



Stock Program 28

f-tronic – Installing innovation

Innovation, determination and quality “Made in Germany” are the cornerstones of our company

We consider electrical installation technology simple. Why is that? Because we make it simpler and never lose sight of efficiency.

f-tronic® has been developing, producing and marketing innovative products for electrical installation since 1990. We are a full-range provider in 6 product areas: Counter cabinets, distributors, industrial housing, sockets, cable fastening systems and fire protection systems. By continually expanding our range of products, we can offer an extensive product spectrum for the electrical trade.

We stand for high quality and innovation in plastics processing. **f-tronic®** is known as a full-range provider in more than 25 countries – with electrical wholesalers as and installers as well. With our injection moulding machines, which are mainly manufactured by German companies, we guarantee the highest quality “Made in Germany”.

In order to bring innovative new products to the market each year, we listen closely to those in the electrical trade and wholesalers. To accomplish this, we have established a Tradesmen Advisory Council with members from the entire German territory. This allows us to gain vast insight into different installation practices – at the same time, we get important impulses directly from real life that we use to improve individual products and develop new ones.

We are committed today to thinking about the major innovations of tomorrow.

We just say it differently. We say: **f-tronic®**.

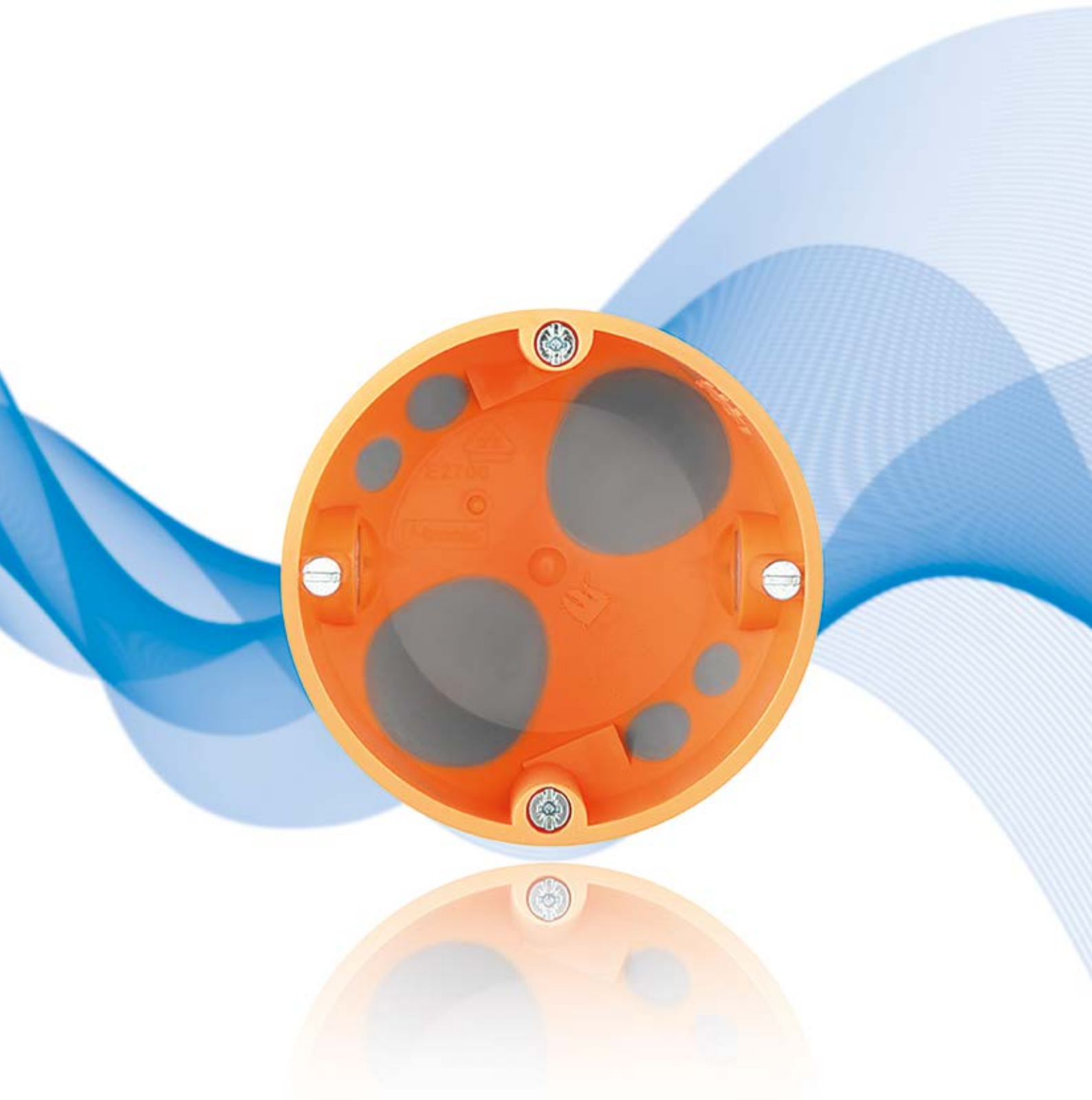
Quality – Made in Germany



f-tronic Stock Program

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Innovative installation!



