tightness
- Variable and toolless insertion of single cables, duplex cables and DIN EN conduits
- Additional space for decentral installation of KNX / LON UP actuators, Venetian blinds UP cut-off relays, and many more
- Separator wall for standardised fitting of two voltage types in one box
- Maintenance of cable bending radii for network connection boxes optimal data transfer
- Easy installation of pre-wired accessories and multi-media connection boxes















# Examples of applications for the two-gang junction box ECON®



Thanks to its large installation opening without a central bridge, the two-gang junction box allows ...



... the use of pre-wired accessories, block inserts, and many more



It also provides an easy-to-use basis for the installation of multi-media connection boxes. The very large installation compartment has plenty of space for configuring cables.



Reserve cables and connection plugs can easily be inserted into the box and are then concealed behind the installation accessories.







# One-gang boxes, One-gang junction boxes for flush-mounting installation

# **Processing instructions**



The permanently elastic sealing membrane used in ECON® technology guarantees the airtight connection of cables up to Ø 11 mm, and conduits up to Ø 25 mm.



Even duplex cables can be installed securely and air-tight without an installation conduit.



The sealing membrane fits tightly around the cable or conduit and permanently prevents leakage in external walls and in interior walls next to external walls.



The peripheral sealing lip between the box body and the front part ensures an air-tight connection i.e. retention of the building's air-tight seal.

# Examples of applications for the electronics box ECON®



By inserting the separator wall, two different voltage types can be fitted in a standardised way in the electronics box. In addition, they provide a generously-sized installation space ...



... for the decentral installation of, for example, small window actuators for controlling Venetian blinds and heating in the external wall.



Thanks to the electronics box, it is easy to install radio-controlled actuators etc. without putting excessive strain on cables or accessories.



Network connection boxes can be used while maintaining the cable bending radii and with the best possible data transfer speeds.

## **Electronics box ECON®**

- · Separator wall to separate electrical circuits
- · Air-tight design with sealing membranes
- · 4 screw domes



# Two-gang junction box FCON®

- · Air-tight design with sealing membranes
- · 6 screw domes





for flush-mounting installation



# **Sealing inserts**

The sealing insert ensures air-tight closing of previously-installed onegang boxes and one-gang junction boxes. It can be used in both flush-mounting and cavity wall installation. Its low installation depth makes use in one-gang junction boxes possible without restricting the wiring.

- Ensures later air-tight closing of one-gang boxes and one-gang junction boxes
- Toolless connection wire penetration is possible
- Guarantees later and permanent air-tightness



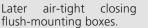






# **Application**







Later air-tight closing of cavity wall boxes.



Pre-punched entry markings permit toolless connection wire penetration up to 2.5 mm<sup>2</sup>.



Press sealing insert and installation accessories into the box and tighten with device screws.

## **Sealing inserts**

- · for retrofit sealing of all existing one-gang boxes and one-gang junction boxes
- · permanently flexible plastic

### **AIR-TIGHT**



| Depth                    | 36,5 mm  |  |
|--------------------------|----------|--|
| Diameter                 | 60 mm    |  |
| Air-tight                | •        |  |
| Art. No.                 | 1040-01  |  |
| Inner packaging/shipping | 10 / 100 |  |

for flush-mounting installation

# **Sealing plugs 16-40** for electrical installation conduits

Sealing plugs with ECON® technology for sealing all standard electrical installation conduits in installation boxes or at cable outlets. The long sealing plug with three sealing lips and in different widths adapts itself to the installation conduit in use and guarantees air-tight and smoke-tight closing, even when the conduits are cut at an angle. From conduit size M25 and up, the membrane surfaces are separated by bridges, which ensure secure cable routing and prevent damage and gaps between cables.



- Sealing plug with three sealing lips and different widths adapts itself perfectly to the installation conduit and guarantees an air-tight end
- Elastic sealing membrane for guaranteed air-tightness
- Toolless cable entry
- Reinforcing ribs in the membrane ensure air-tightness for the cables
- For all installation conduits M16 M40, Pg 9 Pg 36, 3/4" and 5/8"













# Product advantages of sealing plugs



When pushed through, the elastic sealing membrane using ECON® technology wraps itself around the cable or individual leads, ...



... and prevents uncontrolled air flow.



From conduit size M25 upwards, the membrane areas are reinforced with ribs ...



... which prevent damage and ensure air-tightness where the cables pass through.

# **Processing instructions**



The long sealing plug with three sealing lips and different widths adapts itself perfectly to the installation conduit...



... and guarantees an air-tight end even when conduits are cut at an angle.

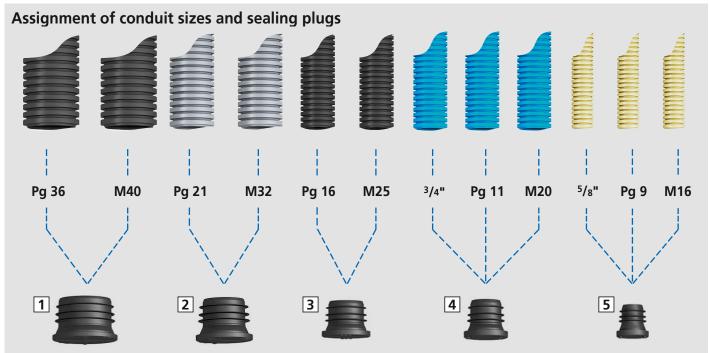


When air-tight installation is necessary, the sealing plugs prevent leakage at the conduit ends.



For installations in the field of fire protection, the sealing plug closes the conduit ends and ensures smoke-tight room sep-

for flush-mounting installation



**1** Sealing plug M40 Art. No. 1040-40 | **2** Sealing plug M32 Art. No 1040-32 | **3** Sealing plug M25 Art. No 1040-25 | **4** Sealing plug M20 Art. No 1040-20 | **5** Sealing plug M16 Art. No 1040-16

# Air-tightness certificate

In comprehensive blower-door tests, a neutral institute tested and confirmed the air-tightness of the M16 - M40 sealing plugs.



# Sealing plugs 16-20

- · for sealing electrical installation conduits
- · ECON® technology for easy cable entry
- · permanently flexible plastic

ECON AIR-TIGHT







3D animation

| Sealing plug             | M16      | M20      |
|--------------------------|----------|----------|
| DIN EN conduit Ø         | 16 mm    | 20 mm    |
| Art. No.                 | 1040-16  | 1040-20  |
| Inner packaging/shipping | 25 / 100 | 25 / 100 |

for flush-mounting installation

# Sealing plugs 25-40

- · for sealing electrical installation conduits
- · ECON® technology for easy cable entry
- · permanently flexible plastic









3D animation

| ECON I | AIR-TIGHT |
|--------|-----------|
|--------|-----------|

| Sealing plug             | M25      | M32     | M40     |  |
|--------------------------|----------|---------|---------|--|
| DIN EN conduit Ø         | 25 mm    | 32 mm   | 40 mm   |  |
| Art. No.                 | 1040-25  | 1040-32 | 1040-40 |  |
| Inner packaging/shipping | 25 / 100 | 25 / 50 | -/25    |  |

# Two-gang junction box

- · can also be used as a one-gang junction box (incl. 2 device inserts)
- · for use as a junction box cover Art. no. 9062-90 is additionally needed
- · use separator wall to separate electrical circuits Art. No. 1656-22 (not illustrated)
- · dimensions in accordance with German DIN 49073





| Length x Width x Depth   | 140 x 60 x 42 mm | 140 x 60 x 42 mm |
|--------------------------|------------------|------------------|
| Screw spacing            | 71 mm            | 71 mm            |
| Device screws            | -                | 4                |
| Conduit entries M20      | 12               | 12               |
| <b>a</b>                 | •                | •                |
| Art. No.                 | 1655-02          | 1656-02          |
| Inner packaging/shipping | 10 / 100         | 10 / 100         |

## One-gang box

- · with nail straps as fitting aid
- · nail Ø max. 3 mm
- · plaster depth min. 6 mm
- · dimensions in accordance with German DIN 49073
- · for M20 conduits





| Depth                    | 42 mm   | 42 mm   |
|--------------------------|---------|---------|
| Installation opening     | 60 mm   | 60 mm   |
| Device screws            | -       | 2       |
| Conduit entries M20      | 7       | 7       |
| <u></u>                  | •       | •       |
| Art. No.                 | 1055-62 | 1056-62 |
| Inner packaging/shipping | - / 100 | - / 100 |

for flush-mounting installation

# One-gang junction box

- $\cdot$  with nail straps as fitting aid
- · nail Ø max. 3 mm
- · plaster depth min. 6 mm
- · dimensions in accordance with German DIN 49073
- · for M20 conduits





| Depth                    | 63 mm   | 63 mm   |
|--------------------------|---------|---------|
| Installation opening     | 60 mm   | 60 mm   |
| Device screws            | -       | 2       |
| Conduit entries M20      | 13      | 13      |
| <u></u>                  | •       | •       |
| Art. No.                 | 1555-62 | 1556-62 |
| Inner packaging/shipping | - / 100 | - / 100 |

# One-gang box without support

- $\cdot \text{ for use in facing masonry} \\$
- $\cdot$  for combinations: use supports Art. No. 1159-01
- $\cdot$  dimensions in accordance with German DIN 49073
- · for M20 conduits





| Depth                    | 42 mm    | 42 mm    |
|--------------------------|----------|----------|
| Installation opening     | 60 mm    | 60 mm    |
| Device screws            | -        | 2        |
| Conduit entries M20      | 7        | 7        |
| <u></u>                  | •        | •        |
| Art. No.                 | 1050-00  | 1051-00  |
| Inner packaging/shipping | 25 / 500 | 25 / 500 |

# One-gang boxes, One-gang junction boxes for flush-mounting installation

# One-gang junction box without support

- · for use in facing masonry
- · for combinations: use supports Art. No. 1159-01
- · dimensions in accordance with German DIN 49073
- · for M20 conduits





| Depth                    | 63 mm    | 63 mm    |
|--------------------------|----------|----------|
| Installation opening     | 60 mm    | 60 mm    |
| Device screws            | -        | 2        |
| Conduit entries M20      | 13       | 13       |
| <u></u>                  | •        | •        |
| Art. No.                 | 1550-00  | 1551-00  |
| Inner packaging/shipping | 25 / 250 | 25 / 250 |

