

## STOCK PROGRAMME 29







## **Company ..... 4**

## **Our solutions ..... 6**

IT installation .....	10
Certified airtight .....	12
Constructional sound protection.....	14
Halogen-free installation .....	16
Constructional fire protection .....	18

## **Plastics technology ..... 20**

## **Full Service Partner ..... 22**

## **Installation boxes ..... 24**

### **Flush mounted socket boxes..... 26**

Standard .....	26
Airtight .....	32

### **Hollow wall socket boxes..... 36**

Standard .....	36
Airtight .....	44
Sound protection .....	50
Fire protection .....	52
Accessories FM / HW socket boxes.....	56

### **Surface mounted socket boxes ..... 62**

Standard .....	62
Damp area IP65 .....	67

### **Concrete socket boxes ..... 68**

Quick-fix .....	68
Wing socket box .....	70
Large socket boxes .....	72

### **TIE-Systems ..... 82**

Device socket.....	84
Accessories .....	86

## **Fire protection systems ..... 90**

Fire protection socket boxes .....	92
Fire protection systems .....	96
Accessories .....	103



## **Fastening systems ..... 104**

Cable management system .....	106
Functional endurance .....	114

## **Distribution boards ..... 116**

### **Small distributor ..... 118**

Combination distributor .....	118
FM Distributor .....	122
HW Distributor .....	123
Communication distributor .....	124
Twin distributor .....	126
SM Distributor .....	128
SM Communications distributor .....	130
SM Automate box .....	132
Accessories FM / HW / SM distributor .....	133
Damp area distributor .....	138
Accessories Damp area distributor .....	141

### **Distributor ..... 144**

Field distributor .....	144
Distribution cabinet .....	145
Accessories .....	146

## **Meter cabinets ..... 152**

## **Meter connection columns.. 160**

## **General terms & conditions ..... 164**

## **Imprint ..... 165**

## **Legend ..... 166**

## **Register ..... 168**

## **Contact ..... 174**

## **f-tronic®** installing innovation

### **Innovation, determination and "Made in Germany" quality are the cornerstones of our company**

We find electrical installation technology simple. Why is that? Because we make life simpler for you and never lose sight of efficiency.

**f-tronic®** has been developing, manufacturing and marketing innovative products for electrical installation since 1990. We provide a full range in 6 product areas: meter cabinets, distributors, meter connection columns, socket boxes, mounting systems and fire protection systems. Due to the continuous expansion of our product range, we can offer a wide range of products for the electrical trade.

We stand for quality and innovative plastics processing. **f-tronic®** is renowned as a full-range provider in more than 25 countries - in the electrical wholesale trade, as well as for installers.

With our automatic spray guns that are manufactured mainly by German engineering companies, we guarantee the highest "Made in Germany" quality.

To bring innovative new products to the market each year, we listen to the wishes from the electrical trade and wholesale. To this end, we have established a tradesmen's advisory board with members from across the territory of the Federal Republic. This gives us an extensive insight into different installation methods - at the same time providing us with important stimuli directly from practice, which we use to improve individual products and develop new ones.

We feel obliged, even today, to think about the great innovations of tomorrow.

We call it something else. We say: **f-tronic®**.

### **Quality - Made in Germany**





# Our Business Principles



## Corporate Values

Sustainable protection and development of the company are at the forefront of all our decisions. Humanity, trust and respectful interaction and loyalty characterise our daily actions. We keep our word (even a handshake). Professional action and short, clear decision-making processes are factors in our success. Objectives for the company are jointly agreed and responsibly implemented. We live out our mission every day.



## Sustainable performance for our customers

We focus on the needs and goals of our clients. We guarantee our customers superior performance and top quality. In return we expect a fair reward for this. Only satisfied customers can guarantee our company's success through a long-term partnership.



## Employees and managers

Humanity, trust, tolerance, respectful behaviour, truth and loyalty in collaboration are the basis of satisfaction and creating pleasure in the workplace. We always demand high performance and promote employees through targeted measures in their education and training. We train young employees in the industrial and commercial sector and support them in their professional development. Our executives are the measure for our actions.

f-tronic management:



## Competitive advantage, creativity and innovation

We must work together with our customers, employees and suppliers to develop innovative products and solutions and implement them quickly and cost-effectively. Our customers would thereby also achieve lasting benefits and competitive advantage. This is a constant challenge and secures our lead over competitors.



## Suppliers are our partners

We focus on long-term partnerships with suppliers and expect from this high performance/attractive pricing, reliability, flexibility, high quality standards and sustainability.



## Profit-driven

We need to generate profits. These secure investment in our future so that we meet commitments to our customers, employees, partners and shareholders. Profit is confirmation for us of the correctness of our actions.



## Future and sustainability

We see the future as a challenge for all of us and have a positive attitude towards people and our unique environment. We constantly optimise our products in relation to minimum environmental impact, resource conservation and energy efficiency. The basis of our actions is long-term goals. He who has objectives deals with the future.

*R. Z. - W. F. E. J. G. L. H. L. S. P. Q.*









# The right solution

for every application

## Table of contents

IT installation .....	10
Certified airtight .....	12
Constructional sound protection .....	14
Halogen-free installation.....	16
Constructional fire protection .....	18







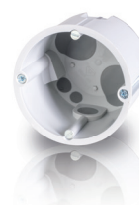
# f-tronic® products

for your home

## 1 IT installation



## 2 Sound protection



## 3 Fire protection and halogen-free



## 4 Distribution and meter cabinets



# IT installation

The specialist for your IT applications

In the modern world of networking, we have efficient IT solutions at **f-tronic®**. Ranging from modern cabling of network technology to communications distributors with a special wireless port.

Modern cabling in network technology has its own rules and challenges, with which conventional device boxes often cannot cope. In a standard device box, due to equipment design, compliant cabling without manual adjustment is not possible. According to DIN 50173, the bending radius for installing network cables must not exceed 4 times the performance diameter, otherwise broken cables and power loss become inevitable.

We have tackled this issue among others and developed various solutions.



# Product range

for IT installation



**FM installation**

from page 34



**HW installation**

from page 37



**FM / HW Communication distributor**

from page 124



**SM communication distributor**

from page 130

# Certified airtight

## 2K-Membrane technology that hits the spot

A complete installation with airtight boxes from **f-tronic®** guarantees the client a sustained increase in energy efficiency and allows comfort by cutting out draughts. Wherever you have to avoid annoying air circulation in your electrical installations, our airtight, flush and cavity wall socket boxes with press-out membranes are the right choice.

Airtight installation certified in accordance with DIN 18015-5 is possible from our socket boxes range with their special 2 component membrane technology (2K). The flexible membrane lies airtight around the pipe and the conduit.



# Product range

in airtight installation



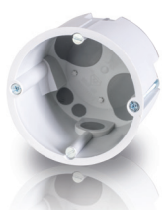
**FM installation**

from page 32



**HW installation**

from page 44



**Sound protection**

from page 50



**Fire protection**

from page 52



**IT installation**

from page 47

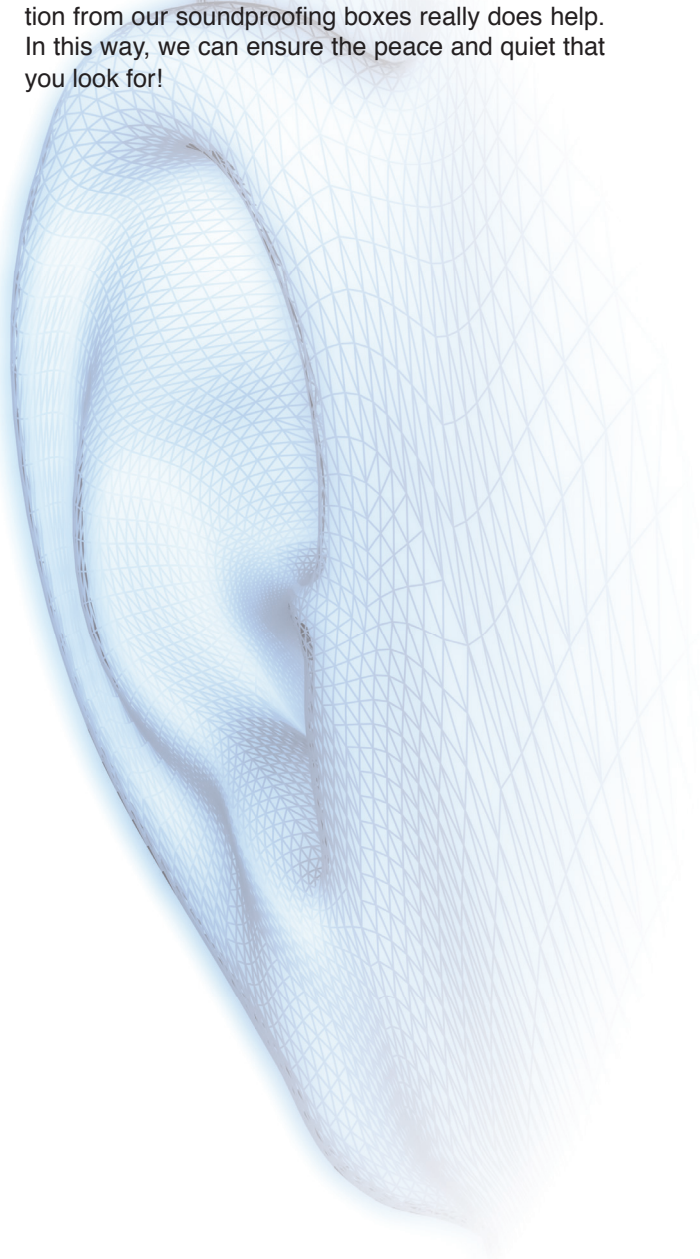


# Constructional sound protection

## The peace of mind you need

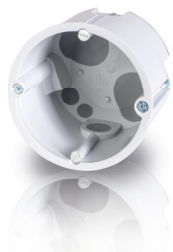
Noise is a major factor that can significantly affect quality of life. Often, however, many noise sources cannot just be turned off. Therefore, sound insulation plays an important role in increasing the quality of living and working in buildings.

Especially when it is a matter of focusing inside a room, whether relaxing or resting, people need peace. Therefore, hospitals, hotels, educational institutions, office and administrative buildings, as well as terraced houses and apartment buildings, set high demands on noise protection from building practices. In this regard, constructional noise protection from our soundproofing boxes really does help. In this way, we can ensure the peace and quiet that you look for!



# Product range

for constructional sound protection



## Sound protection

from page 50



## Fire protection

from page 52

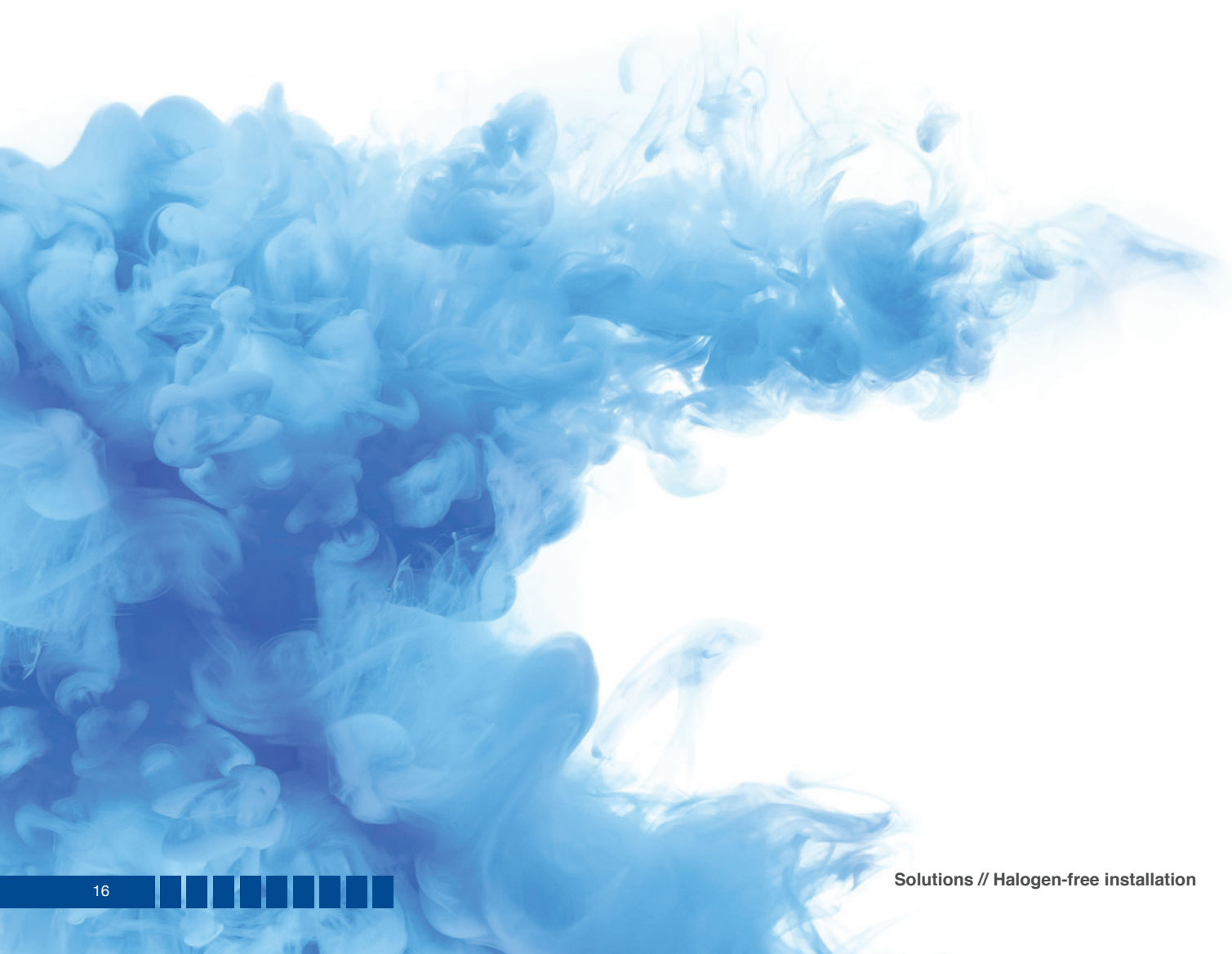


# Halogen-free installation

for more safety

One of the most common causes of death and injury from fires is smoke inhalation. Those substances, which are caused by the burning of halogenated plastics, especially PVC, are key factors in making smoke so dangerous. These are highly toxic and release corrosive gases when in contact with moisture, which can also damage the fabric of the building.

Especially for public works projects, the use of halogen-free plastics is prescribed. We at **f-tronic®** recognise this need with our high quality products. The halogen-free products need only simple handling without any additional tools, ensuring minimal smoke in case of fire, flame resistance, chemical resistance and temperature resistance.



# Product range

for halogen-free installations



## HW installation

from page 36



## Sound protection

from page 50



## Fire protection

from page 52



## IT installation

from page 37

# Constructional fire protection

## Intelligent technology that protects

We at **f-tronic®** with our fire protection socket boxes effectively protect and ensure the integrity of fire walls up to 120 minutes. Also their remarkably simple installation, which even allows an opposing installation and retrofitting.

Stay safe when it matters: our range of fire safety socket boxes is certified across Europe. Thereby you take care, not only of legally fulfilling fire protection requirements, but also the demonstrable safety of rooms and escape routes, especially for public institutions such as hospitals, schools and kindergartens. To protect personal safety in case of fire, it is important that the use of escape routes and access for fire and rescue services is guaranteed for as long as possible.





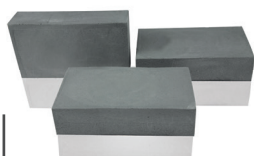
# Product range

for fire protection



## Fire safety boxes

from page 92



## Fire seals

from page 96



## Functional endurance

from page 114







# Innovation

knows no limits!

## Pinnacle of plastic manufacturing

So you intend to launch a new product on the market? You have an idea for a new development? You see a need for optimising your supplier structure? Or the verge of a re-design of your purchased plastic components? Are you looking for some other reason for a new and innovative system supplier, who responds reliably and yet extremely flexibly to your needs? Many years of experience in plastics technology have shaped us and make us the specialists in development, design and processing. We prove this time and again to our national and international customers. And willingly to you as well!

**f-tronic®** not only supports you in component design, but also in the selection of materials. The production of injection moulding tools, we take very seriously - for exactly the result you want. This is guaranteed by our strong team and our modern machinery, with more than 35 injection moulding machines from 200 to 12,500 kN and a shot weight from a few grammes to 2kg.

**f-tronic®** is a full service provider in the plastic injection moulding field, proving the experience of over 30 years in business. From development through tooling to production, we operate with absolute professionalism for you. In addition to the original plastic injection moulding, we are also able to process plastic solutions using our multi-component technology for you. Our main areas are:

- Thermoplastics
- Thermosetting plastics
- 2-Component injection moulding
- Assembly injection moulding
- High performance plastics PPS, PPA

## Your route to receiving a quick offer

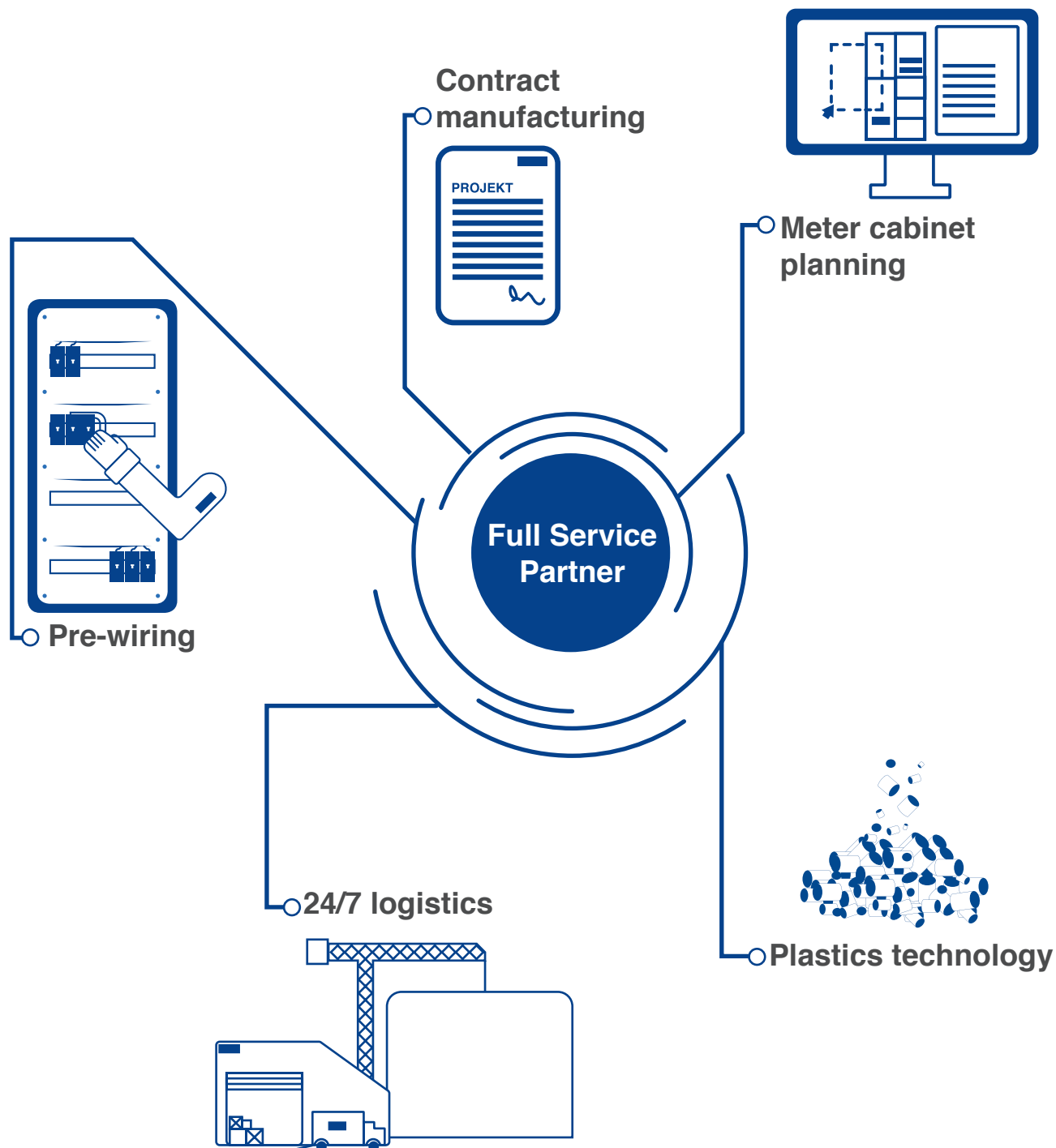
### We need:

- Your complete contact details with the relevant contact person
- Product description with a drawing, if necessary, a photo
- Exact dimensions and weights
- Annual quantities and retrieval lots
- Consist of tools? If so, a detailed description
- Target prices, if available
- Timetable for implementation

## Our contact details

**f-tronic®** GmbH  
f-tronic Plastics technology  
Zum Gerlen 21-25  
D-66131 Saarbrücken  
Phone +49 6893 9483-479  
Email [kunststofftechnologie@f-tronic.de](mailto:kunststofftechnologie@f-tronic.de)





## Contract manufacturing

30 years of experience in plastics technology have shaped us and make us the specialist in construction and manufacturing. We prove this time and again to our national and international customers. And willingly to you as well. Whether you want to produce a commercial product or have an idea for a new product: **f-tronic®** helps you not only with product design, but also in the selection of materials.

## Meter cabinet planning

Let our project team design your meter cabinet. You can find our online form at: [www.f-tronic.com](http://www.f-tronic.com).

For our meter cabinet 2.0 programme, you can always rely on our meter cabinet configurator. This helps you to configure your meter cabinet, as all current technical specifications are entered.

## Pre-wiring

Do you have so many tasks, that you can not cope with them all? No problem! Save your valuable time and let **f-tronic®** work for you. We take over the pre-wiring of your distribution boards and meter cabinets and this with a 100% proven consistent quality for you.

To do this, use the checklist on our website. Our project team will provide support for your every request!

## Plastics technology

Premium "Made in Germany" partner to our customers also means: to lead a highly efficient production with the highest quality standards at our site in Saarbrücken. Our highly automated manufacturing processes are carried out, among others, with 35 injection moulding machines. Quality is not only tested by us but is produced. Each production step is monitored and assessed on the basis of suitable parts and target specifications.

We work with a three-shift operation with more than 100,000 plastic injection parts per day. That is 25 million a year and this with a plastic granulate throughput of more than 1,000 tons per year.

## 24/7 logistics

Our long-standing, well-known national and international customers value us as an innovative and professional development partner in plastics technology, which combines high quality and short delivery times with maximum customer orientation.

The least we can do for you: the timely picking and free delivery to your premises, in transport containers (tray) you demand - if required, even with the Kanban-system. This includes the seamless global "just-in-time" delivery.





# Installation boxes

## Unsurpassed in variety

**f-tronic®** offers a wide range of installation materials for every installation requirement. Whether a flush, hollow-wall, surface, IP54 or IP65 application - we have the right product available for you. In 2004, in a pioneering move, we brought the first airtight box to the market.

Due to a variety of switches, sockets and intelligent, distributed building control, you already install up to 80 different hollow-wall or flush-mounted boxes. This trend will continue into the future. A complete installation with airtight boxes of **f-tronic®** guarantees the client a sustained increase in energy efficiency and allows comfort by avoiding drafts. Wherever you have to avoid annoying air circulation in your electrical installation, our airtight concealed and cavity wall accessory sockets with 2K-Membrane technology are the first choice.

Cost-efficient installation is possible with our standard concealed and cavity wall accessory sockets. This product group is rounded off with flush junction boxes and accessories, such as spring cover, signal cover and levelling rings.

## Table of contents

Flush mounted socket boxes.....	26
Standard .....	26
Airtight .....	32
Hollow wall socket boxes.....	36
Standard .....	36
Airtight .....	44
Sound protection .....	50
Fire protection .....	52
Accessories FM / HW socket boxes.....	56
Surface mounted socket boxes .....	62
Standard .....	62
Damp area IP65 .....	67
Concrete socket boxes .....	68
Quick-fix .....	68
Wing socket box .....	70
Large socket boxes .....	72
TIE-Systems .....	82
Device socket.....	84
Accessories.....	86



# The basics

## of a good flush mounted installation

- Flexibly combined with all junction socket boxes
- 20 and 25 mm tube insertion
- 4x screw boss and 2x area for spreader claw springs



### 1 Nail tab

Combinable with E104 plug nail-straps.



### 2 Standard distance

In combination of multiple socket boxes, the standard spacing of 71 mm is maintained.



### 3 Combined pipe/cable entry

High flexibility through the combination of pipe/cable entry.



Type	E106M25	E106M25S	E107M25	E107M25S
Execution	Device socket	Device socket	Device connection socket	Device connection socket
Item no.	7310129	7310130	7310131	7310132
SU / CB / PL	25 / 300 / 6.000	25 / 300 / 6.000	25 / 200 / 4.000	25 / 200 / 4.000
Depth	46 mm	46 mm	65 mm	65 mm
Material	PS	PS	PS	PS
Device screw incl.	-	•	-	•
Cable entry	4	4	8	8
Conduit entry M20	7	7	13	13
Conduit entry M25	2	2	4	4

optional accessory from page 54

## Flush mounted partition socket DUPLEX



# Installed faster thanks to the DUPLEX

- Combined with all junction socket boxes
- More wiring space
- Pipe and cable entries
- Expandable with levelling rings E130/E132
- Ideal for 100 mm partition walls
- One-man assembly



## Assembly instructions



- 1** Pierce the wall completely with mill bit.



- 2** Box can be installed from one side (one-man assembly).



- 3** Plaster-in box.



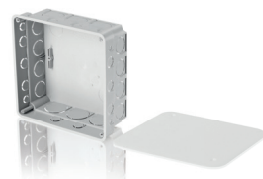
- 4** Wall section with inlaid box; ideal for 100mm partitions.



Type	<b>E400</b>
Execution	Double socket box
Item no.	<b>7310155</b>
SU / CB / PL	10 / 100 / 2.000
Depth	100 mm
Material	PS
Cable entry	4 per side
Conduit entry M20	4 per side
Conduit entry M25	4 per side

optional accessory from page 54

## Flush mounted distribution box



Type	E140	E141	E142
Execution	Distribution box incl. cover	Distribution box incl. cover	Distribution box incl. cover
Item no.	7310060	7310061	7310062
SU / CB / PL	10 / 200 / 4.000	10 / 150 / 3.000	1 / 30 / 600
H x W x D	80 x 80 x 50 mm	100 x 100 x 50 mm	160 x 160 x 65 mm
max. Cross section	4 mm <sup>2</sup>	4 mm <sup>2</sup>	16 mm <sup>2</sup>
Material	PS	PS	PS
Tube insertion M16 / M20 / M25 / M32	- / 8 / - / -	4 / 15 / 4 / -	11 / - / 10 / 6

### Accessories

Type	E140D	E141D	E142D
Execution	Replacement lid	Replacement lid	Replacement lid
Item no.	7310135	7310136	7310137
SU / CB / PL	10 / 500 / 15.000	10 / 300 / 9.600	10 / 100 / 2.200
H x W	95 x 95 mm	120 x 120 mm	185 x 185 mm

## Flush mounted connection socket box

Type	E110
Execution	Connection socket box
Item no.	7310133
SU / CB / PL	25 / 300 / 6.000
Depth	35 mm
Diameter	Ø 72 mm
max. Cross section	2,5 mm <sup>2</sup>
Material	PS
Conduit entry M20	9
Necessary purchase	Screw cap (E112H)





## Flush mounted wall outlet



- For standard installation of cable outlets
- With attachment point for wall lights
- Integrated breakable openings for cables and tubes
- Incl. cover

Type	WAD
Execution	Wall outlet
Item no.	7310077
SU / CB / PL	25 / 500 / 10.000
H x W x D	60 x 31 x 31 mm
max. Cross section	1,5 mm <sup>2</sup>
Material	PS
Cable entry 3x 2,5 <sup>2</sup> / 5x 1,5 <sup>2</sup>	1
Pipe M16	1
Conduit entry M20	3

## Flush mounted device connection socket



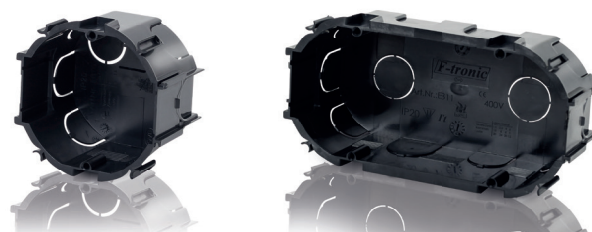
- With lateral wiring space

Type	E510
Execution	Device connection socket
Item no.	7310063
SU / CB / PL	10 / 100 / 2.000
H x W x D	110 x 71 x 45 mm
max. Cross section	2,5 mm <sup>2</sup>
Material	PS
Conduit entry M20	2
Conduit entry M25	8
Conduit entry M20/M25	2

## Flush mounted device socket, Austria



- According to IEC 60670 tested by ÖVE
- Installation of pre-assembled equipment combinations available
- Easily combinable



Type	E810	E811
Execution	Device socket	Device socket, 2-fold
Item no.	7310064	7310066
SU / CB / PL	20 / 200 / 4.000	10 / 100 / 2.000
H x W x D	72 x 73.4 x 45 mm	72 x 144.3 x 45 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PS	PS
Conduit entry M20	7	10
Conduit entry M25	1	2

optional accessory from page 54

## Versatile applications

### solid construction



- Extremely solid material, high wall thickness
- Flexible installation by variable dividers



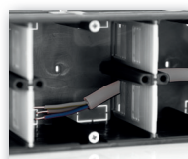
#### 1 Divider

Individually removable dividers for variable separation of installation areas.



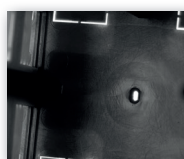
#### 2 Standard distance

The standard distance of 71 mm is automatically maintained.



#### 3 Execution

Knock-throughs in the divider, for the defined cable routing.



#### 4 Marking holes

Mark the points for the milling drill holes on the basis of the marking holes.

## Assembly instructions



**1** By marking the holes, centering points are marked out.



**2** Cut holes with milling bit.



**3** Chisel out remaining material.



**4** Insert socket box into the wall.



**5** Plaster and you are done.



Type	UP20	UP30	UP40	UP50
Execution	Device socket box, 2-fold	Device socket box, 3-fold	Device socket box, 4-fold	Device socket box, 5-fold
Item no.	7310102	7310103	7310104	7310105
SU / CB / PL	10 / 90 / 1.800	5 / 50 / 1.000	5 / 40 / 800	5 / 35 / 700
H x W x D	71 x 141 x 63 mm	71 x 213 x 63 mm	71 x 284 x 63 mm	71 x 354 x 63 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PP	PP	PP	PP
Cable entry Flat cable 20 x 10 mm	12	20	28	36
Conduit entry M20	10	14	18	22



Type	UPD1	UPD2	PAQ	PAH
Execution	Plaster cover semi-circular	Plaster cover square	Plaster compensation square	Plaster compensation semi-circular
Item no.	7390055	7390056	7390089	7390090
SU / CB / PL	50 / 1.000 / 20.000	50 / 1.000 / 20.000	15 / 420 / 8.400	10 / 440 / 8.800
Depth	-	-	30 mm	30 mm
Material	PP	PP	PP	PP

## Application plaster compensation ring



**1** Plaster compensation ring, square and semi-circular.



**2** Break out desired height in 5 mm increments.



## Efficiency in energy and handling

- Airtight from 2K-Membrane technology
- Sustainably increases energy efficiency in buildings
- Creates more comfort by preventing drafts
- Easy to install
- Easy to use without additional tools
- Guaranteed standard combination distance
- 4x screw boss and 2x area for spreader claw springs



### 1 Airtight

The flexible membrane lies airtight around the pipe or conduit.



### 2 Time-saving

Due to the flexible tear-resistant membrane, lines and conduits can be assembled quickly and without tools.



### 3 Combinable

All **f-tronic®** FM socket boxes can be combined. Compliance with the standard distance of 71 mm is guaranteed.



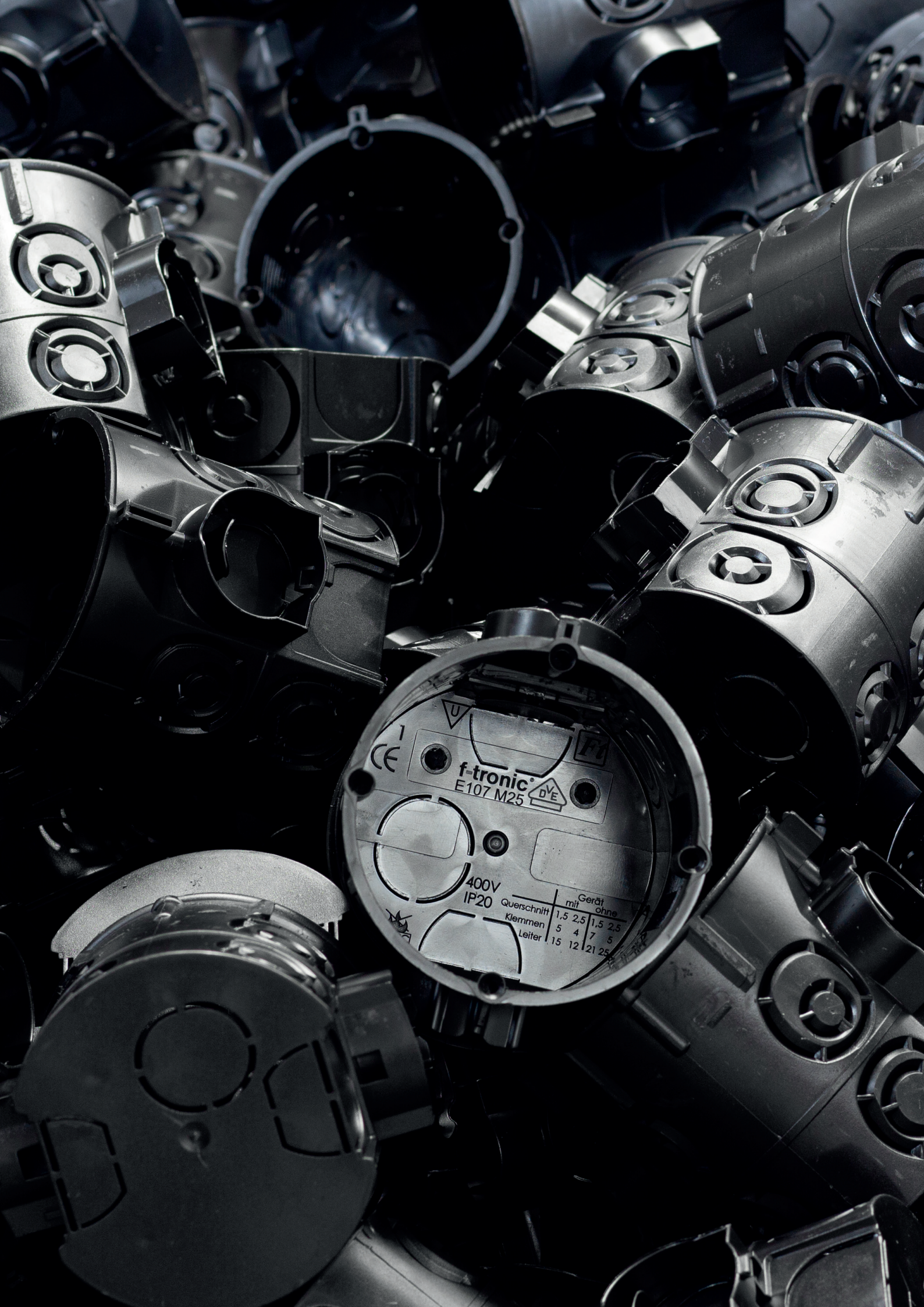
### 4 Nail tab

Flexibility in installation by E104 nail clip.



Type	E1062K	E1072K
Execution	Device socket	Device connection socket
Item no.	7320026	7320028
SU / CB / PL	25 / 300 / 6.000	25 / 200 / 4.000
Depth	46 mm	65 mm
Material	PP / TPE	PP / TPE
Cable entry	-	6
Tube insertion M20 / M25	4 / 2	2 / 4





CE

f-tronic<sup>®</sup>  
E107 M25

U

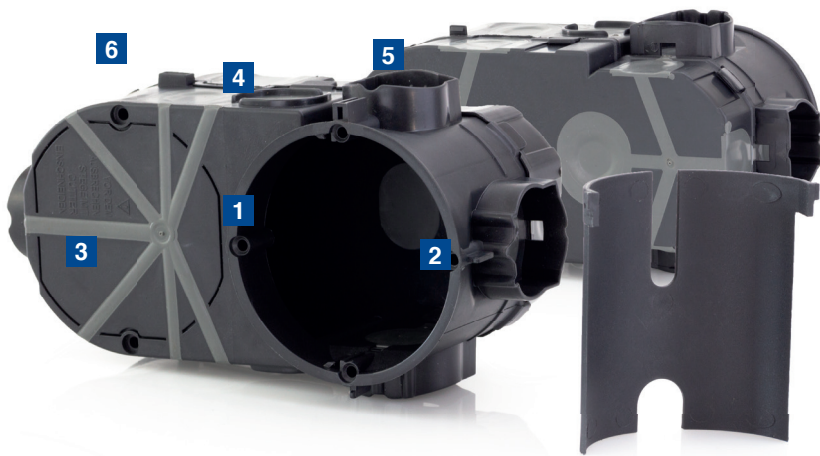
400V  
IP20

Querschnitt	Gerät	
	mit	ohne
Klemmen	1,5 2,5	1,5 2,5
Leiter	5 4	7 5
	15 12	21 25



# Multi-talent and a specialist

- Airtight from 2K-Membrane technology
- 20 mm and 25 mm tube insertion
- 4x screw boss
- Partition for circuit separation in accessories



## 1 Circuit isolation

By using an additional partition, simple circuit isolation is possible.



## 2 4-sided stackable

The E550 can be aligned on all sides, thus installation is possible in any combination.



## 3 Convertible

With little handling, conversion or expansion to double socket is also possible at a later stage.



## 4 Airtight

The flexible membrane lies airtight around the pipe or conduit.



## 5 Combinable

All **f-tronic®** FM Socket boxes can be combined. Compliance with the standard distance of 71 mm is guaranteed.



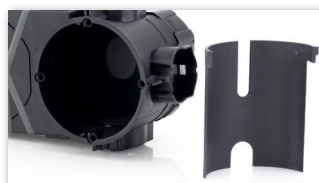
## 6 Plenty of space

The socket box offers plenty of space for the installation of components up to 48 mm height or to comply with bending radii.

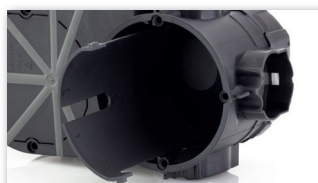


## IT electronics box, airtight

### Installation partition



**1** Additional partition (E551) for circuit isolation.



**2** Simply insert partition from above.



**3** Standardised separation of the circuits.

### Double socket enhancement



**1** Cut in pre-punched socket boxes area.



**2** Refer to recessed area.



**3** Surface adjustment ring e.g. E130 screw.



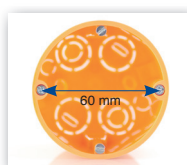
Type	E550
Execution	IT electronics box
Item no.	7320009
SU / CB / PL	10 / 80 / 1.600
Depth	67 mm
max. Cross section	2,5 mm²
Material	PP / TPE
Cable entry to 7x 1,5² / 5x 2,5²	6
Conduit entry M20	11
Accessories	incl. device screws

optional accessory from page 54

# The basics

for a proper hollow wall installation

- With break-outs for cables and pipes
- Integrated management support for NYM cables
- Secure fixing of pipes



## 1 Standard distance

Screw spacing of 60 mm ensures optimum installation of the units in the socket box.