Sockets

UNSURPASSED IN VARIETY!

f-tronic® offers you a wide range of installation material for every installation requirement. Whether it be flush, hollow wall or surface mounted installation, IP 54 or IP 65 application – we have the right product available for you. In 2004, we pioneered the first windproof socket on the market.

Due to the large number of switches, power sockets and intelligent, decentralized building control systems, you can now install more than 80 different hollow wall or flush-mounted sockets. This trend will continue in the future. A complete installation with the windproof sockets from **f-tronic®** guarantees the client a sustainable increase in energy efficiency and provides him comfort by avoiding drafts. Wherever you need to avoid disturbing air circulation in your electrical installation, our windproof flush-mounted and hollow wall device sockets with press out membrane are the first choice.

Cost efficient installation is possible with our standard flush-mounted and hollow wall device sockets. This product group is rounded out with flush-mounted junction boxes and accessories such as spring covers, signal covers and surface compensation rings.

You can also profit from our high manufacturing quality and the many **f-tronic®** extras with the IP 54 and IP 65 products. Patented and unique. The IP 54 junction box with press out membrane and non-detachable, moulded-on cover.

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The IT electrical socket in windproof design, makes it possible for convenient installation of electrical components and offers enough space to adhere to the bending radius when laying data lines.



The hollow wall IT electrical socket offers a lateral connection area with quicker and cleaner one-hole installation.



Flush-mounted device socket, screw spacing 60 mm with press-out membrane, windproof

- Guaranteed windproof by 2-component inlet
- Sustainably increases the energy efficiency in buildings
- Creates more comfort by preventing drafts
- Easy installation
- Easy handling without additional tools
- Guaranteed standard combination distance
- 20 and 25 mm pipe inlets
- Can be combined with E104 push-in nail flaps (see page 11)
- Material: PP, TPE, recyclable

Article no.	Type	Model	Socket depth (mm)	Color	SU	CB	PL
7320026	E1062K	Device socket with 25 mm pipe nozzles, with 4 screw domes	46	black	25	300	6,000
7320028	E1072K	Device connection socket with 25 mm pipe nozzles, with 4 screw domes	62	black	25	200	4,000



IT electrical socket with press-out membrane, windproof

- To install EIB modules, relays or NV transformers up to 48 mm in height
- Windproof by 2-component inlet
- Sustainably increases the energy efficiency in buildings
- Creates more comfort by preventing drafts
- Easy installation – Easy handling without additional tools
- Using the 12 mm surface compensation ring, changeable to the double device connection socket
- Can be extended using a standard combination distance
- Two pipe inlets each M20 and M25
- Material: PP, TPE, recyclable

Article no.	Type	Model	Socket depth (mm)	Color	SU	CB	PL
7320009	E550	Electrical socket with 25 mm pipe nozzles, with 4 screw domes and 2 machine screws	67	black	10	80	1,600



Sealing plugs with press-out membrane, windproof

- Ingenious, easy, reliable
- Windproof and can be retrofitted
- For all flexible insulated pipes
- Essential in all service vehicles
- Material: TPE, recyclable

Article no.	Type	Model	Color	SU	CB	PL
9930014	E06	for pipes with Ø outside of 16 mm (Ø inside 11 mm)	gray	50	6,000	192,000
9930015	E07	for pipes with Ø outside of 20 mm (Ø inside 15 mm)	gray	50	5,000	100,000
9930016	E08	for pipes with Ø outside of 25 mm (Ø inside 19.5 mm)	gray	50	4,500	90,000
9930017	E09	for pipes with Ø outside of 32 mm (Ø inside 25 mm)	gray	50	1,500	24,000
9930018	E10	for pipes with Ø outside of 40 mm (Ø inside 31.5 mm)	gray	50	1,000	24,000

Flush-mounted installation

Flush-mounted installation device sockets, screw spacing 60 mm, with a 25 mm pipe inlet

- 20 and 25 mm pipe inlets
- 4 screw domes
- Can be combined with E104 push-in nail flaps (see page 11)
- Type E106M25NATUR/E107M25NATUR can be labeled with permanent marker
- Material: PS, recyclable

Article no.	Type	Model	Socket depth (mm)	Color	SU	CB	PL
7310129	E106M25	Device socket	45	black	25	300	6,000
7310130	E106M25S	Device socket with machine screws	45	black	25	300	6,000
7310131	E107M25	Device connection socket	65	black	25	200	4,000
7310132	E107M25S	Device connection socket with machine screws	65	black	25	200	4,000
7310005	E106M25 NATUR	Device socket in Natur	45	natur	25	300	6,000
7310013	E107M25 NATUR	Device connection socket in Natur	65	natur	25	200	4,000



Flush-mounted junction socket Ø 72 mm, 35 mm deep

- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7310133	E110	With 11 cable and pipe inlets	black	25	300	6,000
7390022	E112H	Screw cover for junction socket E110	white	50	1,000	32,000



Flush-mounted device connection socket with lateral terminal area

- Material: PS, recyclable

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7310063	E510	With 2 15 mm machine screws and 25 mm pipe nozzles	110 x 71 x 45	black	10	100	2,000





Flush-mounted junction box

For clearly laid out wiring with the possibility to separate the circuit.

The 150 x 150 mm size is suitable for the subsequent installation of 35 mm standard support rails or terminal blocks.