# PERILEX® one-gang box

- · for PERILEX® 16 A inserts
- · only for screw fixing
- $\cdot$  dimensions in accordance with German DIN
- · for M20 conduits



| Depth                    | 48 mm    |  |
|--------------------------|----------|--|
| Screw spacing            | 67 mm    |  |
| Installation opening     | 70 mm    |  |
| Device screws            | 2        |  |
| Conduit entries M20      | 8        |  |
| Art. No.                 | 1076-04  |  |
| Inner packaging/shipping | 10 / 100 |  |

## **One-gang box CEE**

- · for CEE 16 A connectors
- · only for screw fixing
- $\cdot$  with sealing ring, protection class IP3X
- · dimensions in accordance with German DIN 49073
- · For M20/M25 conduits



| Depth                             | 50 mm   |
|-----------------------------------|---------|
| Screw spacing                     | 67 mm   |
| Installation opening Ø            | 70 mm   |
| Raised head accessory screws 4 mm | •       |
| Conduit entries M20               | 2       |
| Conduit entries M25               | 2       |
| <b>4</b>                          | •       |
| Art. No.                          | 1075-04 |
| Inner packaging/shipping          | - / 100 |

## **Junction box**

- · with nail straps as fitting aid
- · nail Ø max. 3 mm
- · plaster depth min. 6 mm
- $\cdot$  without cover and cover screws
- · dimensions in accordance with German DIN 49073
- · for M20 conduits



| Depth  | 36 mm   |
|--|---------|
| Installation opening   | 70 mm   |
| Conduit entries M20  | 8       |
| For 6 terminals 1.5 mm <sup>2</sup> or 5 terminals 2.5 mm <sup>2</sup> | •       |
| Art. No.   | 1172-62 |
| Inner packaging/shipping   | - / 100 |

## **Junction box**

- · Klemmfix® mounting possible
- · according to German DIN VDE 0606, junction box covers may only be removable using tools
- $\cdot$  dimensions in accordance with German DIN 49073
- · for M20 conduits







| Depth  | 36 mm    | 36 mm   | 36 mm    |
|--|----------|---------|----------|
| Installation opening   | 70 mm    | 70 mm   | 70 mm    |
| Conduit entries M20  | 8        | 8       | 8        |
| For 6 terminals 1.5 mm <sup>2</sup> or 5 terminals 2.5 mm <sup>2</sup> | •        | •       | •        |
| For mounting with Klemmfix®<br>(Art. No. 1159-12)                      | •        | •       | •        |
| With cover and 2 cover screws  | -        | -       | •        |
| <u></u>  | -        | -       | •        |
| Art. No.   | 1172-02  | 1172-08 | 1172-92  |
| Inner packaging/shipping   | 25 / 500 | - / 100 | 25 / 250 |

## **Junction box**

- $\cdot$  with plaster disc, cover and cover screw
- · Klemmfix® mounting possible
- $\cdot$  For M20 conduits and cables up to 5 x 2.5  $\text{mm}^2$









| Depth  | 36 mm    | 36 mm    | 36 mm    | 36 mm   |
|--|----------|----------|----------|---------|
| Installation opening   | 70 mm    | 70 mm    | 70 mm    | 70 mm   |
| Conduit entries M20  | 8        | 8        | 8        | 8       |
| For 6 terminals 1.5 mm <sup>2</sup> or 5 terminals 2.5 mm <sup>2</sup> | •        | •        | •        | •       |
| Terminal block, no. of poles   | -        | 4-pole   | 5-pole   | 6-pole  |
| without terminal block   | •        | -        | -        | -       |
| <u></u>  | •        | -        | -        | -       |
| Art. No.   | 1172-09  | 1172-04  | 1172-05  | 1172-06 |
| Inner packaging/shipping   | 25 / 100 | 10 / 100 | 10 / 100 | - / 100 |

# Junction box

- · for 8 terminals 1.5 mm², for 6 terminals 2.5 mm² or for 5 terminals 4 mm²
- · without cover and cover screws
- · For M16/M20 conduits



| Depth                            | 56 mm    |
|----------------------------------|----------|
| Installation opening             | 70 mm    |
| M16-20 combination conduit entry | 14       |
| Art. No.                         | 1572-02  |
| Inner packaging/shipping         | 10 / 250 |

# In-plaster junction box

- $\cdot$  for flat multi-lead wiring (NYIF) 1.5 and 2.5  $\text{mm}^2$
- $\cdot$  terminal block permanently attached
- · with plaster disc, cover and cover screw
- Junction box fire-resistant up to 960°C, cover to 850°C in accordance with DIN EN 60670



| Depth                        | 16 mm    |  |
|------------------------------|----------|--|
| Installation opening         | 80 mm    |  |
| Terminal block, no. of poles | 5        |  |
| <u></u>                      | •        |  |
| Art. No.                     | 1081-05  |  |
| Inner packaging/shipping     | 25 / 250 |  |

# **Light connection boxes, Ceiling exits**

for flush-mounting installation

## Wall light connection box

- · With integrated cover
- $\cdot$  not to be used as a junction box!



| Length x Width x Depth     | 60 x 32 x 30 mm |
|----------------------------|-----------------|
| Break-out openings Ø 20 mm | 4               |
| <u></u>                    | •               |
| Art. No.                   | 1048-00         |
| Inner packaging/shipping   | 25 / 250        |

### Cover

- · for wall light connection boxes Art. No. 1048-00 and Art. No. 9148-00
- · With Ø 3.2 x 15 mm cover screws



| Length x Width           | 75 x 40 mm |
|--------------------------|------------|
| Art. No.                 | 1148-90    |
| Inner packaging/shipping | 25 / 250   |

# **Ceiling light connection box**

- · for casting into concrete ceilings
- · 2 parts with snap-in connection
- · sealed against concrete
- · delivery unit: 1 ceiling light connection box pre-cut for DIN EN conduits 20 mm Ø, 2 reducers/stoppers for use with cable, 1 sealing plug-in cover, 1 light hook (fullyinsulated) max. load 100 N (10 kg) in accordance with German VDE
- $\cdot$  Marking for cables and DIN EN conduits up to 25 mm



| Depth                    | 55 mm   |
|--------------------------|---------|
| Ceiling exit (CE) Ø      | 35 mm   |
| Light hook length        | 55 mm   |
| Conduit entries M20      | 1       |
| <u></u>                  | •       |
| Art. No.                 | 1248-55 |
| Inner packaging/shipping | -/100   |

## Ceiling exit bush

- $\cdot$  for multi-lead wiring (NYIF) 1.5 mm  $^2$  and 2.5 mm  $^2$
- $\cdot$  to prevent cable being ripped out  $\,$





| Cable entry   | 5,5 x 23 mm | 5,5 x 23 mm |
|---|-------------|-------------|
| With light hook and expanding dowel Ø 10 mm                     | -           | •           |
| with brass wedge nut, max. load 100 N (10kg) to German VDE norm | -           | •           |
| Art. No.  | 1144-00     | 1144-05     |
| Inner packaging/shipping  | 100 / 500   | 50 / 250    |

# **Screened one-gang junction box**

Screened one-gang junction box for flush-mounting installation. The conductive coating suppresses interference with a high alternating field component, whether radiated or received.

- For environmentally-safe electrical installation
- With screening and potential conductivity
- The functional earth of the box must only be connected to the potential equalisation and not to the equipment grounding conductor (PE conductor)



## Installation



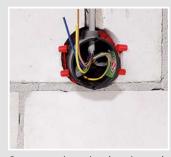
Cut an accurate wall opening (Ø 82 to 84 mm) with the diamond grinding head.



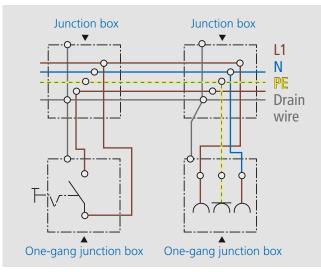
Remove cable sheath and screen with AMZ 2 Art. No. 1190-02. Fit bare tracer wire with transparent insulating hose.



Connect functional earth of the box to tracer wires of screened cable.



One-gang junction box is ready for installation of a socket for biological design.



# Technical processing instructions/standards

- dimensions in accordance with German DIN 49073
- for rooms used for medical purposes, environmentally-friendly construction, etc.
- the conductive coating suppresses interference with a high alternating field component, whether radiated or received
- The functional earth of the box must only be connected to the potential equalisation and not to the equipment grounding conductor (PE conductor)
- Not suitable for use in X-ray or radiation rooms!



# **Screened electrical installation**

# Screened one-gang junction box

- · with screening and functional earth of the box
- $\cdot$  dimensions in accordance with German DIN 49073
- · protection class IP 2X



| Depth  | 63 mm    |
|--|----------|
| Installation opening   | 60 mm    |
| Cable entries 3 x 2.5 mm <sup>2</sup> or 5 x 1.5 mm <sup>2</sup> | 6        |
| Cable entries 3 x 1.5 mm <sup>2</sup>                            | 4        |
| halogen-free   | •        |
| Art. No.   | 1555-88  |
| Inner packaging/shipping   | 10 / 100 |

### Screened cover

- · for making screened one-gang junction boxes
- · for one-gang junction boxes Art. No. 9064-88 and Art. No. 1555-88



| Diameter                 | 80 mm    |
|--------------------------|----------|
| Screw spacing            | 60 mm    |
| Art. No.                 | 1164-88  |
| Inner packaging/shipping | 10 / 100 |

## **Screened junction casing**

- · for cavity wall and flush-mounting installation
- $\cdot$  with screened cover
- · With Ø 3.2 x 15 mm cover screws
- · protection class IP 3X



| Length x Width x Depth                    | 107 x 107 x 53 mm |
|---|-------------------|
| Cut hole Ø                                | 4 x 35 mm         |
| Break-out openings Ø 20 mm                | 8                 |
| Cable entries for NYM and low-voltage cab | ling •            |
| For terminals up to                       | 4 mm <sup>2</sup> |
| Art. No.                                  | 9195-88           |
| Inner packaging/shipping                  | - / 10            |

## **Note**

FX4

Other installation boxes/housings with screening available on request. Please use our radiation protection box in X-ray areas or areas with ionising radiation.

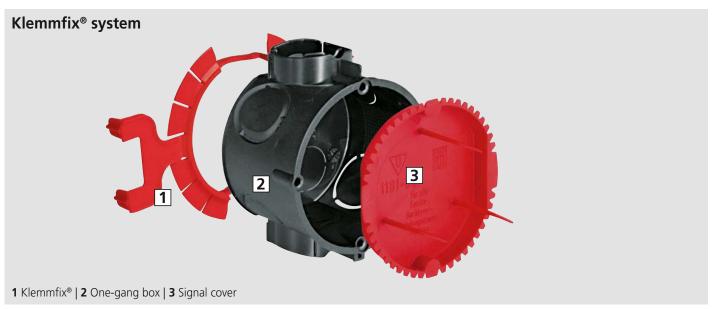
# Plaster-free mounting with Klemmfix®

The Klemmfix® system reduces mounting time by up to 50% compared with plastering. Thanks to the signal cover, the assembly position of the one-gang boxes can be seen immediately once plastering has taken place.