Type	E115	E115HF	E117	E117HF	E118	E135
Execution	Device socket	Device socket, halogen-free	Device connection socket	Device connection socket, halogen-free	Double device socket	Device socket without VDE
Item no.	7350094	7350095	7350096	7350097	7350041	7350099
SU / CB / PL	25 / 300 / 6.000	25 / 300 / 6.000	25 / 400 / 4.800	25 / 400 / 4.800	10 / 100 / 2.000	25 / 300 / 6.000
Milling hole	Ø 68 mm	Ø 68 mm	Ø 68 mm	Ø 68 mm	Ø 68 mm	Ø 68 mm
Depth	47 mm	47 mm	61 mm	61 mm	47 mm	35 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Panel thickness	5 - 40 mm	5 - 40 mm	5 - 40 mm	5 - 40 mm	5 - 40 mm	5 - 25 mm
Material	PP	PP	PP	PP	PP	PP
Cable entry 3x 1,5 <sup>2</sup>	2	2	4	4	1	4
5x 1,5 <sup>2</sup> / 3x 2,5 <sup>2</sup>	2	2	-	-	8	-
7x 1,5 <sup>2</sup> / 5x 2,5 <sup>2</sup>	-	-	2	2	-	-
Conduit entry M20	2	2	4	4	6	-

optional accessory from page 54

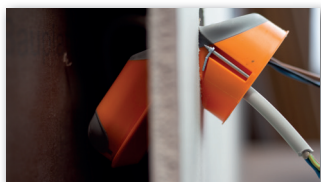
# The original Pioneer IT socket box

- 70% time saving during assembly
- One-hole mounting
- Lateral connection space for all common relays and actuators
- Problem-free compliance with the bending radius for network cabling
- Tool-free insertion from 2C-Membrane technology

## Assembly instructions



**1** The cables are inserted into the socket box. The lateral compartment is suitable for all standard relays and actuators.



**2** Due to the flexible membrane, the socket box is easily and conveniently inserted into the Hollow wall.



**3** Done. The box is installed and the bending radius of the network cable is easily maintained.

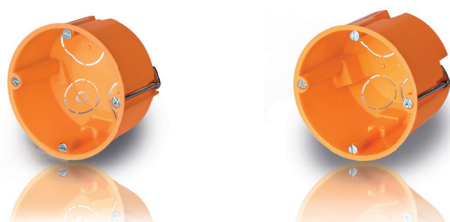


Video

Type	E5000	E5000HF
Execution	IT electronics box	IT electronics box, halogen-free
Item no.	7350066	7350112
SU / CB / PL	10 / 100 / 2.000	10 / 100 / 2.000
Milling hole	Ø 68 mm	Ø 68 mm
Panel thickness	5 - 25 mm	5 - 25 mm
Depth	70 mm	70 mm
Material	PP / TPE	PP / TPE
Insertions	5 (from 4x to M25)	5 (from 4x to M25)

optional accessory from page 54





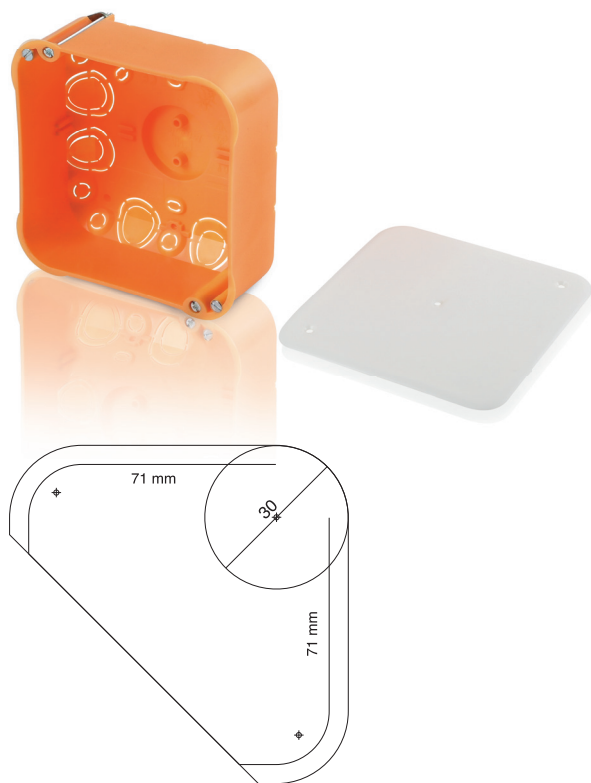
- Specifically for use in pipe installation

Type	E860	E870
Execution	Device socket	Device connection socket
Item no.	7350117	7350116
SU / CB / PL	25 / 300 / 6.000	25 / 300 / 6.000
Milling hole	Ø 68 mm	Ø 68 mm
Depth	47 mm	60 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Panel thickness	5 - 40 mm	5 - 40 mm
Material	PP	PP
Cable entry 3x 1,5 <sup>2</sup>	2	-
5x 1,5 <sup>2</sup> / 3x 2,5 <sup>2</sup>	2	-
Tube insertion M20 / M25	2 / 2	2 / 2

Type	E134
Execution	Outlet box
Item no.	7350098
SU / CB / PL	25 / 300 / 6.000
Milling hole	Ø 35 mm
Depth	45 mm
max. Cross section	2,5 mm <sup>2</sup>
Panel thickness	5 - 25 mm
Material	PP
Cable entry 3x 1,5 <sup>2</sup>	1
Accessories	incl. cover



## Hollow wall distribution box



Type	E116
Execution	Distribution box
Item no.	7350033
SU / CB / PL	1 / 80 / 1.600
H x W x D	105 x 105 x 45 mm
max. Cross section	4 mm <sup>2</sup>
Material	PP
Cable entry 3x 1,5 <sup>2</sup>	8
Tube insertion M16 / M20	4
Conduit entry M20	4
Accessories	incl. screw lid

## Hollow wall connection socket

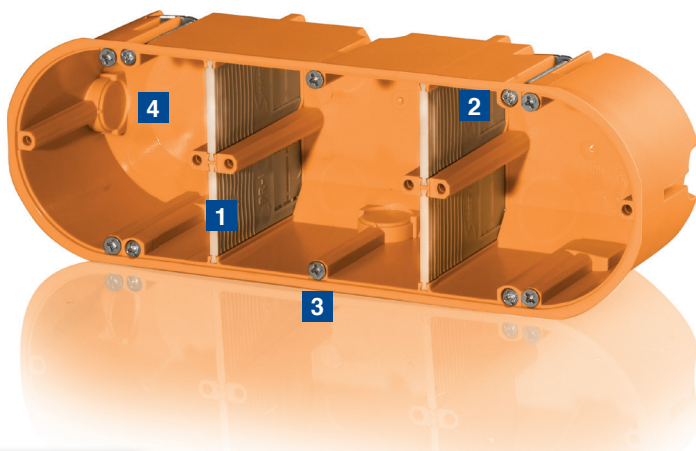


Type	E119	E815
Execution	Connection socket	Connection socket
Item no.	7350043	7350046
SU / CB / PL	10 / 200 / 4.000	20 / 20 / 1.280
Milling hole	Ø 74 mm	Ø 120 mm
Panel thickness	5 - 40	5 - 40
Depth	50 mm	65 mm
max. Cross section	2,5 mm <sup>2</sup>	4 mm <sup>2</sup>
Material	PP	PP
Cable entry 3x 1,5 <sup>2</sup>	4	12
5x 1,5 <sup>2</sup> / 3x 2,5 <sup>2</sup>	-	12
7x 1,5 <sup>2</sup> / 5x 2,5 <sup>2</sup>	-	-
Tube insertion M20 / M25	4	2 / 2
Accessories	incl. screw lid	incl. screw lid

optional accessory from page 54

# Versatile applications

## Solid installation



- Extremely solid material, high wall thickness
- Flexible installation with variable partitions
- With break-outs for easy insertion of cables
- Flame retardant to 960°C



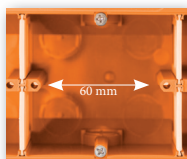
### 1 Divider

Individually removable dividers for separation of circuits.



### 2 Grommet

Break-out cable entry for orderly cable insertion into the socket box.



### 3 Standard distance

The standard distance of 60 mm is maintained, thanks to the design.



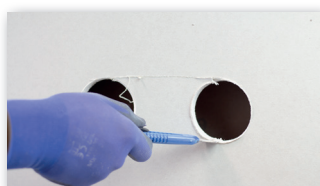
### 4 Marking pin

By pressing the socket box onto the plasterboard, marking of the outer milling holes occurs.

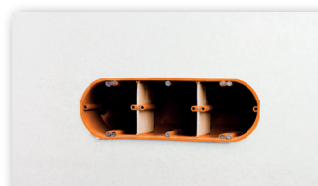
## Assembly instructions



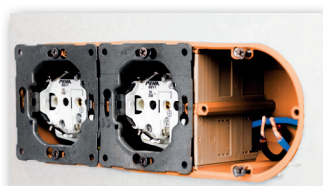
- 1 Mark centring points by pressing the pins.



- 2 With mill bit Ø 68 mm cut, make the two outer holes and cut out the centre piece using a cutter or jigsaw.

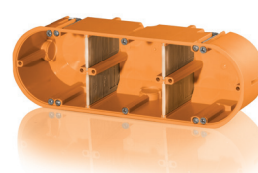
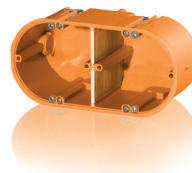
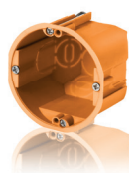


- 3 Insert box and secure it with screws.

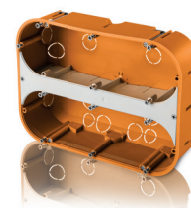
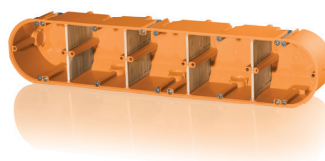
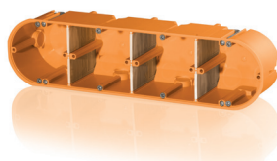


- 4 Socket box offers high flexibility from variable partitions and extra wiring space.





Type	HW10	HW20	HW30
Execution	Device socket, 1-fold	Device socket, 2-fold	Device socket, 3-fold
Item no.	7350061	7350062	7350063
SU / CB / PL	20 / 240 / 4.800	10 / 90 / 1.800	5 / 50 / 1.000
H x W x D	Ø 68 x 63 mm	68 x 139 x 63 mm	68 x 210 x 63 mm
Panel thickness	3 - 38 mm	3 - 38 mm	3 - 38 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PA6	PA6	PA6
Tube insertion M16 / M20	- / 4	- / 6	2 / 8



Type	HW40	HW50	HW60
Execution	Device socket, 4-fold	Device socket, 5-fold	Device socket, 6-fold
Item no.	7350064	7350065	7350093
SU / CB / PL	5 / 40 / 800	5 / 35 / 700	1 / 30 / 600
H x W x D	68 x 281 x 63 mm	68 x 352 x 63 mm	152 x 210 x 63 mm
Panel thickness	3 - 38 mm	3 - 38 mm	3 - 38 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PA6	PA6	PA6
Tube insertion M16 / M20	4 / 10	4 / 12	4 / 12



Type	HWD1	HWD2	PAQ	PAH
Execution	Cover, semi-circular	Cover, square	Plaster compensation, square	Plaster compensation, semi-circular
Item no.	7390057	7390058	7390089	7390090
SU / CB / PL	50 / 1.000 / 48.000	50 / 1.000 / 48.000	15 / 420 / 8.400	10 / 440 / 8.800
Depth	-	-	30 mm	30 mm
Material	PS	PS	PS	PS

Socket boxes

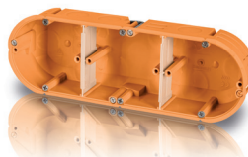
Fire protection

Fastening systems

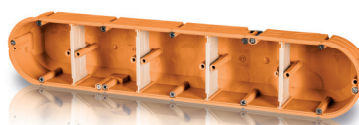
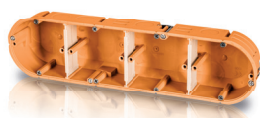
Distributors

Meter cabinets

Meter connection columns



Type	HW20F	HW30F
Execution	Device socket, 2-fold	Appliance socket, 3-fold
Item no.	7350153	7350154
SU / CB / PL	10 / 90 / 1.800	5 / 50 / 1.000
H x W x D	68 x 139 x 45 mm	68 x 210 x 45 mm
Panel thickness	3 - 20 mm	3 - 20 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PA6	PA6
Tube insertion M20 / M25	8 / 2	12 / 4



Type	HW40F	HW50F
Execution	Device socket, 4-fold	Device socket, 5-fold
Item no.	7350155	7350156
SU / CB / PL	5 / 40 / 800	5 / 35 / 700
H x W x D	68 x 281 x 45 mm	68 x 352 x 45 mm
Panel thickness	3 - 20 mm	3 - 20 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PA6	PA6
Tube insertion M20 / M25	16 / 6	20 / 8



Type	HWD1	HWD2	PAQ	PAH
Execution	Cover, semi-circular	Cover, square	Plaster compensation, square	Plaster compensation, semi-circular
Item no.	7390057	7390058	7390089	7390090
SU / CB / PL	50 / 1.000 / 48.000	50 / 1.000 / 48.000	15 / 420 / 8.400	10 / 440 / 8.800
Depth	-	-	30 mm	30 mm
Material	PS	PS	PS	PS





## Still looking for cables?

With f-fix, time-consuming searching belongs to the past.

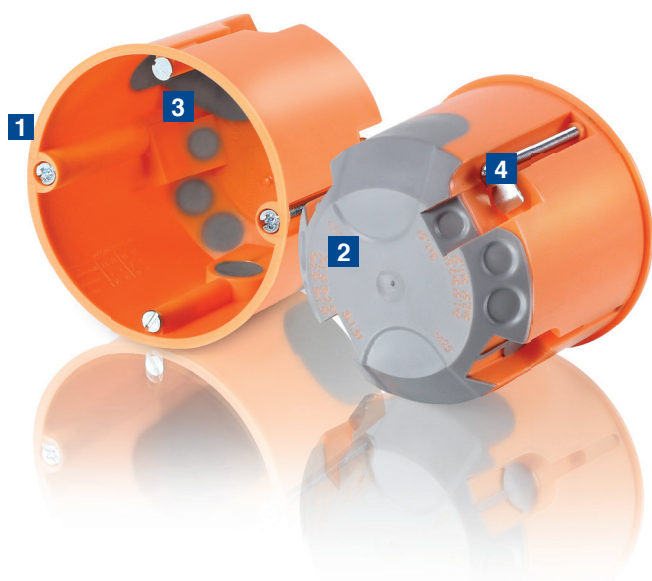


More from page 113



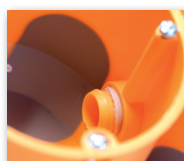
# Guaranteed airtight for any application

- Airtight from 2K -Membrane technology
- Easy to install, due to tool-free cable and conduit insertion
- Integrated conduit support for NYM cables
- Secure fixing of tubes
- Incl. airtight E105 or E105HF connection ports



## 1 Labelling

The overleaf mounted cable and pipe insertion labelling acts through the flexible membrane component and is thus recognisable, even after being exposed to great mechanical stress.



## 2 Airtight through-wiring

The connection port enables guaranteed airtight through-wiring by means of wiring connecting pieces.



## 3 Variable inserts

All airtight accessory connection sockets have a deep-drawn tube inlet, which allows a variable supply line with entrance angles of 90°, enabling an opposing mounting to the wall.

optional accessory from page 54



Type	E2700	E2700HF	E3700	E3700HF
Execution	Device socket	Device socket, halogen-free	Device connection socket	Device connection socket, halogen-free
Item no.	7360028	7360047	7360027	7360048
SU / CB / PL	25 / 300 / 6.000	25 / 300 / 6.000	25 / 400 / 4.800	25 / 400 / 4.800
Milling hole	Ø 68 mm	Ø 68 mm	Ø 68 mm	Ø 68 mm
Panel thickness	5 - 40 mm	5 - 40 mm	5 - 40 mm	5 - 40 mm
Depth	47 mm	47 mm	61 mm	61 mm
max. Cross section	2,5 mm²	2,5 mm²	2,5 mm²	2,5 mm²
Material	PP / TPE	PP / TPE	PP / TPE	PP / TPE
Cable insertion 3x 1,5²	2	2	2	2
5x 1,5² / 3x 2,5²	2	2	2	2
7x 1,5² / 5x 2,5²	-	-	2	2
Tube insertion ≤ M25	2	2	2	2
Accessories	per SU incl. 5x E105	per SU incl. 5x E105HF	per SU incl. 5x E105	per SU incl. 5x E105HF

## Hollow wall connection socket, airtight



- Airtight from 2C-Membrane technology
- Easy to install, due to tool-free cable and conduit insertions
- Integrated conduit support for NYM cables
- Secure fixing of tubes
- Certified by ÖVE



Type	E816
Execution	Connection socket
Item no.	7360016
SU / CB / PL	20 / 20 / 1.280
Milling hole	Ø 120 mm
Panel thickness	5 - 40 mm
Depth	65 mm
max. Cross section	4 mm²
Material	PP / TPE
Cable entry 3x 1.5²	12
5x 1.5² / 3x 2.5²	12
7x 1.5² / 5x 2.5²	6
Tube insertion M20 / M25	2 / 2
Accessories	incl. screw lid

optional accessory from page 54





# The specialist for your IT applications

- Compliance with bending radii for network and data lines
- Combinable
- 3x cable entry
- Guaranteed airtight
- Milling hole Ø 68 mm



## 1 Uncomplicated installation

Easy one-hole mounting in a standard milling hole diameter of Ø 68 mm and 2k-Membrane technology.



## 2 DIN-compliant

The special design avoids bending of the pipe over the radius, which ensures loss-less data transmission.



## 3 Combinable with 3-sides

By an offset arrangement of the fastening screws, the LAN socket can be on three sides with all hollow wall boxes, having a 71 mm standard distance, combinable as desired.



## 4 Airtight

Thanks to 2K-Membrane technology that allows for easy insertion, the LAN socket box is guaranteed to be airtight.



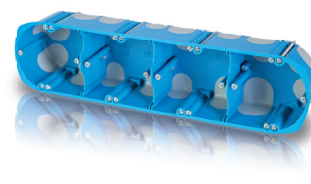
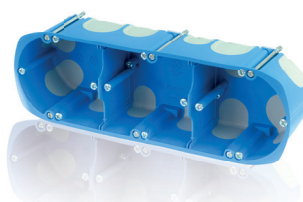
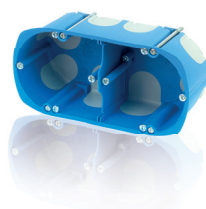
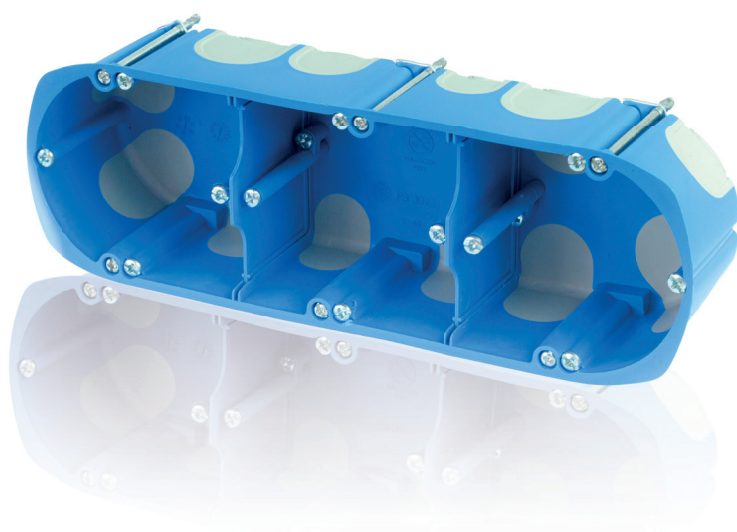
Type	E5100	E5100HF
Execution	LAN socket	LAN socket, halogen-free
Item no.	7360051	7360055
SU / CB / PL	10 / 200 / 4.000	10 / 200 / 4.000
Milling hole	Ø 68 mm	Ø 68 mm
Panel thickness	5 - 25 mm	5 - 25 mm
Depth	60 mm	60 mm
Material	PP / TPE	PP / TPE
Network line cable entry	2	2
Duplex cable	1	1

optional accessory from page 54

# Large construction

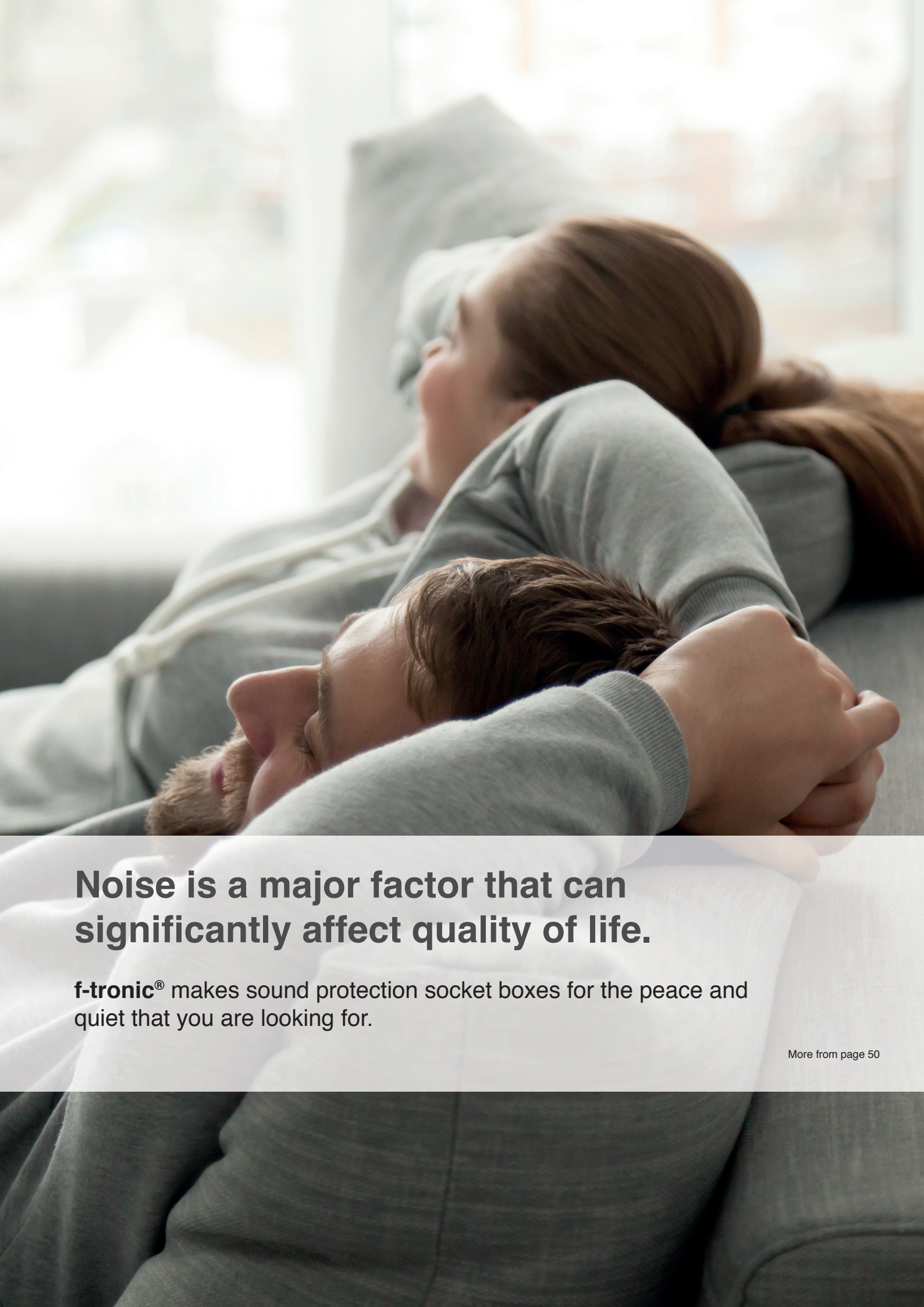
## Airtight installation

- Airtight from 2K-Membrane technology
- Easy to install, due to tool-free conduit insertions
- Removable dividers



Type	HW202K	HW302K	HW402K
Execution	Device socket box	Device socket box	Device socket box
Item no.	7360063	7360064	7360065
SU / CB / PL	10 / 90 / 1.800	5 / 50 / 1.000	5 / 40 / 800
H x W x D	68 x 139 x 50 mm	68 x 210 x 50 mm	68 x 281 x 50 mm
Panel thickness	5 - 40 mm	5 - 40 mm	5 - 40 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PP / TPE	PP / TPE	PP / TPE
Pipe M16	1	3	5
Conduit entry M20	2	2	2
Tube insertion M16 / M20	2	4	6
Tube insertion M20 / M25	3	3	3



A photograph of a man and a woman sleeping peacefully on a grey sofa. The man is in the foreground, with his head resting on his hand, looking towards the left. The woman is behind him, also sleeping. They are both wearing light blue or grey sweatshirts. The background is a bright, out-of-focus window showing a cityscape. The overall mood is calm and serene.

**Noise is a major factor that can significantly affect quality of life.**

**f-tronic®** makes sound protection socket boxes for the peace and quiet that you are looking for.

More from page 50



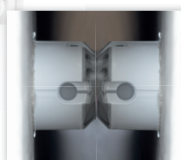
# Relaxing and providing privacy

- Sound-absorbing function of the wall remains intact
- Subsequent installation possible
- Airtight from 2K-Membrane technology
- 4 cable entries
- 2x M25 conduit entries
- Installation of up to 5-fold combinations possible
- Opposing installation from 120 mm wall thickness possible



## 1 Optimised material thickness

Optimised material thickness provides the sound insulation box with superior sound protection properties.



## 2 Opposing installation

From a wall thickness of 120 mm, an opposed shoring without loss of acoustic insulation properties is also possible.



## 3 Standard milling hole

Designed so that in spite of increased material thickness, it keeps the set of the standard interior space at a standard milling hole diameter of Ø 68 mm.



## 4 Tool-free insertion

The 2K-Membrane technology of insertions is designed so that simple and tool-free insertion is possible, despite increased material thickness. The socket box is thereby not only airtight, but the sound insulation properties are maintained as well!



HALOGEN  
FREE

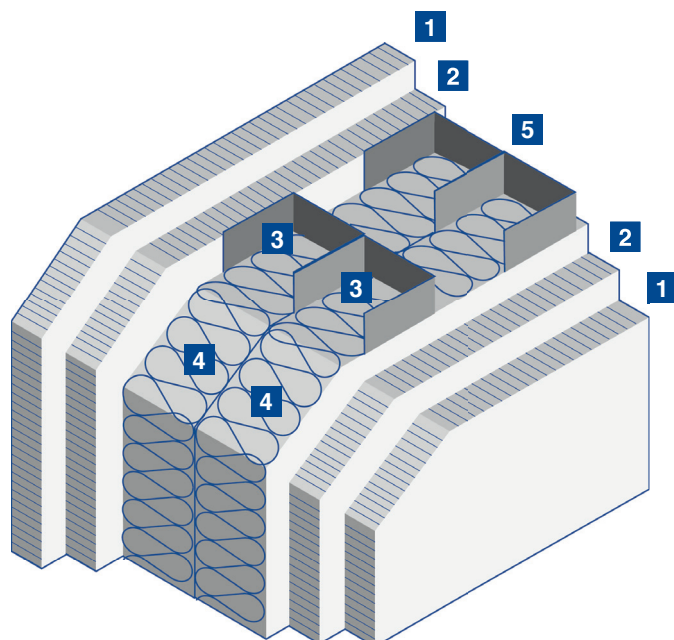


Type	SP3700	SP3700HF
Execution	Sound protection socket	Sound protection socket, halogen-free
Item no.	7520001	7520002
SU / CB / PL	10 / 200 / 4.000	10 / 200 / 4.000
Milling hole	Ø 68 mm	Ø 68 mm
Panel thickness	5 - 40 mm	5 - 40 mm
Depth	58 mm	58 mm
Material	PP / TPE	PP / TPE
Cable entry 3x 1,5 <sup>2</sup>	2	2
5x 1,5 <sup>2</sup> / 3x 2,5 <sup>2</sup>	2	2
Tube insertion ≤ M25	2	2

optional accessory from page 54

## Sound protection in accordance with ISO 10140 when wall mounted

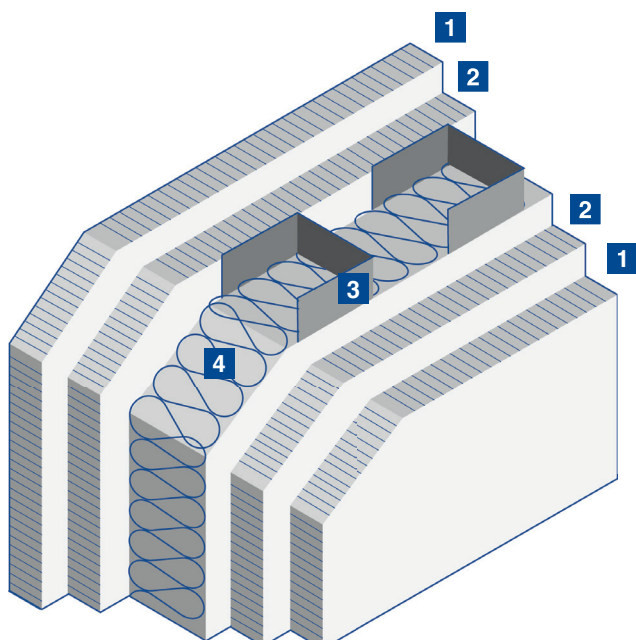
### Total wall thickness 155 mm



- 1** GKP 12,5 mm
- 2** GKP 12,5 mm
- 3** 2x CW profile 50 mm
- 4** 2x insulation 40 mm
- 5** Profile distance 5 mm

Sound reduction index without socket boxes: **63dB**  
Sound reduction index with **f-tronic® SP3700**: **63dB**

### Total wall thickness 100 mm



- 1** GKP 12,5 mm
- 2** GKP 12,5 mm
- 3** CW profile 50 mm
- 4** Insulation 40 mm

Sound reduction index without socket boxes: **55dB**  
Sound reduction index with **f-tronic® SP3700**: **55dB**

## The triathlete among socket boxes



Type	BS2000	BS2700	BS3500	BS3700
Execution	Device socket	Device socket	Device connection socket	Device connection socket
Item no.	7500045	7500042	7500044	7500043
SU / CB / PL	10 / 250 / 4.000	10 / 250 / 4.000	10 / 200 / 3.200	10 / 200 / 3.200
Milling hole	Ø 68 mm	Ø 68 mm	Ø 68 mm	Ø 68 mm
Panel thickness	5 - 40 mm	5 - 40 mm	5 - 40 mm	5 - 40 mm
Depth	50 mm	50 mm	62 mm	62 mm
max. Cross section	2,5 mm²	2,5 mm²	2,5 mm²	2,5 mm²
Material	PP / TPE-S	PP / TPE-S	PP / TPE-S	PP / TPE-S
Cable entry 3 x 1,5²	-	2	-	2
5 x 1,5² / 3 x 2,5²	-	2	-	2
Tube insertion	4x ≤ M20	2x ≤ M25	4x ≤ M20	2x ≤ M25
Accessories	per SU incl. 5x E105HF	per SU incl. 5x E105HF	per SU incl. 5x E105HF	per SU incl. 5x E105HF

more from page 92



Type	BS115	BS117	BS118
Execution	Device socket	Device connection socket	Double device connection socket
Item no.	7500001	7500002	7500003
SU / CB / PL	12 / 192 / 3.744	12 / 192 / 3.744	6 / 96 / 1.584
Milling hole	Ø 74 mm	Ø 74 mm	2 x Ø 74 mm
Panel thickness	25 - 40 mm	25 - 40 mm	25 - 40 mm
Depth	45 mm	54 mm	54 mm
max. Cross section	2,5 mm²	2,5 mm²	2,5 mm²
Material	SAFE 90	SAFE 90	SAFE 90
Cable entry	2 to Ø 14,4 mm	2 to Ø 11,6 mm	4 to Ø 11,6 mm
Conduit entry M20	-	4	-



more from page 94





**Constructional fire protection  
can save lives.**

Our fire protection range can be found starting on page 90.



- Suitable for low-voltage recessed spotlights: NV LED and NV halogen
- Lights height max. 67 mm
- 2 side flaps for spring clip
- For lamps to 35W
- No cool beam lamps

Type	LEG1	LEG2
Execution	Light installation housing	Light installation housing
Item no.	7380001	7380002
SU / CB / PL	10 / 340 / 2.720	10 / 300 / 2.400
Depth	70 mm	70 mm
Ceiling cut	Ø 68 mm	Ø 73 mm
Material	silicone	silicone



Video


**Light installation housing - high-voltage**

- Suitable for high-voltage recessed spotlights: HV LED and HV halogen
- Suitable for low-voltage recessed spotlights: NV LED and NV halogen
- 2 side flaps for spring clips, length 50 mm, width 26 mm
- Suitable for LEDs, energy-saving bulbs

Type	LEG-H3
Execution	Light housing for high-voltage Halogen recessed spotlights
Item no.	7380003
SU / CB / PL	10 / 300 / 2.400
Depth	100 mm
Ceiling cut	Ø 68 mm
Material	silicone



Video


**Luminaire housing - airtight**

- Suitable for low-voltage recessed spotlights: NV LED and NV halogen
- Absolutely airtight
- Quick mounting technology
- No cool beam lamps

Type	LEG WD4
Execution	Light installation housing, airtight
Item no.	7380004
SU / CB / PL	10 / 300 / 2.400
Depth	65 mm
Ceiling cut	Ø 68 mm
Inner diameter	Ø 60 mm
Material	silicone



**f-tronic®**  
installing i





- For all flexible insulating tubes
- Airtight, retrofittable
- Ingenious, simple, reliable



Type	E06	E07	E08	E09	E10
Execution	Sealing plug M16	Sealing plug M20	Sealing plug M25	Sealing plug M32	Sealing plug M40
Item no.	9930014	9930015	9930016	9930017	9930018
SU / CB / PL	50 / 6.000 / 192.000	50 / 5.000 / 100.000	50 / 4.500 / 90.000	50 / 1.500 / 24.000	50 / 1.000 / 24.000
Pipe diameter interior	Ø 11 mm	Ø 15 mm	Ø 19,5 mm	Ø 25 mm	Ø 31,5 mm
Pipe diameter exterior	Ø 16 mm	Ø 20 mm	Ø 25 mm	Ø 32 mm	Ø 40 mm
max. Cable diameter	Ø 6 mm	Ø 10 mm	Ø 14 mm	Ø 18 mm	Ø 25 mm
Material	TPE	TPE	TPE	TPE	TPE



Type	E120	E121	E122
Execution	Signal cover	Signal cover	Signal cover, Austria
Item no.	7390024	7390026	7390027
SU / CB / PL	50 / 1.500 / 30.000	50 / 1.000 / 20.000	50 / 1.000 / 20.000
suitable for	FM socket boxes with screw spacing 60 mm	FM connection socket with screw spacing 70 mm	E810, E811
Material	PE	PE	PE

- For easy retrieval of device and connection sockets after plastering
- Reusable
- Protects the socket box interior, the screw and bolt heads upon plastering

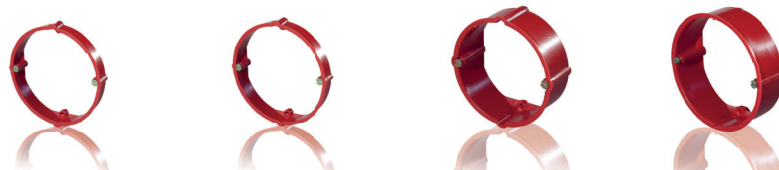


Type	SEG50	SEG-ES51
Execution	Line retrieval device	Replacement cord
Item no.	7390071	7390072
SU / CB / PL	1 / 1 / 20	10 / 10 / 84

- Delivered with accessories in a practical case
- Robust, impact-resistant plastic version
- For tubes Ø interior 16 - 50 mm
- To 300 m installation length
- Useful for buckled pipes and flexible pipes
- Dual function for blowing and sucking

## Plaster compensation ring

- To compensate for deep-seated appliance and junction boxes
- With preassembled device screws (length 15 mm)
- Plaster compensation rings with the same diameter can be mounted to each other



Type	E130	E131	E132	E133
Execution	Plaster compensation ring	Plaster compensation ring	Plaster compensation ring	Plaster compensation ring
Item no.	7390028	7390032	7390033	7390035
SU / CB / PL	50 / 1.200 / 24.000	50 / 1.000 / 20.000	50 / 500 / 10.000	50 / 400 / 8.000
suitable for	FM socket boxes with screw spacing 60 mm	FM junction boxes with screw spacing 70 mm	FM socket boxes with a screw distance of 60 mm	FM junction boxes with screw spacing 70 mm
Depth	12 mm	12 mm	24 mm	24 mm
Material	PS	PS	PS	PS

## Nail tab

- Can be combined due to its unique plug-in system with each flush socket box from the **f-tronic®** range
- Nail straps for fitting providing more flexibility during installation
- Saves on stock duplication



Type	E104
Execution	Nail tab
Item no.	7390069
SU / CB / PL	50 / 1.000 / 48.000
suitable for	FM socket boxes E106M25, E107M25, E1062K, E1072K
Length	45 mm
Material	PS

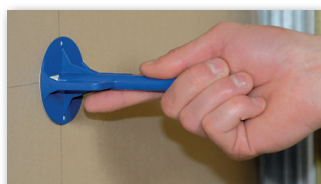


## Enormous time savings

No more searching for lines

- Safe retrieval of pipes with closed walls
- Centring the bore to set the installation boxes
- No superfluous insulation removal
- No damage from exploration of cavity walls, C-sections and insulating materials
- For combinations, only one line carrier must be adhered to, other socket boxes can be drilled using the drilling template

### Assembly instructions



**1** Bonding the line carrier to the rear of the first planking.



**2** Pulling through of cables or pipes. You will be amazed by the enormous staying power of the adhesive disc.



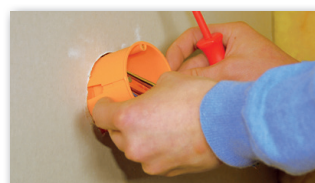
**3** The drywall builder strikes out a hole with a hammer and can get through to the central mandrel, this serves as centring for the drill bit.



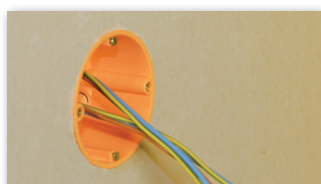
**4** Without re-measuring the specific site, you can mill the hole.



**5** Remove the cable carrier and cables from the wall.



**6** Without having to search for lines you can mount the cavity wall socket box.



**7** Installation complete - quick and easy.



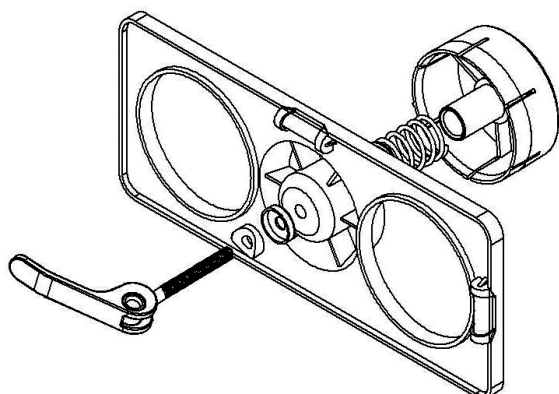
**8** Can also be used as a collecting holder in suspended ceilings. No drilling, just stick on and go.