- With pop-out openings up to M40
- Including cover screws and cover in white
- Material: PS, recyclable

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7310060	E140	80 x 80 mm, uninstalled	80 x 80 x 50	gray	10	200	4,000
7310061	E141	100 x 100 mm, uninstalled	100 x 100 x 50	gray	10	150	3,000
7310062	E142	150 x 150 mm, installed	150 x 150 x 60	gray	10	30	600
7310135	E140D	Replacement cover E140	95 x 95	gray	10	500	15,000
7310136	E141D	Replacement cover E141	120 x 120	gray	10	300	9,600
7310137	E142D	Replacement cover E142	185 x 185	gray	10	100	2,200



Flush-mounted wall outlet sockets

- For VDE compliant installation of cable outlets
- With pre-formed anchors for mounting wall lights or
- Integrated pop-out openings for wires and pipes
- Including cover
- Material: PS, recyclable

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7310077	WAD	Including cover	60 x 31 x 31	white	25	500	10,000



Flush-mounted device sockets, 60 mm screw spacing for Austria

The standard masonry sockets E810 and E811 are tested by ÖVE according to EN60670 and have a wealth of product advantages. Cables and pipes up to a 20 mm diameter can be inserted laterally and from the rear. The sockets, supported by the spacers, are self-centered in the hole and provide a better attachment of the switch in the socket due to their ribbed interior. Both models can be lined up together making the installation of the pre-assembled device combinations possible.

- Pipe inlet up to 20 mm
- Installation of pre-assembled device combinations possible
- Can be combined as desired
- Material: PS, Type E122 PE, recyclable

Article no.	Type	Model	Depth (mm)	Color	SU	CB	PL
7310064	E810	Flush-mounted standard device socket	45	black	20	200	4,000
7310066	E811	Flush-mounted standard device socket - double model	45	black	10	100	2,000
7390027	E122	70 mm Signal cover, for flush-mounted device socket Austria	n.s.	red	50	1,000	20,000

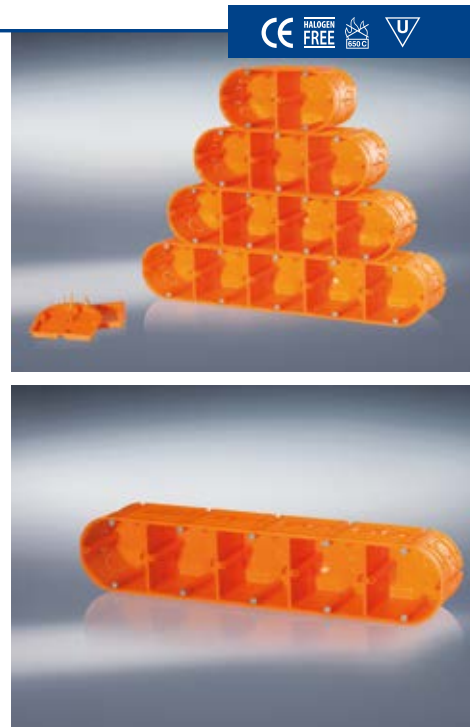
Flush-mounted installation solid

Multiple flush-mounted sockets solid

Our solid multiple flush-mounted sockets are fitted with variable partition walls that make flexible installation possible. The pop-out opening makes it easy to insert wires. They are delivered with 4, 6, 8 or 10 machine screws, depending on the model.

- Extremely solid material, high wall thickness
- Flexible installation with variable partition walls
- With pop-out openings for simple insertion of wires
- Additional lateral pop-out openings on 4 and 5 way models for cable ducts or pipes up to \varnothing 16 mm.
- Material: PP, recyclable

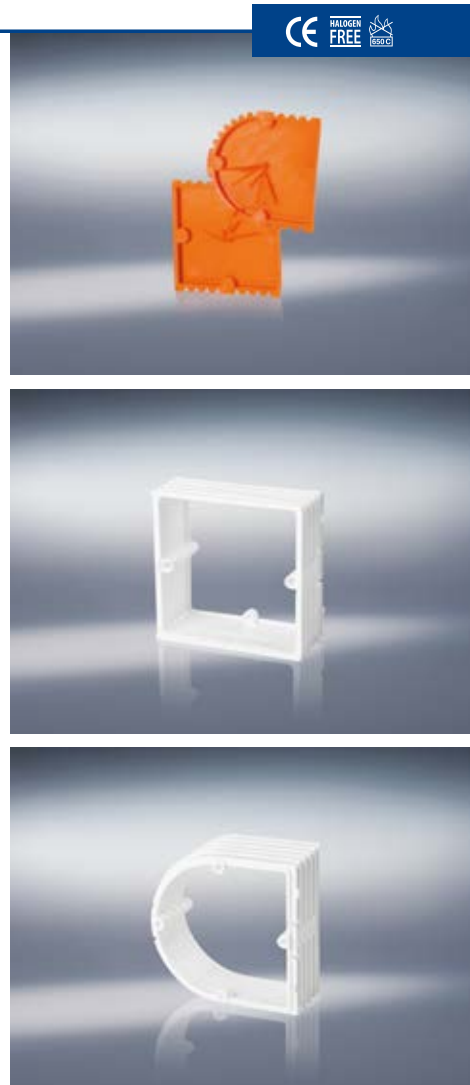
Article no.	Type	Model	Depth (mm)	Color	SU	CB	PL
7310102	UP20	Flush-mounted device socket solid, double, 2 x 60 mm screw spacing	63	orange	10	90	1,800
7310103	UP30	Flush-mounted device socket solid, triple, 3 x 60 mm screw spacing	63	orange	5	50	2,000
7310104	UP40	Flush-mounted device socket solid, 4-way, 4 x 60 mm screw spacing	63	orange	5	40	800
7310105	UP50	Flush-mounted device socket solid, 5-way, 5 x 60 mm screw spacing	63	orange	5	35	700