- For fitting boxes without plaster
- Efficient, clean and time-saving
- Alignment and secure mounting even before plastering
- Can also be used in sub-zero temperatures. The special plastic remains tough but elastic
- Not suitable for use with lime or thin plaster







# Installation



Creating installation opening.



Push in box with Klemmfix® clipped on.



Fit signal cover.



Fine marker bristles on the signal cover show the exact position of the one-gang box after plastering.

## **Proof of stability:**

Tests carried out with 500 N (50 kg) tension force show that all boxes remain unchanged. Long-term use in practice confirms this result. Deviations in plastering material and application of the plaster have no effect.

# for flush-mounting installation

### Klemmfix®

- · for fitting boxes without plaster
- $\cdot$  in openings made with Ø 82 mm hole saw
- · for all types of masonry



For one-gang boxes and one-gang junction boxes Art. Nos. 1055/1056-04, 1555/1556-04, • 1055/1056-21, 1555/1556-21, 1555-88

For junction boxes Ø 70 mm (1172-02, -08, -09, -92)

with depth stop

Art. No. Inner packaging/shipping

1159-02

1159-12

25 / 250

# Signal cover

- · reusable
- · protects interior of box, screwing dome and screw heads when plastering



25 / 250







|   |         | "PRODUCT. | A COMPANY. |             |
|---|---------|-----------|------------|-------------|
| Length x Width  | -       | -         | -          | 131 x 60 mm |
| For installation opening  | 35 mm   | 60 mm     | 70 mm      | -           |
| For two-gang junction box<br>Art. No. 1656-02/1655-02             | -       | -         | -          | •           |
| For one-gang boxes and one-gang junction boxes 60 mm Ø            | -       | •         | -          | -           |
| For junction boxes, PERILEX® boxes and CEE one-gang boxes Ø 70 mm | -       | -         | •          | -           |
| Art. No.  | 1181-35 | 1181-60   | 1181-70    | 1181-56     |
| Inner packaging/shipping  | - / 50  | 50 / 1000 | 25 / 250   | - / 50      |

# Signal cover

- · reusable
- · protects interior of box, screwing dome and screw heads when plastering







| Length x Width                                      | 80 x 80 mm | 100 x 100 mm | 60 x 32 mm |
|---|------------|--------------|------------|
| For wall light connection boxes<br>Art. No. 1048-00 | -          | -            | •          |
| Art. No.  | 1181-94    | 1181-95      | 1181-48    |
| Inner packaging/shipping                            | - / 50     | - / 50       | -/100      |

# **Distance supports**

· For combination distance 91 mm, e.g. for antenna sockets, telephone boxes or EDP connection boxes with sockets which are not touch-safe.



# **UP**PLUS

## **Tunnel connector**

· For fully-insulated floor through-wiring of one-gang junction boxes Art. Nos. 1555/56-04, 1555/56-21, 1068-02, 1068-21 and 1656-21

# **UP**PLUS



| Art. No.                 | 1159-36 |
|--------------------------|---------|
| Inner packaging/shipping | -/10    |

# **Plaster compensation ring**

- · to compensate for deep-seated boxes
- · to maintain IP protection class
- · with 2 screwed-in device screws
- · with 2 ring attachment screws









| Height   | 12 mm    | 24 mm    | 12 mm    | 24 mm    |
|--|----------|----------|----------|----------|
| Screw spacing  | 60 mm    | 60 mm    | 67 mm    | 67 mm    |
| For all one-gang boxes and one-gang junction boxes $\varnothing$ | 60 mm    | 60 mm    | -        | -        |
| For junction boxes Ø   | -        | -        | 70 mm    | 70 mm    |
| <u></u>  | •        | •        | •        | •        |
| Art. No.   | 1155-61  | 1155-62  | 1155-71  | 1155-72  |
| Inner packaging/shipping   | 25 / 250 | 25 / 250 | 10 / 100 | 10 / 100 |

## **Universal VDE cover**

- $\cdot$  for all one-gang, one-gang junction and junction boxes
- · with central exit for light hook
- · flat cover edge
- $\cdot \ \text{surface roughened} \\$





| Diameter                 | 92 mm      | 92 mm      |
|--------------------------|------------|------------|
| Screw spacing            | 60 / 67 mm | 60 / 67 mm |
| halogen-free             | -          | •          |
| Fireproof                | 850 °C     | 850 °C     |
|                          | •          | •          |
| Art. No.                 | 1184-90    | 1184-77    |
| Inner packaging/shipping | 25 / 250   | 25 / 250   |

# **Universal waterproof cover**

- · central entry with stoppers
- · for countersunk screws Ø 4 mm



| Diameter                 | 90 mm   |
|--------------------------|---------|
| Screw spacing            | 67 mm   |
| Fireproof                | 850 °C  |
| Art. No.                 | 1174-99 |
| Inner packaging/shipping | - / 10  |

# for flush-mounting installation

## **Spring cover**

· with permanent elastic spring







| Diameter                 | 72 mm    | 85 mm    | 95 mm    |
|--------------------------|----------|----------|----------|
| for boxes Ø              | 60 mm    | 70 mm    | 80 mm    |
| Art. No.                 | 1159-25  | 1174-25  | 1184-25  |
| Inner packaging/shipping | 50 / 500 | 50 / 500 | 25 / 250 |

## **Screw box**

- · suitable for fixing accessories and covers
- · self-tapping Ø 3.2 mm
- · corrosion-resistant in accordance with German DIN VDE standard
- · RoHS-compliant
- · Countersunk head with PZ1/S combination drive





| Art. No.                 | 2472-91 |
|--------------------------|---------|
| Inner packaging/shipping | - / 100 |

## Device screws +/-

- · self-tapping Ø 3.2 mm
- · Countersunk head with PZ1/S combination drive
- $\cdot \ \text{surface double-treated} \\$
- $\cdot$  corrosion-resistant in accordance with German DIN VDE standard









| Length                   | 15 mm      | 20 mm      | 25 mm      | 40 mm      |
|--------------------------|------------|------------|------------|------------|
| Art. No.                 | 2472-15    | 2472-20    | 2472-25    | 2472-40    |
| Inner packaging/shipping | 100 / 1000 | 100 / 1000 | 100 / 1000 | 100 / 1000 |

# **Sealing screws**

- · in pure brass
- · self-tapping Ø 3.2 mm
- $\cdot$  with cross-hole in the screw head through which sealing wire can be pulled





| Length                   | 15 mm   | 40 mm      |
|--------------------------|---------|------------|
| Art. No.                 | 2444-15 | 2444-40    |
| Inner packaging/shipping | - / 100 | 100 / 1000 |

# **Junction casings** for flush-mounting installation

# **Junction casings**

Flush-mounting junction casings in all sizes and for almost any kind of jobs. This programme features practical housing sizes as well as robust housing design perfect for building sites.

- As central junction casings for star-shaped cable laying
- Easy to rewire when changing the way rooms are used
- With separator walls to separate electrical circuits
- For installation of DIN terminal strips, TS 35 standard rails for terminal blocks, LSA+ terminal strips and much more
- End cover with screw fastening for VDE-compliant installation









# **Processing instructions**



Space for installation of TS 35 standard rails for the installation of terminal blocks, terminal installation devices etc.



Space for installation of LSA+ terminals for distribution of telecommunication equipment.



Several electrical circuits can be safely separated in one casing using separator walls that can be inserted



After breaking out a side wall, the casings (Art. No. 1092-90) can be clipped together and expanded to twice the size.

## **Junction casing 80**

- · for max. 2 circuits using separator wall
- suitable for installation of DIN terminal strips, TS 35 standard rails for terminal strips, terminal blocks up to 16 mm², etc.
- · including cover





| Length x Width x Depth   | 87 x 87 x 60 mm   | 87 x 87 x 60 mm   |
|--------------------------|-------------------|-------------------|
| Conduit entries M20      | 8                 | 8                 |
| Cable entries from top   | 16                | 16                |
| For terminals up to      | 4 mm <sup>2</sup> | 4 mm <sup>2</sup> |
| halogen-free             | -                 | •                 |
|                          | •                 | -                 |
| Art. No.                 | 1094-91           | 1094-01           |
| Inner packaging/shipping | - / 100           | - / 100           |

# Junction casings 100 / 150

- $\cdot$  for max. 2 circuits using separator wall
- $\cdot$  suitable for installation of DIN terminal strips, TS 35 standard rails for terminal strips, terminal blocks up to 16 mm², etc.
- · including cover









| Length x Width x Depth   | 107 x 107 x 57 mm | 107 x 107 x 57 mm | 159 x 159 x 75 mm  | 159 x 159 x 75 mm  |
|--------------------------|-------------------|-------------------|--------------------|--------------------|
| M16 conduit entries      | 4                 | 4                 | -                  | -                  |
| Conduit entries M20      | 12                | 12                | 16                 | 16                 |
| Conduit entries M25      | 4                 | 4                 | 8                  | 8                  |
| M32 conduit entries      | -                 | -                 | 4                  | 4                  |
| Cable entries            | 12                | 12                | 12                 | 12                 |
| For terminals up to      | 6 mm <sup>2</sup> | 6 mm <sup>2</sup> | 16 mm <sup>2</sup> | 16 mm <sup>2</sup> |
| halogen-free             | -                 | •                 | -                  | •                  |
| <u></u>                  | •                 | -                 | •                  | -                  |
| Art. No.                 | 1095-91           | 1095-01           | 1096-91            | 1096-01            |
| Inner packaging/shipping | - / 100           | - / 100           | -/30               | -/30               |

# **Junction casing**

- $\cdot$  suitable for installation of DIN terminal strips, TS 35 standard rails for terminal strips, terminal blocks up to 16 mm<sup>2</sup>, etc.
- $\cdot \ \text{including cover} \\$





| Length x Width x Depth  | 240 x 142 x 87 mm  | 238 x 208 x 68 mm  |
|---|--------------------|--------------------|
| Conduit entries M20   | 24                 | 20                 |
| Conduit entries M25   | 12                 | 8                  |
| M32 conduit entries   | 6                  | 4                  |
| Cable entries   | 12                 | -                  |
| For terminals up to   | 16 mm <sup>2</sup> | 16 mm <sup>2</sup> |
| halogen-free  | •                  | •                  |
| Suitable for standard equipment with 70 mm installation height    | •                  | -                  |
| Casings can be combined once with each other, dimensions are then | 240 x 284 x 87 mm  | -                  |
| Maximum of 3 electrical circuits with separator walls             | -                  | •                  |
| For max. 4 electrical circuits using separator walls              | •                  | -                  |
|   | •                  | •                  |
| Art. No.  | 1092-90            | 1097-92            |
| Inner packaging/shipping  | - / 10             | - / 10             |

# Potential equalisation casing 10<sup>2</sup> and 16<sup>2</sup>

- $\cdot$  for bathrooms or similar
- $\cdot$  with potential equalisation rail, protected against corrosion
- · including cover





| Length x Width x Depth                                  | 107 x 107 x 57 mm | 238 x 208 x 68 mm |
|---|-------------------|-------------------|
| Cables up to 16 <sup>2</sup> , single and stranded wire | -                 | 7                 |
| Circular conductors Ø 8–10 mm                           | -                 | 1                 |
| Circular conductor 6–16², also uncut                    | 1                 | -                 |
| Cables 1.5–10 <sup>2</sup> (for bathrooms or similar)   | 6                 | -                 |
| Flat strip up to 30 mm wide                             | -                 | 1                 |
| Art. No.  | 1095-73           | 1097-75           |
| Inner packaging/shipping                                | -/10              | -/1               |

## **Note**

Other earthing products can be found at our website.