Type	HWLT1	KDKS
Execution	Line carrier incl. Adhesive disc	Adhesive disc
Item no.	7390049	7390074
SU / CB / PL	50 / 50 / 5.600	25 / 500 / 56.000
Material	PP	PP





## Drilling template



Type	<b>BOS2</b>
Execution	Drilling template for HW socket boxes
Item no.	<b>7390048</b>
SU / CB / PL	1 / 42 / 840
Material	PP

- Straight and precise
- Faster and more accurate work
- Any combination is possible

## Assembly instructions



**1** Drilling of the centre hole.



**2** Precise alignment using the integrated spirit level.



**3** Then drill through the existing hole inserts.



**4** Attach the drilling template with the tensioner.



**5** Inserting the template.



Type	E152 / 15	E152 / 25	E152 / 40
Execution	Device screw	Device screw	Device screw
Item no.	9920005	9920007	9920009
SU / CB / PL	100 / 20.000 / 480.000	100 / 15.000 / 100.000	100 / 10.000 / 240.000
Dimensions	3,2 x 15 mm	3,2 x 25 mm	3,2 x 40 mm
Head shape	Slot	Slot	Slot
Material	Steel	Steel	Steel



Type	E112H	E109A	E109
Execution	Screw lid	Pen-in lid spring	Pen-in lid spring
Item no.	7390022	7390016	7390015
SU / CB / PL	50 / 1.000 / 32.000	50 / 1.000 / 20.000	50 / 800 / 16.000
suitable for	socket boxes with spacing for screws 60 and 70 mm	FM socket boxes with screw spacing 60 mm	FM connection socket boxes with screw distance 60 and 70 mm
Accessories	Incl. 2 screws	-	-
Material	PS	PS	PS



Type	E817	E551
Execution	Partition wall	Partition wall
Item no.	7390112	7390120
SU / CB / PL	10 / 1.000 / -	10 / 1.000 / -
suitable for	E815 / E816	E550
Material	PS	PP

## Connecting pieces



Type	E105	E105HF
Execution	Connecting pieces	Connecting pieces, halogen-free
Item no.	7390075	7390091
SU / CB / PL	25 / 500 / 160.000	50 / 5.000 / 100.000
suitable for	airtight seals HW socket boxes E2700, E3700, SP3700	halogen-free, airtight HW socket boxes E2700HF, E3700HF, SP3700HF, BS3700, BS2500, BS3500, BS2700
Material	PP	PP

Socket boxes

Fire protection

## Pipe sleeve and folding sleeve



Type	RM20	RM25	RM32	B920	B925
Execution	Pipe sleeve	Pipe sleeve	Pipe sleeve	Folding sleeve	Folding sleeve
Item no.	7400032	7400033	7400034	7400025	7400026
SU / CB / PL	25 / 300 / 21.600	25 / 250 / 18.000	25 / 150 / 10.800	50 / 50 / 21.600	40 / 40 / 17.280
suitable for	M20	M25	M32	M20	M25
Material	PP	PP	PP	PP	PP

Fastening systems

Distributors

## Sealing nipple



Type	ADN1632
Execution	Sealing nipple
Item no.	7390116
SU / CB / PL	20 / 20 / -
suitable for	Pipe M16 - M32
Material	TPE

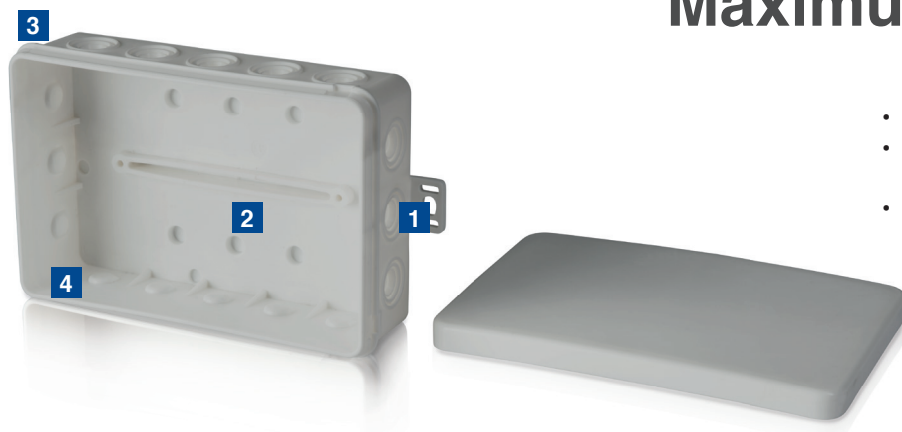
Meter cabinets

Meter connection columns



# Maximum wiring space

## Maximum variability



- Easy to install
- Having up to 12 self-sealing cut-off cable entries for cables up to 5 x 2,5 mm<sup>2</sup>
- External mounting straps with transverse and longitudinal holes for subsequent alignment



### 1 Mounting tab

With transverse and longitudinal holes for subsequent alignment and fixation with cable ties.



### 2 Insertion

Flexible cable entry options to the side and on the ground.



### 3 Protection class IP54

The distribution box series meets the requirements of protection class IP54.



### 4 Stability

Stable housing and reinforced lid counteract slight twisting.



Type	E126	E126W	E126K	E125
Execution	Distribution box	Distribution box	Distribution box	Distribution box
Item no.	7340141	7340058	7340142	7340139
SU / CB / PL	10 / 300 / 6.000	10 / 300 / 6.000	10 / 300 / 6.000	10 / 200 / 4.000
H x W x D	85 x 44 x 40 mm	85 x 44 x 40 mm	85 x 44 x 40 mm	75 x 75 x 40 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PE	PE	PE	PE
Total inserts	12	12	12	15
Inserts at the side	2	10	10	12
Ground inserts	2	2	2	3
Colour	grey	white	grey	grey



Type	E125K	E113	E113W	E113GN
Execution	Distribution box	Distribution box	Distribution box	Distribution box
Item no.	7340140	7340038	7340043	7340110
SU / CB / PL	10 / 200 / 4.000	10 / 150 / 3.000	10 / 150 / 3.000	10 / 150 / 3.000
H x W x D	75 x 75 x 40 mm	85 x 85 x 40 mm	85 x 85 x 40 mm	85 x 85 x 40 mm
max. Cross section	2,5 mm²	2,5 mm²	2,5 mm²	2,5 mm²
Material	PE	PE	PE	PE
Total inserts	15	15	15	15
Inserts at the side	12	12	12	12
Ground inserts	3	3	3	3
Colour	grey	grey	white	green



Type	E113R	E113S	E114	E128	E128W
Execution	Distribution box	Distribution box	Distribution box	Distribution box	Distribution box
Item no.	7340111	7340134	7340044	7340149	7340154
SU / CB / PL	10 / 150 / 3.000	10 / 150 / 3.000	10 / 100 / 2.000	5 / 100 / 5.000	5 / 100 / 5.000
H x W x D	85 x 85 x 40 mm	85 x 85 x 40 mm	100 x 100 x 40 mm	134 x 89 x 40 mm	134 x 89 x 40 mm
max. Cross section	2,5 mm²	2,5 mm²	2,5 mm²	2,5 mm²	2,5 mm²
Material	PE	PE	PE / PP	PE	PE
Total inserts	15	15	12	22	22
Inserts at the side	12	12	12	16	16
Ground inserts	3	3	-	6	6
Colour	red	black	grey	grey	white

## Insertion cutter

- Defined opening of cable entries
- Easy to use
- Ergonomic design



Type	f-cutter
Execution	Insertion cutter
Item no.	7390109
SU / CB / PL	10 / 200 / -
Material	PC

# Easy to use

## Stable execution

- Easy to install
- Easy to use - no need for expensive, additional tools
- With integrated push-out membranes on all four sides
- With back membrane introduction lines of up to 5x 2,5 mm<sup>2</sup>
- Version with and without fixing straps



### 1 Mounting tab

With transverse and longitudinal holes for subsequent alignment and fixation with cable ties.



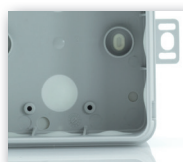
### 2 Floor entry

Two floor entries for cables up to Ø 14 mm.



### 3 Internal fixing

Versatile mounting options; with screws also from the inside.



### 4 No tools required and stable

Tool-free entering and increased stability makes installation particularly convenient.





Type	E1200	E1200w	E1200sw	E1200rt	E1200gn
Execution	Distribution box	Distribution box	Distribution box	Distribution box	Distribution box
Item no.	7340157	7340158	7340165	7340163	7340164
SU / CB / PL	10 / 180 / 3.600	10 / 180 / 3.600	10 / 180 / 3.600	10 / 180 / 3.600	10 / 180 / 3.600
H x W x D	80 x 80 x 37 mm	80 x 80 x 37 mm	80 x 80 x 37 mm	80 x 80 x 37 mm	80 x 80 x 37 mm
max. Cross section	2,5 mm²	2,5 mm²	2,5 mm²	2,5 mm²	2,5 mm²
Material	PP / TPE	PP / TPE	PP / TPE	PP / TPE	PP / TPE
Insertion	2	2	2	2	2
7x 1,5² / 5x 2,5²	12	12	12	12	12
Colour	grey	white	black	red	green
Mounting tab	•	•	•	•	•

Socket boxes

Fire protection

Fastening systems



Type	E1210	E1210w	E1210sw	E1210rt	E1210gn
Execution	Distribution box	Distribution box	Distribution box	Distribution box	Distribution box
Item no.	7340159	7340160	7340168	7340166	7340167
SU / CB / PL	10 / 180 / 3.600	10 / 180 / 3.600	10 / 180 / 3.600	10 / 180 / 3.600	10 / 180 / 3.600
H x W x D	80 x 80 x 37 mm	80 x 80 x 37 mm	80 x 80 x 37 mm	80 x 80 x 37 mm	80 x 80 x 37 mm
max. Cross section	2,5 mm²	2,5 mm²	2,5 mm²	2,5 mm²	2,5 mm²
Material	PP / TPE	PP / TPE	PP / TPE	PP / TPE	PP / TPE
Insertion	2	2	2	2	2
7x 1,5² / 5x 2,5²	12	12	12	12	12
Colour	grey	white	black	red	green
Mounting tab	-	-	-	-	-
Accessories (incl.)	2x insulating seals	2x insulating seals	2x insulating seals	2x insulating seals	2x insulating seals

Distributors

Meter cabinets

Meter connection columns



Type	E830	E831	E832	E833	E834
Execution	floor-mounted Cable trunking box	suspended Cable trunking box	clamping Cable trunking box	clamping Cable trunking box	suspended Cable trunking box
Item no.	7370008	7370037	7370038	7370039	7370040
SU / CB / PL	20 / 200 / 4.000	20 / 200 / 4.000	20 / 200 / 4.000	10 / 100 / 2.000	10 / 100 / 2.000
H x W x D	68 x 68 x 47 mm	68 x 68 x 47 mm	68 x 68 x 47 mm	68 x 142 x 47 mm	68 x 142 x 47 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PP	PP	PP	PP	PP
Insertions	4	4	4	4	4
Suitable for B-Line trunking	•	-	-	-	-
Rehau Signo BK, BS, BA	-	•	-	-	•
Certain Wall trunking	-	•	-	-	•
Licitec installation trunking BR	-	•	-	-	•
Licitec installation duct BRS-F	-	-	•	•	-



- Made of impact-resistant plastic
- Base with pre-creased line outlets
- Incl. 2-piece strain relief
- Cover with quick-close

Type	DB1W	DB1B
Execution	Branch canopy	Branch canopy
Item no.	7330006	7330004
SU / CB / PL	1 / 100 / 6.000	1 / 100 / 6.000
Diameter	Ø 75 mm	Ø 75 mm
Outer depth	23,5 mm	23,5 mm
Interior depth	21 mm	21 mm
max. Cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PS	PS
Insertions	1	1
Accessories	incl. 2-piece strain relief	incl. 2-piece strain relief
Colour	white	brown

# For stringent requirements and severe operating conditions

- High resistance to breakage
- With pre-punched cable entries
- With double membrane seals (IP54)
- Lid with stainless steel screws
- Insulating and sealing plugs enclosed



Type	FK110	FK111	FK210	FK211
Execution	Distribution box	Distribution box	Distribution box	Distribution box
Item no.	7340060	7340061	7340063	7340064
SU / CB / PL	1 / 70 / 2.240	1 / 70 / 2.240	1 / 30 / 960	1 / 30 / 960
H x W x D	80 x 80 x 63 mm	80 x 80 x 63 mm	110 x 110 x 67 mm	110 x 110 x 67 mm
max. Cross section	4 mm <sup>2</sup>	4 mm <sup>2</sup>	6 mm <sup>2</sup>	6 mm <sup>2</sup>
Material	PS	PS	PS	PS
Entry M20	7	7	2	2
M20 / M25	-	-	- / 7	- / 7
M25 / M32	-	-	-	-
M25 / M32 / M40	-	-	-	-
Colour	grey	white	grey	white



Type	FK310	FK311	FK410	FK411
Execution	Distribution box	Distribution box	Distribution box	Distribution box
Item no.	7340066	7340067	7340069	7340070
SU / CB / PL	1 / 24 / 768	1 / 24 / 768	1 / 12 / 384	1 / 12 / 384
H x W x D	140 x 140 x 79 mm	140 x 140 x 79 mm	180 x 180 x 91 mm	180 x 180 x 91 mm
max. Cross section	10 mm <sup>2</sup>	10 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>
Material	PS	PS	PS	PS
Entry M20	2	2	2	2
M20 / M25	5	5	-	-
M25 / M32	5	5	7	7
M25 / M32 / M40	-	-	2	2
Colour	grey	white	grey	white

Socket boxes

Fire protection

Fastening systems

Distributors

Meter cabinets

Meter connection columns



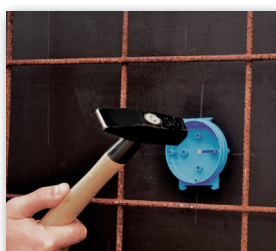
# The professional's time-saver

## with quick-fix technology

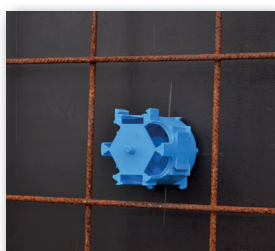


- Mount M20 / M25 pipes toollessly
- Combination distance 71 mm
- Owing to the quick-fix technology, no reworking and cutting of the tubes is necessary
- More terminal space
- Mounting for ceiling hook

### Assembly instructions



- 1** Attach device cover or lamp outlet lid with nails to the formwork.



- 2** Press on the socket body on the cover.



- 3** Close unneeded openings with slide.



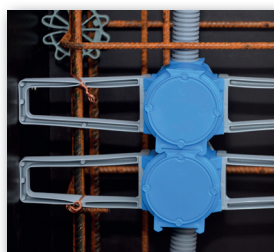
- 4** Insert tube with quick-fix slide and close.



- 5** Done, absolutely secure strain relief!



- 6** In this case, no pipes need be cut off. Extremely high time savings - absolutely tight!



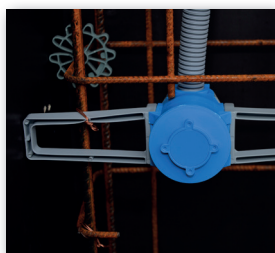
- 7** Simply turn assembly with wings for different concrete covers.



- 8** For different concrete covers, simply turn wing.



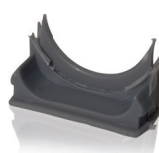
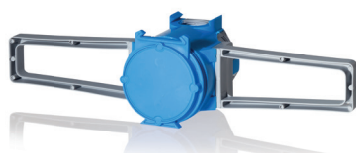
- 9** Installation as ceiling box with clamp room and reception for ceiling hooks.



- 10** Also called luminaire outlet socket box with outlet Ø 35 mm.



Type	B150	B155
Execution	Device socket	Luminaire socket box
Item no.	7400030	7400031
SU / CB / PL	50 / 100 / 2.400	50 / 100 / 2.400
Depth	84 mm	84 mm
Screw spacing	60 mm	-
Outlet	-	Ø 35 mm
Material	PP	PP
Tube insertion M20 / M25	6	6
Accessories (incl.)	Slide 2x M25, 2x M20, 4x closed	Slide 2x M25, 2x M20, 4x closed



Type	B1300	B1000	B1050	B1100
Execution	Wing	M25 slide open	M20 slide open	Slide closed
Item no.	7400006	7400016	7400017	7400018
SU / CB / PL	50 / 250 / 9.000	100 / 2.000 / 80.000	100 / 2.000 / 80.000	100 / 2.000 / 80.000
suitable for	B150 / B155 / B400	B150 / B155	B150 / B155	B150 / B155



Video

Socket boxes

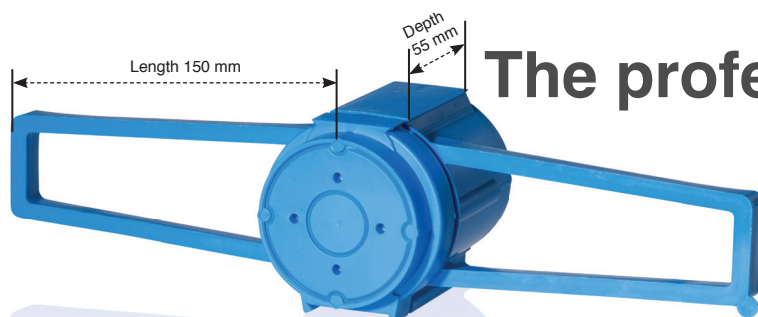
Fire protection

Fastening systems

Distributors

Meter cabinets

Meter connection columns



# The professional's time-saver

## with fixed connection

- Time-saving mounting
- Combinable with deep concrete socket box
- Deep and shallow design

### Assembly instructions



**1** Drill pipe holes.



**2** Insert pipes.



**3** Press on socket box lid.



**4** Allow the wings simply to cue up at the door formwork until the socket box centre (15 cm in length).



**5** Simply bind to the steel reinforcement. Concrete cover to 40 mm.



**6** The assembly of the upturned wing concrete socket box also allows concrete coverage to 60 mm.



**7** Knock out of the socket box lid.



**8** Remove socket box lid - all ready!



Type	B210	B200	B205
Execution	Concrete wing socket box	Concrete wing socket box, flat	Concrete socket box with luminaire outlet
Item no.	7400001	7400015	7400019
SU / CB / PL	50 / 50 / 1.200	50 / 50 / 1.600	50 / 50 / 1.600
Depth	90 mm	55 mm	55 mm
Screw spacing	60 mm	60 mm	-
Outlet	-	-	Ø 35 mm
Material	PP	PP	PP



© Video

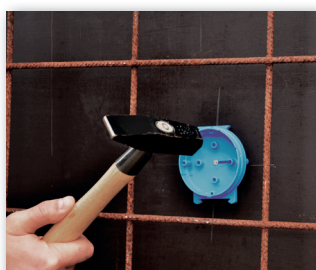


# Unbeatable in compatibility and value

- Ceiling box with a lot of terminal space
- Mounting for ceiling hook
- Device connection box for mounting with nails to the formwork
- Combinable with the proven concrete wings socket box
- 2-piece concrete socket box for pipe sizes M20 and M25
- Combinable, absolutely firm connection through proven sliding technology



## Assembly instructions



**1** Attach device cover with nails to the formwork.



**2** Punch out pipe or cable entry with the punch pliers.



**3** Introduce tube.



**4** Finished!



**5** Can be combined and stackable.



**6** For combinations, firm connection through proven sliding technology along the socket box length.



Video



Type	B450
Execution	Concrete socket box, deep
Item no.	7400029
SU / CB / PL	50 / 100 / 2.400
Depth	90 mm
Screw spacing	60 mm
Material	PP



## The space saver for more terminal space

- Ceiling and wall mounting
- More terminal space
- Mounting with and without wings possible
- Mounting for ceiling hook

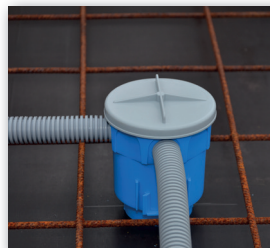
### Assembly instructions



**1** Punch hole out using punch pliers.



**2** Untwist cover.



**3** Installation as ceiling large socket box.

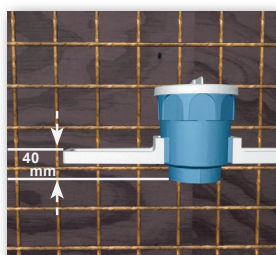


**4** Wall mounting as electronic large socket box.

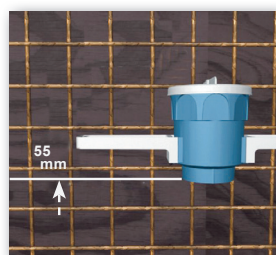


**5** Assembly as electronics electronic large socket box with wings.

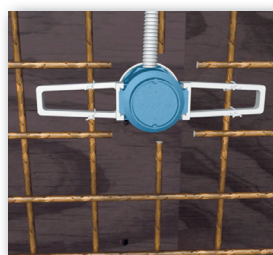
## Application wings



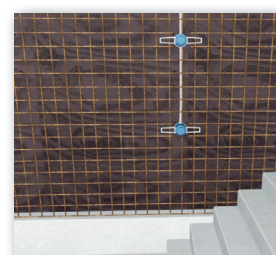
- 1** Push wing at a distance of 40 mm, rotate wing to different distance.



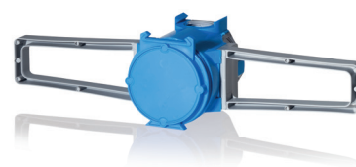
- 2** Push the wing while turned to a distance of 55 mm.



- 3** Mounting with wings on the steel reinforcement/ electronics box.



- 4** Easy installation of the Universal large socket box by using the wings.



Type	B400	B1300
Execution	Universal socket box	Wing
Item no.	7400002	7400006
SU / CB / PL	50 / 50 / 1.000	50 / 250 / 9.000
Depth	111 mm	-
Screw spacing	60 mm	-
Tube insertion M20 / M25	8	-
Material	PP	PP



Video



## XL Large socket box for all fixtures

- Reliable strain relief for the pipes from quick-fix technique
- Reworking and cutting the pipes no longer needed due to the absolutely tight quick-fix technique
- Extremely large time saving from the no-tools tube insertion



### Assembly instructions



- 1** Mineral fibreboard with pictogram "Do not break!"



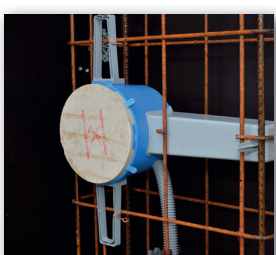
- 2** For in situ concrete formwork, nail or glue the precast plant onto formwork.



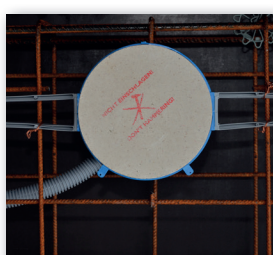
- 3** Simply push in transformer tunnel.



- 4** Quick-Fix technology: Tool-free tube insertion, secure strain relief.



- 5** Mounting with wings and transformer tunnel.



- 6** XL 170 without transformer tunnel, mounting with wings.

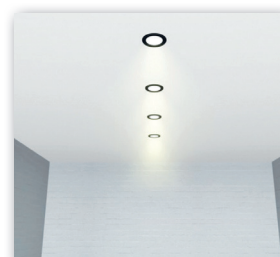
## Final assembly



**1** Mark alignment, inaccuracies can be corrected now.



**2** With a hole cutter, the individual hole is drilled and plastered over on the mineral fibreboard.



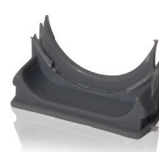
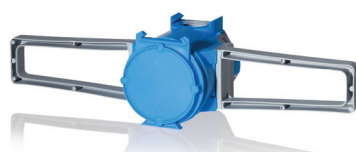
**3** Now radiators or other mounting devices can be mounted.



Type	B550	B500	B1200
Execution	Large socket box	Large socket box	Replacement mineral fibreboard
Item no.	7400010	7400009	7400013
SU / CB / PL	14 / 14 / 280	10 / 10 / 240	10 / 10 / 400
Depth	125 mm	125 mm	15 mm
Diameter	Ø 170 mm	Ø 170 mm	Ø 170 mm
Material	PP	PP	Mineral fibre
Accessories (incl.)	Slide, mineral fibre board, transformer tunnel	Slide, mineral fibreboard	-

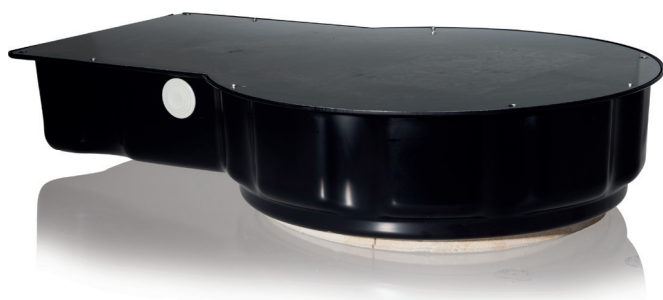


Video



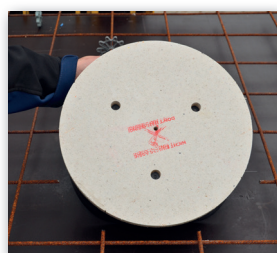
Type	B1300	B1000	B1050	B1100
Execution	Wing	M25 slide open	M20 slide open	Slide closed
Item no.	7400006	7400016	7400017	7400018
SU / CB / PL	50 / 250 / 9.000	100 / 2.000 / 80.000	100 / 2.000 / 80.000	100 / 2.000 / 80.000
suitable for	B150 / B155 / B400	B150 / B155	B150 / B155	B150 / B155

## XXL large socket box for lights and built-in housing



- Individual sections using 306 mm mineral fibreboard
- With stable metal plate, no support tube is needed
- One housing and one size for all fixtures
- Proven quality, since our housings are tested by different lighting manufacturers; lamps are mounted for and checked in endurance tests (with test protocol)
- Structural engineering is not affected
- Stable 15 mm mineral fibreboard

### Assembly instructions B600



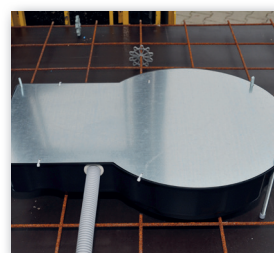
- 1** Mineral fibreboard with pictogram "Do not break!"



- 2** For in situ concrete formwork, nail or glue the precast plant onto the formwork table.



- 3** Simply push the upper part - reinforcement runs under the socket box, no limitation to structural engineering.



- 4** Adjustable height of 130 to 200 mm. Simple supporting plastics with special threaded rods.

### Assembly instructions B610



- 1** Mineral fibreboard with pictogram "Do not break!"



- 2** Nail in situ concrete formwork, glue the precast plant onto formwork table.



- 3** Insert the cable / tubes and secure stable sheet-metal plate with cable ties.



- 4** Finished!



## Final assembly



**1** Mark alignment, inaccuracies can be corrected now.



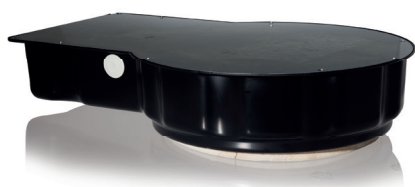
**2** Using a hole cutter, the individual hole is drilled out...



**3** ... and plastered over on the mineral fibre plate ...



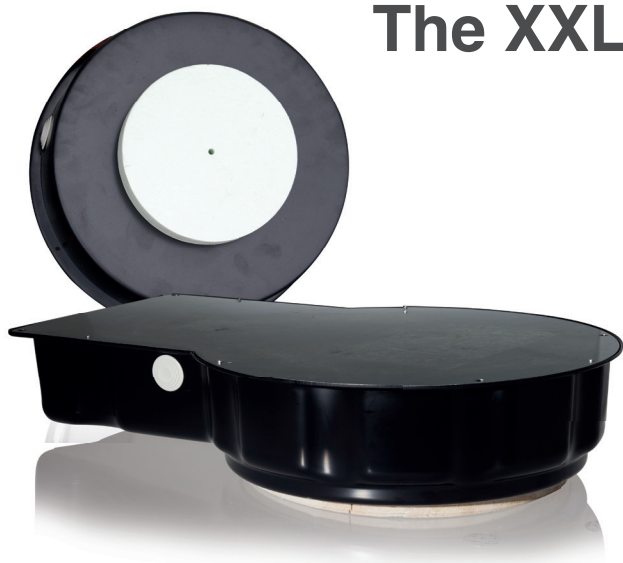
**4** ... now downlights or other mounting devices can be mounted.



Type	B600	B610	B1250
Execution	Large socket box	Compact socket box	Replacement mineral fibreboard
Item no.	7400011	7400027	7400014
SU / CB / PL	4 / 4 / 24	5 / 5 / 20	5 / 5 / 150
Depth	130 - 200 mm	120 mm	15 mm
Diameter	Ø 306 mm	Ø 306 mm	Ø 306 mm
Material	PP	PP	Mineral fibre
Accessories (incl.)	Mineral fibreboard	Mineral fibreboard	-



Video

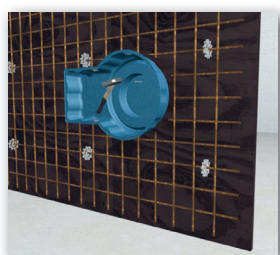


# The XXL Flex large socket box

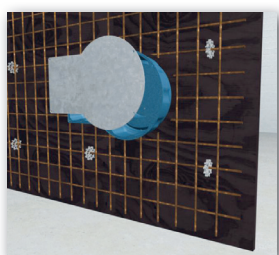
## Flexible and individual

- With individual ceiling cut up to Ø 300 mm (specify when ordering)
- Individual recesses can be produced at short notice
- Structural engineering is not affected
- No additional reinforcement of the Flex large socket box and Flex compact box needed
- Ideal as an object large socket box, low-cost and easy to install
- Installation both in concrete and in situ concrete possible
- No additional components needed
- Ideal for exposed concrete

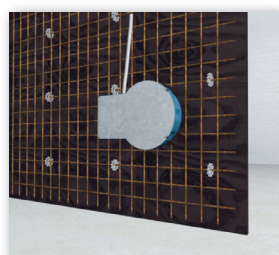
## Assembly instructions



**1** Attach XXL Flex large socket box with nails to the formwork.

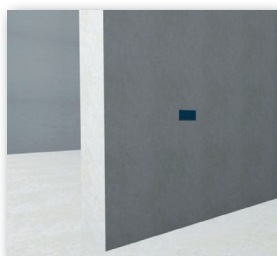
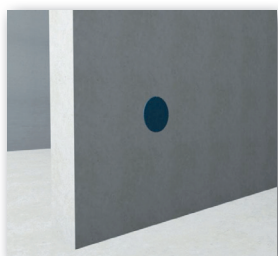
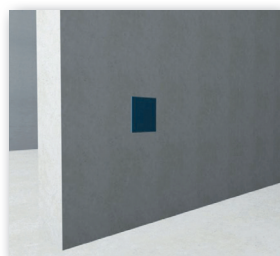


**2** Attach using the cable ties provided.



**3** Insert installation pipes or cables, then the concrete can be poured.

## Individual recesses possible





Type	B650	B660
Execution	Flex large socket box	Flex compact socket box
Item no.	7400012	7400028
SU / CB / PL	1 / 1 / 20	1 / 1 / 20
Depth	140 mm	135 mm
Diameter	Ø 306 mm	Ø 306 mm
Material	PP	PP
Accessories	incl. individual ceiling cut	incl. individual ceiling cut



▶ Video

Socket boxes

Fire protection

Fastening systems

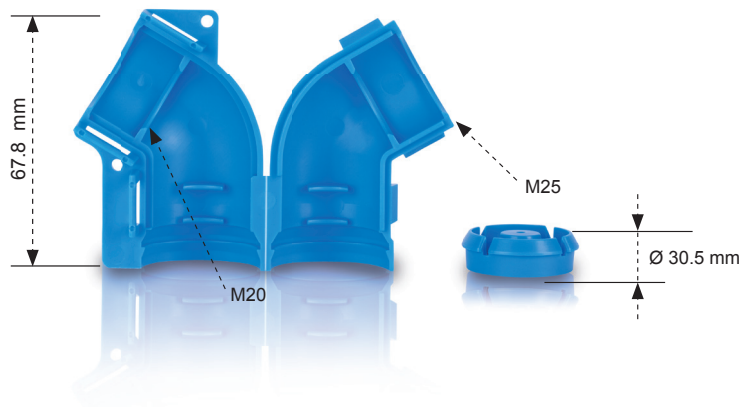
Distributors

Meter cabinets

Meter connection columns



## Absolutely safe for strain relief



- Installation as wall or ceiling transition possible
- Mount pipe sizes M20 and M25 without tools
- Absolutely safe strain relief for pipes
- Secure continuation of the M20 or M25 pipes is possible
- Halogen-free

### Assembly instructions



**1** Nail lower part of the formwork.



**2** Click in pipe M20 or M25.



**3** Simply close.



**4** Attach to the bottom part. Absolutely safe strain relief!

Type	B300
Execution	Wall / ceiling transition
Item no.	7400007
SU / CB / PL	50 / 400 / 9.600
Pipe sizes	M20 / M25
Curvature	30°
Material	PP



Video

## End and sleeve adapter



Type	B820	B825	B832
Execution	End / sleeve adapter	End / sleeve adapter	End / sleeve adapter
Item no.	7400020	7400021	7400022
SU / CB / PL	50 / 500 / 12.000	25 / 100 / 5.400	25 / 100 / 5.400
Pipe sizes	M20	M25	M32
Material	PP	PP	PP

## Assembly instructions



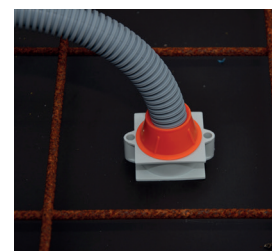
**1** Nail lower part of the formwork.



**2** Connect covers.



**3** Snap pipe into place.



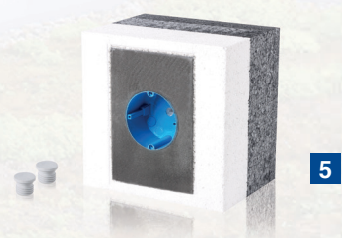
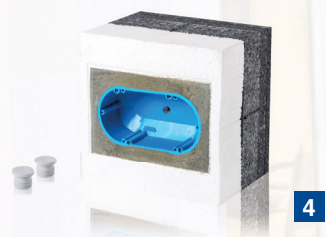
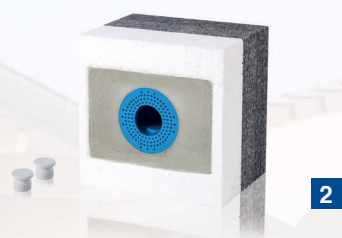
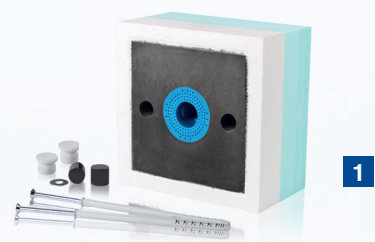
**4** Finished!

## Folding sleeve



Type	B920	B925
Execution	Folding sleeve	Folding sleeve
Item no.	7400025	7400026
SU / CB / PL	50 / 50 / 21.600	40 / 40 / 17.280
suitable for	M20	M25
Material	PP	PP

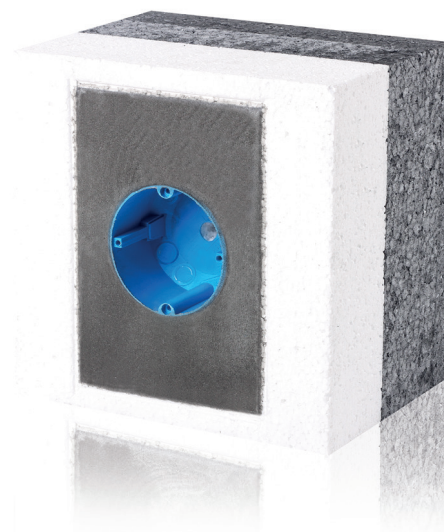






# Energy efficient and time-saving in processing

- Large time and cost savings
- Quick and easy installation
- No additional sealing and insulation work required
- Multiple fastening options
- With corner element and device carrier to 80kg capacity
- Homogeneous, free of thermal bridges, compact frontage
- High individual and overall stability
- Full integration into the frontage
- No discolouration or condensation on the frontage, no mould or algae



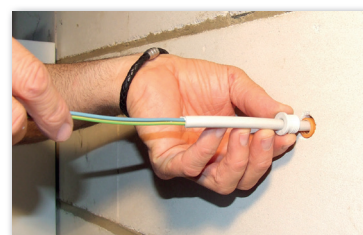
## Assembly instructions



**1** Adjust insulation thickness.



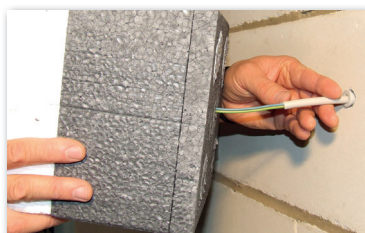
**2** Cut conduit flush with the wall.



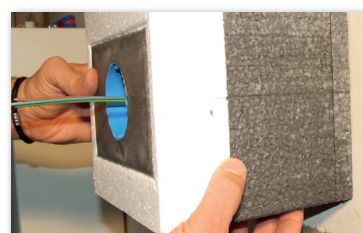
**3** Seal conduit with sealing plugs hermetically (included).