Multiple flush-mounted sockets accessories

- Half-round or rectangular plaster covers make it possible to cover the complete connection area of the multiple socket and protect the socket interior during plastering
- Covering the exterior area of the socket is a possible option using a junction socket with additional connection space
- Material: PP, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7390055	UPD1	Half-round plaster cover for multiple flush-mounted device sockets	orange	50	1,000	20,000
7390056	UPD2	Square plaster cover for multiple flush-mounted device sockets	orange	50	1,000	20,000
7390089	PAQ	Square surface compensator	white	15	420	8,400
7390090	PAH	Half-round surface compensator	white	10	440	8,800





Surface compensation rings

- To compensate devices and connecting sockets that are seated too low
- With pre-assembled 15 mm long machine screws
- Surface compensation rings with the same diameter can be mounted on top of each other
- Available in 12 mm and 24 mm depth
- Material: PS, recyclable

Article no.	Type	Model	Depth	Color	SU	CB	PL
7390028	E130	For device sockets Screw spacing 60 mm	12	red	50	1,200	24,000
7390032	E131	For junction sockets Screw spacing 70 mm	12	red	50	1,000	20,000
7390033	E132	For device sockets Screw spacing 60 mm	24	red	50	500	10,000
7390035	E133	For junction sockets Screw spacing 70 mm	24	red	50	400	8,000



Signal cover

- For easily locating device and connecting sockets after plastering
- Reusable
- Protects the socket interior, the screw dome and screw head during plastering
- Material: PE, LD, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7390024	E120	For device sockets screw spacing 60 mm	red	50	1,500	30,000
7390026	E121	For junction sockets screw spacing 70 mm	red	50	1,000	20,000



Universal screw on cover

- For VDE-compliant covering of device and connecting sockets.
- Ø 92 mm, for device sockets screw spacing 60 mm and junction sockets Type E110
- With 5 pre-punched screw holes for double and single screw mounting
- Including 2 mounting screws (15 mm)
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7390022	E112H	Suitable for all device and junction sockets screw spacing 60 and 70 mm, including 2 screws	white	50	1,000	32,000

Flush-mounted installation accessories



Push-in nail straps

With the newly developed push-in nail straps for flush-mounted installation, **f-tronic®** sets new standards in flexibility for installation technology. You only need to push in the nail straps that, due to their unique push-in system, can be combined with every flush-mounted socket in our product range. You save on double inventory and gain flexibility for your projects.

- Suitable for flush-mounted device sockets and connecting sockets:
E106M25, E107M25, E1062K, E1072K, E106M25NATUR, E107M25NATUR
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7390069	E104	Push-in nail straps	red	50	1,000	48,000



Application example



Spring socket cover

- Stable, impact resistant plastic
- Wide clamping spring
- With tapered cover edge for a clean finish to the wall
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7390016	E109A	For device sockets screw spacing 60 mm	white	50	1,000	20,000
7390015	E109	For connecting sockets screw spacing 70 mm	white	50	800	16,000



Machine screws

Article no.	Type	Model	SU	CB	PL
9920005	E152/15	Slotted screw 3.2 x 15 mm	100	20,000	480,000
9920007	E152/25	Slotted screw 3.2 x 25 mm	100	15,000	360,000
9920009	E152/40	Slotted screw 3.2 x 40 mm	100	10,000	240,000



Cord entry device SEG50

The handy device for blowing or pulling a pull cord during installation in residential, commercial or industrial construction. Can be used to pull in several hundred meters of cord, even with bent or flex pipes.

- Delivered in a practical carrying case with accessories
- Stable, impact resistant plastic design
- For pipes with Ø inside 16 - 50 mm
- Up to 300 m installation length
- Can be used with bent or flex pipes
- Dual function for blowing and extracting

Article no.	Type	Model	SU	CB	PL
7390071	SEG50	Cord entry device with accessories in a carrying case	1	1	20
7390072	SEG-ES51	Replacement cord, 900 m long, tensile force 24 kg	10	10	84

For more safety HALOGEN FREE INSTALLATION!

HALOGEN
FREE

Required in public buildings! Halogen free installation sockets reduce the volume of toxic components in flue gas during fires. They do not develop corrosive substances when coming in contact with fire-extinguishing agents, which can lead to considerable property damage.

Your advantage: Environmentally friendly technology | No corrosive gases in the event of a fire | Reduced flue gas density

f-tronic offers you a wide range of halogen free products...