# Replacement cover

- · flat cover edge
- · surface roughened



| For casing size -<br>flush-mounting boxes | For casing size - cavity wall boxes | For casing size - concrete construction boxes | Fireproof | Art. No. | Inner packaging/<br>shipping |  |
|---|-------------------------------------|---|-----------|----------|------------------------------|--|
| 87 x 87 mm                                | -                                   | -   | 650 °C    | 1094-13  | 10 / 450                     |  |
| 107 x 107 mm                              | -                                   | -   | 650 °C    | 1095-13  | 10 / 500                     |  |
| 159 x 159 mm                              | -                                   | -   | 650 °C    | 1096-13  | 10 / 200                     |  |
| 107 x 107 mm                              | 105 x 105 mm                        | 128 x 128 mm                                  | 850 °C    | 1095-93  | 10 / 500                     |  |
| 159 x 159 mm                              | 165 x 165 mm                        | 180 x 180 mm                                  | 850 °C    | 1096-93  | 10 / 200                     |  |
| 240 x 142 mm                              | 238 x 142 mm                        | -   | 850 °C    | 1092-93  | -/5                          |  |
| 238 x 208 mm                              | 235 x 205 mm                        | 250 x 220 mm                                  | 850 °C    | 1097-93  | 5 / 100                      |  |
| 240 x 284 mm                              | -                                   | -   | 850 °C    | 1092-95  | -/5                          |  |

# **Separator walls**

- · for junction casings
- · can be retrofitted to separate electrical circuits



| for casing<br>size | halo-<br>gen-free | Fireproof | Art. No. | Inner packaging/<br>shipping |  |  |
|--------------------|-------------------|-----------|----------|------------------------------|--|--|
| 87 x 87 mm         | •                 | 650 °C    | 1094-20  | - / 10                       |  |  |
| 107 x 107 mm       | •                 | 650 °C    | 1095-20  | -/10                         |  |  |
| 159 x 159 mm       | •                 | 650 °C    | 1096-20  | - / 10                       |  |  |
| 238 x 208 mm       | •                 | 650 °C    | 1097-22  | -/10                         |  |  |
| 240 x 142 mm       | •                 | 650 °C    | 1092-20  | -/10                         |  |  |

# **Universal installation housings**

for flush-mounting installation



# **Universal installation housings**

Universal installation housings for a wide range of device installations always ensure optimum installation space for all kinds of devices. The intelligent housing design of all six housings ensures stability and secure hold in the wall.

- For displays, LED lamps and much more
- For installing almost all shapes and sizes
- Mineral fibreboard allows individual installation opening







# **Examples of use**

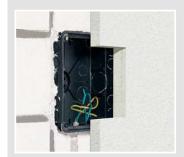








## Installation



Make an appropriate wall opening, feed the cables and conduits into the housing and fasten it (using plaster) in the wall.



You can create the installation opening before or after inserting the housing. The equipment is attached by simply clamping it in or screwing it into the mineral fibreboard.



Use only screws that go into but not through the mineral fibreboard when attaching the device! (e.g. SPAX countersunk head screw 3.5 x 15 mm)

### Note

Observe the maximum stroke length of the saw blade when sawing the installation opening.

# Universal installation housings for flush-mounting installation

# Universal installation housing with mineral fibreboard

- · 2 parts, consisting of housing and mineral fibreboard
- · all-round groove denotes the maximum opening dimension







| Length x Width x Depth                         | 87 x 87 x 75 mm | 107 x 107 x 72 mm | 159 x 159 x 90 mm |
|--|-----------------|-------------------|-------------------|
| Universal opening size up to max.              | 57 x 57 mm      | 77 x 77 mm        | 129 x 129 mm      |
| For devices with an installation depth of max. | 60 mm           | 60 mm             | 75 mm             |
| M16 conduit entries                            | -               | 4                 | -                 |
| Conduit entries M20                            | 10              | 14                | 20                |
| Conduit entries M25                            | -               | 4                 | 10                |
| M32 conduit entries                            | -               | -                 | 4                 |
| Cable entries                                  | 16              | 12                | -                 |
| Art. No.                                       | 1094-22         | 1095-22           | 1096-22           |
| Inner packaging/shipping                       | -/10            | -/10              | - / 10            |

# Universal installation housing with mineral fibreboard

- · 2 parts, consisting of housing and mineral fibreboard
- · all-round groove denotes the maximum opening dimension







| Length x Width x Depth                         | 240 x 142 x 102 mm | 240 x 280 x 102 mm | 238 x 208 x 83 mm |
|--|--------------------|--------------------|-------------------|
| Universal opening size up to max.              | 199 x 102 mm       | 189 x 240 mm       | 198 x 168 mm      |
| For devices with an installation depth of max. | 90 mm              | 90 mm              | 70 mm             |
| Conduit entries M20                            | 24                 | 36                 | 20                |
| Conduit entries M25                            | 12                 | 16                 | 8                 |
| M32 conduit entries                            | 6                  | 10                 | 4                 |
| Cable entries                                  | 16                 | 12                 | -                 |
| Art. No.                                       | 1092-27            | 1092-28            | 1097-28           |
| Inner packaging/shipping                       | -/10               | -/10               | -/10              |

# My housing. Made just for me!

You manufacture modern operating elements for building technology, or sensitive control panels for industrial equipment? For concrete, masonry or cavity walls?

# We have the housing solution that you need!

- A high-quality, flexible, plastic housing.
- Developed on the basis of our many years of experience in plastics technology.
- Whatever dimensions your product has, we will create the best possible shape!
- Look for yourself it couldn't be easier!



Configure the housing you need

the configurator on our website makes it possible: www.myhousing.eu



for insulated interior walls



# **Interior Insulation box**

One-gang junction box for electrical installations in internal insulation systems. For permanently secure and heat-bridge-free installation of switches, sockets and other devices in internally insulated exterior walls. For optimal room climate with proven protection from moisture damage. For use in many internal insulation systems.

- For installation in insulated interior walls
- Guarantees installation without heat bridges
- Moisture regulating and insulating
- Prevention of moisture induced structural damage
- Suitable for use in many insulation systems
  For insulation thcknesses 30 to 100 mm
- Installation on masonry without plaster











# **Examples of use**



Historically significant facades in exposed masonry or stucco facades



Facade of a listed half-timbered house

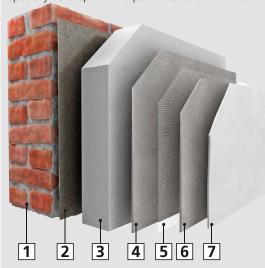


Suitable for e.g. diffusion-open insulation systems made of mineral insulation materials



Can be used in existing masonry with different insulation thicknesses

Specially developed for expert installation in diffusion-open internal insulation systems.



1 Masonry wall | 2 Adhesive | 3 Insulating board | 4 Reinforcement plaster | 5 Reinforcement fabric | 6 Reinforcement plaster | 7 Finish coat of plaster, decorative plaster

Subject to modifications

# **Installation systems** for insulated interior walls

### **Technical information**



Airtightness: Maintains the level of airtightness, No air through-flow possible, Air flow behind the insulation system is prevented, No convection, No entry of mould spores



Heat insulation: • No heat bridge, • Room heat enters the box, not the cold wall, • Insulation component replaces function of the insulation system



Moisture regulation · Roomside moisture (caused by bad ventilation, many people in the room) is stored · Moisture is dispersed in a targeted way · No corrosion on the accessory terminals



Heat conductivity · Highly heat-conductive plastic for the inner box · Room heat is transferred to the box · The raised surface temperature prevents the formation of condensate

# **Proof of functionality**

A comprehensive components test carried out by the TU Dresden – Institut für Bauklimatik – confirms demonstrably the functionality of the KAISER internal insulation box  $\cdot$  The study of internal insulation systems with > 0.03/mK in insulation thicknesses from 30 to 100 mm confirms that by using the new internal insulation box, hygrothermic damage can be excluded. The certificate can be downloaded as a pdf file from our website.



# **Processing instructions**



Installation on masonry without using plaster or mortar



Dimension details on the adapter allow easy adaptation to the insulation thickness



The box allows 4 cables up to  $\emptyset$  11.5 mm to be entered.



Cut exact and air-tight cable entry using a drill

### Creation of combinations



Combination of boxes by simply snapping the adapters into place



Combination distance 71 mm by removing the premarked edge



Fully insulated through-wiring via support connector Art. No. 9060-88



Example of installation of a double socket

## Installation



Determine insulation thickness, adjust fastening lugs of the adapter



For insulation thicknesses < 100mm, cut wall opening (Ø



Define location on the wall and mark it.