**4** Apply TIE-hybrid adhesive in thin, bead form (5-6 mm).



**5** Insert line into the pre-drilled entry hole.



**6** Press in component. Setting time after about 2 minutes.



Video



<b>Execution</b>	<b>TIE 2.0 multifunction device box</b>
<b>max. Cross section</b>	2,5 mm <sup>2</sup>
<b>Material</b>	PU
<b>Properties</b>	1-way receptacle and equipment support plate to 180 NM
<b>Pre-drilled cable bushing</b>	Ø 10 mm
<b>Accessories (incl.)</b>	additional screw-device carrier plate up to 12kg loads, tube closure for M20

<b>Type</b>	<b>EPS20-MULTI</b>
<b>Item no.</b>	<b>7810041</b>
<b>SU / CB / PL</b>	1 / 12 / 192
<b>H x W x D</b>	184 x 184 x 205 mm
<b>for insulation</b>	80-200 mm

194 x 194 x 145  
(H x W x D)  
for insulation  
100 - 140 mm

194 x 194 x 205  
(H x W x D)  
for insulation  
160 - 200 mm

194 x 194 x 245  
(H x W x D)  
for insulation  
220 - 240 mm

194 x 194 x 305  
(H x W x D)  
for insulation  
260 - 300 mm

<b>Type</b>	<b>EPS14-115</b>
<b>Item no.</b>	<b>7810015</b>
<b>SU / CB / PL</b>	1 / 48 / 192

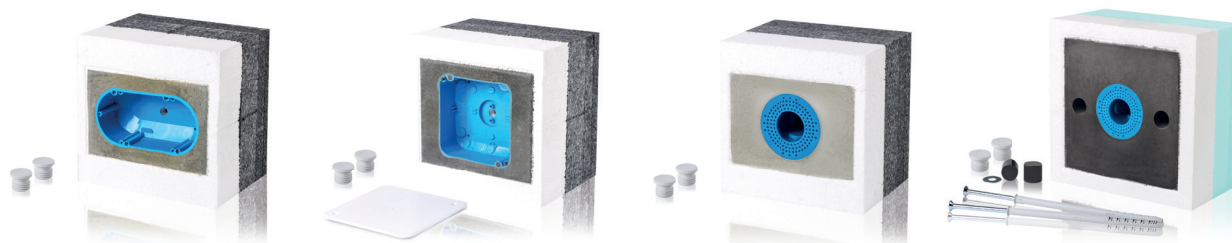
<b>Type</b>	<b>EPS20-115</b>
<b>Item no.</b>	<b>7810021</b>
<b>SU / CB / PL</b>	1 / 48 / 192

<b>Type</b>	<b>EPS24-115</b>
<b>Item no.</b>	<b>7810027</b>
<b>SU / CB / PL</b>	1 / 36 / 144

<b>Type</b>	<b>EPS30-115</b>
<b>Item no.</b>	<b>7810033</b>
<b>SU / CB / PL</b>	1 / 36 / 144



<b>TIE device socket, 1-fold</b>
2,5 mm <sup>2</sup>
PU
tightly integrated appliance box E115
Ø 10 mm
Pipe plug for M20 and M25



TIE device socket, 2-fold	TIE-junction box	TIE tool carriers - up to 20kg	TIE tool carriers - up to 80kg
2,5 mm²	2,5 mm²	2,5 mm²	2,5 mm²
PU	PU	PU	PU
tightly integrated appliance box E118	firmly integrated Distribution box E116	for attachments up to 20 kg, 2x mounting surface 110 x 160 mm	for attachments up to 80 kg, 3x mounting surface 194 x 194 mm
Ø 10 mm	Ø 10 mm	Ø 10 mm	-
Pipe plug for M20 and M25	Screw cap, Pipe plug for M20 and M25	Pipe plug for M20 and M25	Tube closure for M20 and M25, two universal frames, with dowel screws and washers, two PU sealing plugs
<b>EPS14-118</b>	<b>EPS14-116</b>	<b>EPS14-T20</b>	<b>EPS14-T80</b>
<b>7810017</b>	<b>7810016</b>	<b>7810019</b>	<b>7810020</b>
1 / 48 / 192	1 / 48 / 192	1 / 48 / 192	1 / 24 / 96
<b>EPS20-118</b>	<b>EPS20-116</b>	<b>EPS20-T20</b>	<b>EPS20-T80</b>
<b>7810023</b>	<b>7810022</b>	<b>7810025</b>	<b>7810026</b>
1 / 48 / 192	1 / 48 / 192	1 / 48 / 192	1 / 24 / 96
<b>EPS24-118</b>	<b>EPS24-116</b>	<b>EPS24-T20</b>	<b>EPS24-T80</b>
<b>7810029</b>	<b>7810028</b>	<b>7810031</b>	<b>7810032</b>
1 / 36 / 144	1 / 36 / 144	1 / 36 / 144	1 / 18 / 72
<b>EPS30-118</b>	<b>EPS30-116</b>	<b>EPS30-T20</b>	<b>EPS30-T80</b>
<b>7810035</b>	<b>7810034</b>	<b>7810037</b>	<b>7810038</b>
1 / 36 / 144	1 / 36 / 144	1 / 36 / 144	1 / 18 / 72

Socket boxes

Fire protection

Fastening systems

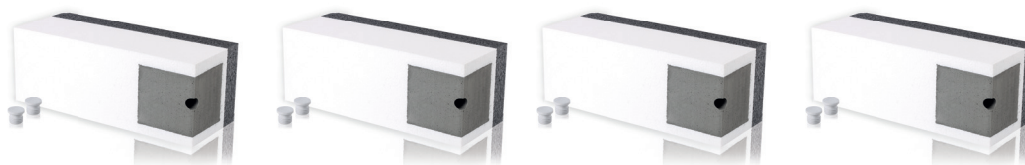
Distributors

Meter cabinets

Meter connection columns



- Capacity 12 kg
- Mounting surface 100 x 100 mm, density of 220 kg / m<sup>3</sup>



Type	EPS14-ECK	EPS20-ECK	EPS24-ECK *	EPS30-ECK *
Execution	Corner	Corner	Corner	Corner
Item no.	7810018	7810024	7810030	7810036
SU / CB / PL	1 / 32 / 128	1 / 32 / 128	1 / 17 / 68	1 / 16 / 64
H x W x D	140 x 450 x 145 mm	140 x 450 x 205 mm	140 x 450 x 245 mm	140 x 450 x 305 mm
Material	PU	PU	PU	PU
for insulation	100 to 140 mm	160 to 200 mm	220 - 240 mm	260 - 300 mm
prefabricated pipe insertion	1 x M20	1 x M20	1 x M20	1 x M20
Accessories (incl.)	Tube closure piece M20 and M25	Tube closure piece M20 and M25	Tube closure piece M20 and M25	Tube closure piece M20 and M25

\*Delivery within 3 weeks

## TIE-hybrid glue

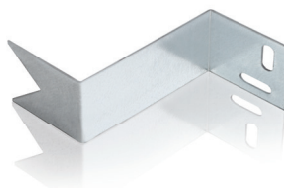
Type	251-KL
Execution	Hybrid glue
Item no.	7810014
SU / CB / PL	1 / 20 / 360
Quantity	310 ml
enough for	about 12 system elements
Setting time	1 - 2 mins.



- Cured after only 24 hours

## TIE-Mounting bracket

Type	252-WK
Execution	TIE-mounting bracket
Item no.	7810042
SU / CB / PL	1 / 10 / 4.000
Material	Steel
Kit Contents	2 pieces



- Alternatively, for rapid adhesive mounting, we also offer mounting brackets with nail or screw fastenings

## insulation fixing

- For subsequent mounting of attachment parts, e.g. doorbells, lamps, mailboxes, downspouts and motion detectors, in an existing EIFS



Type	DSD50	DSD85
Execution	insulation fixing	insulation fixing
Item no.	7820004	7820003
SU / CB / PL	25 / 750 / 30.000	25 / 400 / 19.200
Length	50 mm	85 mm
Material	PA	PA
Support plate	Ø 28 mm	Ø 28 mm
needed	5 mm Allen	5 mm Allen

## TIE Styrocutter

- Hand cutter for insulation and insulation from Styrodur, polystyrene and polystyrene foam



Type	253-SC
Execution	Styrocutter
Item no.	7820001
SU / CB / PL	1 / 1 / 500
Properties	3 m of cable with Euro-plug, 16-step regulation
Accessories (incl.)	200 mm blade, cleaning tool, exchange keys and suitcases

## TIE Styrocutter replacement blade



Type	253-SC-EK
Execution	Styrocutter replacement blade
Item no.	7820002
SU / CB / PL	1 / 1 / 5.000
Length	200 mm

# TIE elements

## Thermal conductivity ( $\lambda$ ) and thermal insulation capability (U)

Thermal conductivity ( $\lambda$ ) (Greek: Lambda) gives the amount of heat, which penetrates within one second at a temperature gradient of one degree Centigrade (1 K in absolute temperature scale) through one cubic meter of fabric. Basically you can say: the smaller the value, the better. Accordingly, the higher the thermal conductivity ( $\lambda$ ) of a material, the worse the thermal insulation capability (U).

### TIE-elements ...- 115 / ...- 116 / ...- 118 / ...- T20

60 mm EPS20 white + PU foam

+ 45 mm NEOPOR® 15 (insulation thickness 100 mm)	U = 0.33 W / m²K
+ 65 mm NEOPOR® 15 (insulation thickness 120 mm)	U = 0.27 W / m²K
+ 85 mm NEOPOR® 15 (insulation thickness 140 mm)	U = 0.23 W / m²K
+ 105 mm NEOPOR® 15 (insulation thickness 160 mm)	U = 0.20 W / m²K
+ 125 mm NEOPOR® 15 (insulation thickness 180 mm)	U = 0.18 W / m²K
+ 145 mm NEOPOR® 15 (insulation thickness 200 mm)	U = 0.16 W / m²K

### TIE elements ...- T80

60 mm EPS20 white + PU foam

+ 45 mm XPS (insulation thickness 100 mm)	U = 0.36 W / m²K
+ 65 mm XPS (insulation thickness 120 mm)	U = 0.30 W / m²K
+ 85 mm XPS (insulation thickness 140 mm)	U = 0.26 W / m²K
+ 105 mm XPS (insulation thickness 160 mm)	U = 0.23 W / m²K
+ 125 mm XPS (insulation thickness 180 mm)	U = 0.21 W / m²K
+ 145 mm XPS (insulation thickness 200 mm)	U = 0.19 W / m²K

### TIE elements ...- ECK

100 mm EPS20 white + PU foam

+ 0 mm NEOPOR® 15 (insulation thickness 100 mm)	U = 0.37 W / m²K
+ 25 mm NEOPOR® 15 (insulation thickness 120 mm)	U = 0.29 W / m²K
+ 45 mm NEOPOR® 15 (insulation thickness 140 mm)	U = 0.25 W / m²K
+ 65 mm NEOPOR® 15 (insulation thickness 160 mm)	U = 0.21 W / m²K
+ 85 mm NEOPOR® 15 (insulation thickness 180 mm)	U = 0.19 W / m²K
+ 105 mm NEOPOR® 15 (insulation thickness 200 mm)	U = 0.17 W / m²K

### TIE 2.0 EPS20 Multi

200 mm EPS (200 mm insulation thickness)	U = 0.17 W / m²K
--	------------------











# Fire protection systems

## Intelligent technology that protects

We at **f-tronic®** guarantee our fire protection boxes effectively to protect and ensure the integrity of fire walls up to 120 minutes. And with a remarkably simple installation, which even allows an opposing installation and retrofitting.

Stay safe when it matters: our fire protection boxes range is certified Europewide. Thereby you take care, not only of legally fulfilling fire protection requirements, but also the demonstrable safety of rooms and escape routes, especially for public institutions such as hospitals, schools and kindergartens. To protect personal safety in case of fire, it is important that the use of escape routes and access for fire and rescue service is guaranteed for as long as possible.

## Table of contents

Fire protection socket boxes .....	92
Fire protection systems .....	96
Accessories .....	103



# The triathlete among socket boxes

- Fire protection, sound insulation, airtight
- DIBt Z-19.21.2283
- ETA-18 / 0628
- Opposing installation and retrofitting possible
- tested for up to 5-fold combinations
- Lightweight wall:
  - Fire resistance class to EI120
  - Fire resistance class EI30 to EI60 without insulating wool
- Laminated timber wall:
  - Fire resistance class to EI90



**1** The rear-mounted labeling allows easy and correct allocation of suitable pipe and cable entries.



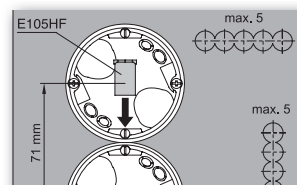
**2** Its airtight construction, in case of fire, even before the temperature-induced activation of the intrinsic fire protection function, provides for the reliable prevention of smoke spreading inside the building.



**3** Despite their compact construction, fire protection socket boxes of the latest generation from **f-tronic®** meet the sound insulation requirements of DIN EN ISO 10140.



**4** Due to the 2C-Membrane, tool-free pipe and cable insertion is made possible, which simplifies assembly and enables a time saving of up to 60%.



**5** Compliance with the standard milling hole diameter of 68 mm allows quick and easy installation, as well as trouble-free stacking, without additional effort.

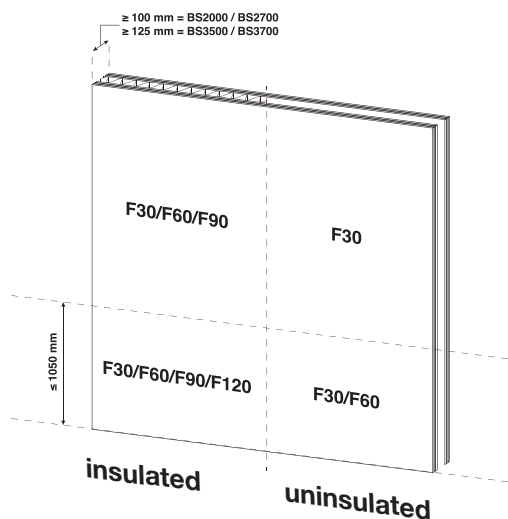


Video

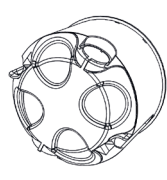

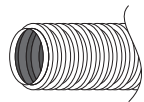
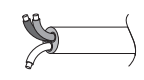


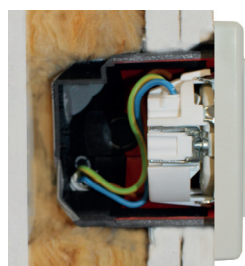
Type	BS2000	BS2700	BS3500	BS3700
Execution	Device socket	Device socket	Device connection socket	Device connection socket
Item no.	7500045	7500042	7500044	7500043
SU / CB / PL	10 / 250 / 4.000	10 / 250 / 4.000	10 / 200 / 3.200	10 / 200 / 3.200
Milling hole	Ø 68 mm	Ø 68 mm	Ø 68 mm	Ø 68 mm
Panel thickness	5 - 40 mm	5 - 40 mm	5 - 40 mm	5 - 40 mm
Depth	50 mm	50 mm	62 mm	62 mm
max. cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	PP / TPE-S	PP / TPE-S	PP / TPE-S	PP / TPE-S
Cable entry 3 x 1,5 <sup>2</sup>	-	2	-	2
5 x 1,5 <sup>2</sup> / 3 x 2,5 <sup>2</sup>	-	2	-	2
Tube insertion	4x ≤ M20	2x ≤ M25	4x ≤ M20	2x ≤ M25
Accessories	per SU incl. 5x E105HF	per SU incl. 5x E105HF	per SU incl. 5x E105HF	per SU incl. 5x E105HF

## Proven installation zones in lightweight walls



## Laying of pipe and cable entries

				
Item	BS2000	BS3500	BS2700	BS3700
	4 x ≤ M20	4 x ≤ M20	2 x ≤ M25	2 x ≤ M25
	-	-	4 x ≤ Ø 14.4 mm	4 x ≤ Ø 14.4 mm



before the fire



in case of fire

## Operation of the fire protection socket box

- Upon reaching the critical temperature, the socket box reacts and forms an insulating layer.
- The interior of the socket box is definitely closed from the inside to the outside.
- The socket box remains dimensionally stable in accordance with the fire resistance class.

- With fire resistance class EI90
- Subsequent and opposing installation possible
- Installation boxes meet the sound insulation requirements
- Up to 5 socket box stacking



Type	BS115	BS117	BS118
Execution	Device socket	Device connection socket	Double device connection socket
Item no.	7500001	7500002	7500003
SU / CB / PL	12 / 192 / 3.744	12 / 192 / 3.744	6 / 96 / 1.584
Milling hole	Ø 74 mm	Ø 74 mm	2 x Ø 74 mm
Panel thickness	25 - 40 mm	25 - 40 mm	25 - 40 mm
Depth	45 mm	54 mm	54 mm
max. cross section	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
Material	SAFE 90	SAFE 90	SAFE 90
Cable entry	2 to Ø 14,4 mm	2 to Ø 11,6 mm	4 to Ø 11,6 mm
Conduit entry M20	-	4	-



Type	BS112	BS112 / 2
Execution	Lid, 1-fold	Lid, 2-fold
Item no.	7500030	7500031
SU / CB / PL	10 / 100 / 9.000	5 / 20 / 4.800
Material	SAFE 90	SAFE 90







**Easy.  
Safe.  
Persuasive.  
And approved.**  
Intelligent technology that protects you when the going gets tough.





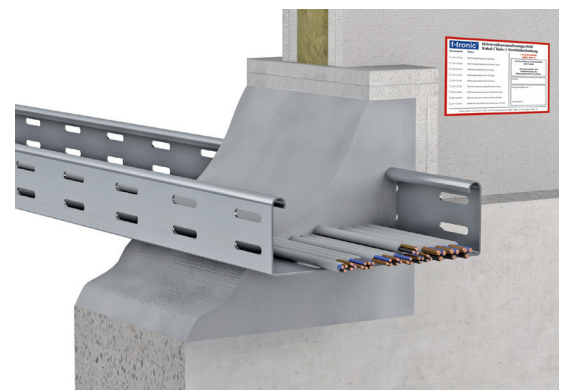
Type	BSSCH18	BSSCH48
Execution	Fire protection foam	Fire protection foam
Item no.	7500005	7500006
SU / CB / PL	1 / 12 / 423	1 / 12 / 423
Content	180g	480g



## Approval for S 30 Z-19.15-1764 and S 90 Z-19.53-2360

Pliable fire protection foam for wall and ceiling ducts for insulating individual or bundled electrical wires and cables of all types (cable diameters up to 32 mm according to S 90) and optical waveguides, as well as supporting structures (cable trays, load platforms, guides) made of steel, aluminium or plastic. Individual steel and plastic tubes  $\leq 15$  mm.

- Foam does not drip when applied
- Insulation does not have to be coated again
- Simple retrofitting, since foam remains soft and pliable
- 180g cartridges usable with conventional press guns
- Easy to use by squeezing out
- Cut-off remains can be reused
- No advance handling
- Processing is dust- and fibre-free
- Highly flexible sealing system for different forms and break-through requirements
- High yield at appropriate processing temperature (23°C)
- No doubling of cable support structure required



## Fire protection foam

### Scope of application

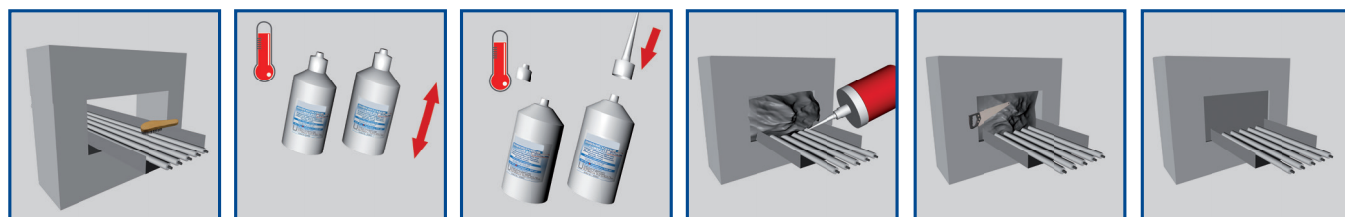
S 30 installation in at least 7.5cm thick walls of masonry, concrete or porous concrete in at least 7.5cm thick drywall partitions. Allowable fire bulkhead size: max. 25 x 25cm or 25cm diameter (e.g. core drilling).

S 90 installation in at least 10cm thick walls of masonry, concrete or aerated concrete, at least 10cm thick in lightweight partition walls, as well as at least 15cm thick ceilings of concrete or aerated concrete. Allowable fire bulkhead size: max. 22 x 22cm or 22cm diameter (e.g. core drilling).

#### Technical data

Technical Manual	Solid wall Lightweight partition F30	Ceiling solid F90	Solid wall Lightweight partition F90
Wall I ceiling thickness	min. 75 mm	min. 150 mm	min. 100 mm
Max. bulkhead size (W x H I L)	250 x 250 mm	220 x 220 mm	220 x 220 mm
Thick insulation min.	75 mm	200 mm	200 mm
Workrooms S 30	Distance ≥ 40 mm between individual cable layers, as well as between top cable layer and soffit ≥ 40 mm, clearance to the side, among themselves and bottom ≥ 0 mm.		
Workrooms S 90	Distance between individual cable layers ≥ 35 mm and between top cable layer and soffit ≥ 15 mm, clearance to the side, with each other on the wall and below ≥ 0 mm.		
Doubling on component (subject to approval)			

### Processing



### Assembly instructions

The entire cartridge content is available, no advance handling. Clean and dust off component's opening before installation. Close spandrel between cables with **f-tronic® BSSCH**. S 30: distance between individual cable layers min. 40 mm, likewise between the uppermost cable layer and soffit, min. 40 mm, distance between the sides and bottom at 0 mm. S 90: distance between individual cable layers min. 35 mm, likewise between the uppermost cable layer and soffit min. 15 mm, distance between the sides and bottom at 0 mm.

While preparing the cartridge and during use, wear gloves, protective goggles and suitable working clothes (see MSDS).

Cable insulation must be permanently marked by the installing company with a shield, to be fixed in each case adjacent to the cable insulation on the component. Identification plates are available from **f-tronic® GmbH**.

#### Foam insulation S 90 at 60% configuration - spreadsheet at 18°C application temperature

Insulation surface	180g cartridge	480g cartridge
0,005m <sup>2</sup>	0,62 apiece	0,23 apiece
0,010m <sup>2</sup>	1,23 apiece	0,46 apiece
0,020m <sup>2</sup>	2,46 apiece	0,91 apiece
0,030m <sup>2</sup>	3,69 apiece	1,37 apiece
0,040m <sup>2</sup>	4,92 apiece	1,83 apiece
0,048m <sup>2</sup>	5,96 apiece	2,21 apiece

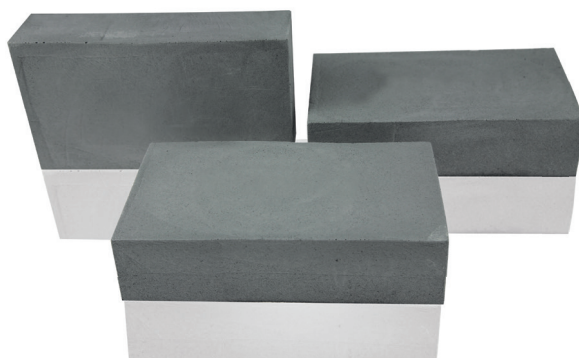
Handle cartridges according to instructions in the manual!

### Retrofitting

**f-tronic® BSSCH** remains pliable after curing, which makes further installations problem-free.

Here a ring joint of at least 1cm is to be applied and then sealed with **f-tronic® BSSCH**.





Type	BSB	BSST62	BSST77	BSST107	BSST132	BSST158
Execution	Fire protection block	Fire protection plugs	Fire protection plugs	Fire protection plugs	Fire protection plugs	Fire protection plugs
Item no.	7500010	7500012	7500013	7500014	7500015	7500016
SU / CB / PL	1 / 20 / 400	1 / 32 / 1.536	1 / 20 / 960	1 / 10 / 480	1 / 14 / 200	1 / 10 / 200
Dimensions	60 x 130 x 230 mm	Ø 62 mm	Ø 77 mm	Ø 107 mm	Ø 132 mm	Ø 158 mm

## Approval for S 30 - S 60

Z-19.15-1762 Wall insulation

## Approval for S 90 - S 120

Z-19.15-1762 Wall insulation

Z-19.15-1763 Ceiling insulation

Pliable fire protection blocks for wall ducts for the insulation of individual or bundled electrical wires and cables of all types (including optical fibre). Without limiting the total conductor cross-section of the single cable, as well as supporting structures (cable trays, load platforms, ladders) made of steel, aluminium or plastic. Individual steel and plastic tubes ≤ 15 mm.

- Combinable with fire protection foam for later application and man-drels
- Condensation and moisture-resistant
- Plugs and blocks do not have to be glued during installation
- Resistant to aging
- Flexible, take on the original shape after being squeezed together
- Cut-off remains can be reused
- No additional coating necessary
- Dust and fibre-free processing
- Smoke density according to DIN 4102, part 9
- Highly flexible sealing system for different forms and breakthrough requirements
- The width of the frame (if required) is only 2,5cm



## Fire protection block / plugs

### Scope of application

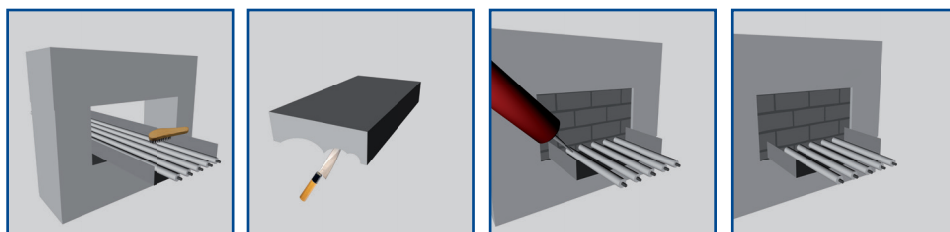
For all fire-walls (masonry | concrete | cellular concrete | lightweight partition  $\geq 75$  mm)

Permissible partition size: Wall (W x H) max. 70 cm x 40 cm

#### Technical data

Technical Manual	Solid wall F30   F60   lightweight partition	Solid wall   Lightweight partition F90   F120	Ceiling
<b>Wall thickness</b>	min. 75 mm	min. 100 mm	min. 150 mm
<b>Max. Partition size (W x H   L)</b>	700 x 400 mm	700 x 400 mm	400 x $\infty$ mm
<b>Thick insulation min.</b>	130 mm	230 mm	230 mm
<b>Workrooms</b>	<b>Wall insulation:</b> Distance between individual cable layers $\geq 40$ mm, as well as between the uppermost cable layer and soffit $\geq 40$ mm, distance between the sides and bottom $\geq 0$ mm		<b>Ceiling insulation:</b> Distance between individual cable layers $\geq 40$ mm, as well as laterally between the cable layers $\geq 30$ mm. Distance side and bottom $\geq 0$ mm
<b>Frame at S 60 + cable bundle</b>	At a distance of cable tray < 20 mm to the soffit, on the underside, a strip of BSB is to be attached 20 x 30 mm on both sides of the insulation to the cable support structure		

### Processing



### Assembly instructions

Clean and dust off component's opening before installation. Cut the **f-tronic®** BSB for S30-S60 transversely and install with staggered joints (13 cm), so that a tight connection to the structural member is formed. Existing gaps must be sealed with **f-tronic®** BSSCH.

Wall: distance between individual cable layers and between top cable layer and soffit min. 40 mm, distance between the sides and bottom to 0 mm.

Cable insulation must be permanently marked by the installing company with a shield, to be fixed in each case adjacent to the cable insulation on the component. Identification tags are available from **f-tronic®** GmbH.

	S30 - S60		S90 - S120	
Insulation surface	40%	60%	40%	60%
0,005 m <sup>2</sup>	0,22 piece	0,14 piece	0,38 piece	0,26 piece
0,01 m <sup>2</sup>	0,43 piece	0,29 piece	0,77 piece	0,51 piece
0,05 m <sup>2</sup>	2,17 piece	1,45 piece	3,85 piece	2,56 piece
0,10 m <sup>2</sup>	4,35 piece	2,90 piece	7,69 piece	5,13 piece
0,20 m <sup>2</sup>	8,70 piece	5,80 piece	15,38 piece	10,26 piece
0,28 m <sup>2</sup>	12,17 piece	8,12 piece	21,54 piece	14,36 piece
0,40 m <sup>2</sup>	17,39 piece	11,59 piece	30,77 piece	20,51 piece
0,50 m <sup>2</sup>	21,74 piece	14,49 piece	38,46 piece	25,64 piece
0,60 m <sup>2</sup>	26,09 piece	17,39 piece	46,15 piece	30,77 piece

### Retrofitting

**f-tronic®** BSB | BSSCH remains pliable after curing, making further installations problem-free. Here a ring joint of at least 1 cm is to be applied and then sealed with **f-tronic®** BSB | BSSCH.

**Fire protection sleeve for electrical conduits according to ETA-13/0792 and pipe insulation in accordance with ETA-13/0922 and - Z-19.17-2125**



Type	BSMS63	BSMS75	BSMS90	BSMS110	BSMS125
Execution	Fire protection cuff	Fire protection cuff	Fire protection cuff	Fire protection cuff	Fire protection cuff
Item no.	7500020	7500021	7500022	7500023	7500024
SU / CB / PL	1 / 10 / 850	1 / 10 / 800	1 / 10 / 400	1 / 10 / 350	1 / 10 / 220
Dimensions Outside / Inside	Ø 94 mm / Ø 67 mm	Ø 106 mm / Ø 79 mm	Ø 132 mm / Ø 94 mm	Ø 155 mm / Ø 114 mm	Ø 172 mm / Ø 129 mm
Installation height	26 mm	26 mm	27 mm	27 mm	40 mm
Number of plate tabs	4	4	4	4	4

## Approval ETA-13/0792

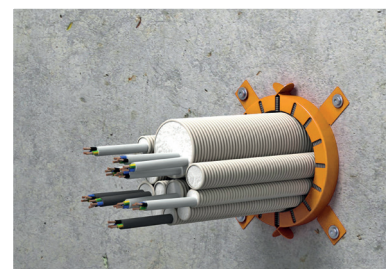
### Fire resistance class EI 120

Wall entrance: fire protection sleeves

Ceiling duct: underside cover, one fire protection sleeve

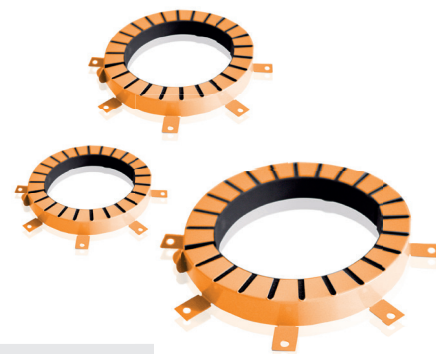
Execution of:

- Electrical installation pipes (for manufacturer specifications, see approval), either unapproved or approved, hereby cable diameter max. 21 mm
- Single pipe max. 63 mm outer diameter
- In bundles up to max. 125 mm outer diameter
- Electrical installation pipes with cables and blank electric conduit must not be fitted with a common pipe sleeve.
- Small footprint from low height
- Approved for drywall partitions
- Closure of the residual opening possible with commercial materials, e.g. concrete, cement mortar, plaster
- Use in already-laid pipes possible from simple closure technology
- Cuff housing must adjoin ceiling-mount (zero distance)
- Electric conduits are selectively approved or unapproved (thus reserves for future retro-fitting are given)



## Fire protection sleeve for the pipe insulation in accordance with ETA-13/0922 and Z-19.17-2125

Type	BSMS32	BSMS40	BSMS50
Execution	Fire protection sleeve	Fire protection sleeve	Fire protection sleeve
Item no.	7500017	7500018	7500019
SU / CB / PL	1 / 10 / 2.000	1 / 10 / 1.800	1 / 10 / 1.500
Dimensions Outside / Inside	Ø 50 mm / Ø 36 mm	Ø 58 mm / Ø 44 mm	Ø 68 mm / Ø 54 mm
Installation height	26 mm	26 mm	26 mm
Number of plate tabs	2	2	2



Type	BSMS140	BSMS160	BSMS180	BSMS200
Execution	Fire protection sleeve	Fire protection sleeve	Fire protection sleeve	Fire protection sleeve
Item no.	7500025	7500026	7500027	7500028
SU / CB / PL	1 / 5 / 150	1 / 5 / 150	1 / 5 / 80	1 / 5 / 70
Dimensions Outside / Inside	Ø 200 mm / Ø 144 mm	Ø 220 mm / Ø 164 mm	Ø 264 mm / Ø 184 mm	Ø 284 mm / Ø 204 mm
Installation height	40 mm	40 mm	40 mm	40 mm
Number of plate tabs	6	6	8	8

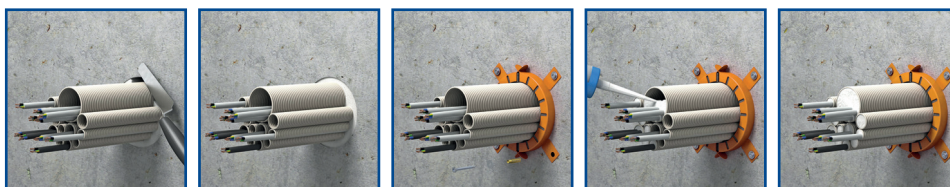


## Fire protection systems

### Scope of application

Application according to ETA-13/0792			
Designation	Wall	Lightweight construction wall	Ceiling
Component size	≥ 100 mm	≥ 94 mm	≥ 150 mm
Maximum dimension of bundle of electrical installation pipes to be insulated	≤ 125 mm	≤ 125 mm	≤ 125 mm
Electrical conduits	Ø 16 to Ø 63 mm	Ø 16 to Ø 63 mm	Ø 16 to Ø 63 mm
Maximum outer diameter of the sleeve to be used	≤ 125 mm	≤ 125 mm	≤ 125 mm
Distance from other cable / pipe bulkheads	200 mm	200 mm	200 mm
Distance from other openings or fittings	200 mm	200 mm	200 mm

### Processing



### Assembly instructions according to ETA-13/0792

Fire protection bulkheads from **f-tronic®** may be incorporated into solid walls, solid ceilings and lightweight partition walls in accordance with the above-listed table.

The wall must have a minimum thickness of 100 mm and consist of wood or steel studs, that are covered on both sides with at least 2 layers of 12.5 mm thick sheets. For wood stud walls, a minimum distance of 100 mm must be kept from the partitioning to each upright and the cavity between upright and isolation must be closed up, with at least 100 mm insulation of class A1 or A2 (according to EN 13501-1). The insulation must present a minimum pipe density of 85 - 115 kg / m<sup>3</sup> (according to EN 1363-1).

#### Principles of installation:

With walls, one cuff per side is put in, for ceilings only one, below the ceiling. The electrical installation pipes can run through the insulation individually or combined into a bundle. The bundle must demonstrate for walls at least 100 mm thick, or for solid ceilings at least 150 mm thick, a max. diameter of 125 mm. The electrical installation pipes must demonstrate a single outer diameter of max. 63 mm, the cables running through may not exceed an max. outside diameter of 21 mm. The smallest fire protection sleeve type suitable for the respective empty tube bundle from **f-tronic®** BSMS is to be selected. The minimum length of the electrical installation pipes must be 200 mm, measured from the wall / ceiling on both sides of the wall / ceiling surface, respectively. Any remaining openings around the empty tube bundle in walls or ceilings must be filled in with concrete, cement mortar or plaster. The interstices between the individual

ducts must not be filled. Attach cuff to the wall or ceiling with fire protection approved dowels.

The attachment of the fire protection sleeve to lightweight partition walls must be made by means of continuous threaded rods, M6 or M8. For ceilings, several cuffs are to be laid with zero distance apart. The ends of the electrical conduits are to be filled for smoke safety reasons at least 20 mm deep.

When installing the cable insulation in walls, the first holders (supports) of the cable are to be arranged on both sides of the wall at a distance ≤ 450 mm, above ceilings ≤ 420 mm. The fire resistance of the supporting structure must suit the application.

Type	BSDSB
Execution	Intumescent
Item no.	7500004
SU / CB / PL	1 / 20 / 720
Content	310ml / 400g



## Approval Z-19.11-2014

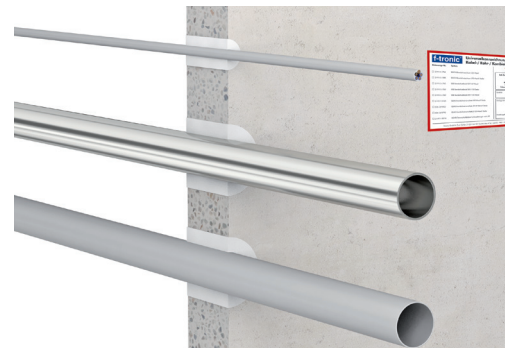
- Subject to external monitoring because of the certification (building material approval)
- (Only for individual lines according to LAR (if necessary, note the differences in the LAR of the individual provinces!) Standard Cable Line Directive (MLAR) of the DIBt can be modified in parts by individual provinces
- The cured product must not be exposed to the immediate effects of the weather (driving rain, freeze / thaw cycles, UV rays)
- Suitable for single line ducts in solid elements
- Suitable for cladding tubes made of non-combustible material in lightweight partition walls, according to MLAR rules
- Cartridges usable with standard press guns
- Aging-resistant, water-based
- Easy processing, even with small ring joints
- Can be used in areas with a high humidity rating



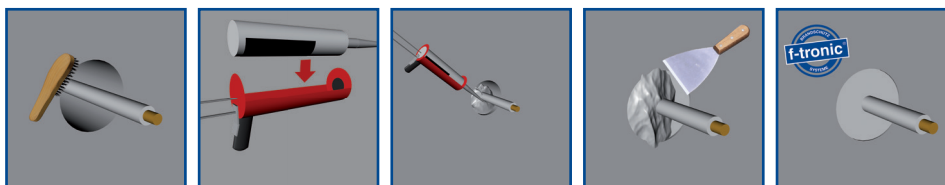
## Scope of application

MLAR Directive: Implementation of individual lines in individual openings.

- Electrical lines
- Tubes with an outer diameter of up to 160 mm made of non-combustible materials (other than aluminium and glass) also with a coating of combustible materials of up to 2 mm thickness
- Pipelines for non-flammable liquids and conduits for electrical cables with an outer diameter to 32 mm made of combustible materials, aluminium or glass



## Processing



## Assembly instructions

- Conducting wires according to MLAR, sections 4.2 and 4.3.2
- Carrying through of individual wires through walls and ceilings (4.3.1 and 4.3.2): - ring joints up to 15 mm by means of **f-tronic®** BSDSB intumescents - close ring joints up to 50 mm with mineral wool fibre (melting point > 1,000°C plugged as tight as possible) or cement mortar
- Close ring joints over 50 mm with cement mortar
- Feed wires with no minimum distance from each other through fire-resistant walls (take care with exempted walls), see MLAR, section 4.2

## Accessories



Type	BSPI	BSM	BSMV	BSKS
Execution	Press gun	Mixing tube	Mixing tube extension	Universal label
Item no.	7500007	7500008	7500009	7500029
SU / CB / PL	1 / - / 150	10 / 10 / 8.000	10 / 10 / 8.000	20 / - / -
Info	for 480 g cartridges	-	L = 200 mm	-



Type	BSBF50	BSBF125	BSBF160	BSBF200
Execution	Fixing set	Fixing set	Fixing set	Fixing set
Item no.	7500032	7500033	7500034	7500035
SU / CB / PL	1 / - / -	1 / - / -	1 / - / -	1 / - / -
suitable for	Fire protection sleeve size 32 - 50	Fire protection sleeve size 63 - 125	Fire protection sleeve size 140 - 160	Fire protection sleeve size 180 - 200

Socket boxes

Fire protection

Fastening systems

Distributors

Meter cabinets

Meter connection columns







# Quickly fixed

## And hard to take out

Installers can now dispense with tools. Because **f-tronic®** Cable Management System products are easily affixed by hand. How is that possible? Thanks to an easy assembly system that needs nothing else but a Ø 6mm hole and the same for all fastening systems. Whether surface or flush-mounted, for maximum flexibility.

We expanded our range of fastening techniques to systems with functional endurance, these materials round off the whole range.

All the benefits that are offered by "Made in Germany" technologies: Very simple operation without changing of tools, enormous time savings during installation, with easy laying and mounting.

One could also say: select your CMS, plug it in, you're done!