... E106M25NATUR . E107M25NATUR . UPV12+2ST . E126W . FCclip . UPV24+4ST . FK110 . FT10 . UPV36+6ST . FK111 . FT16 . UPV48+8ST . FK210 . FT8 . APV12+2TM . FK211 . KSH15 . APV12+2TW . FK310 . KSH30 . APV24+4TM . FK311 . KSH30B . APV24+4TW . FK410 . UH1 . APV36+6TM . FK411 . CMS1 . APV36+6TW . E113GN . CMS2 . APV48+8TM . E113R . CMS3 . APV48+8TW . E1100R . CMS4 . E140 . E1100GN . CMS11 . E141 . E113S . CMS12 . E142 . E1000 . CMS13 . E510 . E125 . CMS1S . E810 . E125K . CMS2S . E811 . E126 . CMS3S . WAD . E126K . CMS4S . UP20 . E115HF . BS115 . UP30 . E117HF . BS117 . UP40 . E5000HF . BS118 . UP50 . E2700HF . BS112 . E106M25 . E3700HF . BS112/2 . E106M25S . E830 . SP3700HF . E107M25S . E832 . E107M25 . E831 . EPS14-118 . EPS14-116 . E110 . E833 . 115 . E107M25S . E832 . EPS14-118 . E140D . E834 . E109 . EPS14-T20 . E142D . EPS14-ECK . E141D . E550 . E120 . EPS20-115 . E1062K . E121 . EPS20-116 . E1072K . E122 . EPS20-118 . DB1B . E130 . EPS20-ECK . DB1W . E131 . EPS20-T20 . E180 . E132 . EPS20-T80 . E181 . E133 . EPS20-MULTI . E1000W . UPD1 . E1100 . UPD2 . E1100W . E104 . E113 . RM20 . E113W . RM25 . E114 . RM32





Hollow wall device sockets with press-out membrane, windproof

The hollow wall sockets with press-out membrane are guaranteed windproof and quick to install. Wires or pipes can be pushed through the membrane without any additional tools, shortening the standard working time.

Due to advanced developments, all sockets now have 2x M25 pipe inlets and a variety of further inlet possibilities with improved cable retention. All models of this series are of course VDE certified.

- Guaranteed windproof
- Sustainably increases the energy efficiency in buildings
- Creates more comfort by preventing drafts
- Easy installation
- Easy handling without additional tools
- Drilled opening Ø 68 mm
- 4 cable inlets: (2x) M25, (2x) 3x1.5 qmm, (2x) 3x2.5 qmm - 5x1.5 qmm
- Including windproof connection piece E105 or E105HF
- E3700/E3700HF also have 2 additional cable inlets for 7 x 1.5 qmm or 5 x 2.5 qmm
- Material: PP, TPE, recyclable

Article no.	Type	Model	Socket depth (mm)	Color	SU	CB	PL
7360028	E2700	Device socket	47	orange	25	300	6,000
7360027	E3700	Device connection socket	61	orange	25	400	4,800
7360047	E2700HF	Device socket, halogen free	47	white	25	300	6,000
7360048	E3700HF	Device connection socket, halogen free	61	white	25	400	4,800



Hollow wall junction socket with press-out membrane, windproof

- Guaranteed windproof
- Sustainably increases the energy efficiency in buildings
- Creates more comfort by preventing drafts
- Easy installation
- Easy handling without additional tools
- Drilled opening Ø 120 mm
- Scope of delivery includes cover, white
- Material: PP, TPE, recyclable

Article no.	Type	Model	Diameter (mm)	Color	SU	CB	PL
7360016	E816	Including cover	120	orange	20	20	1,280

Hollow wall installation, windproof



Hollow wall device sockets with press-out membrane, windproof - for the prefabricated housing branch

With our hollow wall device sockets (prefabricated housing branch) you can push wires or pipes through the membrane without any additional tools, saving you working time.

The E4000 model has a laterally raised, enlarged and windproof press-out membrane for pipes up to 25 mm; through these 4 pipe inlets, the sockets are ideally suited for the installation of hollow pipes in drywall / hollow wall.

All models of this series are of course VDE certified.

- Guaranteed windproof
- Sustainably increases the energy efficiency in buildings
- Creates more comfort by preventing drafts
- Easy installation
- Easy handling without additional tools
- Drilled opening Ø 68 mm
- Type E2000/E3500 with 4x M20 pipe inlets
- Type E4000 with 4x M20/M25 pipe inlets
- Material: PP, TPE, recyclable

Article no.	Type	Model	Socket Depth (mm)	Color	SU	CB	PL
7360044	E2000	Device socket	47	orange	25	300	6,000
7360045	E3500	Device connection socket	61	orange	25	400	4,800
7360046	E4000	Device connection socket, for a 25 pipe inlet	61	orange	25	400	4,800



Sealing plug with press-out membrane, windproof

- Ingenious, easy, reliable
- Windproof and can be retrofitted
- For all flexible insulated pipes
- Essential in all service vehicles
- Material: TPE, recyclable

Article no.	Type	Model	Color	SU	CB	PL
9930014	E06	for pipes with Ø outside of 16 mm (Ø inside 11 mm)	gray	50	6,000	192,000
9930015	E07	for pipes with Ø outside of 20 mm (Ø inside 15 mm)	gray	50	5,000	100,000
9930016	E08	for pipes with Ø outside of 25 mm (Ø inside 19.5 mm)	gray	50	4,500	96,000
9930017	E09	for pipes with Ø outside of 32 mm (Ø inside 25 mm)	gray	50	1,500	24,000
9930018	E10	for pipes with Ø outside of 40 mm (Ø inside 31.5 mm)	gray	50	1,000	24,000