Insert cable on rear side of adapter, fix adapter to the wall



box to adapter



Insert cables into box, screw Strip cable, insert signal cover



Apply the internal insulation



Remove signal cover and install required accessory

# **INNOVATION**

### **Interior Insulation box**

- · One-gang junction box for insulated interior walls
- · including attachment adapter
- · rear cable entries
- · circumferential airtight sealing lip
- $\cdot$  Can be combined with each other







| Depth                               | 90 mm            |
|-------------------------------------|------------------|
| Adapter dimensions (LxWxD)          | 75 x 81 x 100 mm |
| for insulation thicknesses          | 30 - 100 mm      |
| Device screws                       | 2                |
| Fixing screw spacing                | 60 mm            |
| Cable entries of up to Ø 11.5 mm    | 4                |
| Support connectors for each package | 3                |
| Art. No.                            | 1159-90          |
| Inner packaging/shipping            | 5 / 50           |

# Fixing adapter internal insulation box

- · For secure fixing of the internal insulation box
- · For installation on masonry
- $\cdot$  For standard combinations 71 mm



| Adapter dimensions (LxWxD) | 75 x 81 x 100 mm |
|----------------------------|------------------|
| for insulation thicknesses | 30 - 100 mm      |
| Art. No.                   | 1159-91          |
| Inner packaging/shipping   | 5 / 50           |

## **Support connector**

- $\cdot$  for through-wiring of combinations to IP 3X standard air-tight
- · For Art. Nos. 1159-90, 1555-51 and 9074-03



| Art. No.                 | 9060-88  |
|--------------------------|----------|
| Inner packaging/shipping | 25 / 100 |

# Assignment table for making entry openings



| HSS drill |                         | Ø setting |
|-----------|-------------------------|-----------|
| NYM cable | 3 x 1.5 mm <sup>2</sup> | 8.0       |
|           | 5 x 1.5 mm <sup>2</sup> | 9.5       |
|           | 3 x 2.5 mm <sup>2</sup> | 9.5       |



| Universal opening cutter |         | Ø setting |
|--------------------------|---------|-----------|
| Support connector        | 9060-88 | 14        |
| Conduits                 | M16     | 17        |





for insulated facades



## **Universal equipment carrier**

Universal equipment carrier for securely attaching electrical installations in or to heat-insulating external facades. Stable attachment of external lights, sockets, motion detectors, external temperature sensors, radio receivers, anemometers, cameras, letter boxes and much more.

- Secure attachment of various equipment to or in insulated external facades.
- Prevents heat bridges
- Quick installation with snap-in connections
- For insulation thicknesses of 60 to 360 mm







#### **Examples of use**

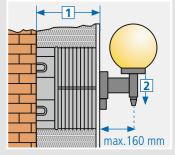


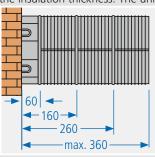


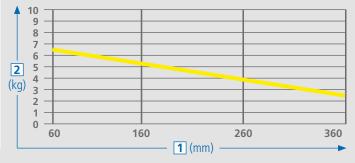


#### **Processing instructions**

Weight-bearing load dependent on the insulation thickness. The universal equipment carrier is only suitable for vertical installation (upright)!







1 External insulation - insulation thickness | 2 Permissible load

| tion    | bridge calc      |
|---------|------------------|
| sulated | not<br>insulated |
|         |                  |
|         |                  |
|         |                  |
|         | 0°C -1           |

When the equipment carrier is correctly installed, hardly any heat losses are measured.

Calculation and source: PASSIV HAUS INSTITUT Dr. W. Feist

| [mm] | insulated [m²] | not insulated [m²] |
|------|----------------|--------------------|
| 160  | 0.027          | 0.300              |
| 360  | 0.039          | 0.520              |

#### Installation



Screw the housing base to the wall.



If necessary, adjust the extension element to suit the insulation thickness.



Fit the rock wool provided. (supplied)



Fit the mounting plate (closing clip underneath) and close.



If you do not have a universal equipment carrier with combination insert (Art. No. 1159-26) available, you can use the rear markings to cut the installation opening for the fitting of one-gang boxes.



Fit and close the mounting plate with one-gang boxes.

#### Universal equipment carrier

- · for use with externally-insulated walls
- · for secure fixing of lights, intercoms, motion detectors etc.
- · can be extended in steps of 100 mm each (max. 360 mm) using extension elements Art. No. 1159-27
- · can be reduced in 10 mm steps
- · With pre-cut rock wool parts through which the equipment carrier can be fed



| Length x Width x Height            | 220 x 100 x 60-160 mm |
|------------------------------------|-----------------------|
| Combination conduit entries M20/25 | 6                     |
| Art. No.                           | 1159-24               |
| Inner packaging/shipping           | - / 5                 |

#### **Extension element**

- · to extend the Universal equipment carrier by 100 mm simply by latching on
- · can be reduced in 10 mm steps by cutting
- · with rock wool pre-cut parts to fill the extension panel



| Length x Width x Depth   | 220 x 100 x 100 mm |
|--------------------------|--------------------|
| Art. No.                 | 1159-27            |
| Inner packaging/shipping | -/5                |

for insulated facades



# Universal equipment carrier with combination insert

Universal equipment carrier with combination insert for the installation of entryphones and installation accessories on the insulated external facade. The perfect basis for intercoms, sockets, switches and much more, and also for two-unit and three-unit combinations.

- Guarantees installation without heat bridges
- For entryphones and variable accessory installation combinations of 1 to 3 units
- For future expansion without damaging the external facade
- For insulation thicknesses up to 360 mm









#### **Examples of use**



The product is suitable for single, double or triple combinations ...



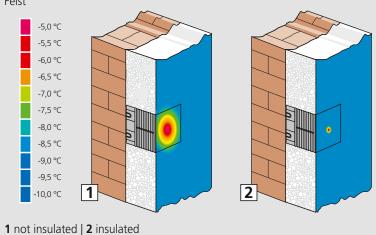
... and also permits future expansion without damage to the facade.



The equipment carrier with combination insert can be mounted horizontally or vertically

#### Heat bridge calculation

If installed correctly, heat losses are hardly measurable. Calculation and source: inside: +20°C, outside: -10°C | PASSIV HAUS INSTITUT Dr. W. Feist



#### Installation



Define location on the wall and mark it.



Screw the housing base to the wall.



If necessary, adjust the extension element to suit the insulation thickness.



Attach the extension element and snap it into place.



Fit the rock wool insulation (supplied).



Position the combination insert (mounting clip at bottom) and snap into place.



The installation can now be fitted and installed.



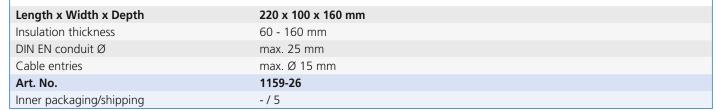
After applying the plaster, attach the desired accessory.

#### Universal equipment carrier with combination insert

- · for use with externally-insulated walls
- · For secure mounting of intercoms, switches, sockets and many more
- · Can be extended in steps of 100 mm using extension element
- · With pre-cut rock wool parts through which the equipment carrier can be fed



3D animation



#### **Extension element**

0

- $\cdot$  to extend the Universal equipment carrier by 100 mm simply by latching on
- · can be reduced in 10 mm steps
- · with rock wool pre-cut parts to fill the extension panel



| Length x Width x Depth   | 220 x 100 x 100 mm |
|--------------------------|--------------------|
| Art. No.                 | 1159-27            |
| Inner packaging/shipping | -/5                |

for insulated facades



## System equipment carrier

The system equipment carrier is designed to fit perfectly into the external insulation and in this way reliably prevents heat bridges. Easy, fast fixing with the screw dowles included in the scope of delivery permanently anchors the system equipment carrier on many surfaces. Ideal for stable fixing of external lamps, sockets, door intercom devices and many more. nd permanently. Heavy loads are not a problem.

- Extra-fast, easy installation
- 2 product types allow a wide range of applications
- Heat bridges are efficiently prevented
- Adaptable to insulation thickness in 10 mm steps no cutting necessary
- Modular design for insulation thicknesses from 160 to 310 mm



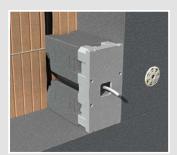






#### **Examples of use**



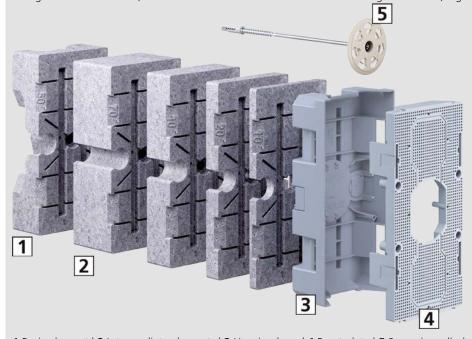






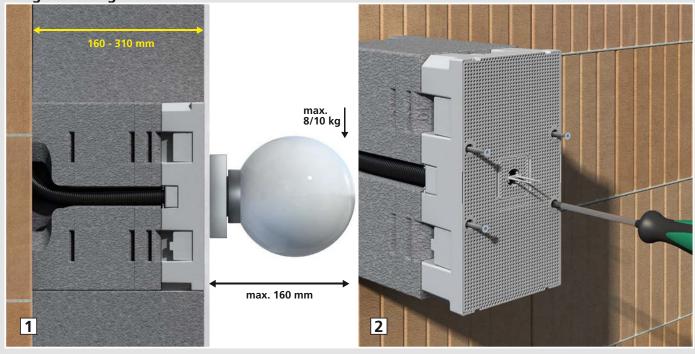
#### Versatile in use

The choice of two front parts and the modular design make the system equipment carrier a product which is extremely versatile in use. Cutting to size is not necessary because of adaptation to the insulation in 10 mm steps. Fixing by means of a single impact dowel reduces fitting time to a minimum, and at the same time it ensures secure anchoring to the base, e.g. masonry, concrete or wood materials.



1 Basic element | 2 Intermediate elements | 3 Housing base | 4 Front plate | 5 Screw-in wall-plug

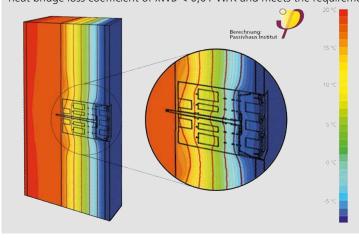
#### Weight-bearing loads



1 Weight-bearing loads – independently of the insulation thickness: For an overhang of 160 mm and insulation thicknesses of 160 - 310 mm; 8 kg without additional screwing of the front plate; 10 kg with additional screwing of the front plate. The system equipment carrier must be fitted vertically. The hole for the dowel must be drilled to make an exact fit. | 2 Increasing the weight-bearing loads: To fix heavier loads, we recommend additional securing of the mounting plate by means of four  $\emptyset$  3.5 x 25 screws

#### **Heat bridge calculation**

A heat bridge calculation carried out by the Passivhaus Institut in Darmstadt shows that the system equipment carrier has a point-specific heat bridge loss coefficient of xWB < 0,01 W/K and meets the requirements of a heat bridge-free facade.>



for insulated facades

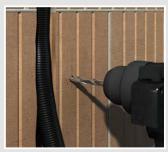
#### Installation



Masonry with conduit exit



Adapt equipment carrier to insulation thickness by selecting suitable components.