## Table of contents

Cable Management System .....	106
Functional endurance .....	114

# CMS

## Quick and easy to connect



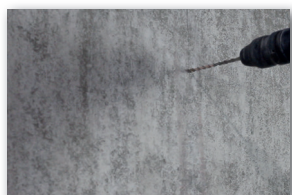
- Savings in working time and costs from quick and easy installation
- Secure hold, thanks to pull-out forces up to 40kg
- UV-stabilised
- Halogen-free
- Working temperature range -20°C - + 84°C
- To 750°C for filament
- All products each in own resealable bag
- For all products, a bore diameter of 6 mm diameter is required

## Double plug-in anchors

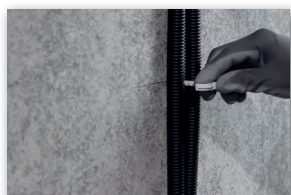


Type	CMS11	CMS12	CMS13
Execution	Double plug-in anchors	Double plug-in anchors	Double plug-in anchors
Item no.	7440016	7440017	7440018
SU / CB / PL	200 / 2.000 / 128.000	100 / 1.000 / 96.000	100 / 1.000 / 64.000
Clamping range	4 - 12 mm	20 - 25 mm	25 - 32 mm
suitable for	Electric wire	Pipe	Pipe
for drill diameters	Ø 6 mm	Ø 6 mm	Ø 6 mm
Material	PP	PP	PP
Colour	grey	grey	grey

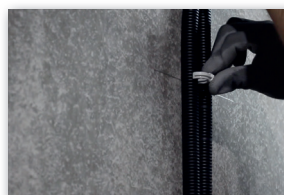
## Assembly instructions



**1** Borehole Ø 6 mm.



**2** The product is inserted without any additional tools.



**3** Simple and quick installation, safe stop.



Video



## Insertion flap



Type	CMS1	CMS2	CMS3	CMS4
Execution	Insertion flap	Insertion flap	Insertion flap	Insertion flap
Item no.	7440012	7440013	7440014	7440015
SU / CB / PL	200 / 3.000 / 192.000	200 / 2.000 / 128.000	100 / 1.500 / 96.000	100 / 1.000 / 64.000
Clamping range	3 - 13 mm	6 - 20 mm	8 - 28 mm	20 - 40 mm
for drill diameters	Ø 6 mm	Ø 6 mm	Ø 6 mm	Ø 6 mm
Material	PP	PP	PP	PP
Colour	grey	grey	grey	grey



Type	CMS1S	CMS2S	CMS3S	CMS4S
Execution	Insertion flap	Insertion flap	Insertion flap	Insertion flap
Item no.	7440037	7440038	7440039	7440040
SU / CB / PL	200 / 3.000 / 192.000	200 / 2.000 / 128.000	100 / 1.500 / 96.000	100 / 1.000 / 64.000
Clamping range	3 - 13 mm	6 - 20 mm	8 - 28 mm	20 - 40 mm
for drill diameters	Ø 6 mm	Ø 6 mm	Ø 6 mm	Ø 6 mm
Material	PP	PP	PP	PP
Colour	UV-stabilised, black	UV-stabilised, black	UV-stabilised, black	UV-stabilised, black

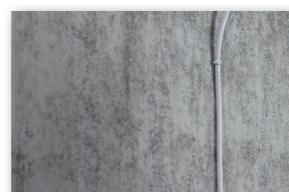
## Assembly instructions



**1** Borehole Ø 6 mm.



**2** The product is inserted without any additional tools.



**3** Simple and quick installation, safe stop.

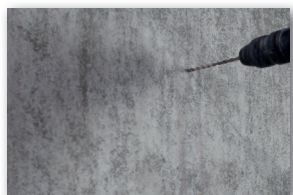


Video



Type	CMS9	CMS10
Execution	Clamping bracket	Clamping bracket
Item no.	7420017	7420018
SU / CB / PL	50 / 800 / 16.000	50 / 600 / 12.000
suitable for	up to 10 cables	up to 20 cables
for drill diameters	Ø 6 mm	Ø 6 mm
Material	PA6	PA6
Colour	grey	grey

## Assembly instructions



**1** Borehole Ø 6 mm.



**2** The product is inserted without any additional tools.



**3** Simple retrospective installation possible.



**4** Safe Stop.



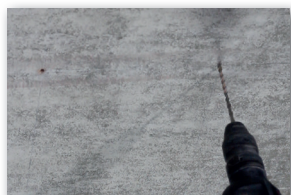
Video

## Multi-cable bracket



Type	CMS15	CMS30
Execution	Multi-cable bracket	Multi-cable bracket
Item no.	7430007	7430008
SU / CB / PL	50 / 400 / 8.000	25 / 250 / 5.000
suitable for	up to 15 cables	up to 30 cables
Attachment Wall / ceiling	• / •	- / •
for drill diameters	Ø 6 mm	Ø 6 mm
recommended purchase	CMS5 / CMS6 / CMS7 / CMS8	CMS5 / CMS6 / CMS7 / CMS8
Material	PA6	PA6
Colour	grey	grey

## Assembly instructions



**1** Borehole Ø 6 mm.



**2** Simple installation of the plug system (CMS 5, 6, 7 or 8). Insert the collection holder.



**3** Simple retrospective installation possible.



**4** Safe Stop.



▶ Video





Type	CMS5	CMS6	CMS7	CMS8
Execution	System plugs	System plugs	System plugs	System plugs
Item no.	7440024	7440025	7440026	7440027
SU / CB / PL	100 / 2.000 / 128.000	100 / 1.500 / 96.000	100 / 1.000 / 64.000	100 / 600 / 38.400
Length of anchor	11 mm	27 mm	42 mm	80 mm
Drilling diameter	Ø 6 mm	Ø 6 mm	Ø 6 mm	Ø 6 mm
Material	PP	PP	PP	PP
Colour	grey	grey	grey	grey



Type	CMS17	CMS18
Execution	Simple plug-in dowel	Simple plug-in dowel
Item no.	7440041	7440042
SU / CB / PL	100 / 1.000 / 64.000	100 / 1.000 / 64.000
Clamping range	16 - 20 mm	20 - 25 mm
Length of anchor	32 mm	32 mm
Drilling diameter	Ø 6 mm	Ø 6 mm
Material	PP	PP
Colour	grey	grey

Type	CMS21
Execution	Cable plug fastening anchor
Item no.	7440043
SU / CB / PL	200 / 3.000 / 168.000
for cable ties	≤ 8.5 mm
Length of anchor	27 mm
Material	PA6
Drilling diameter	Ø 6 mm

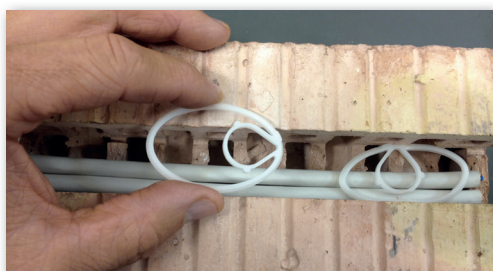


## Fixing clip

# f-clip

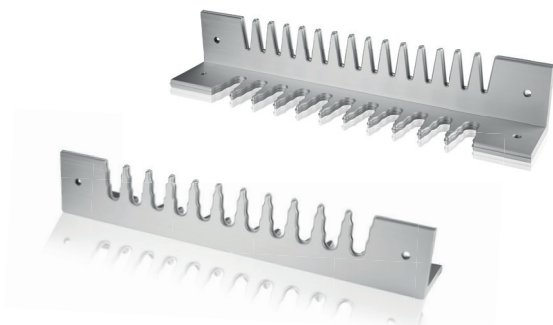
## Quick and tool-free cable attachment

- Quick and tool-free fixing in masonry slots up to 55 mm
- High clamping force
- No showing through the plaster thanks to colour neutrality
- No damage to the cables possible
- Easy installation due to practical finger loop
- Reduced installation time - 50% faster!



Type	<b>f-clip</b>
Execution	Fixing clip
Item no.	<b>7410003</b>
SU / CB / PL	50 / 6.000 / 96.000
Slot width	≤ 55 mm
Material	POM

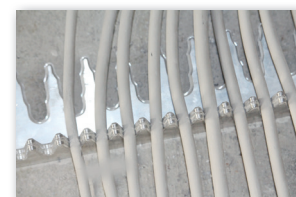
## Cable laying rail for cables and pipes



Type	<b>KVS</b>
Execution	Cable laying rail
Item no.	<b>7390084</b>
SU / CB / PL	1 / - / -
Pipe attachment	M16, M20, M25
Line attachment	Ø 5 to 12,5 mm
Material	Aluminium



For pipes.



For cables.



Video

## Multi bracket



Type	KSH15	KSH30	KSH30B	UH1
Execution	Multi bracket	Multi bracket	Multi bracket flush with the wall	Universal holder for KSH15 and KSH30
Item no.	7430001	7430002	7430003	7430004
suitable for	up to 15 cables	up to 30 cables	up to 30 cables	-
SU / CB / PL	50 / 400 / 8.000	25 / 250 / 5.000	20 / 320 / 6.400	50 / 3.000 / 48.000
Material	PA6	PA6	PA6	PA6
Colour	grey	grey	grey	grey

## Clamp



Type	FT8	FT10	FT16
Execution	Cable clamp	Cable clamp	Cable clamp
Item no.	7420011	7420007	7420009
SU / CB / PL	50 / 1.200 / 24.000	50 / 800 / 16.000	50 / 600 / 12.000
suitable for	up to 8 cables	up to 10 cables	up to 16 cables
Material	PA6	PA6	PA6
Colour	grey	grey	grey

## Nail plate

Type	NS28 / 230	NS28 / 240	NS28 / 250
Execution	Nail plate	Nail plate	Nail plate
Item no.	7440001	7440002	7440003
SU / CB / PL	100 / 3.000 / 96.000	100 / 3.000 / 96.000	100 / 3.000 / 96.000
Diameter	Ø 28 mm	Ø 28 mm	Ø 28 mm
Nail	2 x 30 mm	2 x 40 mm	2 x 50 mm



Type	NS35 / 340	NS35 / 350	NS35 / 360	NS35 / 370
Execution	Nail plate	Nail plate	Nail plate	Nail plate
Item no.	7440004	7440005	7440006	7440007
SU / CB / PL	100 / 3.000 / 48.000	100 / 3.000 / 48.000	100 / 3.000 / 48.000	100 / 3.000 / 48.000
Diameter	Ø 35 mm	Ø 35 mm	Ø 35 mm	Ø 35 mm
Nail	3 x 40 mm	3 x 50 mm	3 x 60 mm	3 x 70 mm



## Cable holders

# f-fix

## Put an end to cable searches

- For cable fixing in HW socket box installations
- No unnecessary holes
- No fishing for the cable
- No complex cable search
- No cable damage
- Valuable time saved

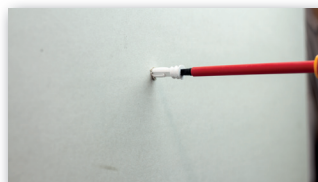


Type	f-fix	f-fix-MaxiPack	f-fix-Set	f-fix-Bohrer
Execution	Cable holders for Hollow wall installation	Cable holders for Hollow wall installation Maxipack	Set 50x f-fix + 1x drill	Drill 5x 200 mm for f-fix
Item no.	7390114	7390117	7390115	7390118
SU / CB / PL	100 / 2.000 / -	500 / 2.000 / -	1 / 30 / -	10 / - / -

## Assembly instructions



**1** Drill a Ø 10 mm hole.



**2** Screw in f-fix .



**3** Fix cable with cable tie to f-fix.



**4** Drill Ø 5 mm diameter hole: Drill is guided through the f-fix.



**5** Drill into predetermined hole with centre of the mill bit; make socket hole.



**6** Find cable.



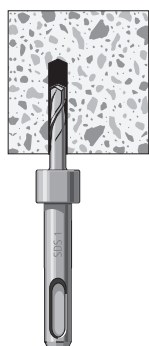
Video



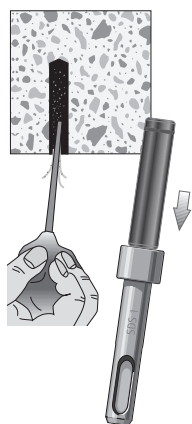
## It works even in tough conditions

- General test certificate (abP)
- Endurance E30 - E90
- Easy snap-on
- No fire load
- Halogen-free

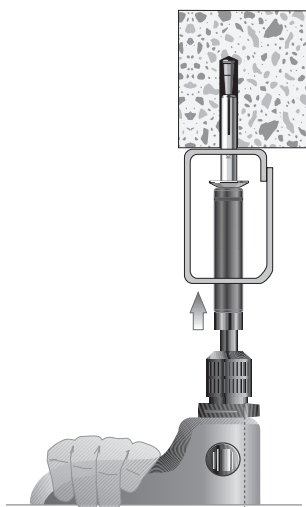
### 1 Drill



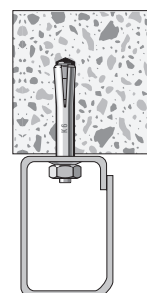
### 2 Clean



### 3 Force in



### 4 Finished



### Cable collection holder with functional endurance



Type	KSM15	KSM30
Execution	Cable collection holder	Cable collection holder
Item no.	7501001	7501002
SU / CB / PL	50 / 50 / -	25 / 25 / -
suitable for	up to 15 cables	up to 30 cables
Attachment Wall / ceiling	• / •	• / •
Material	Steel	Steel
required purchase	KDM-2 Set	KDM-2 Set

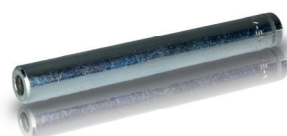
## Dowels for collecting holders

- Mounting in concrete
- Fire resistance class R30 - R120
- Mounting is removable
- For fixing collection holder KSM15 / 30



Type	KDM-2 Set
Execution	200 anchors + stop drill bit
Item no.	<b>7501003</b>
SU / CB / PL	1 / 10 / -
Length of anchor	32 mm
Material	Steel
Drilling diameter	Ø 6 mm

## Accessory cable collection holder



Type	SWM-SM 50	SDS 1
Execution	Setting tool long for KDM2	Stop drill bit
Item no.	<b>7501004</b>	<b>7501005</b>
SU / CB / PL	1 / - / -	1 / - / -
Material	Steel	Steel

Socket boxes

Fire protection

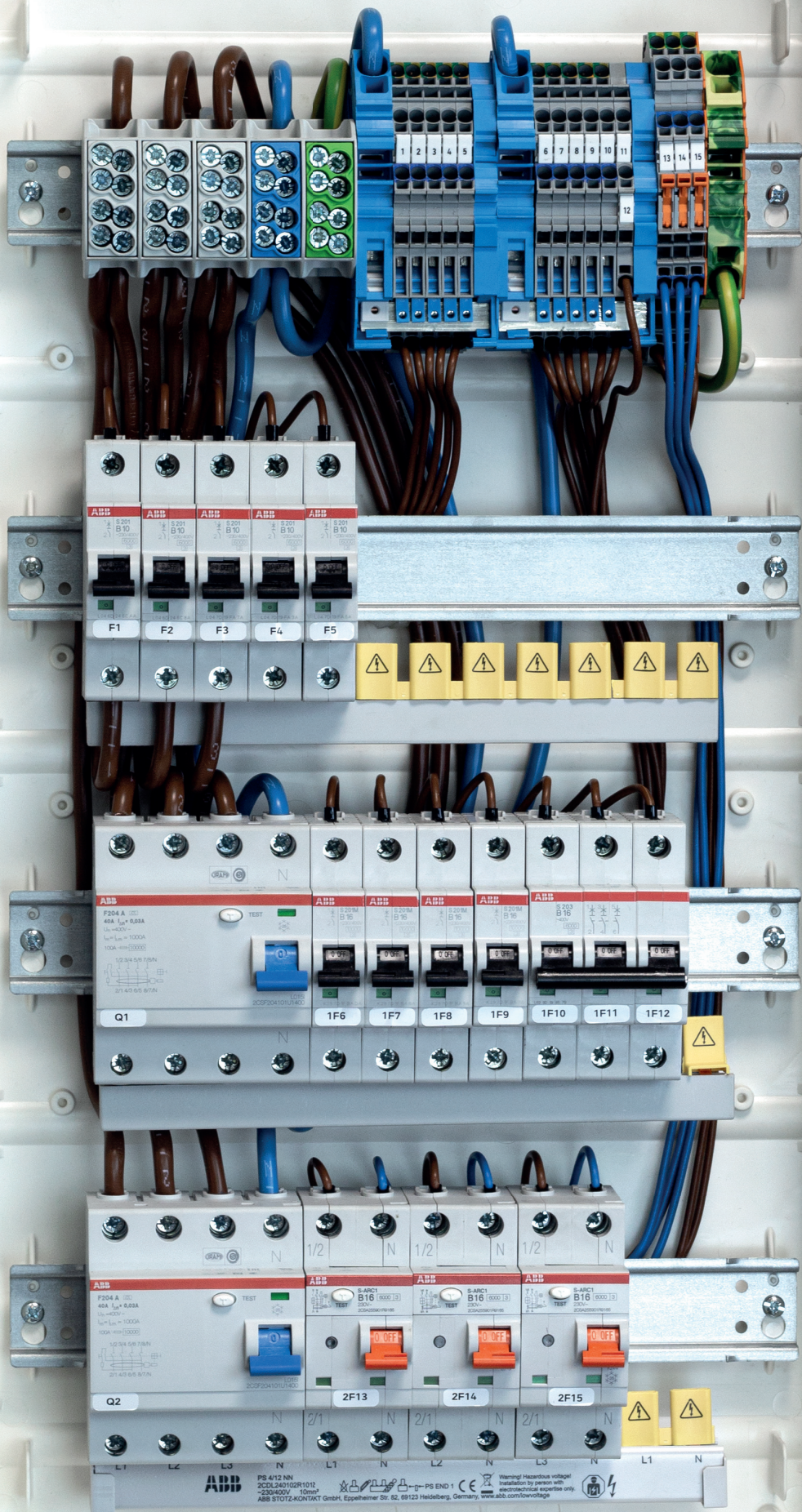
Fastening systems

Distributors

Meter cabinets

Meter connection columns





Richt zum Einbau in brandschneidbegrenzende Kehlwände



# Distribution boards

## The right distributor for every application

**f-tronic®** small distributors are hard to beat in their diversity. Whether flush, hollow-wall, surface, communications or damp area distributors - **f-tronic®** has it all!

With our JUMBO flush mounted and hollow wall distributors, we offer a solution for every application. We at **f-tronic®** have 1- to 5-row power distribution panels with plug and screw clamps in our range. These distributors can of course also be combined with the identically constructed communications distributors. For easy and convenient combination, we offer a unique distribution connector set. All communication distributors can also be equipped with a WiFi port.

Should there be no room for two separate distributors, the twin distributor series is the right solution for you. This clever and space-saving combination, consisting of a circuit and communication distributor, offers you a lot of room in a tight space.

Our VISION series is the right solution for surface mounted distribution. Here we offer 1- to 4-row power distribution and its matching communication distributor.

In difficult installation environments, the **f-tronic®** damp-area-distributor series can be used with up to 70 modular units. For larger space requirements, we have surface-mounted field distributors and distribution boards with up to 540 modular units in our range.

## Table of contents

Small distributor.....	118
Combination distributor .....	118
FM Distributor.....	122
HW Distributor .....	123
Communication distributor .....	124
Twin distributor.....	126
SM Distributor .....	128
SM Communications distributor .....	130
SM Automate box.....	132
Accessories FM / HW / SM distributor .....	133
Damp area distributor.....	138
Accessories Damp area distributor .....	141
Distributor .....	144
Field distributor.....	144
Distribution cabinet.....	145
Accessories .....	146

# Flexible usage

## Flush and hollow wall



- Generous wiring space
- Strain relief possible
- Frame height 9 mm
- Packaging can be used as plaster protection
- Suitable with HWA-Set for hollow wall installation



- 1** Integrated air vents provide for heat dissipation.



- 2** Easy installation due to a lot of space in the upper and lower connection area.



- 3** Simple and easy installation, thanks to the integrated spirit level.



**Certified**  
DIN EN 60670-1  
DIN EN 60670-24  
DIN EN 61439-1  
DIN EN 61439-3  
DIN 43871

**U<sub>MAX</sub>** 400 V  
**I<sub>MAX</sub>** 63A



Type	JUMBO12+2	JUMBO24+4	JUMBO36+6	JUMBO48+8	JUMBO60+10
Execution	1-row	2-rows	3-rows	4-rows	5-rows
Item no.	7250012	7250017	7250022	7250028	7250062
SU / CB / PL	1 / 1 / 90	1 / 1 / 60	1 / 1 / 45	1 / 1 / 45	1 / 1 / 30
Equipped with	1x door with frame (T+RJUMBO12+2) 1x FI supplementary clamp (FIK) 1x PE-N-plug-in clamp (SKN17PE)	1x door with frame (T+RJUMBO24+4) 1x FI supplementary clamp (FIK) 1x PE-N-plug-in clamp (SKN17PE)	1x door with frame (T+RJUMBO36+6) 1x PE-plug-in clamp (SKPE34) 1x N-plug-in clamp (SKN34) 1x N-N-plug-in clamp (SKN17N)	1x door with frame (T+RJUMBO48+8) 1x PE-plug-in clamp (SKPE34) 1x N-plug-in clamp (SKN34) 1x N-N-plug-in clamp (SKN17N)	1x door with frame (T+RJUMBO60+10) 1x PE-plug-in clamp (SKPE34) 2x N-N-plug-in clamp (SKN17N)
recommended purchase	HWA-Set MH-Set ADS12W	HWA-Set MH-Set ADS12W	HWA-Set MH-Set ADS12W	HWA-Set MH-Set ADS12W	HWA-Set MH-Set ADS12W
Modules	14	28	42	56	70
Panel thickness HW	8 - 40 mm	8 - 40 mm	8 - 40 mm	8 - 40 mm	8 - 40 mm
H x W x D	400 x 365 x 98 mm	525 x 365 x 98 mm	650 x 365 x 98 mm	775 x 365 x 98 mm	900 x 365 x 98 mm
Material	PS / sheet steel	PS / sheet steel	PS / sheet steel	PS / sheet steel	PS / sheet steel
lead seal / stackable	• / •	• / •	• / •	• / •	• / •

Accessories from page 133  
Clamping equipment from page 150



**4** 12 + 2 units per row.



**5** 3 + 4 rows standard size prepared for three FI circuits.



**6** Hollow wall anchors from 8 mm.

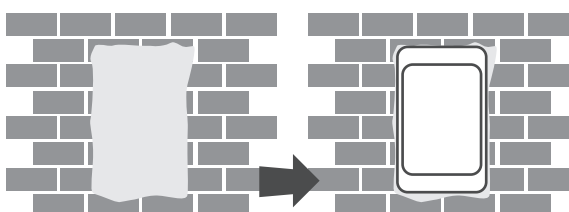
# Preassemblable with System

- Optionally, can be used for flush mounting or hollow wall mounting
- Generous wiring space
- Strain relief possible
- Packaging can be used as plaster protection
- Suitable with HWA-Set for hollow wall installation



## 1. Preassemble

Install the distribution pan, lay pipes and cables and attach trim.



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DIN EN 61439-3  
DIN 43871

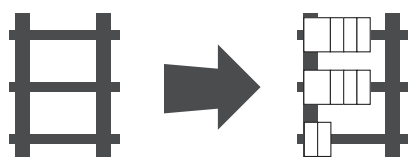
**U<sub>MAX</sub>** 400 V  
**I<sub>MAX</sub>** 63A

Type	JUMBO12+2XX	JUMBO24+4XX	JUMBO36+6XX	JUMBO48+8XX
Execution	1-row	2-rows	3-rows	4-rows
Item no.	7250015	7250020	7250025	7250031
SU / CB / PL	1 / 1 / 90	1 / 1 / 60	1 / 1 / 45	1 / 1 / 45
Equipped with	1x door with frame (T+RJUMBO12+2) 1x PE-N-Screw clamp (KN17PE)	1x door with frame (T+RJUMBO24+4) 1x PE-N-Screw clamp (KN17PE)	1x door with frame (T+RJUMBO36+6) 1x PE Screw clamp (KPE34) 1x N-screw clamp(KN34)	1x door with frame (T+RJUMBO48+8) 1x PE Screw clamp (KPE34) 1x N-Screw clamp (KN34)
recommended purchase	HWA-Set MH-Set ADS12W	HWA-Set MH-Set ADS12W	HWA-Set MH-Set ADS12W	HWA-Set MH-Set ADS12W
Modules	14	28	42	56
Panel thickness HW	8 - 40 mm	8 - 40 mm	8 - 40 mm	8 - 40 mm
H x W x D	400 x 365 x 98 mm	525 x 365 x 98 mm	650 x 365 x 98 mm	775 x 365 x 98 mm
Material	PS / sheet steel	PS / sheet steel	PS / sheet steel	PS / sheet steel
lead seal / stackable	• / •	• / •	• / •	• / •

Accessories from page 133  
Clamping equipment from page 150

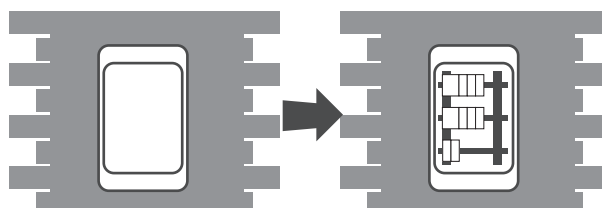
## 2. Pre-install

On the supporting structure, the devices can be already installed and pre-wired.



## 3. Complete

Remove the plaster protection, assemble pre-installed supporting structure, connect, mount the frame and door.





# Simple and reliable

for flush mounting

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DIN EN 60670-1  
DIN EN 60670-24  
DIN EN 61439-1  
DIN EN 61439-3  
DIN 43871

**U**<sub>MAX</sub> 400 V  
**I**<sub>MAX</sub> 63A



Type	UPV12+2ST	UPV24+4ST	UPV36+6ST	UPV48+8ST	UPV60+10ST
Execution	1-row	2-rows	3-rows	4-rows	5-rows
Item no.	7210028	7210029	7210030	7210031	7210063
SU / CB / PL	1 / 1 / 90	1 / 1 / 60	1 / 1 / 45	1 / 1 / 45	1 / 1 / 30
Modules	14	28	42	56	70
H x W x D	400 x 365 x 98 mm	525 x 365 x 98 mm	650 x 365 x 98 mm	775 x 365 x 98 mm	900 x 365 x 98 mm
Equipped with	1x door with frame (T+RJUMBO12+2) 1x PE-N-Screw clamp (KN17PE)	1x door with frame (T+RJUMBO24+4) 1x PE-N-Screw clamp (KN17PE)	1x door with frame (T+RJUMBO36+6) 1x PE-N-Screw clamp (KPE34) 1x N-Screw clamp (KN34)	1x door with frame (T+RJUMBO48+8) 1x PE Screw clamp (KPE34) 1x N-Screw clamp (KN34)	1x door with frame (T+RJUMBO60+10) 1x PE Screw clamp (KPE34) 2x N-N-Screw clamp (KN17N)
recommended purchase	ADS12W	ADS12W	ADS12W	ADS12W	ADS12W
Material	PS / sheet steel	PS / sheet steel	PS / sheet steel	PS / sheet steel	PS / sheet steel
lead seal / stackable	• / •	• / •	• / •	• / •	• / •

Accessories from page 133

Clamping equipment technology from page 150

# Simple and reliable

## for hollow wall

**Certified**

DIN EN 60670-1  
DIN EN 60670-24  
DIN EN 61439-1  
DIN EN 61439-3  
DIN 43871

**U<sub>MAX</sub>** 400 V  
**I<sub>MAX</sub>** 63A



Type	HWV12+2ST	HWV24+4ST	HWV36+6ST	HWV48+8ST	HWV60+10ST
Execution	1-row	2-rows	3-rows	4-rows	5-rows
Item no.	7230015	7230016	7230017	7230018	7230035
SU / CB / PL	1 / 1 / 90	1 / 1 / 60	1 / 1 / 45	1 / 1 / 45	1 / 1 / 30
Modules	14	28	42	56	70
Panel thickness HW	8 - 40 mm	8 - 40 mm	8 - 40 mm	8 - 40 mm	8 - 40 mm
H x W x D	400 x 365 x 98 mm	525 x 365 x 98 mm	650 x 365 x 98 mm	775 x 365 x 98 mm	900 x 365 x 98 mm
Equipped with	1x door with frame (T+RJUMBO12+2) 1x PE-N-Screw clamp (KN17PE) 1x hollow wall anchor set (HWA-Set)	1x door with frame (T+RJUMBO24+4) 1x PE-N-Screw clamp (KN17PE) 1x hollow wall anchor set (HWA-Set)	1x door with frame (T+RJUMBO36+6) 1x PE-Screw clamp (KPE34) 1x N-Screw clamp (KN34) 1x hollow wall anchor set (HWA-Set)	1x door with frame (T+RJUMBO48+8) 1x PE-Screw clamp (KPE34) 1x N-Screw clamp (KN34) 1x hollow wall anchor set (HWA-Set)	1x door with frame (T+RJUMBO60+10) 1x PE-Screw clamp (KPE34) 2x N-N-Screw clamp (KN17N) 1x Hollow wall anchor set (HWA-Set)
recommended purchase	ADS12W	ADS12W	ADS12W	ADS12W	ADS12W
Material	PS / sheet steel	PS / sheet steel	PS / sheet steel	PS / sheet steel	PS / sheet steel
lead seal / stackable	• / •	• / •	• / •	• / •	• / •

Socket boxes

Fire protection

Fastening systems

Distributors

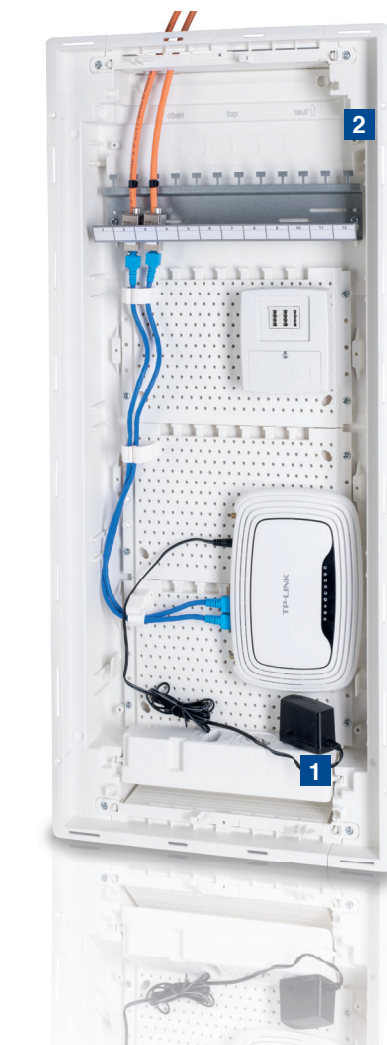
Meter cabinets

Meter connection columns

Accessories from page 133  
Clamping equipment from page 150

# Innovative solutions for communications distribution

- For hollow wall and flush mounted installation
- For installation of multimedia applications (e.g.: telecommunications and CATV distribution)
- Convenient access to hardware components (e.g.: modem, wireless router, switch)
- Standard 3-way socket with staggered slots
- Ventilation slots in the door for heat dissipation
- Door with plastic insert for wireless application available



about 25m



about 25m

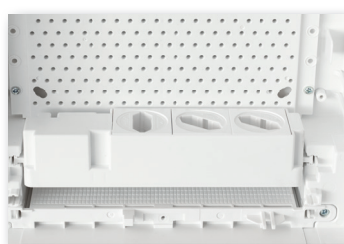


about 25m

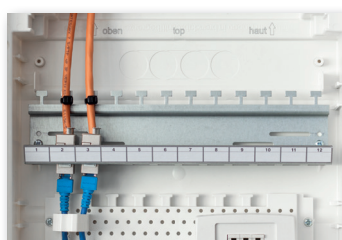


## Wireless capability

The revision of our renowned and proven **f-tronic®** communication distributors provides a distribution variant with improvements to your wireless signal: There are recesses on the door, which are sealed by a discreet plastic plate.



**1** On the plastic carrier plates, the hardware components are mounted potential-free and powered by the triple socket for Euro plugs with mains voltage.



**2** The patch panel integrated in the upper area allows easy mounting of patch modules in the "Keystone" format.



**3** The integral spirit levels allow for quick and accurate alignment of the distributor.



<b>Manufactured to</b> DIN 18015-1 DIN 18015-2 DIN 18015-3 DIN 18015-4	
<b>U<sub>MAX</sub></b>	400 V
<b>I<sub>MAX</sub></b>	63A



Type	JUMBO36K	JUMBO48K	JUMBO60K
Execution	3-rows	4-rows	5-rows
Item no.	7250027	7250033	7250063
SU / CB / PL	1 / 1 / 45	1 / 1 / 45	1 / 1 / 30
HW / FM	• / •	• / •	• / •
Equipped with	1x door with frame (T+RJUMBO36K) 1x Patch Panel (PATCH12) 2x mounting plate 1x 3-way socket (STECKD3) 1x hollow wall anchor set (HWA-Set) 1x connecting bracket (VK-Set)	1x door with frame (T+RJUMBO48K) 1x Patch Panel (PATCH12) 3x mounting plate 1x 3-way socket (STECKD3) 1x hollow wall anchor set (HWA-Set) 1x connecting bracket (VK-Set)	1x door with frame (T+RJUMBO60K) 1x Patch Panel (PATCH12) 4x mounting plate 1x 3-way socket (STECKD3) 1x hollow wall anchor set (HWA-Set) 1x connecting bracket (VK-Set)
recommended purchase	MH-Set	MH-Set	MH-Set
Panel thickness HW	8 - 40 mm	8 - 40 mm	8 - 40 mm
H x W x D	650 x 365 x 98 mm	775 x 365 x 98 mm	900 x 365 x 98 mm
lead seal / stackable	• / •	• / •	• / •
Material	PS / sheet steel	PS / sheet steel	PS / sheet steel

<b>Manufactured to</b> DIN 18015-1 DIN 18015-2 DIN 18015-3 DIN 18015-4	
<b>U<sub>MAX</sub></b>	400V
<b>I<sub>MAX</sub></b>	63A



Type	JUMBO36KW	JUMBO48KW	JUMBO60KW
Execution	3-rows	4-rows	5-rows
Item no.	7250064	7250065	7250066
SU / CB / PL	1 / 1 / 45	1 / 1 / 45	1 / 1 / 30
HW / FM	• / •	• / •	• / •
Equipped with	1x door with frame (T+RJUMBO36KW) 1x Patch Panel (PATCH12) 2x mounting plate 1x 3-way socket (STECKD3) 1x hollow wall anchor set (HWA-Set) 1x connecting bracket (VK-Set)	1x door with frame (T+RJUMBO48KW) 1x Patch Panel (PATCH12) 3x mounting plate 1x 3-way socket (STECKD3) 1x hollow wall anchor set (HWA-Set) 1x connecting bracket (VK-Set)	1x door with frame (T+RJUMBO60KW) 1x Patch Panel (PATCH12) 4x mounting plate 1x 3-way socket (STECKD3) 1x hollow wall anchor set (HWA-Set) 1x connecting bracket (VK-Set)
recommended purchase	MH-Set	MH-Set	MH-Set
Panel thickness HW	8 - 40 mm	8 - 40 mm	8 - 40 mm
H x W x D	650 x 365 x 98 mm	775 x 365 x 98 mm	900 x 365 x 98 mm
lead seal / stackable	• / •	• / •	• / •
Material	PS / sheet steel	PS / sheet steel	PS / sheet steel

Socket boxes

Fire protection

Fastening systems

Distributors

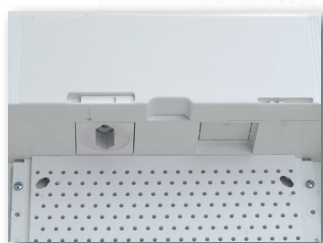
Meter cabinets

Meter connection columns

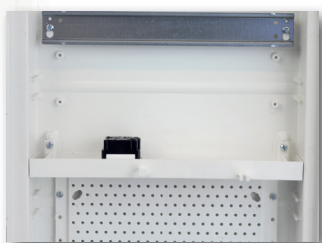
# Double Power

## in distribution

- Generous wiring space
- For flush mounted and hollow wall installation
- Ventilation slots in the door for heat dissipation
- Optimal combination of circuit power and communications distribution
- Variants with wireless ports available
- 5-row housing with 2 or 3 row distribution and corresponding communication field
- Two distributors combined into one space-saving unit



**1** Socket at the bottom of the circuit portion allows direct power supply of communication devices.



**2** Separating web between the two sections ensures registration of protection class.



Type	JUMBO60-2	JUMBO60-3	JUMBO60-2W	JUMBO60-3W
Execution	2-rows + communication field	3-rows + communication field	2-rows + communication field	3-rows + communication field
Item no.	7250067	7250068	7250069	7250070
SU / CB / PL	1 / 1 / 30	1 / 1 / 30	1 / 1 / 30	1 / 1 / 30
HW / FM	• / •	• / •	• / •	• / •
Equipped with	1x door with frame (T+RJUMBO60-2) 2x mounting plate 1x PE-N-plug-in clamp (SKN17PE) 1x socket 1x hollow wall anchor set (HWA-Set)	1x door with frame (T+RJUMBO60K) 1x mounting plate 1x PE-plug-in clamp (SKPE34) 1x N-N-plug-in clamp (SKN17N) 1x socket 1x hollow wall anchor set (HWA-Set)	1x door with frame (T+RJUMBO60-2W) 2x mounting plate 1x PE-N-plug-in clamp (SKN17PE) 1x socket 1x hollow wall anchor set (HWA-Set)	1x door with frame (T+RJUMBO60KW) 1x mounting plate 1x PE-plug-in clamp (SKPE34) 1x N-N-plug-in clamp (SKN17N) 1x socket 1x hollow wall anchor set (HWA-Set)
recommended purchase	MH-Set, ADS12W	MH-Set, ADS12W	MH-Set, ADS12W	MH-Set, ADS12W
Modules	28	42	28	42
H x W x D	900 x 365 x 98 mm	900 x 365 x 98 mm	900 x 365 x 98 mm	900 x 365 x 98 mm
lead seal / stackable	• / •	• / •	• / •	• / •
Panel thickness HW	8 - 40 mm	8 - 40 mm	8 - 40 mm	8 - 40 mm

Socket boxes

Fire protection

Fastening systems

## Package JUMBO and distributor connector

- Package JUMBO K, JUMBO circuit distributor and connector set
- For hollow wall and flush mounted installation



Type	JUMBO PA3	JUMBO PA4	JUMBO PA5
Execution	Distributor package 3 rows	Distributor package 4 rows	Distributor Package 5 rows
Item no.	7250077	7250078	7250079
SU / CB / PL	1 / - / -	1 / - / -	1 / - / -
Equipped with	see JUMBO36+6 and JUMBO36K	see JUMBO48+8 and JUMBO48K	see JUMBO60+10 and JUMBO60K
Kit Contents	1x JUMBO36+6 1x JUMBO36K 1x VB3-Set	1x JUMBO48+8 1x JUMBO48K 1x VB4-Set	1x JUMBO60+10 1x JUMBO60K 1x VB5-Set

Distributors

Meter cabinets

Meter connection columns



# VISION

for the installation of tomorrow



**1** Strain relief for imported lines above and below.



**2** Easy installation, due to a lot of space in the upper and lower connection areas.



**3** Rear cable entry options in the upper, middle and lower connection area.

**Certified**  
DIN EN 60670-1  
DIN EN 60670-24  
DIN EN 61439-1  
DIN EN 61439-3  
DIN 43871

**U<sub>MAX</sub>** 400V  
**I<sub>MAX</sub>** 63A



Plug-in clamp	Type	APV12+2	APV24+4	APV36+6	APV48+8
	Execution	1-row	2-rows	3-rows	4-rows
	Item no.	7220044	7220050	7220056	7220061
	Equipped with	1x FI supplementary clamp (FIK) 1x PE-N-plug-in clamp (SKN17PE)	1x FI supplementary clamp (FIK) 1x PE-N-plug-in clamp (SKN17PE)	1x N-plug-in clamp (SKN34) 1x N-N-plug-in clamp (SKN17N) 1x PE-plug-in clamp (SKPE34)	1x N-plug-in clamp (SKN34) 1x N-N-plug-in clamp (SKN17N) 1x PE-plug-in clamp (SKPE34)
Screw clamp	Type	APV12+2PEN	APV24+4PEN	APV36+6PEN	APV48 + 8PEN
	Execution	1-row	2-rows	3-rows	4-rows
	Item no.	7220045	7220051	7220057	7220062
	Equipped with	1x PE-N-Screw clamp (KN17PE)	1x PE-N-Screw clamp (KN17PE)	1x N-Screw clamp (KN34) 1x PE-Screw clamp (KPE34)	1x N-Screw clamp (KN34) 1x PE-Screw clamp (KPE34)
	SU / CB / PL	1 / 12 / 144	1 / 8 / 96	1 / 6 / 72	1 / 5 / 30
	recommended purchase	door system APV12+2TM APV12+2TW	door system APV24+4TM APV24+4TW	door system APV36+6TM APV36+6TW	door system APV48+8TM APV48+8TW
	Modules	14	28	42	56
	H x W x D	250 x 305 x 99 mm	375 x 305 x 99 mm	515 x 305 x 99 mm	640 x 305 x 99 mm
	Introductions	2 x 220 x 35 mm flange 4x M25	2 x 220 x 35 mm flange 6x M25	2 x 220 x 35 mm flange 8x M25	2 x 220 x 35 mm flange 10x M25
	Lead seal / Stacking	• / -	• / -	• / -	• / -
	Material	PS	PS	PS	PS



**4** 12 + 2 units per row.



**5** 3 + 4 rows standard prepared for three FI circuits.

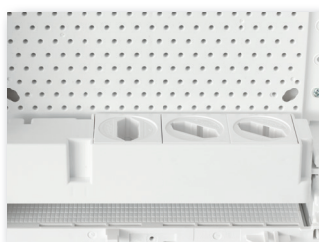
Accessories from page 133  
Terminal technology from page 150

## VISION K for a future-oriented technology

- For installation of multimedia applications (e.g.: telecommunications and BK distributions)
- 3- and 4-row version for surface installations
- Integrated patch panel for mounting patch modules
- Plastic carrier plate for hardware components (e.g.: modem, WiFi router, switch)
- 3-way socket
- Vents
- Meets all the requirements of DIN 18015-1 to DIN 18015-4



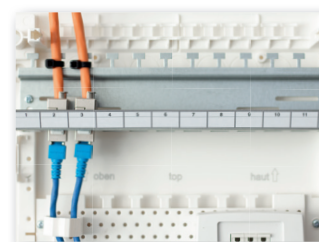




- 1** On the plastic support plates, the hardware components are mounted potential-free and supplied via the 3-way socket for Euro-plugs with mains voltage.