Connection piece, windproof

- For windproof wiring with socket combinations
- Material: PP, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7390075	E105	Connection piece for windproof hollow wall sockets - E2700, E3700, SP3700	orange	25	500	160,000
7390091	E105HF	Connection piece for windproof hollow wall sockets - E2700HF, E3700HF, SP3700HF	white	25	500	160,000





Hollow wall junction socket

- Drilled opening Ø 74 mm
- Scope of delivery includes screw on cover E112H
- Material: PP, recyclable

Article no.	Type	Model	Socket depth (mm)	Color	SU	CB	PL
7350043	E119	Including screw on cover	50	orange	10	200	4,000



Hollow wall junction box

- Scope of delivery including screw on cover 104 x 104 mm, white
- Material: PP, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7350033	E116	Including screw on cover, 104 x 104 mm	orange	1	80	1,600



Hollow wall junction socket

- Drilled opening Ø 120 mm
- Scope of delivery includes cover, white
- Material: PP, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7350046	E815	Including screw on cover	orange	20	20	1,280



Hollow wall outlet socket

- Drilled opening Ø 35 mm
- Scope of delivery includes cover, white
- Material: PP, recyclable

Article no.	Type	Model	Socket depth (mm)	Color	SU	CB	PL
7350098	E134	Including cover	45	orange	25	500	10,000

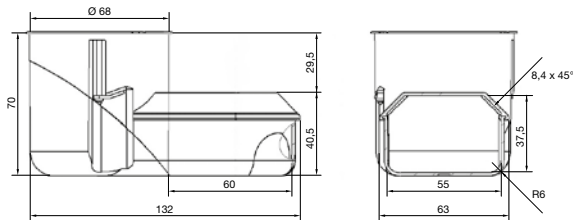
Hollow wall installation

IT electrical socket, hollow wall

Technology that inspires! With the electrical socket, you can set new standards for hollow wall installation. It doesn't get quicker than this! Comfortable and time-saving installation due to the one-hole mounting, yet you still continue to enjoy all the advantages of a double socket. In this way you have, for example, enough space to comply to the bending radius, especially when laying data cables, or electronic components can be installed in the lateral tunnel.

- 70% time saving during installation
- One-hole mounting
- Lateral connection compartment for all conventional relays and actuators
- Compliance to the bending radius for network cabling easily possible
- Material: PP, TPE, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7350066	E5000	Hollow wall electrical socket	orange	10	100	2,000
7350112	E5000HF	Hollow wall electrical socket, halogen free	white	10	100	2,000



Video



Hollow wall device socket

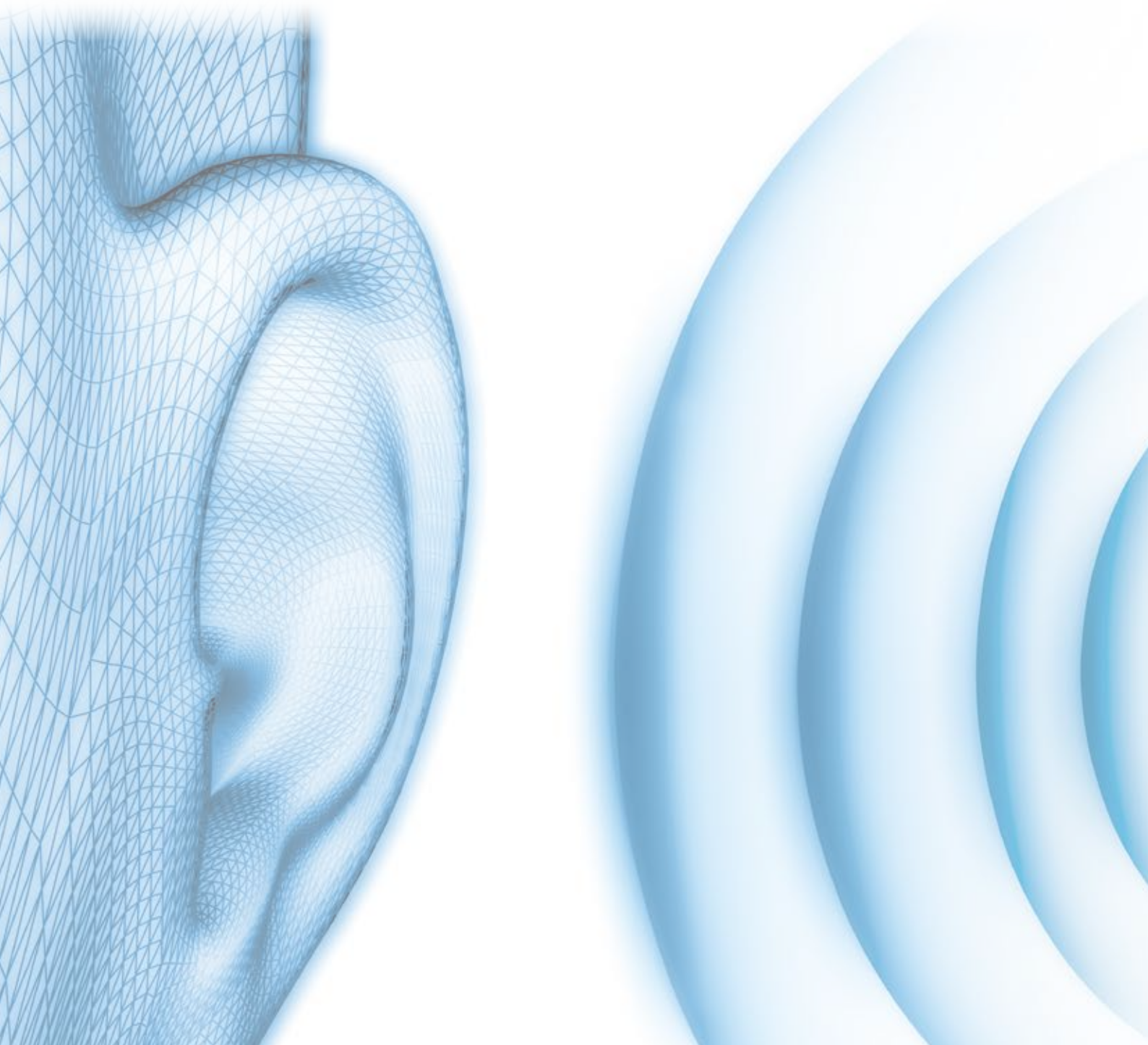
The proven design with metal claws for a cost efficient installation in hollow walls.