Cut  $\emptyset$  8 mm drill hole at least 50 mm deep.



Remove the side lugs from the screw dowel. Note the different lengths!



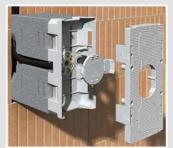
The dowel screw must protrude from the basic element by at least 40 mm.



Hold the equipment carrier against the wall, align it, and fix it using the dowel.



Press the conduit into the side guide and cut it to length.



Snap on the required front part. Fit Styrofoam cap and the dowel cover.

#### Tips and tricks



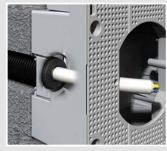
For an additional conduit, remove the bridges next to the Neopor® parts ...



... and the perforated entry broken out in the case of the dowel cover



For air-tight installation, fit a suitable air-tight sleeve to the conduit exit site ...

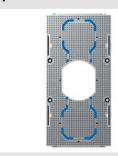


... and fit a sealing plug to the conduit.

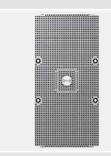
#### **Combinations with front panels**



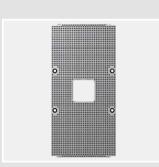
Multiple accessories front panel (Art. Nos. 9966.31 and 9966.32); opening Ø 1 x 68 mm



2-way and 3-way combinations can be made by breaking out the covers



Delivery status of Art. Nos. 9966.21 and 9966.22, universal mounting plate.



Universal mounting plate with broken-out exit for luminaires.

#### **INNOVATION**

#### **Modular support for devices** 160 – 240 mm

- · Adaptation to insulation thickness possible in 10 mm steps
- · Including 2 screw dowels
- · Material: Polyethylene
- · Insulation material: Neopor
- · Processing temperature: -5°C / +60°C







3D animation

| Length x Width x Height            | 220 x 110 x 160-240 mm | 220 x 110 x 160-240 mm            |
|------------------------------------|------------------------|-----------------------------------|
| Combination                        | 1x1 / 2x1 / 3x1        | Luminaire outlet / mounting plate |
| Combination conduit entries M20/25 | 2                      | 2                                 |
| halogen-free                       | •                      | •                                 |
| Screw-in wall-plug                 | 1 x 200 mm, 1 x 240 mm | 1 x 200 mm, 1 x 240 mm            |
| C€                                 | •                      | •                                 |
| Art. No.                           | 9966.31                | 9966.21                           |
| Inner packaging/shipping           | -/5                    | -/5                               |

#### **INNOVATION**

## System equipment carrier 240 – 310 mm

- · Adaptation to insulation thickness possible in 10 mm steps
- · Including 2 screw dowels
- · Material: Polyethylene
- · Insulation material: Neopor
- · Processing temperature: -5°C / +60°C







3D animation

| Length x Width x Height            | 220 x 110 x 240-310 mm | 220 x 110 x 240-310 mm            |
|------------------------------------|------------------------|-----------------------------------|
| Combination                        | 1x1 / 2x1 / 3x1        | Luminaire outlet / mounting plate |
| Combination conduit entries M20/25 | 2                      | 2                                 |
| halogen-free                       | •                      | •                                 |
| Screw-in wall-plug                 | 1 x 280 mm, 1 x 320 mm | 1 x 280 mm, 1 x 320 mm            |
| C€                                 | •                      | •                                 |
| Art. No.                           | 9966.32                | 9966.22                           |
| Inner packaging/shipping           | - / 5                  | -/5                               |

for insulated facades



# Installation housing for external insulation

Installation housing for the secure and heat-bridge-free installation of rigid and swivelling built-in LED luminaires or other installation accessories in insulated ceilings. The housing protects the surrounding insulation material against the high operating temperatures of the LED luminaire and protects the LED luminaire itself against dirt. The integrated insulation element reliably prevents heat bridges.

- For the installation of luminaires and installation accessories in insulated ceilings
- Suitable for all standard insulation materials
- Thermically-protected installation space
- The integrated insulation element prevents heat bridges
- For insulation thicknesses from 100 mm to 160 mm (170 mm to 350 mm with extension element)
- Adjustment to the insulation thickness in 10 mm steps.
- Installation diameter up to ø 86 mm











#### **Examples of use**



Buildings are constructed heatbridge-free using the WDVS composite thermal insulation systems, e.g ...



... insulated external ceilings of built-over terraces with lighting



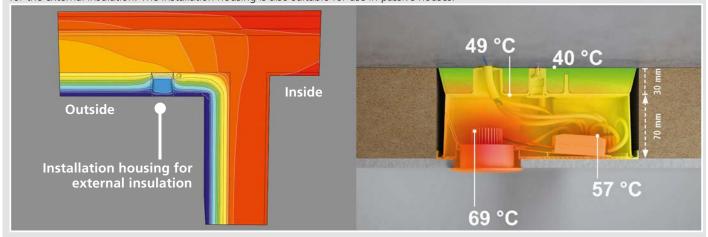
... insulated, recessed entrance areas with lighting



... insulated facades with outdoor lighting over the entrance and garage door

#### Heat-bridge calculation / temperature profile

A heat bridge calculation by the Passivhaus Institut, Darmstadt, shows that heat bridges can be reliably prevented by the installation housing for the external insulation. The installation housing is also suitable for use in passive houses.



1 Heat bridge profile | 2 Installation housing for external insulation (ambient temperature 25°C) with 8 Watt LED illumination.

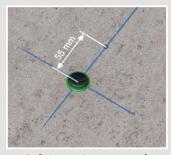
#### Installation



Ceiling with conduit or cable exit. Measuring the insulation thickness.



Adapt installation housing to the insulation thickness.



Mark fixing point 55 mm from the luminaire centre point.



Alternative: Position the installation housing with the alignment markings for the luminaire and mark the drill hole.



Drill a Ø 8 mm hole for a standard dowel and insert the dow-



Break out the conduit entry or cut an exact cable entry for airtight installation, e.g. by using the KAISER universal opening cutter (Art. No. 1085-80).



Screw installation housing to the ceiling.



Fit the screw covering.



Insert the conduit or cable into the installation housing; fit sealing plug to the conduit.



Ceiling exit Ø 68 mm for knocking in, ceiling outlet up to Ø 86 mm for cutting out.



Depending on the required installation diameter ceiling exit of Ø 68 mm or up to Ø 86 mm, turn the front part by 180° and latch into position



Applying insulation and plaster. Fitting the LED installation spotlight with plenty of space for the ballast device.

#### **Processing instructions**



Many entry possibilities for conduits and cables.



Adaptation to the insulation thickness (<160 mm) simply by cutting-off using measuring scale or (> 160 mm) with extension element.



Universal front part for installation diameter of  $\varnothing$  68 mm for knocking in or universal up to  $\varnothing$  86 mm for cutting out (turn by 180°).



Alignment markings for the luminaire position and the fixing point.



Adaptation to the insulation thickness (<160 mm) in 10 mm steps, e.g.:>



Installation depth 70 mm (insulation thickness 100 mm).



Installation depth 100 mm (insulation thickness 130 mm).



Installation depth 130 mm (insulation thickness 160 mm).

## Installation housing for external insulation 100 - 160 mm

- $\cdot$  with external insulation of ceilings
- $\cdot$  for insulation thicknesses of 100 mm and above
- · Adjustment to the insulation thickness in 10 mm steps.
- · for LED luminaires up to 8 Watt
- · max. luminaire installation depth 70 mm to 130 mm (insulation thickness less 30 mm)
- · Front panel with ceiling exit (CE) Ø 68 mm or universal up to Ø 86 mm
- Space for ballast devices
   120 mm x 30 mm x 28 mm (installation diameter 68 mm, installation depth 70 mm)





| Length x Width x Height                        | 220 x 110 x 160 mm |
|--|--------------------|
| Insulation thickness                           | 100 - 160 mm       |
| Ceiling exit (CE) Ø                            | 68 - 86 mm         |
| max. installation depth for the LED luminaires | 70 - 130 mm        |
| max. lamp output                               | 8 Watt             |
| Cable or conduit entries up to max. ø 25 mm    | 5                  |
| Art. No.                                       | 1159-70            |
| Inner packaging/shipping                       | -/6                |



3D animation

HOUSINGS

#### **Extension element**

- · for installation housing for external insulation
- · for insulation thicknesses 170 350 mm
- $\cdot$  Adjustment to the insulation thickness in 10 mm steps.



| Length x Width x Height                       | 220 x | 110 x 190 mm |
|---|-------|--------------|
| Insulation thickness in combination with Art. | 170   | 250          |

170 - 350 mm

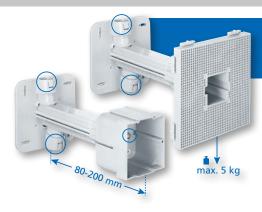
No. 1159-70 Art. No.

Inner packaging/shipping

1159-71 -/6



for insulated facades



# Telescope equipment carrier and switch box.

For the safe installation of luminaires, motion detectors and many other accessories in and on insulated facades. Optimised for the latest insulation thicknesses, the telescopic products permit a wide range of applications in external faces with insulation thicknesses from 80 to 200 mm. The two conduit entries on the basic carrier guarantee secure conduit connection. The cable routing which is integrated in the carrier arm ensures a fast, easy cable pull-in.

- Stable fit to walls and ceilings
- For insulation thicknesses from 80 to 200 mm
- Equipment carriers for accessories up to max. 5 kg
- One-gang boxes can be combined with a standardised 71 mm combination distance
- Conduit entries on the carrier with internal cable routing
- Integrated indicated dimension allows easy cutting off to insulation thickness
- Front fixing and depth stop prevent incorrect installation
- Front fixing of the mounting plate/one-gang box











#### **Examples of use**









#### Installing the basic carrier



Prepare the cable routes. Try to avoid direct cable routing through masonry and insulation



The internal cable routing can easily be broken off to permit cable routing from the rear.



Saw the carrier to the required length. The integrated indicated dimension ensures exact reading of the dimension.



Slotted holes allow precise alignment even when the drill holes are not exact.

#### Installing the equipment carrier



Push the one-gang box onto the supporting arm as far as the stop.