- 2** Standard 3-way socket with staggered slots.



- 3** The patch panel integrated in the top area, allowing easy mounting of patch modules in the "Keystone" format.



Type	APV36K	APV48K
Execution	3-rows	4-rows
Item no.	7220087	7220088
SU / CB / PL	1 / 6 / 72	1 / 5 / 30
Mounting surface	450 x 210 mm	600 x 210 mm
H x W x D	515 x 305 x 99 mm	640 x 305 x 99 mm
Lead seal / Stacking	• / -	• / -
Equipped with	1x door (APVTK36TM) 1x patch panel (PATCH12) 2x mounting plate 1x 3-way socket (STECKD3)	1x door (APVTK48TM) 1x patch panel (PATCH12) 3x mounting plate 1x 3-way socket (STECKD3)

Accessories from page 133  
Terminal technology from page 150



Type	KV02	KV04	KV06
Execution	SM-automate box	SM-automate box	SM-automate box
Item no.	7260010	7260012	7260014
SU / CB / PL	1 / 80 / 2.560	1 / 84 / 1.344	1 / 56 / 896
H x W x D	140 x 50 x 65 mm	160 x 94 x 65 mm	160 x 140 x 65 mm
Colour	white	white	white
Material	PS	PS	PS
Modules	2	4	6
Equipped with	-	-	-



Type	KV02K	KV04K	KV06K
Execution	SM-automate box	SM-automate box	SM-automate box
Item no.	7260011	7260013	7260015
SU / CB / PL	1 / 80 / 2.560	1 / 84 / 1.344	1 / 56 / 896
H x W x D	140 x 50 x 65 mm	160 x 94 x 65 mm	160 x 140 x 65 mm
Colour	white	white	white
Material	PS	PS	PS
Modules	2	4	6
Equipped with	PE-N clamps	PE-N clamps	PE-N clamps

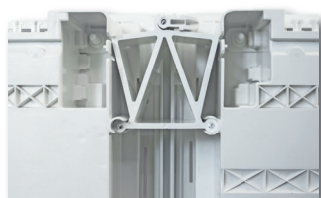
# Distributor connector

## A reliable connection

- Extremely stable
- Quick and easy installation
- Saves time and money
- End rail for a clean finish
- Suitable for cavity wall and flush mounting



Type	VB3-SET	VB4-SET	VB5-SET
Execution	Distributor connector set for JUMBO 3 rows	Distributor connector set for JUMBO 4 rows	Distributor connector set for JUMBO 5 row
Item no.	7290172	7290173	7290174
SU / CB / PL	1 / - / -	1 / - / -	1 / - / -
Material	PS	PS	PS
suitable for	HWV36+6ST JUMBO36+6 JUMBO36+6XX JUMBO36K UPV36+6ST JUMBO36KW	HWV48+8ST JUMBO48+8 JUMBO48+8XX JUMBO48K UPV48+8ST JUMBO48KW	HWV60+10ST JUMBO60+10 JUMBO60K UPV60+10ST JUMBO60KW JUMBO Twin



**1** Stable connection for two distributors.



**2** Clean finish from white rail.



# Suitable in every application



1-row	Type	T+RJUMBO12+2	-	-	APV12+2TM	APV12+2TW	-
	Item no.	7290090	-	-	7220046	7220048	-
	SU / CB / PL	1 / 12 / 96	-	-	1 / 10 / 560	1 / 10 / 560	-
2-row	Type	T+RJUMBO24+4	-	-	APV24+4TM	APV24+4TW	-
	Item no.	7290091	-	-	7220052	7220054	-
	SU / CB / PL	1 / 12 / 96	-	-	1 / 10 / 320	1 / 15 / 480	-
3-row	Type	T+6+RJUMBO36	T+RJUMBO36K	T+RJUMBO36KW	APV36+6TM	APV36+6TW	APVTK36TM
	Item no.	7290092	7290094	7290164	7220058	7220060	7220166
	SU / CB / PL	1 / 12 / 48	1 / 12 / 48	1 / 12 / 48	1 / 20 / 160	1 / 20 / 160	1 / 12 / 160
4-row	Type	T+RJUMBO48+8	T+RJUMBO48K	T+RJUMBO48KW	APV48+8TM	APV48+8TW	APVTK48TM
	Item no.	7290093	7290095	7290165	7220063	7220065	7220167
	SU / CB / PL	1 / 12 / 24	1 / 12 / 24	1 / 12 / 24	1 / 40 / 80	1 / 40 / 80	1 / 40 / 80
5-row	Type	T+R+10JUMBO60	T+RJUMBO60K	T+RJUMBO60KW	-	-	-
	Item no.	7290168	7290167	7290166	-	-	-
	SU / CB / PL	1 / 1 / -	1 / 1 / -	1 / 1 / -	-	-	-
	JUMBO / VISION	• / -	• / -	• / -	- / •	- / •	- / •
	Material	Sheet steel	Sheet steel	Sheet steel / PS	Sheet steel	PC	Sheet steel
	Wireless capability	-	-	•	-	-	-
	Ventilation	-	•	•	-	-	•

5-row	Type	T+RJUMBO60-2	T+RJUMBO60-2W
	Item no.	7290181	7290182
	SU / CB / PL	1 / 1 / -	1 / 1 / -
	suitable for	JUMBO60-2	JUMBO60-2W



## Cover strips



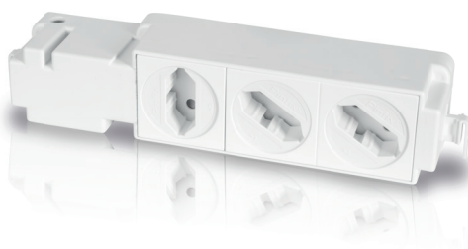
# Safety

simple and effective



Type	ADS12W	ADS12GR	ADS12SB
Execution	Cover strips	Cover strips	Cover strips, lockable
Item no.	7290032	7290031	7110060
SU / CB / PL	10 / 500 / 16.000	10 / 500 / 16.000	10 / 500 / 16.000
For modules	up to 12	up to 12	up to 12
H x W	219 x 54 mm	219 x 54 mm	219 x 54 mm
Material	PS	PS	PS
Colour	white, RAL9010	grey, RAL7035	white, RAL9010

## 3-way socket



Type	STECKD3
Execution	3-way socket
Item no.	7290113
SU / CB / PL	1 / 32 / 1.280
Slots	3x Euro plug
Material	PS
suitable	JUMBO / VISION

## Door lock with 2 keys



Type	TSV
Execution	Door lock with 2 keys
Item no.	7220086
SU / CB / PL	1 / 20 / 8.400
suitable for	JUMBO / VISION



Type	SKN17N	SKN17PE	SKN34	SKPE34
Execution	N-N-Plug-in clamp	PE-N-Plug-in clamp	N-Plug-in clamp	PE-Plug-in clamp
Item no.	9910009	9910010	9910011	9910012
SU / CB / PL	1 / 20 / 1.440	1 / 20 / 1.440	1 / 20 / 1.440	1 / 20 / 1.440
Connections	screw-in 3x 25 mm <sup>2</sup> plug-in 14x 4 mm <sup>2</sup>	screw-in 3x 25 mm <sup>2</sup> plug-in 14x 4 mm <sup>2</sup>	screw-in 6x 25 mm <sup>2</sup> plug-in 28x 4 mm <sup>2</sup>	screw-in 6x 25 mm <sup>2</sup> plug-in 28x 4 mm <sup>2</sup>
Colour	blue	blue / yellow	blue	yellow
suitable for	rigid conductors	rigid conductors	rigid conductors	rigid conductors



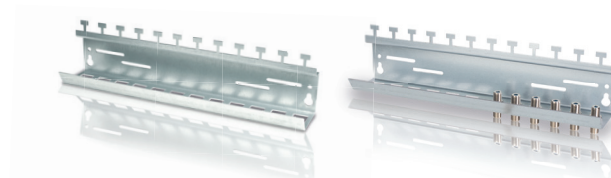
Type	KN17N	KN17PE	KN34	KPE34
Execution	N-N-Screw clamp	PE-N-Screw clamp	N-Screw clamp	PE-Screw clamp
Item no.	7290158	7290159	7290157	7290160
SU / CB / PL	1 / 20 / 1.440	1 / 20 / 1.440	1 / 20 / 1.440	1 / 20 / 1.440
Connections	screw-in 3x 4 - 16 mm <sup>2</sup> screw-in 14x 1.5 to 10 mm <sup>2</sup>	screw-in 3x 4 - 16 mm <sup>2</sup> screw-in 14x 1.5 to 10 mm <sup>2</sup>	screw-in 6x 4 - 16 mm <sup>2</sup> plug-in 28x 1.5 - 10 mm <sup>2</sup>	screw-in 6x 4 - 16 mm <sup>2</sup> plug-in 28x 1.5 - 10 mm <sup>2</sup>
Colour	blue	blue / yellow	blue	yellow
suitable for	rigid and flexible conductors	rigid and flexible conductors	rigid and flexible conductors	rigid and flexible conductors



Type	PEN310	N14	FIK
Execution	PE-N bridge	N-Plug-in clamp	FI clamp
Item no.	7110238	7110239	7290002
SU / CB / PL	1 / 20 / 4.320	1 / 10 / 4.000	1 / 30 / 8.400
Connections	-	1x 25 mm <sup>2</sup> 2x 4 mm <sup>2</sup> 12x 2.5 mm <sup>2</sup>	3x 16 mm <sup>2</sup> 2x 10 mm <sup>2</sup>
suitable for	-	rigid conductors	rigid and flexible conductors



## Patch panel



Type	PATCH12	PATCH6+6
Execution	Patch panel for Keystone mounting	Patch panel divided
Item no.	7290116	7290183
SU / CB / PL	1 / 20 / 960	1 / 32 / 1.280
Places	12x Keystone	6x Keystone 6x coax
Material	Metal	Metal
Accessories (incl.)	Adhesive label for labelling	Adhesive label for labelling
suitable for	JUMBO K / VISION K	JUMBO K / VISION K

## Device bracket set



Type	GK45
Execution	Devices bracket set for mounting of devices on the multimedia field
Item no.	7290156
SU / CB / PL	1 / - / -
Material	Metal
suitable for	JUMBO K / VISION K

## Distributor attachments




Type	MK-SET	MH-SET	VK-SET	HWA-SET
Execution	Joining bracket	Mounting bracket set	Connecting clip set	Hollow wall anchor set
Item no.	7290097	7290098	7290107	7290079
SU / CB / PL	1 / 10 / 8.400	1 / 30 / 2.160	1 / 30 / 5.760	1 / 10 / 2.880
HW / UP	- / •	- / •	• / •	• / -
Set Contents	4 pieces	4 pieces	2 pieces	4 pieces

## Robust in all installation environments




- Small distributors for devices up to 63A
- For industrial sites, workshops, basements or garages
- Large volume of space
- From 4 compact to 70 generous module units
- Interchangeable single doors in smoky topaz
- Door for left and right hand opening
- Several system housings can be easily lined up under each other or to the side
- With integrated spirit level for quick and professional alignment (from APV14)

<b>U<sub>MAX</sub></b> 400V <b>I<sub>MAX</sub></b> 63A					
	<b>APV14</b>	<b>APV28</b>	<b>APV42</b>	<b>APV56</b>	<b>APV70</b>
<b>Type</b>	1-row	2-rows	3-rows	4-rows	5-rows
<b>Execution</b>	1-row	2-rows	3-rows	4-rows	5-rows
<b>Item no.</b>	<b>7240022</b>	<b>7240024</b>	<b>7240027</b>	<b>7240029</b>	<b>7240032</b>
<b>SU / CB / PL</b>	1 / 1 / 90	1 / 1 / 60	1 / 1 / 48	1 / 1 / 40	1 / 1 / 30
<b>Equipped with</b>	1x PE-N-Screw clamp (KN17PE) 1x cover strips (ADS12GR) Double membrane seals (DMS20 / DMS25 / DMS32)	1x PE-Screw clamp (KPE34) 1x N-Screw clamp (KN34) 1x cover strips (ADS12GR) Double membrane seals (DMS20 / DMS25 / DMS32)	1x PE-Screw clamp (KPE34) 1x N-Screw clamp (KN34) 2x cover strips (ADS12GR) Double membrane seals (DMS20 / DMS25 / DMS32)	1x PE-Screw clamp (KPE34) 1x N-Screw clamp (KN34) 2x cover strips (ADS12GR) Double membrane seals (DMS20 / DMS25 / DMS32)	1x PE-Screw clamp (KPE34) 1x N-Screw clamp (KN34) 2x cover strips (ADS12GR) Double membrane seals (DMS20 / DMS25 / DMS32)
<b>Modules</b>	14	28	42	56	70
<b>H x W x D</b>	300 x 300 x 142 mm	450 x 300 x 142 mm	600 x 300 x 142 mm	750 x 300 x 142 mm	900 x 300 x 142 mm
<b>Material</b>	PS / PC	PS / PC	PS / PC	PS / PC	PS / PC
<b>Lead seal / Stacking</b>	• / •	• / •	• / •	• / •	• / •
<b>Inserts</b>	10x M25 / M32, 26x M20	12x M25 / M32, 26x M20	14x M25 / M32, 26x M20	16x M25 / M32, 26x M20	20x M25 / M32, 26x M20

Socket boxes

Fire protection

Fastening systems

<b>U<sub>MAX</sub></b> 400V <b>I<sub>MAX</sub></b> 63A				
	<b>APV14AR</b>	<b>APV28AR</b>	<b>APV42AR</b>	<b>APV56AR</b>
<b>Type</b>	1-row	2-rows	3-rows	4-rows
<b>Execution</b>	1-row	2-rows	3-rows	4-rows
<b>Item no.</b>	<b>7240023</b>	<b>7240025</b>	<b>7240028</b>	<b>7240030</b>
<b>SU / CB / PL</b>	1 / 1 / 60	1 / 1 / 48	1 / 1 / 40	1 / 1 / 30
<b>Equipped with</b>	see APV14	see APV28	see APV42	see APV56
<b>Modules</b>	14	28	42	56
<b>H x W x D</b>	450 x 300 x 142 mm	600 x 300 x 142 mm	750 x 300 x 142 mm	900 x 300 x 142 mm
<b>Material</b>	PS / PC	PS / PC	PS / PC	PS / PC
<b>Lead seal / Stacking</b>	• / •	• / •	• / •	• / •
<b>Inserts</b>	12x M25 / M32, 26x M20	14x M25 / M32, 26x M20	16x M25 / M32, 26x M20	18x M25 / M32, 26x M20

Distributors

Meter cabinets

Meter connection columns

Accessories from page 141  
Clamping equipment from page 150





Type	APV4	APV6
Execution	1-row	1-row
Item no.	7240026	7240031
SU / CB / PL	1 / 210 / 420	1 / 165 / 330
Equipped with	1x cover strips 4HP 1x PE-Screw clamp 5-pole 1x N-Screw clamp 5-pole Double membrane seals (DMS20 / DMS25)	1x cover strips 4HP 1x PE-Screw clamp 5-pole 1x N-Screw clamp 5-pole Double membrane seals (DMS20 / DMS25)
Modules	4	6
H x W x D	200 x 125 x 120 mm	200 x 160 x 120 mm
I <sub>MAX</sub>	63A	63A
Material	PS / PC	PS / PC
Lead seal / Stacking	• / •	• / •
Inserts	2x M20 / M25, 12x M20	2x M20 / M25, 12x M20

Accessories from page 141  
Clamping equipment from page 150



Type	KV04WDKE	KV06WDKE	KV10WDKE
Execution	1-row	1-row	1-row
Item no.	7240050	7240051	7240052
SU / CB / PL	1 / 50 / 600	1 / 35 / 420	1 / 25 / 300
Equipment	1x PE-Screw clamp 5-pole 1x N-Screw clamp 5-pole Double membrane seals (DMS20)	1x PE-Screw clamp 5-pole 1x N-screw clamp 5-pole Double membrane seals (DMS20)	1x PE-Screw clamp 5-pole 1x N-Screw clamp 5-pole Double membrane seals (DMS20 / DMS25)
Modules	4	6	10
H x W x D	180 x 125 x 90 mm	180 x 160 x 90 mm	180 x 230 x 90 mm
I <sub>MAX</sub>	63A	63A	63A
Material	PS / PC	PS / PC	PS / PC
Inserts	6x M20	8x M20	2x M25, 8x M20, 4x M16

Accessories from page 141  
Clamping equipment from page 150

## Plug-in clamp

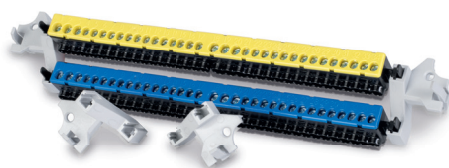


Type	SKN17N	SKN17PE	SKN34	SKPE34
Execution	N-N-Plug-in clamp	PE-N-Plug-in clamp	N-Plug-in clamp	PE-Plug-in clamp
Item no.	9910009	9910010	9910011	9910012
SU / CB / PL	1 / 20 / 1.440	1 / 20 / 1.440	1 / 20 / 1.440	1 / 20 / 1.440
Connections	screw-in 3x 25 mm <sup>2</sup> plug-in 14x 4 mm <sup>2</sup>	screw-in 3x 25 mm <sup>2</sup> plug-in 14x 4 mm <sup>2</sup>	screw-in 6x 25 mm <sup>2</sup> plug-in 28x 4 mm <sup>2</sup>	screw-in 6x 25 mm <sup>2</sup> plug-in 28x 4 mm <sup>2</sup>
Colour	blue	blue / yellow	blue	yellow
suitable for	rigid conductors	rigid conductors	rigid conductors	rigid conductors

Socket boxes

Fire protection

## Clamp adapter for damp area Distributors IP65



Type	KAIP65
Execution	Clamp adapter set (2 pieces) for damp area Distributors
Item no.	7290111
SU / CB / PL	1 / 10 / 7.680
Set Contents	2 pieces

Fastening systems

Distributors

## Stepped collar IP54



Type	STM25	STM32	STM40
Execution	Stepped membrane M25	Stepped membrane M32	Stepped membrane M40
Item no.	7290086	7290087	7290088
SU / CB / PL	20 / 800 / 51.200	20 / 600 / 38.400	20 / 400 / 25.600
Material	PVC	PVC	PVC
Colour	grey	grey	grey

Meter cabinets

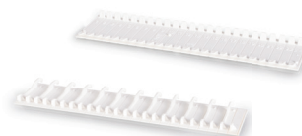
Meter connection columns



Type	DMS20	DMS25	DMS32
Execution	Membrane seals M20	Membrane seals M25	Membrane seals M32
Item no.	7290059	7290060	7290061
SU / CB / PL	20 / 1.000 / 64.000	20 / 800 / 51.200	20 / 600 / 38.400
Material	PVC	PVC	PVC
Colour	grey	grey	grey
Cable diameter	Ø 7-12 mm	Ø 12-18 mm	Ø 14-23 mm



## Cover strips



Type	ADS12W	ADS12GR	ADS12SB
Execution	Cover strips	Cover strips	Cover strips, lockable
Item no.	7290032	7290031	7110060
SU / CB / PL	10 / 500 / 16.000	10 / 500 / 16.000	10 / 500 / 16.000
For modules	up to 12	up to 12	up to 12
H x W	219 x 54 mm	219 x 54 mm	219 x 54 mm
Material	PS	PS	PS
Colour	white, RAL9010	grey, RAL7035	white, RAL9010

## Accessories and spare parts IP65




Type	TS1	TS3	APV4T	APV6T
Execution	Spare door IP65	Door lock complete	Spare door for APV4	Spare door for APV6
Item no.	7240060	7240059	7290114	7290115
SU / CB / PL	1 / 15 / 960	1 / 20 / 8.400	1 / 12 / 3.072	1 / 7 / 2.240
Colour	PC smoky topaz	-	PC smoky topaz	PC smoky topaz



# Too many orders?

**f-tronic®** relieves you of the pre-wiring of your distributors and meter cabinets.



 Further information



# Field distributors

## for intelligent installation technology



- Generous cable entries at the bottom, top and back of each field width
- Upper and lower cable entry with membrane puncture, allowing quick and easy handling without additional tools
- All covers with lateral bulkheads
- From three field widths with double door
- Various lock variants are possible - even DIN cylinder lock
- Incl. 1x ZSSKN17N and 1x ZSSKPE34 plug-in clamp per field

		1-field	2-fields	3-fields	4-fields
3-rows	Type		<b>FV2-3</b>	<b>FV3-3</b>	
	Item no.		<b>7110220</b>	<b>7110221</b>	
	SU / CB / PL		1 / 1 / 24	1 / 1 / 15	
	Modules		72	108	
	H x W x D		500 x 550 x 165 mm	500 x 800 x 165 mm	
	Material		Sheet steel	Sheet steel	
4-rows	Type	<b>FV1-4</b>	<b>FV2-4</b>	<b>FV3-4</b>	
	Item no.	<b>7110222</b>	<b>7110223</b>	<b>7110224</b>	
	SU / CB / PL	1 / 1 / 40	1 / 1 / 24	1 / 1 / 15	
	Modules	48	96	144	
	H x W x D	650 x 300 x 165 mm	650 x 550 x 165 mm	650 x 800 x 165 mm	
	Material	Sheet steel	Sheet steel	Sheet steel	
5-rows	Type	<b>FV1-5</b>	<b>FV2-5</b>	<b>FV3-5</b>	<b>FV4-5</b>
	Item no.	<b>7110225</b>	<b>7110226</b>	<b>7110227</b>	<b>7110228</b>
	SU / CB / PL	1 / 1 / 20	1 / 1 / 16	1 / 1 / 10	1 / 1 / 6
	Modules	60	120	180	240
	H x W x D	800 x 300 x 165 mm	800 x 550 x 165 mm	800 x 800 x 165 mm	800 x 1050 x 165 mm
	Material	Sheet steel	Sheet steel	Sheet steel	Sheet steel
6-rows	Type	<b>FV1-6</b>	<b>FV2-6</b>	<b>FV3-6</b>	<b>FV4-6</b>
	Item no.	<b>7110229</b>	<b>7110230</b>	<b>7110231</b>	<b>7110232</b>
	SU / CB / PL	1 / 1 / 18	1 / 1 / 10	1 / 1 / 8	1 / 1 / 6
	Modules	72	144	216	288
	H x W x D	950 x 300 x 165 mm	950 x 550 x 165 mm	950 x 800 x 165 mm	950 x 1050 x 165 mm
	Material	Sheet steel	Sheet steel	Sheet steel	Sheet steel

Accessories from page 146  
Clamping equipment technology from page 150

## Distribution cabinet

- Housing in an appealing design of 1 mm thickness, powder coated steel plate
- Unique, push-out fastening system, thus rapid and flexible wall mounting
- Door can be removed without tools and can be affixed to the left or right
- Large door opening angle
- Includes cover strips and PE-N plug-in clamps in scope of delivery
- Retractable mounting rails
- Large wiring space behind the standard mounting rails
- Cabinet depth incl. mounting straps 210 mm
- Incl. 1x ZSSKN17N and 1x ZSSKPE34 plug-in clamp per field



Socket boxes

Fire protection

Fastening systems

Distributors

Meter cabinets

Meter connection columns

6-rows		1-field	2-fields	3-fields	4-fields	5-fields
	Type	VS1-6	VS2-6	VS3-6	VS4-6	VS5-6
	Item no.	7110240	7110241	7110242	7110243	7110244
	SU / CB / PL	1 / 1 / 15	1 / 1 / 8	1 / 1 / 7	1 / 1 / 3	1 / 1 / 3
	Modules	72	144	216	288	360
	H x W x D	950 x 300 x 210 mm	950 x 550 x 210 mm	950 x 800 x 210 mm	950 x 1050 x 210 mm	950 x 1300 x 210 mm
	Material	Sheet steel	Sheet steel	Sheet steel	Sheet steel	Sheet steel
7-rows	Type	VS1-7	VS2-7	VS3-7	VS4-7	VS5-7
	Item no.	7110245	7110246	7110247	7110248	7110249
	SU / CB / PL	1 / 1 / 15	1 / 1 / 8	1 / 1 / 5	1 / 1 / 3	1 / 1 / 3
	Modules	84	168	252	336	420
	H x W x D	1100 x 300 x 210 mm	1100 x 550 x 210 mm	1100 x 800 x 210 mm	1100 x 1050 x 210 mm	1100 x 1300 x 210 mm
	Material	Sheet steel	Sheet steel	Sheet steel	Sheet steel	Sheet steel
8-rows	Type	VS1-8	VS2-8	VS3-8	VS4-8	VS5-8
	Item no.	7110250	7110251	7110252	7110253	7110254
	SU / CB / PL	1 / 1 / 8	1 / 1 / 6	1 / 1 / 5	1 / 1 / 3	1 / 1 / 3
	Modules	96	192	288	384	480
	H x W x D	1250 x 300 x 210 mm	1250 x 550 x 210 mm	1250 x 800 x 210 mm	1250 x 1050 x 210 mm	1250 x 1300 x 210 mm
	Material	Sheet steel	Sheet steel	Sheet steel	Sheet steel	Sheet steel
9-rows	Type	VS1-9	VS2-9	VS3-9	VS4-9	VS5-9
	Item no.	7110255	7110256	7110257	7110258	7110259
	SU / CB / PL	1 / 1 / 8	1 / 1 / 6	1 / 1 / 5	1 / 1 / 3	1 / 1 / 3
	Modules	108	216	324	432	540
	H x W x D	1400 x 300 x 210 mm	1400 x 550 x 210 mm	1400 x 800 x 210 mm	1400 x 1050 x 210 mm	1400 x 1300 x 210 mm
	Material	Sheet steel	Sheet steel	Sheet steel	Sheet steel	Sheet steel

Accessories from page 146  
Clamping equipment from page 150



## Plug-in clamp



Type	ZSSKN17N	ZSSKN17PE	ZSSKN34	ZSSKPE34
Execution	N-N-Plug-in clamp	PE-N-Plug-in clamp	N-Plug-in clamp	PE-Plug-in clamp
Item no.	7110023	7110022	7110020	7110021
SU / CB / PL	1 / 20 / 1.440	1 / 20 / 1.440	1 / 20 / 1.440	1 / 20 / 1.440
Connections	2x 3x screw-in 25 mm <sup>2</sup> 2x plug-in 14x 4 mm <sup>2</sup>	2x 3x screw-in 25 mm <sup>2</sup> 2x plug-in 14x 4 mm <sup>2</sup>	screw-in 6x 25 mm <sup>2</sup> plug-in 28x 4 mm <sup>2</sup>	screw-in 6x 25 mm <sup>2</sup> plug-in 28x 4 mm <sup>2</sup>
Colour	blue	blue / yellow	blue	yellow
suitable for	rigid conductors	rigid conductors	rigid conductors	rigid conductors

## Screw clamp



Type	ZSN17N	ZSN17PE	ZSN34	ZSPE34
Execution	N-N-Screw clamp	PE-N-Screw clamp	N-Screw clamp	PE-Screw clamp
Item no.	7110090	7110039	7110041	7110040
SU / CB / PL	1 / 20 / 1.440	1 / 20 / 1.440	1 / 20 / 1.440	1 / 20 / 1.440
Connections	2x screw-in 3 x 4-16 mm <sup>2</sup> 2x screw-in 14x 1.5 to 10 mm <sup>2</sup>	2x screw-in 3 x 4-16 mm <sup>2</sup> 2x screw-in 14x 1.5 - 10 mm <sup>2</sup>	screw-in 6 x 4-16 mm <sup>2</sup> plug-in 28x 1.5 to 10 mm <sup>2</sup>	screw-in 6 x 4-16 mm <sup>2</sup> plug-in 28x 1.5 to 10 mm <sup>2</sup>
Colour	blue	blue / yellow	blue	yellow
suitable for	rigid and flexible conductors	rigid and flexible conductors	rigid and flexible conductors	rigid and flexible conductors

## Cable clamp

Type	KKL
Execution	Cable clamp for meter cabinets and distributors
Item no.	7110056
SU / CB / PL	10 / - / -
Material	PA6
suitable for	Meter cabinets DIN rail and Multimedia fields

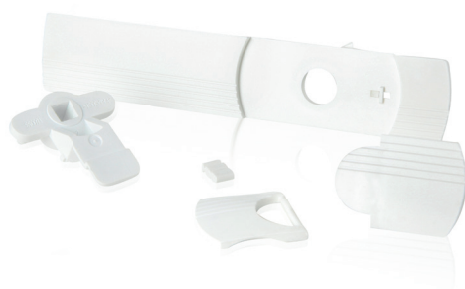


## Door hinge set



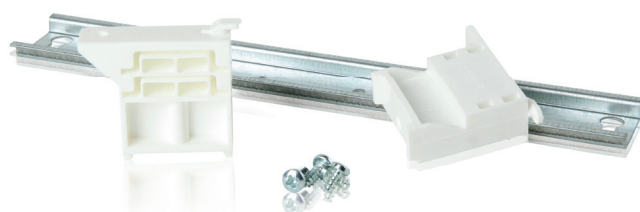
Type	<b>ZSTS</b>
Execution	Door hinge set upper / lower
Item no.	<b>7110036</b>
SU / CB / PL	1 / 10 / -
suitable for	Meter cabinet, field distributors, distribution cabinet

## Door Handle Set



Type	<b>ZSTG</b>
Execution	Door Handle Set
Item no.	<b>7110037</b>
SU / CB / PL	1 / 10 / -
suitable for	Meter cabinet, field distributors, distribution cabinet

## DIN rail



Type	<b>HU Set</b>
Execution	DIN rail incl. holder + screws
Item no.	<b>7110038</b>
SU / CB / PL	1 / 10 / -
suitable for	Meter cabinet, field distributors, distribution cabinet

Socket boxes

Fire protection

Fastening systems

Distributors

Meter cabinets

Meter connection columns

Type	<b>ZSSBG-N</b>
Execution	Pivoted handle with Semi-cylinder
Item no.	<b>7110122</b>
SU / CB / PL	1 / - / -
suitable for	Meter cabinet, field distributors, distribution cabinet



Pivoted handle with push rod



Type	<b>ZSSBG-5</b>	<b>ZSSBG-6</b>	<b>ZSSBG-7</b>	<b>ZSSBG-1</b>
Execution	Pivoted handle with semi-cylinder	Pivoted handle with semi-cylinder	Pivoted handle with semi-cylinder	Pivoted handle with semi-cylinder
Item no.	<b>7110123</b>	<b>7110124</b>	<b>7110125</b>	<b>7110126</b>
SU / CB / PL	1 / - / -	1 / - / -	1 / - / -	1 / - / -
suitable for	Height 500 mm	Height 650 mm	Height 800 mm	Height 950 mm

Type	<b>ZSSBG-2</b>	<b>ZSSBG-3</b>	<b>ZSSBG-4</b>
Execution	Pivoted handle with semi-cylinder	Pivoted handle with semi-cylinder	Pivoted handle with semi-cylinder
Item no.	<b>7110127</b>	<b>7110128</b>	<b>7110129</b>
SU / CB / PL	1 / - / -	1 / - / -	1 / - / -
suitable for	Height 1100 mm	Height 1250 mm	Height 1400 mm



## Fuse cover

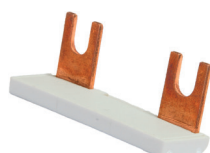


Type	SIAD-2	SIAD-3
Execution	Fuse cover	Fuse cover
Item no.	7110049	7110050
SU / CB / PL	1 / 1 / -	1 / 1 / -
Material	PS	PS
suitable for	2-rows	3-rows

## Clamp technology



Type	PDB160	PDB210	PDB220	PDB270	PDB400	PDB490
Execution	Phase distribution block 160 A	Phase distribution block 210 A	Phase distribution block 220 A	Phase distribution block 270 A	Phase distribution block 400 A	Phase distribution block 490 A
Item no.	7110136	7110137	7110138	7110139	7110143	7110146
SU / CB / PL	1 / 28 / 1.344	1 / 28 / 1.344	1 / 28 / 1.344	1 / 28 / 1.440	1 / 28 / 1.440	1 / 28 / 1.440
Colour	grey / transparent	grey / transparent	grey / transparent	grey / transparent	grey / transparent	grey / transparent
number of poles	1	1	1	1	1	1
Connection points	1x 2.5 - 25 mm <sup>2</sup> 1x phase rail fork M6 or 1x 1.5 to 16 mm <sup>2</sup> (Circular conductor) 3x 1.5 - 10 mm <sup>2</sup> (Circular conductor) 2x 1.5 to 25 mm <sup>2</sup> (Circular conductor)	1x 4 - 35 mm <sup>2</sup> (Circular conductor) 1x phase rail fork M6 or 1x 1.5 to 16 mm <sup>2</sup> (Circular conductor) 3x 1.5 to 16 mm <sup>2</sup> (Circular conductor) 2x 2.5 to 25 mm <sup>2</sup> (Circular conductor)	1x 10 - 70 mm <sup>2</sup> (Circular conductor) 1x flat conductor 15 mm wide 2 - 5 mm thick 3x 25 mm <sup>2</sup> (Circular conductor) 2x 35 mm <sup>2</sup> (Circular conductor)	1x 16 - 95 mm <sup>2</sup> (Circular conductor) 2x 4 - 35 mm <sup>2</sup> (Circular conductor) 8x 2.5 to 25 mm <sup>2</sup> (Circular conductor)	1x 35-120 mm <sup>2</sup> (Circular conductor) 1x flat conductor 24 mm wide 3-5 mm thick 2x 35 mm <sup>2</sup> (Circular conductor) 3x 25 mm <sup>2</sup> (Circular conductor) 4x 16 mm <sup>2</sup> (Circular conductor)	1x 95 - 185 mm <sup>2</sup> (Circular conductor) 1x flat conductor 24 mm wide 3-5 mm thick 2x 35 mm <sup>2</sup> (Circular conductor) 3x 25 mm <sup>2</sup> (Circular conductor) 4x 16 mm <sup>2</sup> (Circular conductor)
suitable for	CU conductor	CU conductor	CU conductor	CU conductor	CU conductor	CU conductor

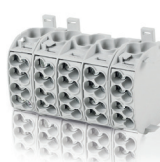


Type	PDB160-2	PDB160-3	PDB210-2	PDB210-3
Execution	Phase rail bridge for PDB2x100, 2 modules	Phase rail bridge for PDB3x100, 3 modules	Phase rail bridge for PDB2x125, 2 modules	Phase rail bridge for PDB3x125, 3 modules
Item no.	7110263	7110264	7110265	7110266
SU / CB / PL	20 / 360 / 14.440	20 / 360 / 14.440	20 / 360 / 14.440	20 / 360 / 14.440

## Clamp technology



Type	HLAK1p25gr	HLAK1p25bl	HLAK1p25gnge	HLAK1p25br	HLAK1p25sw
Execution	Main branch clamp	Main branch clamp	Main branch clamp	Main branch clamp	Main branch clamp
Item no.	7110188	7110189	7110190	7110191	7110192
SU / CB / PL	5 / 60 / 3.840	5 / 60 / 3.840	5 / 60 / 3.840	5 / 60 / 3.840	5 / 60 / 3.840
Colour	grey	blue	green / yellow	brown	black
number of poles	1	1	1	1	1
Access	2x 25 mm <sup>2</sup>	2x 25 mm <sup>2</sup>	2x 25 mm <sup>2</sup>	2x 25 mm <sup>2</sup>	2x 25 mm <sup>2</sup>
Exit	2x 16 mm <sup>2</sup>	2x 16 mm <sup>2</sup>	2x 16 mm <sup>2</sup>	2x 16 mm <sup>2</sup>	2x 16 mm <sup>2</sup>
Connections	25 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>
suitable for	CU conductor	CU conductor	CU conductor	CU conductor	CU conductor



Type	HLAK3p25gr	HLAK4p25gr	HLAK4p25grgn	HLAK4p25grbl	HLAK5p25gr	HLAK5p25grblgn
Execution	Main branch clamp	Main branch clamp	Main branch clamp	Main branch clamp	Main branch clamp	Main branch clamp
Item no.	7110194	7110233	7110234	7110235	7110236	7110237
SU / CB / PL	2 / 24 / 1.536	1 / 12 / 960	1 / 12 / 960	1 / 12 / 960	1 / 12 / 768	1 / 12 / 768
Colour	grey	grey	grey, green	grey, blue	grey	grey, blue, green
number of poles	3	4	4	4	5	5
Access	6x 25 mm <sup>2</sup>	8x 25 mm <sup>2</sup>	8x 25 mm <sup>2</sup>	8x 25 mm <sup>2</sup>	10x 25 mm <sup>2</sup>	10x 25 mm <sup>2</sup>
Exit	6x 16 mm <sup>2</sup>	8x 16 mm <sup>2</sup>	8x 16 mm <sup>2</sup>	8x 16 mm <sup>2</sup>	10x 16 mm <sup>2</sup>	10x 16 mm <sup>2</sup>
Connections	25 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>
suitable for	CU conductor	CU conductor	CU conductor	CU conductor	CU conductor	CU conductor



Type	HLAK1p35gr	HLAK1p35bl	HLAK1p35gnge	HLAK1p35br	HLAK1p35sw
Execution	Main branch clamp	Main branch clamp	Main branch clamp	Main branch clamp	Main branch clamp
Item no.	7110195	7110196	7110197	7110198	7110199
SU / CB / PL	5 / 60 / 2.880	5 / 60 / 2.880	5 / 60 / 2.880	5 / 60 / 2.880	3 / 36 / 1.728
Colour	grey	blue	green / yellow	brown	black
number of poles	1	1	1	1	1
Access	2x 35 mm <sup>2</sup>	2x 35 mm <sup>2</sup>	2x 35 mm <sup>2</sup>	2x 35 mm <sup>2</sup>	2x 35 mm <sup>2</sup>
Exit	2x 25 mm <sup>2</sup>	2x 25 mm <sup>2</sup>	2x 25 mm <sup>2</sup>	2x 25 mm <sup>2</sup>	2x 25 mm <sup>2</sup>
Connections	35 mm <sup>2</sup>	35 mm <sup>2</sup>	35 mm <sup>2</sup>	35 mm <sup>2</sup>	35 mm <sup>2</sup>
suitable for	CU conductor	CU conductor	CU conductor	CU conductor	CU conductor

## Clamp technology



Type	HLAK1p70gr	HLAK1p70bl	HLAK1p70nge	HLAK1p70br	HLAK1p70sw
Execution	Main branch clamp	Main branch clamp	Main branch clamp	Main branch clamp	Main branch clamp
Item no.	7110201	7110202	7110203	7110204	7110205
SU / CB / PL	3 / 36 / 1.728	3 / 36 / 1.728	3 / 36 / 1.728	3 / 36 / 1.728	3 / 36 / 1.728
Colour	grey	blue	green / yellow	brown	black
number of poles	1	1	1	1	1
Access	2x 70 mm <sup>2</sup>	2x 70 mm <sup>2</sup>	2x 70 mm <sup>2</sup>	2x 70 mm <sup>2</sup>	2x 70 mm <sup>2</sup>
Exit	2x 50 mm <sup>2</sup>	2x 50 mm <sup>2</sup>	2x 50 mm <sup>2</sup>	2x 50 mm <sup>2</sup>	2x 50 mm <sup>2</sup>
Connections	70 mm <sup>2</sup>	70 mm <sup>2</sup>	70 mm <sup>2</sup>	70 mm <sup>2</sup>	70 mm <sup>2</sup>
suitable for	CU conductor	CU conductor	CU conductor	CU conductor	CU conductor



Type	UVB100gr	UVB100bl	UVB100nge
Execution	Sub-distribution block	Sub-distribution block	Sub-distribution block
Item no.	7110206	7110207	7110208
SU / CB / PL	3 / 42 / 2.688	3 / 42 / 2.688	3 / 42 / 2.688
Colour	grey	blue	green
number of poles	1	1	1
Supply clamping points	2x 2.5 to 25 mm <sup>2</sup>	2x 2.5 to 25 mm <sup>2</sup>	2x 2.5 to 25 mm <sup>2</sup>
Distribution terminal points	6x 1.5 to 10 mm <sup>2</sup>	6x 1.5 to 10 mm <sup>2</sup>	6x 1.5 to 10 mm <sup>2</sup>
suitable for	CU conductor	CU conductor	CU conductor



Type	SSAK16
Execution	Busbar tap clamp
Item no.	7110219
SU / CB / PL	12 / 96 / 4.608
Colour	grey
Number of poles	1
Exit	2x 16 mm <sup>2</sup>
suitable for	CU conductor for flat copper 3 - 10 mm <sup>2</sup>

Socket boxes

Fire protection

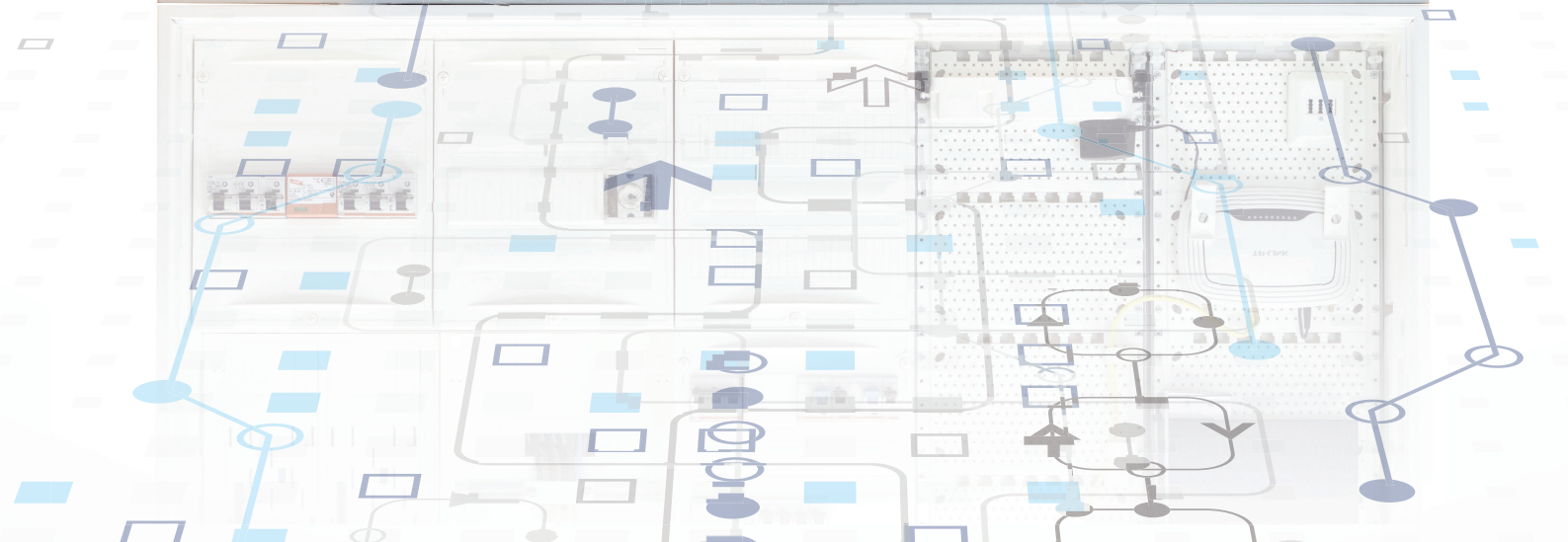
Fastening systems

Distributors

Meter cabinets

Meter connection columns





# Meter cabinets 2.0

## The intelligence centre in the house

With the **f-tronic®** Meter Cabinet 2.0, we focus entirely on the needs of customers - the builders and installers. Numerous new features ensure quick and convenient installation - such as click screws for quick installation of hoods or the bayonet locking system holding the dome for easy re-siting of the plug-in/screw clamps. And the screw-less mounting system for mounting areas has been newly developed.