- With pre-assembled machine screws
- With pop-out openings for wires and pipes
- Type E115 / E117 - NEW
- Drilled opening Ø 68 mm
- Material: PP, recyclable

Article no.	Type	Model	Socket Depth (mm)	Color	SU	CB	PL
7350099	E135	Device socket without VDE	35	orange	25	300	6,000
7350094	E115	Device socket	47	orange	25	300	6,000
7350096	E117	Device connection socket	61	orange	25	400	4,800
7350041	E118	Double device socket	47	orange	10	100	2,000
7350095	E115HF	Device socket, halogen free	47	white	25	300	6,000
7350097	E117HF	Device connection socket, halogen free	61	white	25	400	4,800



Those who don't want to hear anything,
will feel it!



Sound insulating hollow wall sockets

Noise is an essential factor that significantly affects the quality of life. Many noise sources, however, cannot be simply switched off. Sound insulation, therefore, plays an important role in improving the quality of life and work in buildings.

People need peace and quiet, especially in rooms for concentrating, relaxing or recovering. Because of this, hospitals, hotels, educational facilities, offices and administration buildings, as well as town homes and apartment buildings, have high requirements for noise protection in the construction industry. Our sound insulating sockets can help with structural noise protection. and ensure the peace and quiet you need!

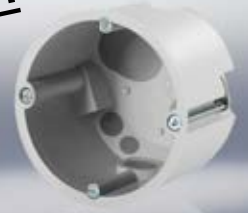
Innovative soundproofing for more relaxation and privacy

The installation of conventional hollow wall sockets in sound insulating walls weakens the sound isolation dramatically! With our innovative sound insulating sockets, the structural requirements of the sound insulating walls remain in spite of the installation opening. The noise is fully absorbed, guaranteeing quiet and privacy in everyday life. Installing our sound insulating sockets is just as uncomplicated, quick and easy as installing conventional hollow wall sockets into a standard 68 mm diameter opening.

- The soundproofing function of the walls remains intact
- Subsequent installation possible
- 2K membrane inlet
- Installation up to a 5 way combination possible
- Drilled opening Ø 68 mm
- Opposite installation possible from 120 mm wall thickness
- Including 5 connection pieces per SU Type E105 or E105HF
- Windproof
- Ideal for renovation and refurbishment in residential buildings
- Material: PP, TPE, recyclable

Article no.	Type	Model	Depth	Color	SU	CB	PL
7520001	SP3700	Sound insulating socket 2K, Ø 68mm	58 mm	gray	10	200	4,000
7520002	SP3700HF	Sound insulating socket 2K, Ø 68mm, halogen free	58 mm	white	10	200	4,000

New!



New!



New!



The advantages at a glance:

- The soundproofing function of the wall remains intact
- Subsequent installation possible
- 2K membrane inlet
- 4 cable inlets
- Pipe inlets up to 2 x M25
- Installation up to a 5 way combination possible
- Opposite installation possible from 120 mm wall thickness
- **Drilled opening Ø 68 mm**
- **Easy punch out cable inlet (no tools needed)**

Soundproofing effect:

Wall 1

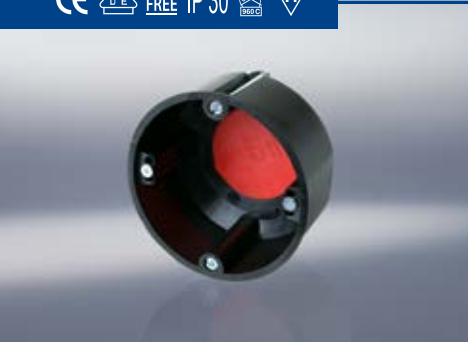
- Metal studs 2x CW 75
- Drywall sheets 2x 12,5 mm
- Total wall thickness 200 mm

Wall 2

- Metal studs 2x CW 50
- Drywall sheets 2x 12,5 mm
- Total wall thickness 100 mm

Result

Closed wall **64dB**
Wall with SP3700 **64dB**



Fire protection sockets

Intelligent technology that protects when things gets hot.