The front fixing and the depth stop always ensure exact fitting and prevent incorrect installation.



Side fixings allow the secure positioning of several equipment carriers next to each other ...



... and stable installation for accessories when the attachment points are far apart.

#### Installing the one-gang box



Push the one-gang box onto the supporting arm as far as the stop.



The front fixing and the depth stop always ensure exact fitting and prevent incorrect installa-



For multiple combinations, cut out the side separator walls and connect the one-gang boxes.



For multiple combinations, cut out the side separator walls and connect the one-gang boxes.

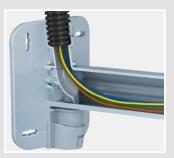
#### **Product advantages**



Dimensions shown on the carrier ensure that the carrier length can easily be sawn off to match the insulation thickness – no need for measuring!



Slotted holes allow precise alignment even when the drill holes are not exact.



The two conduit entries on the carrier guarantee secure conduit support. The integrated cable routing ensures fast, easy cable insertion.



Luminaires and many other accessories are easily fitted in the mounting plate through the plaster using screws up to 4 mm Ø

#### Front fixing of telescope equipment carrier and box

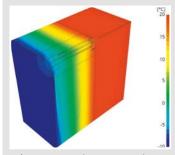


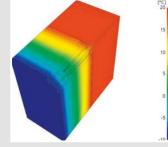




#### Heat bridge calculation / weight-bearing load

A heat bridge analysis produced by the Passivhaus Institut Dr. Feist, Darmstadt, showed that heat conductivity is only changed to a negligible extent and consequently it is demonstrated that no heat bridges result. When the space between the basic carrier and mounting plate / one-gang box is filled with insulating material, the loss coefficient "x WB" for the telescope equipment carrier is 0.0085 W/K, and 0.0077 W/K for the telescope switch box.





max. 50N max. 50N (5kg)

Telescope equipment carrier

Telescope switch box

When fitting an equipment carrier to a wall, ensure that the cable entries are positioned vertically.

#### **INNOVATION**

#### Telescope equipment carrier

- · for secure installation of luminaires and much more
- · for use with external insulation of walls and ceilings
- · installation area for dowel-free installation of accessories





3D animation







| Length x Width   | 120 x 120 mm                        |
|--|-------------------------------------|
| Insulation thickness   | 80 - 200 mm                         |
| max. attachment surface for devices  | 120 x 120 mm                        |
| Weight when attached to ceiling  | 5 kg                                |
| Weight when attached to wall   | 5 kg                                |
| Conduit entry M20 on the carrier   | 2                                   |
| Art. No.   | 1159-60                             |
| Inner packaging/shipping   | - / 10                              |
| Weight when attached to ceiling Weight when attached to wall Conduit entry M20 on the carrier Art. No. | 5 kg<br>5 kg<br>2<br><b>1159-60</b> |

#### **INNOVATION**

#### Telescope switch box

- · for secure fixing of sockets and much more
- · for use with external insulation of walls and ceilings
- · with 2 screw domes
- · standardised combination distance 71 mm









#### Combination one-gang box

 $\cdot$  for combinations with telescope switch box (Art. No. 1159-61)



| Length x Width x Depth                         | 68 x 70 x 50 mm | 68 x 70 x 50 mm |
|--|-----------------|-----------------|
| Insulation thickness                           | 80 - 200 mm     | -               |
| Conduit entry M20 on the carrier               | 2               | -               |
| Cable entries up to Ø 16 mm                    | 2               | 2               |
| Art. No.                                       | 1159-61         | 1159-62         |
| Inner packaging/shipping                       | -/10            | - / 10          |
| Accessories: Combination one-gang box, page 64 |                 |                 |

## ISO box set

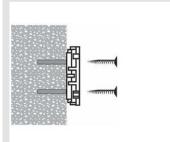
ISO box set for securely attaching one-gang boxes on the masonry in insulated facades.

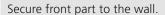
- For securely attaching switches, sockets etc. in the external insulation
- Can be extended as required
- High torsional strength, and can be combined by means of snap-in connector
- Guaranteed standard combination distance of 71 mm

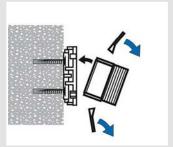




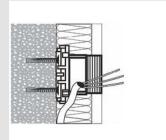
#### Installation







Break off the nail straps of the extension ring and screw the ring to the front part (device screws 40 mm).



Extension rings can be fitted for adaptation to insulation thickness.



#### Note

Pay attention to expert cable entry and cable length! If necessary, extend cable prior to installation. All cavities in the ISO box set must be completely filled with insulating material in order to prevent heat bridges. Not suitable for internal insulation – please use Art. No. 1159-90 for this purpose!

#### ISO box set

- · mounts on wall surface
- · for exterior insulation
- · consists of front part, extension ring and 2 ring attachment screws 40 mm
- · compensation height 70 mm, can be reduced by 3 x 5 mm to 55 mm
- · multiple extensions possible with extension ring



| Installation opening     | 60 mm   |
|--------------------------|---------|
| Art. No.                 | 1155-03 |
| Inner packaging/shipping | 5 / 10  |

for insulated facades



## **UP** extension ring

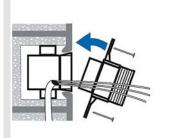
UP extension rings for extending existing one-gang boxes or one-gang junction boxes.

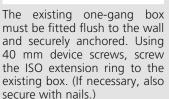
- For extending existing one-gang boxes
- Can be attached on top of existing one-gang boxes and one-gang junction boxes
- For securely attaching switches, sockets etc.
- Can be extended as required
- High torsional strength, and can be combined by means of snap-in connector
- Guaranteed standard combination distance of 71 mm

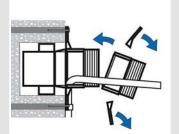




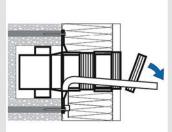
#### Installation







For multiple extensions: break off the nail straps on all additional extension rings and connectors. Fit with an offset of 90° and screw to the last ring.



Every extension ring can be shortened to adapt to the insulation thickness. Fill all cavities in the one-gang box and extension rings with insulating material (no heat bridge created)

#### Note

Pay attention to expert cable entry and cable length! If necessary, extend cable prior to installation. All cavities in the ISO box set must be completely filled with insulating material in order to prevent heat bridges. Not suitable for internal insulation – please use Art. No. 1159-90 for this purpose!

#### **UP extension ring**

- $\cdot$  compensation height 50 mm, can be reduced by 3 x 5 mm to 35 mm
- $\cdot \ \text{multiple extensions possible}$
- $\cdot$  2 x 40 mm ring attachment screws needed, Art. No. 2471-40



| Installation opening     | 60 mm   |
|--------------------------|---------|
| Art. No.                 | 1155-02 |
| Inner packaging/shipping | 10 / 50 |

## Mini equipment carrier

Mini equipment carrier for later attachment of a variety of accessories to insulated and already plastered composite thermal insulation systems. Luminaires, motion detectors, external sensors etc. can be permanently attached easily, quickly, securely and without creating heat bridges.

- For retrofitting in insulated facades
- Exact flush aligning of attachment devices
- Guarantees installation without heat bridges
- 4 swivels for secure anchoring
- No moisture penetration









#### **Examples of use**



The small mini device carriers are concealed by luminaires and smaller accessories.



Secure attachment of motion detectors.



Invisible even when close to



Secure, easy fitting of the corner mounting.

#### **Technical information**



The swivels anchor the KAISER mini equipment carrier in the insulation.



Clamping ribs, sealing lip and holding ring provide additional stability.



The adjustable screw-on surface accommodates a tolerance of up to 10 mm.



The screw-on surface is concealed even when the attachment points are close to the edge.

#### Hardened metal cutter Ø 20 mm for KAISER mini equipment carrier



The hardened metal cutter Ø 20 mm with hardened metal cutters for exact installation openings. Art. No. 1088-06



By simply unscrewing the cutter head, the drilled core can be removed quickly using a centering drill.



The drilling depth stop ensures that only the amount of insulation material is removed which is necessary to secure the mini equipment carrier.

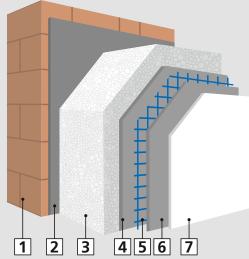


The insulating capacity remains intact despite the installation opening.

## **Installation systems** for insulated facades

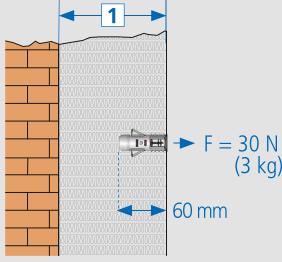
#### Structure of an organic WDVS

The mini equipment carrier was developed especially for later installation in organic composite thermal insulation systems.



1 Masonry wall | 2 Adhesive | 3 Insulating board | 4 Reinforcement plaster | 5 Reinforcement fabric | 6 Reinforcement plaster | 7 Finish coat of plaster, decorative plaster

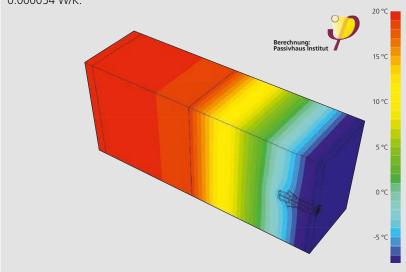
Maximum pull-out force for the mini equipment carrier.



**1** External insulation - insulation thickness

#### Heat bridge calculation

A heat bridge analysis produced by the Passivhaus Institut Dr. Feist, Darmstadt, showed that heat conductivity is only changed to a negligible extent and consequently it is demonstrated that there are no heat bridges in the electrical installation. The loss coefficient "× WB" is 0.000054 W/K.



#### Installation

The two-piece mini equipment carrier can be anchored securely in the insulated external facade in a few simple steps.



Create installation openings of Ø 20 mm (e.g. KAISER hardened metal cutter with depth stop).



Release the cutter head and remove the drilled core.



Press the anchor sleeve of the mini equipment carrier into the installation opening so that it is flush with the wall.



Press in the attachment core until it locks into the anchor sleeve.



Pressing in the attachment core anchors the swivels in the insulation material and provides a secure fit for the mini equipment carrier.



The mini equipment carriers now provide stable and wallflush screw-on surfaces ...



and provide a tolerance compensation of up to 10 mm. This permits later exact alignment of all installation accesso-



The luminaire is securely and permanently flush-mounted to the wall.