"For the practitioner from the practitioner" - precisely from this perspective, we have made meter cabinets a good bit easier for local practitioners. Of course, with the famous "Made in Germany" **f-tronic®** quality.

With the new flange for cable entry, cables in the new meter cabinets are not only optimally sealed, but always best assigned, due to the certified insertions. The abundance of high-quality innovations in meter cabinets represents the move to a new generation of meter cabinets.

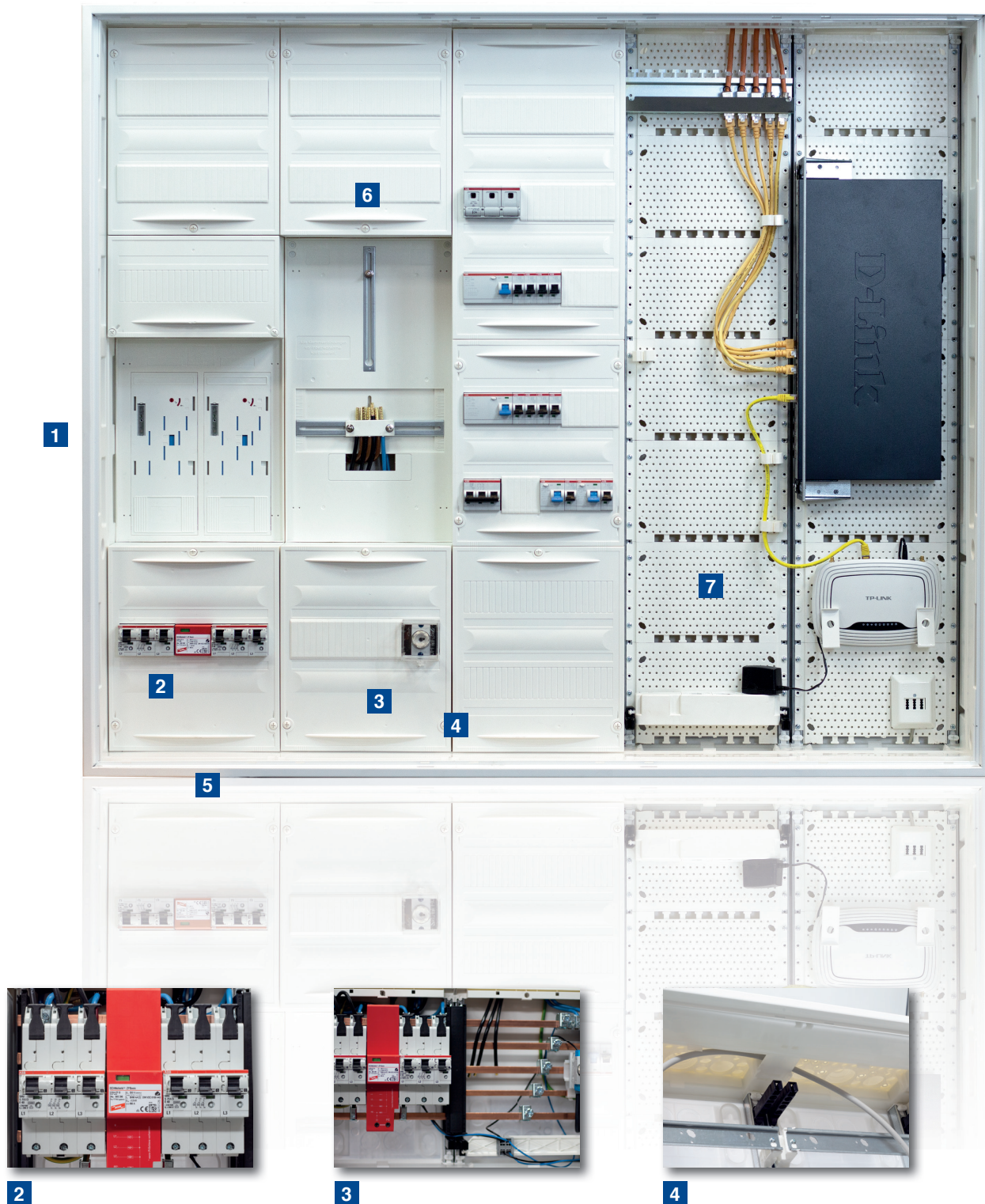


 Meter cabinet catalogue



# The meter cabinet

## Highlights





## 1 More stability

The reinforced door and housing provide tremendous stability. Sheet steel housing, fully fabricated and the reinforced door offer enormous stability.

## 2 Space in the line-side connection (NAR)

The NAR has full 12 modules. Accordingly, there is enough space for 2 SLS switches and a surge protector.

## 3 Additional space for the DIN rail

In the NAR, there is additional space for a rail (for example, to install the control line cross-wiring).

## 4 Integrated through a wiring channel

Located between individual fields up and down through wiring channels, that are opened by simply breaking them out. The channels enormously facilitate wiring within the cabinet.

## 5 Entrance flange

The 2K entrance flange is located at the top and bottom of the housing with push-out membranes with pre-formed entries for different cable cross-sections.

## 6 DIN rail

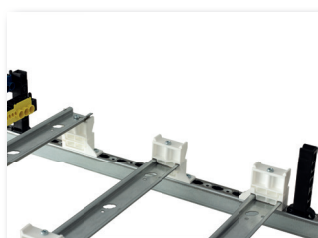
The standard 3-stage removable protective rail offers maximum flexibility for your installations.

## 7 Communications field

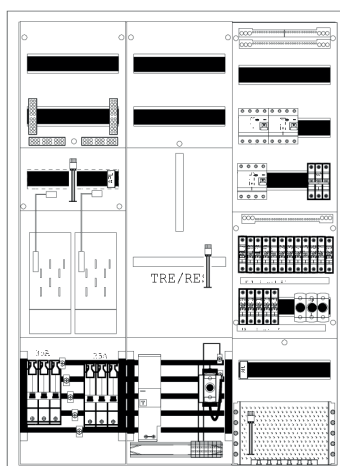
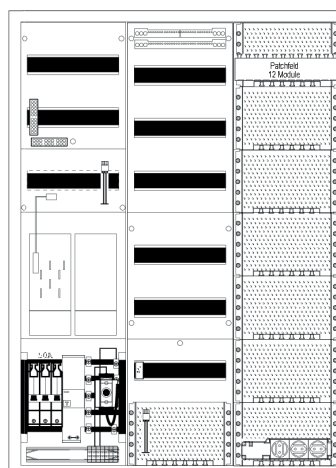
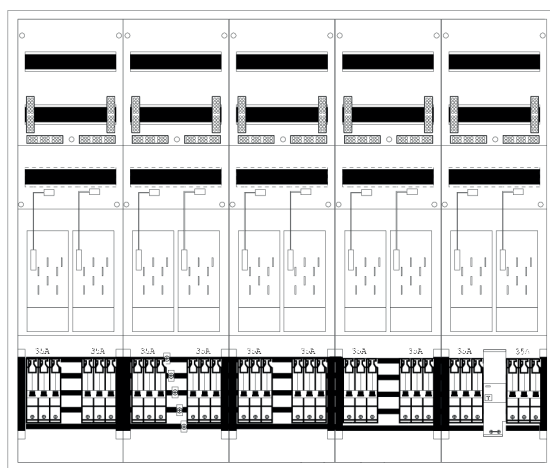
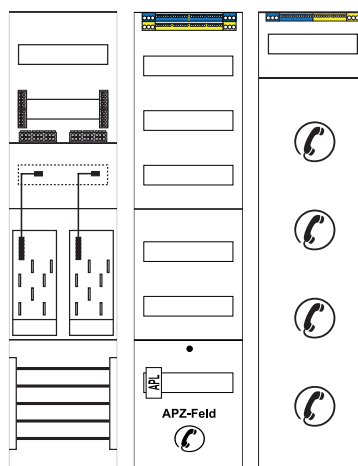
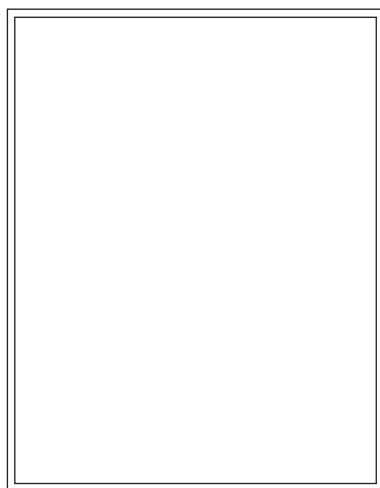
With a plastic plate for flexible installation of communication devices, optionally equipped with e.g. outlet, patch panel for 12 modules, multimedia console, 19 inch holders and device clamp.



5



6



# Delivery forms of the f-tronic® meter cabinets

## Assembly group packaging

Assemble your meter cabinet individually. **f-tronic®** offers wholesale of storage systems, enabling you to assemble your meter cabinet individually. The required counter, distribution and communication fields can simply be collected from storage - flexibly and without delivery times!

## Project engineering delivery form

We plan the right cabinet for your project. To do this, simply contact our project team and provide all the required information (installation site for the system, number of meter locations, size of the terminal compartment, etc.). Our project team plans the counter plant via a construction plan for you, so **f-tronic®** can pre-assemble and deliver them to your project. Subsequently, the pre-assembled meter cabinet is ready for wiring by you. This saves valuable time in planning and installation.

## Developed project delivery form

We are happy to plan your metering system with its complete wiring and documentation. For this, our project team needs all your information (the installation location of the plant, number of meter panels, circuit diagram, etc.) The metering system is completely wired at **f-tronic®** and labelled for delivery to your project. You mount the system as a complete system and you can take it into operation immediately. Thus, you save valuable time in planning, documentation and assembly.

Socket boxes

Fire protection

Fastening systems

Distributors

Meter cabinets

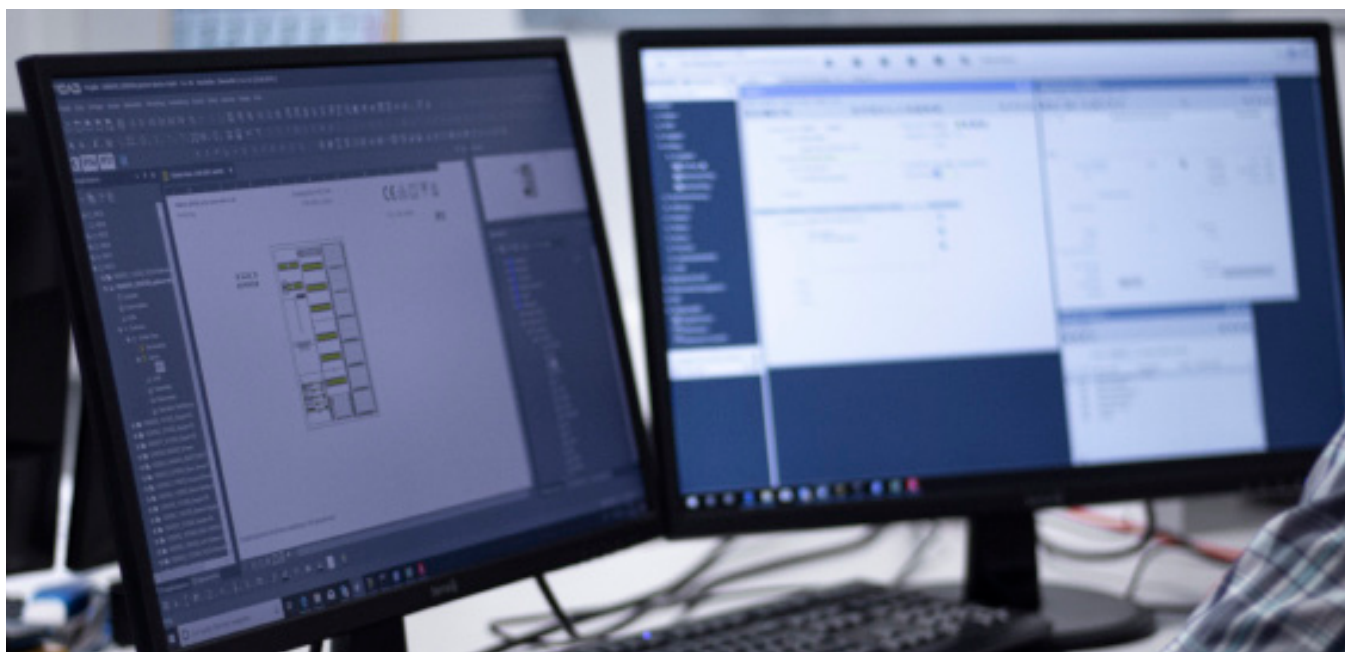
Meter connection columns



## Our meter cabinet project team

Do you need personal advice on planning your project?  
Our skilled project team will be happy to help.

For contact details see page 174.



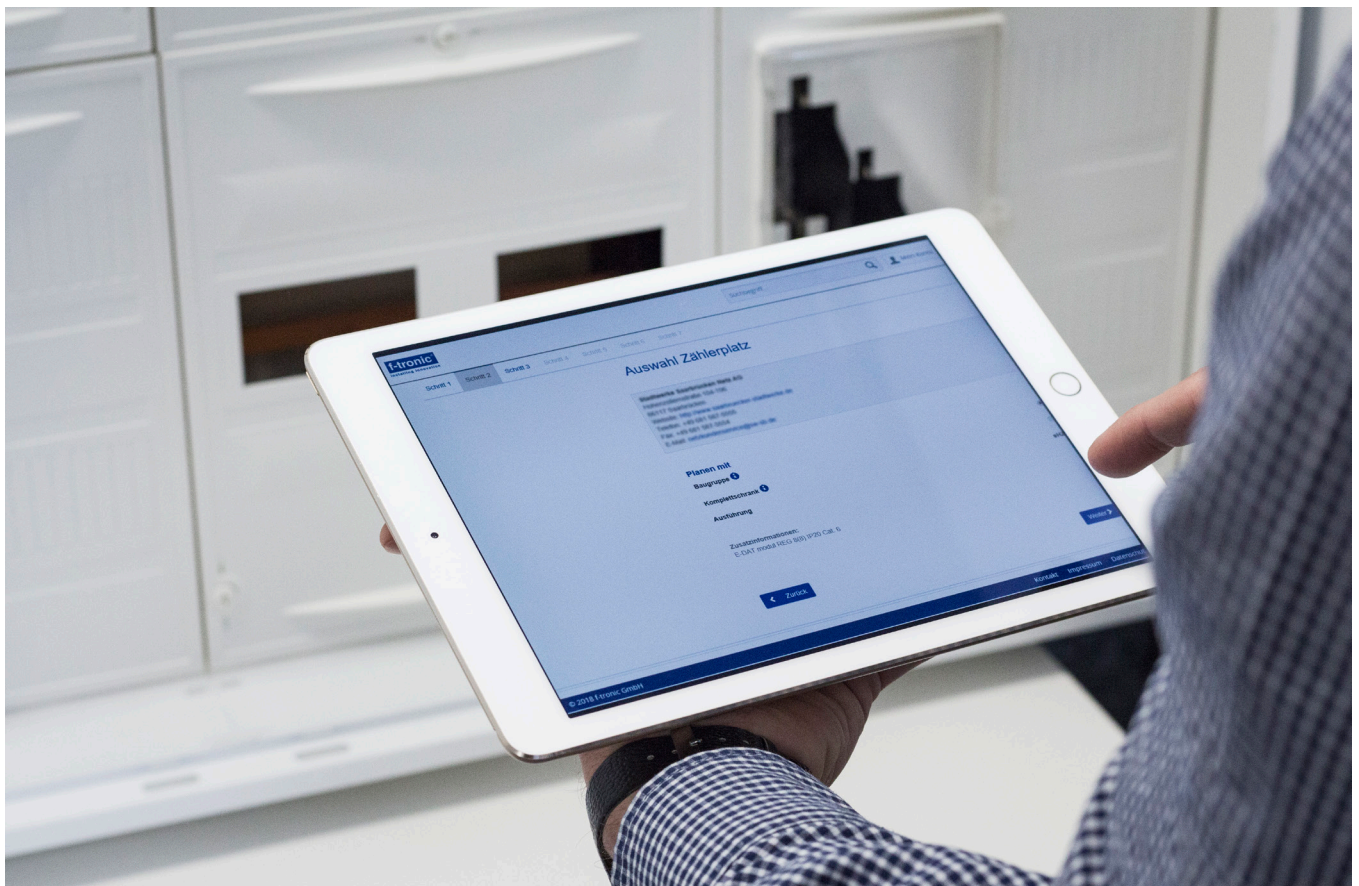
# Meter cabinet configurator

## Safe and fast planning

We at **f-tronic®** value a simple and uncomplicated process. Therefore, we have developed an online configurator that allows the installer to perform meter cabinet configuration in a simple and straightforward manner.

Owing to the respectively currently updated technical connection conditions (TAB) of the individual energy supply companies (EVU), great safety in the placement and design of the counter cabinet is provided to the configurator's user. The installer no longer has to deal with the placement proposal with the TABs of the individual utilities, as the configurator selects the appropriate placement automatically.

Planning and ordering is significantly accelerated by this secure and convenient software solution and thus provides a valuable efficiency asset to the installation industry.



Socket boxes

Fire protection

Fastening systems

Distributors

Meter cabinets

Meter connection columns







# Meter connection columns

## JUPITER - The all-weather ruler


Jupiter is considered the highest and most important god of the ancient Romans, as protector of the state, the family and the household. He rules over lightning, thunder and rain. Protection, strength and safety are also offered by our meter connection columns.

The stable housing is made of hot-pressed, glass-fibre reinforced polyester with a profiled surface. Resistant to acidic and basic reactants in the ground, Jupiter rules over the weather.

**f-tronic®** offers a broad range of meter connection columns that sets standards. In various designs and sizes, it protects sensitive technical installations against lightning, thunder and rain.

Get to know about it now: our Jupiter  
- the strongest protector for outdoors.



 Meter Connection Columns  
catalogue

Socket boxes

Fire protection

Fastening systems

Distributors

Meter cabinets

Meter connection columns



## **1 Complete housing**

Stable housing in one piece

## **2 No tools**

Simple click system enables tool-free dis-assembly of the door and the adjusting plates

## **3 Protection**

The side trap guard for example, repels crawling animals

## **4 Stability**

The door handle system is persuasive, thanks to its high stability

## **5 Safety**

No fibre chipping during assembly

## **6 Time savings**

Flange for cable entry helps you achieve a faster installation, due to the puncture membrane

## **7 Mounting of back wall**

All components are mounted on a mounting plate

## **8 Product protection**

The modern, profiled surface of the housing prevents unwanted signage

## **9 Space allowance**

The door opening angle of up to 180° makes your installation easier

## **10 Easy to install**

Easily accessible screws for securing the hood

## Notice concerning the positioning of meter connection columns

The site is to be selected, so that the ambient temperature,

- whose max. upper limit of 40°C or
- over a period of 24 hours, the mean value of 35°C or
- whose max. lower limit of -25°C

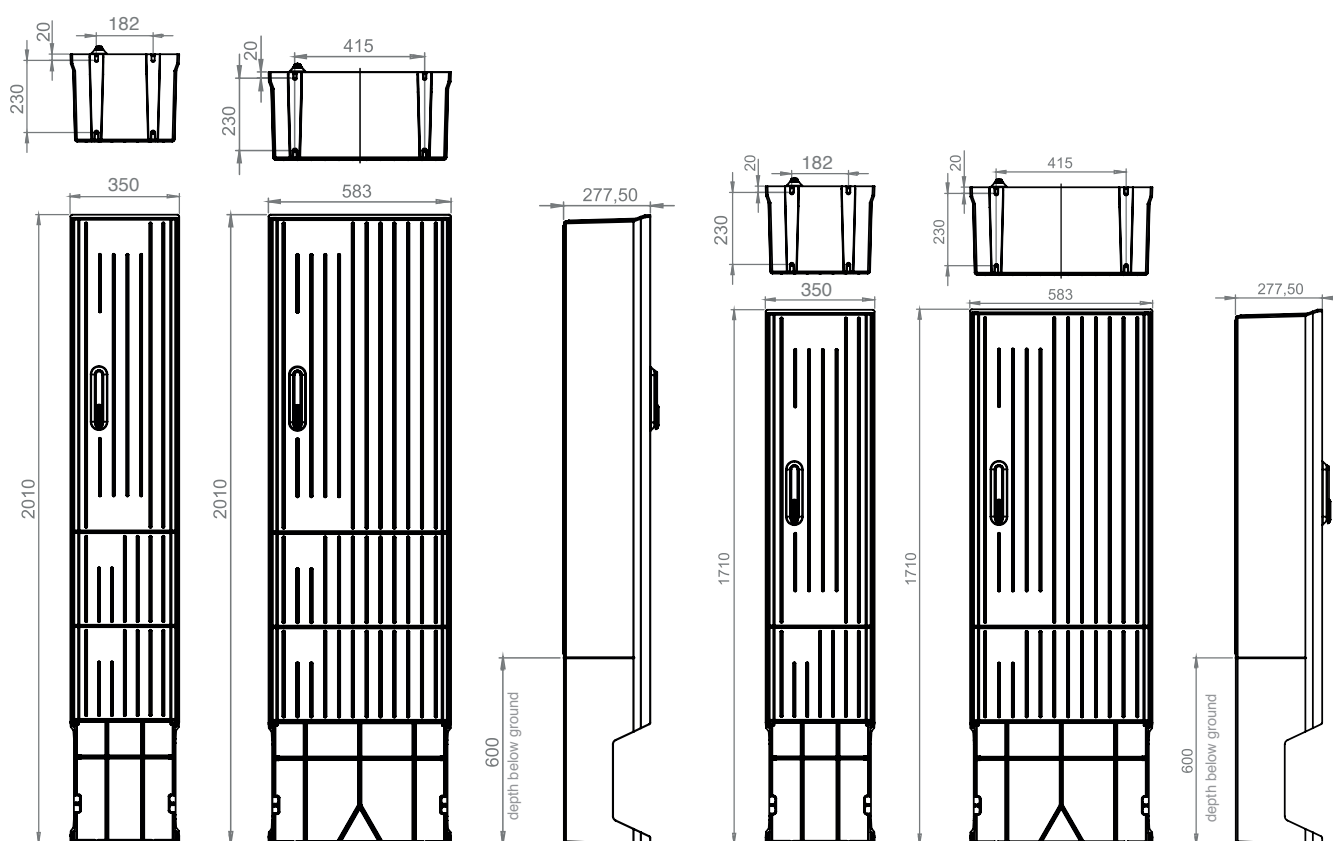
is not exceeded (see DIN EN61439, part 1, VDE066-600-1).

These requirements in the open must be complied with in all respects. Therefore, the installed switchgear must be selected, so that it meets the requirements (e.g., humidity and temperature limits, whichever are the manufacturer's relevant instructions).

If compliance with the temperature limits is impossible, then the installer of the system must ensure that the operating conditions are met.

Note here, for example, the following measures:

- Siting in the shade
- Guard above the cabinet
- Correct trigger settings by changing the thermal cutoff of the switch and the rated load factor.





# General Terms and Conditions of f-tronic GmbH

## § 1 General

- (1) The following terms and conditions (GTC) in commercial business apply for all customers of f-tronics.
- (2) Terms and conditions of customers or third parties do not apply, even if f-tronic does not contradict their validity in individual cases separately. Even if f-tronic refers to text that contains or refers to terms and conditions of the customer or a third party, that is that not an agreement to the validity of those terms.
- (3) Offers and Contracts
  - a. All offers from f-tronic are non-binding, unless they are explicitly marked as binding or contain specific periods of acceptance. Orders or contracts can be accepted by f-tronic within 14 days of receipt.
  - b. Only relevant to the legal relationships between f-tronic and the buyers is any purchase agreement concluded in writing, including these terms and conditions. This reiterates all agreements between the parties to the contract completely. Verbal commitments from f-tronic prior to this Agreement are not legally binding and oral agreements between the parties are replaced by the written contract, unless expressly clear from them that they shall remain in force.
  - c. Any additions and amendments to the agreements made, including these terms and conditions, shall be effective only if in writing. With the exception of Managing Directors and proxies, employees of f-tronic are not entitled to make verbal side agreements.
  - d. Details from f-tronic on the subject of the goods or services (for example, weight, dimensions, values in use, load capacity, tolerances and technical data) as well as the representations of f-tronic thereof (e.g. drawings and illustrations) are only approximate, unless the usability for the contractually agreed purpose presupposes an exact match. They are not guaranteed characteristics, but descriptions or designations of the delivery or service. Customary deviations and deviations stipulated by legal regulations or technical improvements, as well as the replacement of components with equivalent parts, shall be permitted, provided they do not impair the usability for the contractually intended purpose.
  - e. f-tronic reserves ownership or copyright of all offers and cost estimates delivered by it, as well as those drawings, diagrams, calculations, brochures, catalogues, tools and other documents and aids provided to the customer. The customer may not make available these objects without the express permission of f-tronic either as such, or to third parties, make them known, use them himself or through third parties or reproduce them. At the request of f-tronic, he must completely return any items and destroy any copies made, if they are no longer needed by him in the ordinary course of business, or if negotiations do not lead to the conclusion of any contract.

## § 2 Prices

### (1) Net rates

The prices apply to those products listed in the order confirmations in their scope of performance and supply. Additional or special services are charged separately. Packaging costs are generally included in the product price. Special packaging will be charged at cost price to the customer's invoice. The prices are in Euros ex-works, plus VAT, and for export, customs duty and fees and other public charges. Additional special labels are not included in the price.

### (2) Surcharge

As far as the agreed prices, the list prices of f-tronic underlie and delivery is only to take place more than four months after conclusion of the contract, those valid list prices by f-tronic (each minus an agreed percentage or fixed discount) apply. Exceptions are agreed in the framework contract prices.

### (3) Due date

Bills must be paid within 30 days without any deduction, unless otherwise agreed in writing. For payment within ten calendar days of the invoice, f-tronic offers a 2% discount on the net price. The date of payment is deemed to be receipt by f-tronic. Cheques are only credited after clearance.

### (4) Delays

If the purchaser defaults when due, the outstanding amount from the due date is chargeable at 5% per annum; the assertion of higher interest and further damages in the event of default remains unaffected.

### (5) Offsetting

Offsetting by counterclaims from the customer or the withholding of payments due to such claims is permissible, only if the counterclaims are undisputed or legally binding.

### (6) Advance/security

f-tronic is authorised to perform or provide outstanding deliveries or services only against advance payment or security, if circumstances become known to him after conclusion of the contract, which are likely substantially to reduce the creditworthiness of the buyer and through which, the payment of the outstanding claims of f-tronic by the buyer due to the respective contractual relationship (including other individual orders, for which the same framework agreement applies) becomes jeopardised. To customers who are not known to f-tronic, f-tronic shall supply against advance payment and grant the customer a 2% discount.

## § 3 Delivery

### (1) Deliveries are made ex-works.

(2) Should the value of an order exceed an amount of 250.00 EURO net, then delivery from warehouse to the warehouse address of the customer within Germany is prepaid. For orders below 250 EURO and over 125 EURO, 16 EURO and for orders under 125 EURO, 24 EURO shipping costs and minor quantity surcharge for deliveries within Germany are added. Third-party deliveries, special products and special distribution or special quantities shall be sent carriage forward at the expense of the customer.

(3) Proposed deadlines and dates for deliveries and services by f-tronic are always only approximate, unless expressly agreed in writing or agreed to be a fixed period or a fixed date. If shipping has been agreed upon, delivery terms and delivery dates refer to the time of handover to the shipper, carrier or other third party contracted for transportation.

(4) f-tronic can - without prejudice to rights from delay of the customer - request from the purchaser, an extension to delivery and service periods, or a postponement of delivery and service schedules to the period in which the customer does not fulfil his contractual obligations to f-tronic.

(5) f-tronic is not liable for impossibility of delivery or for delays, because of force majeure or other unforeseeable events at the time the contract is concluded, such as breakdowns of any kind, caused by difficulties with materials - or energy, transport delays, strikes, lawful lockouts, shortage of labour, energy or raw materials, difficulties in obtaining necessary regulatory approvals, official measures or missing, wrong or late delivery by suppliers), for which f-tronic is not responsible.

If such events render delivery or service provision significantly more difficult or impossible to f-tronic and the hindrance is not only of a temporary nature, f-tronic is entitled to cancel the contract. For temporary hindrances, the delivery or performance periods shall be extended or postponed by the period of obstruction, plus a reasonable acceptance period. As far as the buyer accepting delivery or service cannot be expected due to the delay, he can withdraw from the contract with an immediate, written notice to f-tronic.

### (6) f-tronic is entitled to deliver, when

- a partial delivery to customers under the contractual intended purpose can be performed,
- delivery of the remaining ordered goods is ensured and
- the customer does not thereby incur any significant, additional expenditure or additional costs.

(7) If f-tronic becomes in default with a delivery or service or a delivery or service, for whatever reason, becomes impossible, then liability for compensation by f-tronic is restricted in accordance with § 7 of these General Terms and Conditions.

## § 4 Place of provision, shipping type, transfer of risk, acceptance

### (1) Place of provision

Provision of all obligations under the contractual relationship is Saarbrücken, unless otherwise determined. Should f-tronic be responsible for the installation, then the place of provision is where installation has to be done.

### (2) Shipping type

The shipping type and packaging are subject to the professional judgment of f-tronic.

### (3) Transfer of risk

Risk is transferred at the latest upon the hand-over of the delivery item, wherein the start of the loading is crucial, to the carrier, freight carrier or other specific third party charged with executing dispatch to the customer. This also applies if partial deliveries are made or f-tronic has assumed other services (e.g. shipping or installation). If dispatch or delivery is delayed, due to circumstances for which responsibility lies with the buyer, the risk is transferred from that day on to the Customer, on which the delivery item is ready for shipment and f-tronic has notified such to the customer.

### (4) Storage costs

Storage costs after transfer of risk are borne by the customer. For storage by f-tronic, storage costs are 0.25% of the bill for the delivery items to be stored per week elapsed. The assertion and proof of additional or lower storage costs remain reserved to both sides

### (5) Insurance

The consignment shall be insured by f-tronic only at the express request of the customer and at his expense against theft, transport, fire and water damage or other insurable risks.

### (6) Acceptance

If acceptance is to take place, the purchased item is regarded as accepted, when

- the supply and, where f-tronic is also responsible for installation, when installation is complete,
- f-tronic has notified the customer having regard to the deemed acceptance under this paragraph 6 and asked him to accept,
- twelve working days have passed since delivery or installation or the customer has begun to use the purchased item (e.g. has commissioned the delivered plant) and six working days have passed in this case since delivery or installation, and
- the customer has refrained from accepting within this period, due to any reason other than because of a defect displayed by f-tronic, which makes the use of the purchased goods impossible or significantly impairs it.

## § 5 Retention of title

The goods remain the property of f-tronic until full payment of all claims, including ancillary claims, claims for damages and payment of cheques and bills of exchange. Retention of title also applies, if individual claims of f-tronic are included in a current account and the balance is drawn and acknowledged. The buyer is entitled to process the goods further and sell them under the following provisions: The powers of the buyer to process reserved goods in the ordinary course of business, end with the suspension of payment by the buyer or by the requiring or opening of bankruptcy proceedings. By processing, the Buyer does not acquire ownership of the new item pursuant to § 950 BGB. Processing is performed for f-tronic without it incurring any liabilities thereby. If the goods are processed, combined or mixed with other items, f-tronic acquires joint ownership of the new item in proportion of the value of its reserved goods to the total value of goods. The buyer hereby assigns the claim with all ancillary rights from the resale of the goods to f-tronic, also proportionally, to the extent that the goods are processed, mixed or blended and f-tronic has acquired joint ownership in the amount of its invoice. In the latter case, f-tronic is at a ratio to the invoiced value of their reserved goods to the invoice of the object's corresponding fraction of the purchase price on this assignment. If the purchaser sells the claim within the framework of genuine factoring, he cedes the substitute claim against the factor to f-tronic. f-tronic accepts this assignment. f-tronic shall not collect the assigned claims, as long as the buyer meet his payment obligations. The authorisation mandate ends with any payment delay by the Buyer. In this case, f-tronic is authorised by the buyer to inform the customers of the assignment and to collect the claim itself.

The buyer is obliged to provide f-tronic upon demand with a detailed list of the f-tronic monies owed, with the names and addresses of customers, the amount of the individual claims, the invoice date and inform f-tronic of all information required to assert the assigned claims and to permit verification of the information. The buyer is entitled to collect the claims himself, as long as f-tronic has not instructed otherwise. Should the value of the existing securities exceed f-tronic's claim by more than 20%, then f-tronic at the request of the buyer is obliged to release securities insofar as f-tronics has obligated itself according to its own wishes.

## § 6 Warranty, Defects

### (1) Warranty period

The warranty period is one year from delivery or, if acceptance is required, from acceptance. However, if the goods are used for building or a purpose that has been used in accordance with their usual purpose for building and has caused its defectiveness (building materials), the limitation period is, in accordance with legislation, 5 years after delivery (§ 438 para. 1, no. 2 BGB). The special statutory regulations for collateral rights of third parties (§ 438 para. 1, No. 1, BGB) are also not affected, in bad faith of the seller (§ 438, para. 3, BGB) and for claims under the supplier's responsibility for final delivery to a consumer (§ 479 BGB).

### (2) Inspection and complaint

The items delivered must be carefully inspected immediately after delivery to the purchaser or to that third party designated by him. They are deemed as approved, if f-tronic has not received written complaint of obvious defects or other defects that were recognised during an immediate, thorough investigation, within seven working days after delivery of the delivery item, or otherwise within seven working days, prior to discovery of the defect or any earlier time at which the defect to the buyer for normal use of the delivered item was recognised without further investigation. At the request of f-tronic, the rejected delivery item is to be returned FOB to f-tronic. For justified complaints, f-tronic shall reimburse the cost of the cheapest method of dispatch; this does not apply, if costs are increased because the delivery item is at a location other than the location of intended use.

### (3) Repairs

In case of defects to the goods supplied, F-tronic is obligated and justified, within a reasonable period at its own discretion then to provide repairs or a replacement delivery. In the case of default, i.e. impossibility, unacceptability, refusal or unreasonable delay in the repair or replacement, the customer may withdraw from the contract or reduce the purchase price appropriately.

### (4) Culpability

If a defect is the fault of f-tronic, the customer can demand compensation under certain conditions of section 7.