3D animation

#### Mini equipment carrier

- · Retrofitting in existing composite thermal insulation systems
- · consisting of anchor sleeve and attachment
- · for insulation thicknesses of 80 mm and upwards
- · Screw-on surface with 10 mm tolerance compensation
- · 4 swivel cutters
- · 2 ribs
- · Sealing lip on all sides
- Weight loading up to 30 N (3 kg)
   equipment attached with self-tapping screws
   \*\*G of 2 2 4 mm\*\*





## 0

| Length                                    | 60 mm    |
|---|----------|
| Installation opening                      | Ø 20 mm  |
| Art. No.                                  | 1159-50  |
| Inner packaging/shipping                  | 10 / 100 |
| Accessories: Hardened metal cutter 20 mm, | page 303 |

for insulated facades



# One-gang junction box ECON® Styro55

One-gang junction box ECON® Styro55 for later attachment of a wide range of installation accessories to insulated and pre-plastered composite thermal insulation systems (EIFS). Switches, sockets, intercoms etc. can be permanently attached easily, quickly, securely and without heat bridges.

- For retrofitting in insulated facades
- Cutter system prevents damage to cables
- Guarantees installation without heat bridges
- 4 swivels for secure anchoring
- No moisture penetration









#### **Examples of use**



Secure attachment to a EIFS without adhesive.



Accessory installation without disrupting the insulation or creating heat bridges.



Secure and flush-mounting installation including multiple combinations.

#### **Technical information**



Tool-free and wind-tight cable entry prevents air draughts along the cable.



The swivels anchor the box securely in the insulation material. The ribs at the front also give the box additional support.



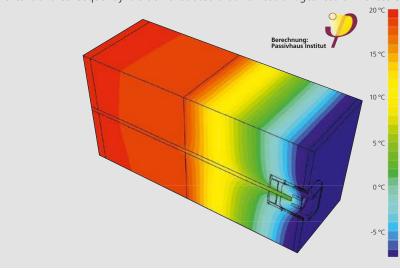
The lip at the back forms a sealing barrier to the insulation material and prevents air draughts along the box.



The all-round sealing lip seals the EIFS, so no moisture can penetrate.

#### **Heat bridge calculation**

A heat bridge analysis produced by the Passivhaus Institut Dr. Feist, Darmstadt, showed that heat conductivity is only changed to a negligible extent and consequently it is demonstrated that no heat bridges result. The loss coefficient "× WB" is 0.005044 W/K.



#### Installation with an existing cable



Ensure that the cable was fed through the insulation material panel. Shorten the existing cable to approximately 10 cm.



Fasten the KAISER centering aid Ø 68 mm Art. No. 1090-68 to the composite thermal insulation system using steel nails.



Using carbide cutter 180 Art. No. 1088-07, cut the installation opening precisely as far as the depth stop.



Remove the drilled core from the opening.



The opening is now only as deep as necessary. The insulation remains intact and the cable is undamaged.



The ECON® technology elastic sealing membrane ensures a wind-tight seal around the cable as it is pushed through.



Simply insert the ECON® Styro55 one-gang junction box in the installation opening.



Press the box in the holding ring until the rim is flush with the wall.



Use KAISER tool Art. No. 1090-21 to position the four swivels in the catch mechanism.



Flush-mounting and secure fit of the one-gang box.



Using the KAISER stripping pliers, Art. No. 1190-02, remove the insulation from the cable.



The swivel sheaths on the box seat themselves securely in the insulation material.

#### Installation of combinations



Using the combined cutting aids Art. No. 1090-68, cut installation openings at the standard spacing of 71 mm.



Before inserting the support connector, remove the strap without using a tool.



Fully-insulated through-wiring is accomplished using the KAI-SER support connector Art. No. 9060-88..



Secure and permanent attachment of multi-gang combinations, intercoms and much more.

#### **INNOVATION**

#### One-gang junction box **ECON® Styro55**

- · Retrofitting in existing composite thermal insulation systems
- · for insulation thicknesses of 80 mm and upwards
- · 4 swivel cutters
- · Clamping ribs
- · Sealing lip on all sides
- · Styro55 tool

**ECON** 



| 6   |   |
|-----|---|
|     | 5 |
| The | 5 |
|     |   |

| Depth                                 | 60 mm    |
|---------------------------------------|----------|
| Installation opening                  | 68 mm    |
| Device screws                         | 2        |
| Tool-free cable entries up to Ø 15 mm | 2        |
| Support connectors for each package   | 5        |
| VDE                                   | •        |
| Art. No.                              | 1555-51  |
| Inner packaging/shipping              | 10 / 100 |

Accessories: Hardened metal cutter 180, page 303; Centering aid Ø 68 mm, page 304; Styro55 tool, page 304

For international projects, we offer a large range of products which meet the relevant national standards and regulations.

- Dimensions and approvals based on national standards
- Suitable installation tools
- Many combination options















#### Q-range® one-gang boxes

- · For masonry installation
- · With screw domes
- · Conduit entries on all sides
- · Suitable for 60 / 71 mm combinations
- · Protection class IP 2X











|                                   | 100                                |                                       |                                    |                                       |
|-----------------------------------|------------------------------------|---------------------------------------|------------------------------------|---------------------------------------|
| Length x Width x Depth            | 60 x 60 x 50 mm                    | 60 x 60 x 65 mm                       | 60 x 60 x 50 mm                    | 60 x 60 x 65 mm                       |
| Device screws                     | 2                                  | 2                                     | -                                  | -                                     |
| Fixing screw spacing              | 60 mm                              | 60 mm                                 | 60 mm                              | 60 mm                                 |
| Horizontal conduit entry          | 2 x M20,<br>2 x M16/20 mm          | 2 x M20,<br>2 x M16/20 mm             | 2 x M20,<br>2 x M16/20 mm          | 2 x M20,<br>2 x M16/20 mm             |
| Base conduit entry                | 2 x M20, 2 x M16,<br>2 x Ø 10,5 mm | 2 x M20, 2 x M16,<br>2 x Ø 10,5 mm    | 2 x M20, 2 x M16,<br>2 x Ø 10,5 mm | 2 x M20, 2 x M16,<br>2 x Ø 10,5 mm    |
| Vertical conduit entry            | 2 x M16,<br>4 x M16/20 mm          | 2 x M16,<br>4 x M16/20,<br>4 x M20 mm | 2 x M16,<br>4 x M16/20 mm          | 2 x M16,<br>4 x M16/20,<br>4 x M20 mm |
| Screw domes for device attachment | V: 2 x 3, H: 2 x 1                 | V: 2 x 3, H: 2 x 1                    | V: 2 x 3, H: 2 x 1                 | V: 2 x 3, H: 2 x 1                    |
| Through-wiring fields             | 1                                  | 2                                     | 1                                  | 2                                     |
| (TIME)                            | •                                  | •                                     | •                                  | •                                     |
| Art. No.                          | 7500                               | 7650                                  | 7501                               | 7651                                  |
| Inner packaging/shipping          | 10 / 100                           | 10 / 100                              | 10 / 100                           | 10 / 100                              |

#### Q-range ECON® one-gang box

- · Air-tight design with sealing membranes
- · Centre distance 60 mm horizontally as well as 71 mm horizontally and vertically
- · 2 x 3 fixed entries, 2 x 2 fixed entries, 4 base







| Length x Width x Depth   | 60 x 60 x 50 mm    |
|--------------------------|--------------------|
| Horizontal conduit entry | 2 x 20 + 2 x 16 mm |
| Base conduit entry       | 2 x 20 + 2 x 16 mm |
| Vertical conduit entry   | 2 x 20 + 1 x 16 mm |
| for clamp fixing         | -                  |
| for screw fixing         | •                  |
| Art. No.                 | 752                |
| Inner packaging/shipping | 10 / 100           |



## **International products**

for accessory installation in accordance with national standards

#### Q-up®

- · Plaster compensation frame with 2 screws 40 mm, Pozidriv drive
- · For boxes which are placed too deeply





| Art. No.                 | 994      |
|--------------------------|----------|
| Inner packaging/shipping | 10 / 100 |

#### Q-signal®

- · Protects the box interior, the screw domes and screw heads during plastering
- · reusable



| Art. No.                 | 975      |  |
|--------------------------|----------|--|
| Inner packaging/shipping | 10 / 100 |  |

#### One-gang box - Swiss standard

- · suitable for screw or claw fixing of accessories
- · with injection-moulded signal cover
- $\cdot$  for assembling combinations, centre distance 60  $\mbox{mm}$
- · low-lying plaster grips





| Depth                              | 59 mm    |
|------------------------------------|----------|
| Diameter                           | 71 mm    |
| Break-out openings Ø 20 mm         | 11       |
| Combination conduit entries M20/25 | 1        |
| CE                                 | •        |
| Art. No.                           | 9921     |
| Inner packaging/shipping           | 50 / 100 |

#### One-gang box - Swiss standard

- $\cdot$  suitable for screw attachment of equipment
- · to create combinations in both axis directions, centre distance 60 mm
- $\cdot \text{ with separator wall} \\$





| Length x Width x Depth             | 72 x 72 x 57 mm |
|------------------------------------|-----------------|
| Break-out openings Ø 20 mm         | 13              |
| Combination conduit entries M20/25 | 5               |
| C€                                 | •               |
| Art. No.                           | 99.1234         |
| Inner packaging/shipping           | - / 50          |

# **International products** for accessory installation in accordance with national standards

#### Signal cover

· for one-gang box Art. No. 99.1234





## One-gang box (Italian and American standard)

· with 2 screw domes (without screws)



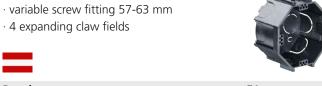




| Length x Width x Depth   | 100 x 60 x 52 mm | 121 x 60 x 52 mm |
|--------------------------|------------------|------------------|
| Screw spacing            | 83 mm            | 108 mm           |
| M16 conduit entries      | 1                | 1                |
| Conduit entries M20      | 12               | 12               |
| Conduit entries M25      | 3                | 6                |
| Art. No.                 | 662              | 663              |
| Inner packaging/shipping | 5 / 100          | 5 / 100          |

#### One-gang box acc. to EN 60670 and ÕVE





| Depth  | 51 mm   |
|--|---------|
| Cable entries 1 x 5 x 1.5 mm <sup>2</sup> or 3 x 2.5 mm <sup>2</sup> | •       |
| Conduit entries M16-M20  | 10      |
| Telephone cable J-Y(ST)Y   | 1       |
| (ÓVE)  | •       |
| Art. No.   | 1076-20 |
| Inner packaging/shipping   | - / 100 |