### (5) Exclusions/surcharges

The warranty is void if the customer changes the delivered goods without the consent of f-tronic or has it modified by third parties and the rectification of the deficiency is impossible or unreasonably difficult. In any case, the buyer must bear the costs of additional charges for the defect's removal.

(6) In the case of defects of components from other manufacturers, which f-tronic cannot rectify for licensing or actual reasons, f-tronic at its own discretion shall make its warranty claims valid against the manufacturer and suppliers on behalf of the customer or assign them to the customer. Warranty claims against f-tronic exist for such defects under the other conditions and in accordance with these General Terms and Conditions, only if legal enforcement of the aforementioned claims against the manufacturer and suppliers was unsuccessful or, for example, due to insolvency, is hopeless. For the duration of the legal dispute, the limitation of the respective warranty claims of the client against f-tronic is inhibited.

(7) The warranty is void, if the customer changes without the consent of f-tronic the delivered item or has it altered by a third party and the rectification of the deficiency is thereby impossible or unreasonably difficult. In any case, the customer must bear the additional costs brought about by defect removal.

(8) A delivery of used goods agreed individually with the customer is carried out without any warranty for defects.

## § 7 Liability

(1) The liability of f-tronic for compensation, for whatever reason, in particular from impossibility, delay, defective or incorrect delivery, breach of contract, breach of duties in contract negotiations and tort, provided that it is in matters of fault, is limited, under this § 7.

(2) f-tronic is not liable in cases of simple negligence by its bodies, legal representatives, employees or other agents, as long as it is not a breach of contractual obligations. Essential contractual obligations are those to make a timely delivery and installation free of material defects to the delivery item, as well as consulting, protection and care obligations, that will enable the contractual use of the delivery item by the customer or to protect the lives and health of the staff of the buyer or the protection of his property from significant damage.

(3) To the extent that f-tronic is liable in accordance with this § 7 on the merits of damages, this liability is limited to damages that f-tronic foresaw when concluding the contract as a possible consequence of a breach of contract or should have foreseen when applying due diligence. Indirect or consequential damages arising from defects in the delivered item are also eligible for compensation, if such damage can typically be expected from proper use of the delivered item.

(4) In the case of liability for simple negligence, f-tronic's liability for property damage and resultant further damages is limited to an amount of 6 million Euros per claim (according to the current coverage of its product liability insurance or liability insurance), even if it is matter of a breach of contractual obligations.

(5) The above exclusions and limitations apply to the same extent in favour of the bodies, legal representatives, employees and other agents of f-tronic.

(6) Insofar as f-tronic provides technical information or advisory capacity and this information or advice is not part of the agreed contractually owed scope, this is performed free of charge and under exclusion of any liability.

(7) The limitations of this § 7 shall not apply to f-tronic's liability in case of deliberate conduct, guaranteed characteristics, injury to life, limb or health or under the Product Liability Act.

## § 8 Property rights

(1) f-tronic is according to this § 8 to ensure that the object of delivery is free of third parties' industrial property rights or copyrights. Each party shall notify the other party in writing or by e-mail if any claims of infringement of such rights are asserted against him.

(2) In the event that the delivered item infringes the intellectual property or copyright of a third party, f-tronic at its own discretion and at its own expense shall so change or exchange the delivered item so that third party rights are violated no longer, the delivered item meets and continues to meet the contractually agreed functions, or provide the customer with right of use by making a licence agreement. If this is not managed within a reasonable timescale, the customer is entitled to withdraw from the contract or reduce the purchase price accordingly. Any claims for damages by the customer are subject to the restrictions of § 7 of these Terms of Sale.

(3) In the case of rights violations of other manufacturers by products supplied by f-tronic, f-tronic will make at its discretion their claims against the manufacturers and pre-suppliers on the customer's account or assign them to the customer. Claims against f-tronic arise in these cases, according to this § 8, only if the legal enforcement of the aforementioned claims against the manufacturers and pre-suppliers was unsuccessful, or, for example, due to bankruptcy, is hopeless.

## § 9 Returns

Goods delivered in accordance with the contract provide the buyer with no right to exchange or return the goods. Should f-tronic exceptionally declare itself ready to exchange the goods or take them back, the following shall apply: before returning the goods, the exchange or taking back must be agreed in writing with F-tronic. Goods must then be delivered, freight charges prepaid, to one of f-tronic's premises at the buyer's risk. The goods must arrive in perfect condition at f-tronic; they cannot be used, already installed, broken, defective or constructively outdated material. It is further agreed that f-tronic is the ordering party as reimbursement of 15% of the value of the exchanged or returned goods charge, insofar as another amount has not been agreed separately in writing.

## § 10 Final provisions

### (1) Jurisdiction

Jurisdiction for any disputes arising from the business relationship between f-tronic and its customers/clients is at the discretion of f-tronic Saarbrücken or the registered office of the customer/buyer. For complaints against f-tronic, Saarbrücken is the exclusive jurisdiction. Mandatory statutory provisions regarding exclusive jurisdiction remain unaffected by this provision.

### (2) Choice of law

The relationship between f-tronic and its clients/customers is subject to the law of the Federal Republic of Germany. The United Nations Convention on Contracts for the International Sale of Goods of 11 April 1980 (CISG) does not apply.

### (3) Design

If the contract or these General Terms and Conditions contain loopholes, those legal provisions as agreed are valid, that would have been agreed according to the economic objectives of the contract and the purpose of

these General Terms, in which the loophole would have been known to fill these gaps.

Status: 2018-09

With this edition of the Terms & Conditions, all previous Terms and Conditions of f-tronic lose their validity.

## Imprint:

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[www.f-tronic.com](http://www.f-tronic.com)

Catalogue as at: 07/2019

## Legend



### Surface mounted

Products with this mark are suitable for surface mounting.



### Concrete

Products with this mark are suitable for mounting in concrete elements.



### Hollow wall

Products with this mark are suitable for mounting in hollow wall constructions.



### Flush mounted

Products with this mark are suitable for flush mounting.



### Glow wire tested products

The glow-wire test is a test of plastic sheets or components for flammability. Here, the specimen is exposed for a defined time interval selectively to a high temperature load. In this test, the time until combustion, until its expiry, the glow wire ignition temperature (GWIT) and the glow wire flammability index (GWFI) are determined as material parameters, which are used for component evaluation. Here, the filament, pre-heated to a certain temperature, touches the test piece for a period of 30s.



### CE marking

Thus, the manufacturer, distributor or EU representative in accordance with EU regulation 765/2008, declares that the product meets the applicable requirements set out in the Community harmonisation legislation providing for its affixing.





### IP classification

Protection according to national and international standards DIN EN 60529/DIN VDE 0470 Part 1 and ISO 20653 denotes the Type of protection in the different IP classes. The first digit or number/letter combination stands for the degree of protection of the housing against accidental contact. At the same time, this indicator provides information on protection against foreign objects.



### Insulation

Appliances of class II have an enhanced or double insulation between the power circuit and output voltage or metal housing and have no protective conductor connection. This protective measure is also called protective insulation (safe electrical isolation). Even if they have electrically conductive surfaces, so they are protected by reinforced insulation against contact with live parts. Portable appliances with protection class II have no safety plug; for connections, plugs are used that have no grounding; at high currents, these are shaped plugs in Germany - Plug designs that are similar to a plug. For smaller flows (up to 2.5A) so-called Euro-plugs may be used.



### Halogen-free

Products with this label must not contain halogens, causing, in case of fire, no toxic and corrosive fumes.



### VDE

The VDE mark documents the safety and conformity to standards of an electrotechnical product, in terms of electrical, mechanical, thermal, toxic and other hazards. It is only awarded by the VDE Testing and Certification Institute.



### ÖVE

The ÖVE sign documents the safety and conformity to standards of an electrotechnical product, in terms of electrical, mechanical, thermal, toxic and other hazards. It is only awarded by the ÖVE Testing and Certification Institute.

## Register by Type

Type	Item No.	Page
251KL	7810014	86
252-WK	7810042	86
253-SC	7820001	87
253-SC-EK	7820002	87
ADN1632	7390116	61
ADS12GR	7290031	135, 142
ADS12SB	7110060	135, 142
ADS12W	7290032	135, 142
APV12+2	7220044	129
APV12+2PEN	7220045	129
APV12+2TM	7220046	134
APV12+2TW	7220048	134
APV14	7240022	139
APV14AR	7240023	139
APV24+4	7220050	129
APV24+4PEN	7220051	129
APV24+4TM	7220052	134
APV24+4TW	7220054	134
APV28	7240024	139
APV28AR	7240025	139
APV36+6	7220056	129
APV36+6PEN	7220057	129
APV36+6TM	7220058	134
APV36+6TW	7220060	134
APV36K	7220087	131
APV4	7240026	140
APV42	7240027	139
APV42AR	7240028	139
APV48+8	7220061	129
APV48+8PEN	7220062	129
APV48+8TM	7220063	134
APV48+8TW	7220065	134
APV48K	7220088	131
APV4T	7290114	142
APV56	7240029	139
APV56AR	7240030	139
APV6	7240031	140
APV6T	7290115	142
APV70	7240032	139
APVTK36TM	7220166	134
APVTK48TM	7220167	134
B1000	7400016	69, 75
B1050	7400017	69, 75
B1100	7400018	69, 75
B1200	7400013	75
B1250	7400014	77
B1300	7400006	69, 73, 75
B150	7400030	69
B155	7400031	69
B200	7400015	70
B205	7400019	70
B210	7400001	70

Type	Item No.	Page
B300	7400007	80
B400	7400002	73
B450	7400029	71
B500	7400009	75
B550	7400010	75
B600	7400011	77
B610	7400027	77
B650	7400012	79
B660	7400028	79
B820	7400020	81
B825	7400021	81
B832	7400022	81
B920	7400025	61, 81
B925	7400026	61, 81
BOS2	7390048	59
BS112	7500030	94
BS112/2	7500031	94
BS115	7500001	52, 94
BS117	7500002	52, 94
BS118	7500003	52, 94
BS2000	7500045	52, 93
BS2700	7500042	52, 93
BS3500	7500044	52, 93
BS3700	7500043	52, 93
BSB	7500010	98
BSBF125	7500033	103
BSBF160	7500034	103
BSBF200	7500035	103
BSBF50	7500032	103
BSDSB	7500004	102
BSKS	7500029	103
BSM	7500008	103
BSMS110	7500023	100
BSMS125	7500024	100
BSMS140	7500025	100
BSMS160	7500026	100
BSMS180	7500027	100
BSMS200	7500028	100
BSMS32	7500017	100
BSMS40	7500018	100
BSMS50	7500019	100
BSMS63	7500020	100
BSMS75	7500021	100
BSMS90	7500022	100
BSMV	7500009	103
BSPI	7500007	103
BSSCH18	7500005	96
BSSCH48	7500006	96
BSST107	7500014	98
BSST132	7500015	98
BSST158	7500016	98
BSST62	7500012	98

Type	Item No.	Page
BSST77	7500013	98
CMS1	7440012	107
CMS10	7420018	108
CMS11	7440016	106
CMS12	7440017	106
CMS13	7440018	106
CMS15	7430007	109
CMS17	7440041	110
CMS18	7440042	110
CMS1S	7440037	107
CMS2	7440013	107
CMS21	7440043	110
CMS2S	7440038	107
CMS3	7440014	107
CMS30	7430008	109
CMS3S	7440039	107
CMS4	7440015	107
CMS4S	7440040	107
CMS5	7440024	110
CMS6	7440025	110
CMS7	7440026	110
CMS8	7440027	110
CMS9	7420017	108
DB1br	7330004	66
DB1ws	7330006	66
DMS20	7290059	142
DMS25	7290060	142
DMS32	7290061	142
DSD50	7820004	87
DSD85	7820003	87
E06	9930014	56
E07	9930015	56
E08	9930016	56
E09	9930017	56
E10	9930018	56
E104	7390069	57
E105	7390075	61
E105HF	7390091	61
E1062K	7320026	32
E106M25	7310129	26
E106M25S	7310130	26
E1072K	7320028	32
E107M25	7310131	26
E107M25S	7310132	26
E109	7390015	60
E109A	7390016	60
E110	7310133	28
E112H	7390022	60
E113	7340038	63
E113GN	7340110	63
E113R	7340111	63
E113S	7340134	63

Type	Item No.	Page
E113W	7340043	63
E114	7340044	63
E115	7350094	36
E115HF	7350095	36
E116	7350033	39
E117	7350096	36
E117HF	7350097	36
E118	7350041	36
E119	7350043	39
E120	7390024	56
E1200	7340157	65
E1200gn	7340164	65
E1200rt	7340163	65
E1200sw	7340165	65
E1200W	7340158	65
E121	7390026	56
E1210	7340159	65
E1210gn	7340167	65
E1210rt	7340166	65
E1210sw	7340168	65
E1210W	7340160	65
E122	7390027	56
E125	7340139	62
E125K	7340140	63
E126	7340141	62
E126K	7340142	62
E126W	7340058	62
E128	7340149	63
E128W	7340154	63
E130	7390028	57
E131	7390032	57
E132	7390033	57
E133	7390035	57
E134	7350098	38
E135	7350099	36
E140	7310060	28
E140D	7310135	28
E141	7310061	28
E141D	7310136	28
E142	7310062	28
E142D	7310137	28
E152/15	9920005	60
E152/25	9920007	60
E152/40	9920009	60
E2700	7360028	45
E2700HF	7360047	45
E3700	7360027	45
E3700HF	7360048	45
E400	7310155	27
E5000	7350066	37
E5000HF	7350112	37
E510	7310063	29
E5100	7360051	47
E5100HF	7360055	47
E550	7320009	35
E551	7390120	60
E810	7310064	29
E811	7310066	29

Type	Item No.	Page
E815	7350046	39
E816	7360016	45
E817	7390112	60
E830	7370008	66
E831	7370037	66
E832	7370038	66
E833	7370039	66
E834	7370040	66
E860	7350117	38
E870	7350116	38
EPS14-115	7810015	84
EPS14-116	7810016	85
EPS14-118	7810017	85
EPS14-ECK	7810018	86
EPS14-T20	7810019	85
EPS14-T80	7810020	85
EPS20-115	7810021	84
EPS20-116	7810022	85
EPS20-118	7810023	85
EPS20-ECK	7810024	86
EPS20-MULTI	7810041	84
EPS20-T20	7810025	85
EPS20-T80	7810026	85
EPS24-115	7810027	84
EPS24-116	7810028	85
EPS24-118	7810029	85
EPS24-ECK	7810030	86
EPS24-T20	7810031	85
EPS24-T80	7810032	85
EPS30-115	7810033	84
EPS30-116	7810034	85
EPS30-118	7810035	85
EPS30-ECK	7810036	86
EPS30-T20	7810037	85
EPS30-T80	7810038	85
f-clip	7410003	111
f-cutter	7390109	63
f-fix	7390114	113
f-fix-Bohrer	7390118	113
f-fix-MaxiPack	7390117	113
f-fix-Set	7390115	113
FIK	7290002	136
FK110	7340060	67
FK111	7340061	67
FK210	7340063	67
FK211	7340064	67
FK310	7340066	67
FK311	7340067	67
FK410	7340069	67
FK411	7340070	67
FT10	7420007	112
FT16	7420009	112
FT8	7420011	112
FV1-4	7110222	144
FV1-5	7110225	144
FV1-6	7110229	144
FV2-3	7110220	144
FV2-4	7110223	144

Type	Item No.	Page
FV2-5	7110226	144
FV2-6	7110230	144
FV3-3	7110221	144
FV3-4	7110224	144
FV3-5	7110227	144
FV3-6	7110231	144
FV4-5	7110228	144
FV4-6	7110232	144
GK45	7290156	137
HLAK1p25bl	7110189	150
HLAK1p25br	7110191	150
HLAK1p25gnge	7110190	150
HLAK1p25gr	7110188	150
HLAK1p25sw	7110192	150
HLAK1p35bl	7110196	150
HLAK1p35br	7110198	150
HLAK1p35gnge	7110197	150
HLAK1p35gr	7110195	150
HLAK1p35sw	7110199	150
HLAK1p70bl	7110202	151
HLAK1p70br	7110204	151
HLAK1p70gnge	7110203	151
HLAK1p70gr	7110201	151
HLAK1p70sw	7110205	151
HLAK3p25gr	7110194	150
HLAK4p25gr	7110233	150
HLAK4p25grbl	7110235	150
HLAK5p25gr	7110236	150
HLAK5p25grblgn	7110237	150
HLAKp25grgn	7110234	150
HU-SET	7110038	147
HW10	7350061	41
HW20	7350062	41
HW202K	7360063	48
HW20F	7350153	42
HW30	7350063	41
HW302K	7360064	48
HW30F	7350154	42
HW40	7350064	41
HW402K	7360065	48
HW40F	7350155	42
HW50	7350065	41
HW50F	7350156	42
HW60	7350093	41
HWA-SET	7290079	137
HWD1	7390057	41, 42
HWD2	7390058	41, 42
HWLT1	7390049	58
HWV12+2ST	7230015	123
HWV24+4ST	7230016	123
HWV36+6ST	7230017	123
HWV48+8ST	7230018	123
HWV60+10ST	7230035	123
JUMBO PA3	7250077	127
JUMBO PA4	7250078	127
JUMBO PA5	7250079	127
JUMBO12+2	7250012	119
JUMBO12+2XX	7250015	121



Type	Item No.	Page
JUMBO24+4	7250017	119
JUMBO24+4XX	7250020	121
JUMBO36+6	7250022	119
JUMBO36+6XX	7250025	121
JUMBO36K	7250027	125
JUMBO36KW	7250064	125
JUMBO48+8	7250028	119
JUMBO48+8XX	7250031	121
JUMBO48K	7250033	125
JUMBO48KW	7250065	125
JUMBO60-2	7250067	127
JUMBO60-2W	7250069	127
JUMBO60-3	7250068	127
JUMBO60-3W	7250070	127
JUMBO60+10	7250062	119
JUMBO60K	7250063	125
JUMBO60KW	7250066	125
KAIP65	7290111	141
KDKS	7390074	58
KDM-2-Set	7501003	115
KKL	7110056	146
KN17N	7290158	136
KN17PE	7290159	136
KN34	7290157	136
KPE34	7290160	136
KSH15	7430001	112
KSH30	7430002	112
KSH30B	7430003	112
KSM15	7501001	114
KSM30	7501002	114
KV02	7260010	132
KV02K	7260011	132
KV04	7260012	132
KV04K	7260013	132
KV04WDKE	7240050	140
KV06	7260014	132
KV06K	7260015	132
KV06WDKE	7240051	140
KV10WDKE	7240052	140
KVS	7390084	111
LEG-H3	7380003	54
LEG-WD4	7380004	54
LEG1	7380001	54
LEG2	7380002	54
MH-SET	7290098	137
MK-SET	7290097	137
N14	7110239	136
NS28/230	7440001	112
NS28/240	7440002	112
NS28/250	7440003	112
NS35/340	7440004	112
NS35/350	7440005	112
NS35/360	7440006	112
NS35/370	7440007	112
PAH	7390090	31, 41, 42
PAQ	7390089	31, 41, 42
PATCH12	7290116	137
PATCH6+6	7290183	137

Type	Item No.	Page
PDB160	7110136	149
PDB160-2	7110263	149
PDB160-3	7110264	149
PDB210	7110137	149
PDB210-2	7110265	149
PDB210-3	7110266	149
PDB220	7110138	149
PDB270	7110139	149
PDB400	7110143	149
PDB490	7110146	149
PEN310	7110238	136
RM20	7400032	61
RM25	7400033	61
RM32	7400034	61
SDS1	7501005	115
SEG-ES51	7390072	56
SEG50	7390071	56
SIAD-2	7110049	149
SIAD-3	7110050	149
SKN17N	9910009	136, 141
SKN17PE	9910010	136, 141
SKN34	9910011	136, 141
SKPE34	9910012	136, 141
SP3700	7520001	50
SP3700HF	7520002	50
SSAK16	7110219	151
STECKD3	7290113	135
STM25	7290086	141
STM32	7290087	141
STM40	7290088	141
SWM-SM 50	7501004	115
T+RJUMBO12+2	7290090	134
T+RJUMBO24+4	7290091	134
T+RJUMBO36+6	7290092	134
T+RJUMBO36K	7290094	134
T+RJUMBO36KW	7290164	134
T+RJUMBO48+8	7290093	134
T+RJUMBO48K	7290095	134
T+RJUMBO48KW	7290165	134
T+RJUMBO60-2	7290181	134
T+RJUMBO60-2W	7290182	134
T+RJUMBO60+10	7290168	134
T+RJUMBO60K	7290167	134
T+RJUMBO60KW	7290166	134
TS1	7240060	142
TS3	7240059	142
TSV	7220086	135
UH1	7430004	112
UP20	7310102	31
UP30	7310103	31
UP40	7310104	31
UP50	7310105	31
UPD1	7390055	31
UPD2	7390056	31
UPV12+2ST	7210028	122
UPV24+4ST	7210029	122
UPV36+6ST	7210030	122
UPV48+8ST	7210031	122

Type	Item No.	Page
UPV60+10ST	7210063	122
UVB100bl	7110207	151
UVB100gnge	7110208	151
UVB100gr	7110206	151
VB3-Set	7290172	133
VB4-Set	7290173	133
VB5-Set	7290174	133
VK-SET	7290107	137
VS1-6	7110240	145
VS1-7	7110245	145
VS1-8	7110250	145
VS1-9	7110255	145
VS2-6	7110241	145
VS2-7	7110246	145
VS2-8	7110251	145
VS2-9	7110256	145
VS3-6	7110242	145
VS3-7	7110247	145
VS3-8	7110252	145
VS3-9	7110257	145
VS4-6	7110243	145
VS4-7	7110248	145
VS4-8	7110253	145
VS4-9	7110258	145
VS5-6	7110244	145
VS5-7	7110249	145
VS5-8	7110254	145
VS5-9	7110259	145
WAD	7310077	29
ZSSBG-1	7110126	148
ZSSBG-2	7110127	148
ZSSBG-3	7110128	148
ZSSBG-4	7110129	148
ZSSBG-5	7110123	148
ZSSBG-6	7110124	148
ZSSBG-7	7110125	148
ZSSBG-N	7110122	148
ZSTG	7110037	147
ZSTS	7110036	147

## Register for item number

Item No.	Type	Page
7110036	ZSTS	147
7110037	ZSTG	147
7110038	HU-SET	147
7110049	SIAD-2	149
7110050	SIAD-3	149
7110056	KKL	146
7110060	ADS12SB	135, 142
7110122	ZSSBG-N	148
7110123	ZSSBG-5	148
7110124	ZSSBG-6	148
7110125	ZSSBG-7	148
7110126	ZSSBG-1	148
7110127	ZSSBG-2	148
7110128	ZSSBG-3	148
7110129	ZSSBG-4	148
7110136	PDB160	149
7110137	PDB210	149
7110138	PDB220	149
7110139	PDB270	149
7110143	PDB400	149
7110146	PDB490	149
7110188	HLAK1p25gr	150
7110189	HLAK1p25bl	150
7110190	HLAK1p25gnge	150
7110191	HLAK1p25br	150
7110192	HLAK1p25sw	150
7110194	HLAK3p25gr	150
7110195	HLAK1p35gr	150
7110196	HLAK1p35bl	150
7110197	HLAK1p35gnge	150
7110198	HLAK1p35br	150
7110199	HLAK1p35sw	150
7110201	HLAK1p70gr	151
7110202	HLAK1p70bl	151
7110203	HLAK1p70gnge	151
7110204	HLAK1p70br	151
7110205	HLAK1p70sw	151
7110206	UVB100gr	151
7110207	UVB100bl	151
7110208	UVB100gnge	151
7110219	SSAK16	151
7110220	FV2-3	144
7110221	FV3-3	144
7110222	FV1-4	144
7110223	FV2-4	144
7110224	FV3-4	144
7110225	FV1-5	144
7110226	FV2-5	144
7110227	FV3-5	144
7110228	FV4-5	144
7110229	FV1-6	144
7110230	FV2-6	144
7110231	FV3-6	144

Item No.	Type	Page
7110232	FV4-6	144
7110233	HLAK4p25gr	150
7110234	HLAKp25grgn	150
7110235	HLAK4p25grbl	150
7110236	HLAK5p25gr	150
7110237	HLAK5p25grblgn	150
7110238	PEN310	136
7110239	N14	136
7110240	VS1-6	145
7110241	VS2-6	145
7110242	VS3-6	145
7110243	VS4-6	145
7110244	VS5-6	145
7110245	VS1-7	145
7110246	VS2-7	145
7110247	VS3-7	145
7110248	VS4-7	145
7110249	VS5-7	145
7110250	VS1-8	145
7110251	VS2-8	145
7110252	VS3-8	145
7110253	VS4-8	145
7110254	VS5-8	145
7110255	VS1-9	145
7110256	VS2-9	145
7110257	VS3-9	145
7110258	VS4-9	145
7110259	VS5-9	145
7110263	PDB160-2	149
7110264	PDB160-3	149
7110265	PDB210-2	149
7110266	PDB210-3	149
7210028	UPV12+2ST	122
7210029	UPV24+4ST	122
7210030	UPV36+6ST	122
7210031	UPV48+8ST	122
7210063	UPV60+10ST	122
7220044	APV12+2	129
7220045	APV12+2PEN	129
7220046	APV12+2TM	134
7220048	APV12+2TW	134
7220050	APV24+4	129
7220051	APV24+4PEN	129
7220052	APV24+4TM	134
7220054	APV24+4TW	134
7220056	APV36+6	129
7220057	APV36+6PEN	129
7220058	APV36+6TM	134
7220060	APV36+6TW	134
7220061	APV48+8	129
7220062	APV48+8PEN	129
7220063	APV48+8TM	134
7220065	APV48+8TW	134

Item No.	Type	Page
7220086	TSV	135
7220087	APV36K	131
7220088	APV48K	131
7220166	APVTK36TM	134
7220167	APVTK48TM	134
7230015	HWV12+2ST	123
7230016	HWV24+4ST	123
7230017	HWV36+6ST	123
7230018	HWV48+8ST	123
7230035	HWV60+10ST	123
7240022	APV14	139
7240023	APV14AR	139
7240024	APV28	139
7240025	APV28AR	139
7240026	APV4	140
7240027	APV42	139
7240028	APV42AR	139
7240029	APV56	139
7240030	APV56AR	139
7240031	APV6	140
7240032	APV70	139
7240050	KV04WDKE	140
7240051	KV06WDKE	140
7240052	KV10WDKE	140
7240059	TS3	142
7240060	TS1	142
7250012	JUMBO12+2	119
7250015	JUMBO12+2XX	121
7250017	JUMBO24+4	119
7250020	JUMBO24+4XX	121
7250022	JUMBO36+6	119
7250025	JUMBO36+6XX	121
7250027	JUMBO36K	125
7250028	JUMBO48+8	119
7250031	JUMBO48+8XX	121
7250033	JUMBO48K	125
7250062	JUMBO60+10	119
7250063	JUMBO60K	125
7250064	JUMBO36KW	125
7250065	JUMBO48KW	125
7250066	JUMBO60KW	125
7250067	JUMBO60-2	127
7250068	JUMBO60-3	127
7250069	JUMBO60-2W	127
7250070	JUMBO60-3W	127
7250077	JUMBO PA3	127
7250078	JUMBO PA4	127
7250079	JUMBO PA5	127
7260010	KV02	132
7260011	KV02K	132
7260012	KV04	132
7260013	KV04K	132
7260014	KV06	132

Item No.	Type	Page
7260015	KV06K	132
7290002	FIK	136
7290031	ADS12GR	135, 142
7290032	ADS12W	135, 142
7290059	DMS20	142
7290060	DMS25	142
7290061	DMS32	142
7290079	HWA-SET	137
7290086	STM25	141
7290087	STM32	141
7290088	STM40	141
7290090	T+RJUMBO12+2	134
7290091	T+RJUMBO24+4	134
7290092	T+RJUMBO36+6	134
7290093	T+RJUMBO48+8	134
7290094	T+RJUMBO36K	134
7290095	T+RJUMBO48K	134
7290097	MK-SET	137
7290098	MH-SET	137
7290107	VK-SET	137
7290111	KAIP65	141
7290113	STECKD3	135
7290114	APV4T	142
7290115	APV6T	142
7290116	PATCH12	137
7290156	GK45	137
7290157	KN34	136
7290158	KN17N	136
7290159	KN17PE	136
7290160	KPE34	136
7290164	T+RJUMBO36KW	134
7290165	T+RJUMBO48KW	134
7290166	T+RJUMBO60KW	134
7290167	T+RJUMBO60K	134
7290168	T+RJUMBO60+10	134
7290172	VB3-Set	133
7290173	VB4-Set	133
7290174	VB5-Set	133
7290181	T+RJUMBO60-2	134
7290182	T+RJUMBO60-2W	134
7290183	PATCH6+6	137
7310060	E140	28
7310061	E141	28
7310062	E142	28
7310063	E510	29
7310064	E810	29
7310066	E811	29
7310077	WAD	29
7310102	UP20	31
7310103	UP30	31
7310104	UP40	31
7310105	UP50	31
7310129	E106M25	26
7310130	E106M25S	26
7310131	E107M25	26
7310132	E107M25S	26
7310133	E110	28
7310135	E140D	28

Item No.	Type	Page
7310136	E141D	28
7310137	E142D	28
7310155	E400	27
7320009	E550	35
7320026	E1062K	32
7320028	E1072K	32
7330004	DB1br	66
7330006	DB1ws	66
7340038	E113	63
7340043	E113W	63
7340044	E114	63
7340058	E126W	62
7340060	FK110	67
7340061	FK111	67
7340063	FK210	67
7340064	FK211	67
7340066	FK310	67
7340067	FK311	67
7340069	FK410	67
7340070	FK411	67
7340110	E113GN	63
7340111	E113R	63
7340134	E113S	63
7340139	E125	62
7340140	E125K	63
7340141	E126	62
7340142	E126K	62
7340149	E128	63
7340154	E128W	63
7340157	E1200	65
7340158	E1200W	65
7340159	E1210	65
7340160	E1210W	65
7340163	E1200rt	65
7340164	E1200gn	65
7340165	E1200sw	65
7340166	E1210rt	65
7340167	E1210gn	65
7340168	E1210sw	65
7350033	E116	39
7350041	E118	36
7350043	E119	39
7350046	E815	39
7350061	HW10	41
7350062	HW20	41
7350063	HW30	41
7350064	HW40	41
7350065	HW50	41
7350066	E5000	37
7350093	HW60	41
7350094	E115	36
7350095	E115HF	36
7350096	E117	36
7350097	E117HF	36
7350098	E134	38
7350099	E135	36
7350112	E5000HF	37
7350116	E870	38

Item No.	Type	Page
7350117	E860	38
7350153	HW20F	42
7350154	HW30F	42
7350155	HW40F	42
7350156	HW50F	42
7360016	E816	45
7360027	E3700	45
7360028	E2700	45
7360047	E2700HF	45
7360048	E3700HF	45
7360051	E5100	47
7360055	E5100HF	47
7360063	HW202K	48
7360064	HW302K	48
7360065	HW402K	48
7370008	E830	66
7370037	E831	66
7370038	E832	66
7370039	E833	66
7370040	E834	66
7380001	LEG1	54
7380002	LEG2	54
7380003	LEG-H3	54
7380004	LEG-WD4	54
7390015	E109	60
7390016	E109A	60
7390022	E112H	60
7390024	E120	56
7390026	E121	56
7390027	E122	56
7390028	E130	57
7390032	E131	57
7390033	E132	57
7390035	E133	57
7390048	BOS2	59
7390049	HWLT1	58
7390055	UPD1	31
7390056	UPD2	31
7390057	HWD1	41, 42
7390058	HWD2	41, 42
7390069	E104	57
7390071	SEG50	56
7390072	SEG-ES51	56
7390074	KDKS	58
7390075	E105	61
7390084	KVS	111
7390089	PAQ	31, 41, 42
7390090	PAH	31, 41, 42
7390091	E105HF	61
7390109	f-cutter	63
7390112	E817	60
7390114	f-fix	113
7390115	f-fix-Set	113
7390116	ADN1632	61
7390117	f-fix-MaxiPack	113
7390118	f-fix-Bohrer	113
7390120	E551	60
7400001	B210	70



Item No.	Type	Page
7400002	B400	73
7400006	B1300	69, 73, 75
7400007	B300	80
7400009	B500	75
7400010	B550	75
7400011	B600	77
7400012	B650	79
7400013	B1200	75
7400014	B1250	77
7400015	B200	70
7400016	B1000	69, 75
7400017	B1050	69, 75
7400018	B1100	69, 75
7400019	B205	70
7400020	B820	81
7400021	B825	81
7400022	B832	81
7400025	B920	61, 81
7400026	B925	61, 81
7400027	B610	77
7400028	B660	79
7400029	B450	71
7400030	B150	69
7400031	B155	69
7400032	RM20	61
7400033	RM25	61
7400034	RM32	61
7410003	f-clip	111
7420007	FT10	112
7420009	FT16	112
7420011	FT8	112
7420017	CMS9	108
7420018	CMS10	108
7430001	KSH15	112
7430002	KSH30	112
7430003	KSH30B	112
7430004	UH1	112
7430007	CMS15	109
7430008	CMS30	109
7440001	NS28/230	112
7440002	NS28/240	112
7440003	NS28/250	112
7440004	NS35/340	112
7440005	NS35/350	112
7440006	NS35/360	112
7440007	NS35/370	112
7440012	CMS1	107
7440013	CMS2	107
7440014	CMS3	107
7440015	CMS4	107
7440016	CMS11	106
7440017	CMS12	106
7440018	CMS13	106
7440024	CMS5	110
7440025	CMS6	110
7440026	CMS7	110
7440027	CMS8	110

Item No.	Type	Page
7440037	CMS1S	107
7440038	CMS2S	107
7440039	CMS3S	107
7440040	CMS4S	107
7440041	CMS17	110
7440042	CMS18	110
7440043	CMS21	110
7500001	BS115	52, 94
7500002	BS117	52, 94
7500003	BS118	52, 94
7500004	BSDSB	102
7500005	BSSCH18	96
7500006	BSSCH48	96
7500007	BSPI	103
7500008	BSM	103
7500009	BSMV	103
7500010	BSB	98
7500012	BSST62	98
7500013	BSST77	98
7500014	BSST107	98
7500015	BSST132	98
7500016	BSST158	98
7500017	BSMS32	100
7500018	BSMS40	100
7500019	BSMS50	100
7500020	BSMS63	100
7500021	BSMS75	100
7500022	BSMS90	100
7500023	BSMS110	100
7500024	BSMS125	100
7500025	BSMS140	100
7500026	BSMS160	100
7500027	BSMS180	100
7500028	BSMS200	100
7500029	BSKS	103
7500030	BS112	94
7500031	BS112/2	94
7500032	BSBF50	103
7500033	BSBF125	103
7500034	BSBF160	103
7500035	BSBF200	103
7500042	BS2700	52, 93
7500043	BS3700	52, 93
7500044	BS3500	52, 93
7500045	BS2000	52, 93
7501001	KSM15	114
7501002	KSM30	114
7501003	KDM-2-Set	115
7501004	SWM-SM 50	115
7501005	SDS1	115
7520001	SP3700	50
7520002	SP3700HF	50
7810014	251KL	86
7810015	EPS14-115	84
7810016	EPS14-116	85
7810017	EPS14-118	85
7810018	EPS14-ECK	86
7810019	EPS14-T20	85

Item No.	Type	Page
7810020	EPS14-T80	85
7810021	EPS20-115	84
7810022	EPS20-116	85
7810023	EPS20-118	85
7810024	EPS20-ECK	86
7810025	EPS20-T20	85
7810026	EPS20-T80	85
7810027	EPS24-115	84
7810028	EPS24-116	85
7810029	EPS24-118	85
7810030	EPS24-ECK	86
7810031	EPS24-T20	85
7810032	EPS24-T80	85
7810033	EPS30-115	84
7810034	EPS30-116	85
7810035	EPS30-118	85
7810036	EPS30-ECK	86
7810037	EPS30-T20	85
7810038	EPS30-T80	85
7810041	EPS20-MULTI	84
7810042	252-WK	86
7820001	253-SC	87
7820002	253-SC-EK	87
7820003	DSD85	87
7820004	DSD50	87
9910009	SKN17N	136, 141
9910010	SKN17PE	136, 141
9910011	SKN34	136, 141
9910012	SKPE34	136, 141
9920005	E152/15	60
9920007	E152/25	60
9920009	E152/40	60
9930014	E06	56
9930015	E07	56
9930016	E08	56
9930017	E09	56
9930018	E10	56

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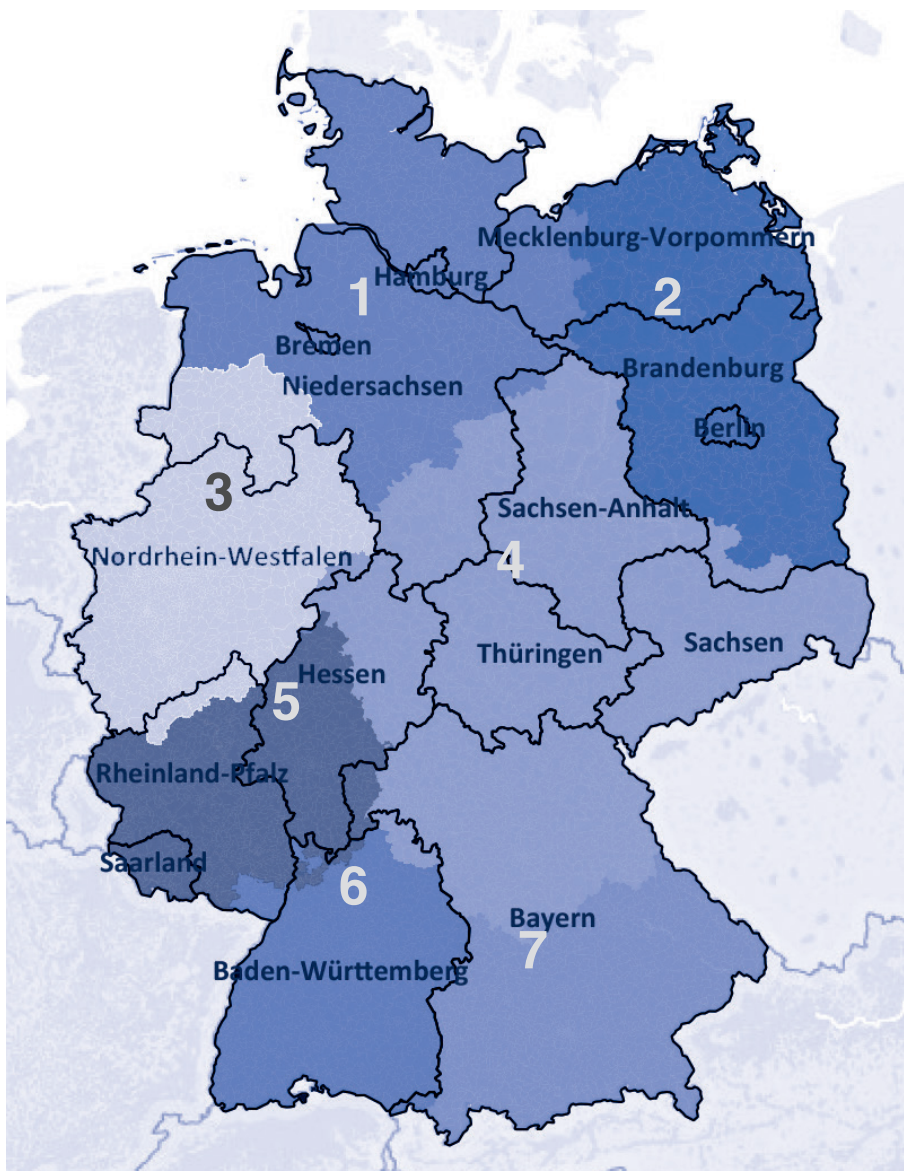
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