The innovative technology reacts immediately to fire and heat and effectively prevents the spread of fire. Special material inside the socket foams up and completely seals the installation opening. In this way, our fire protection sockets guarantee effective fire protection and ensure the function of the fire protection walls for at least 90 minutes. And all that with an extremely simple installation that even allows for opposite installation and subsequent installation.

Get to know our Europe-wide certified fire protection socket range now and fulfill not only the legal requirements for fire protection but also ensure verifiable safety in areas and escape routes when it matters.

- With fire resistance rating EI90
- ETA15/0598
- DIBt Z-19.21-2224
- Subsequent and opposite installation possible
- Available in three versions: flat, deep and double
- Halogen free
- Material: high strength, temperature-resistant special plastic "SAFE 90"
- Stackable up to 5 sockets
- BS115: for 2 cables each with a maximum Ø 14.4 mm
- BS117: for 4 cables each with a maximum Ø 11.6 mm or 4 pipe entries maximum Ø 20 mm outside
- BS118: for 4 cables each with a maximum Ø 11.6 mm

Article no.	Type	Model	Depth	SU	CB	PL
7500001	BS115	Installation socket, drilled opening Ø 74 mm **	45	12	192	3,744
7500002	BS117	Installation socket, drilled opening Ø 74 mm **	54	12	192	3,456
7500003	BS118	Double installation socket, drilled opening Ø 74 mm **	54	6	96	1,584
7500030	BS112	Cover single	n.s.	10	100	9,000
7500031	BS112/2	Cover double	n.s.	5	20	4,800

** Please consult the local building authorities and fire protection commissioner prior to installing the products.



Hollow wall installation solid

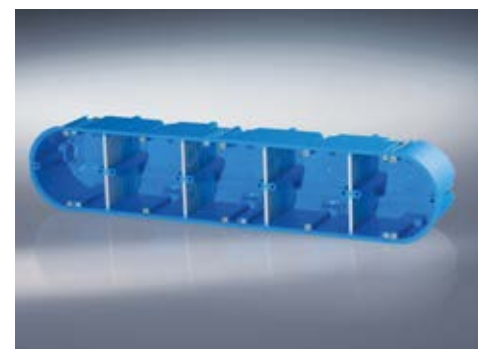


Solid multiple hollow wall sockets

Our solid multiple hollow wall sockets are fitted with variable partition walls that make flexible installation possible. The pop-out opening makes it easy to insert wires. They are delivered with 4, 6, 8 or 10 machine screws, depending on the model.

- Extremely solid material, high wall thickness
- Flexible installation with variable partition walls
- With pop-out openings for simple insertion of wires
- Additional lateral pop-out openings on 4 and 5 way models for cable ducts or pipes up to Ø 16 mm
- Flame retardant up to 960 °C
- Material: PA6, recyclable

Article no.	Type	Model	Socket depth (mm)	Color	SU	CB	PL
7350061	HW10	Hollow wall device socket solid, single, drilled opening 68 mm	60	blue	20	240	4,800
7350062	HW20	Hollow wall device socket solid, double, drilled opening 68 mm	60	blue	10	90	1,800
7350063	HW30	Hollow wall device socket solid, triple, drilled opening 68 mm	60	blue	5	50	1,000
7350064	HW40	Hollow wall device socket solid, 4 way, drilled opening 68 mm	60	blue	5	40	800
7350065	HW50	Hollow wall device socket solid, 5 way, drilled opening 68 mm	60	blue	5	35	700
7350093	HW60	Hollow wall device socket solid, 6 way, drilled opening 68 mm*	60	blue	1	30	600



* suitable for frame width of 85 mm.
For smaller frame sizes
There is a gap in the intermediate area

Accessories multiple hollow wall sockets solid

- A half-round or square cover completely covers the connection compartment of the multi-socket
- Flush closing cover with socket rim
- Suitable for separately covering a section of the socket, allowing the second area to be used as an additional installation area
- Flame retardant up to 960 °C
- Material: PP, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7390057	HWD1	Half-round cover for multi-hollow wall device socket	white	50	1,000	48,000
7390058	HWD2	Square cover for multi-hollow wall device socket	white	50	1,000	48,000
7390089	PAQ	Square surface compensator	white	15	420	8,400
7390090	PAH	Half-round surface compensator	white	10	440	8,800

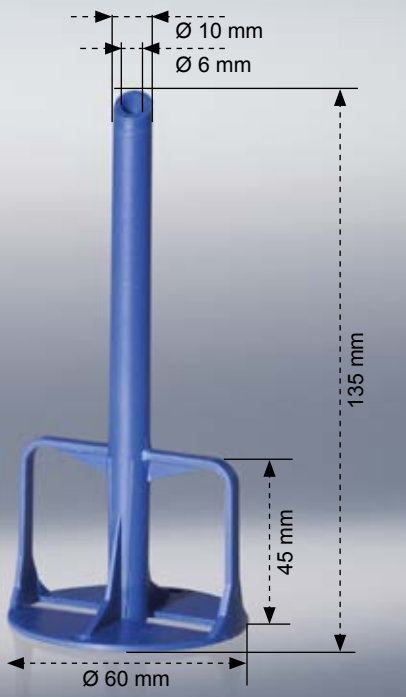
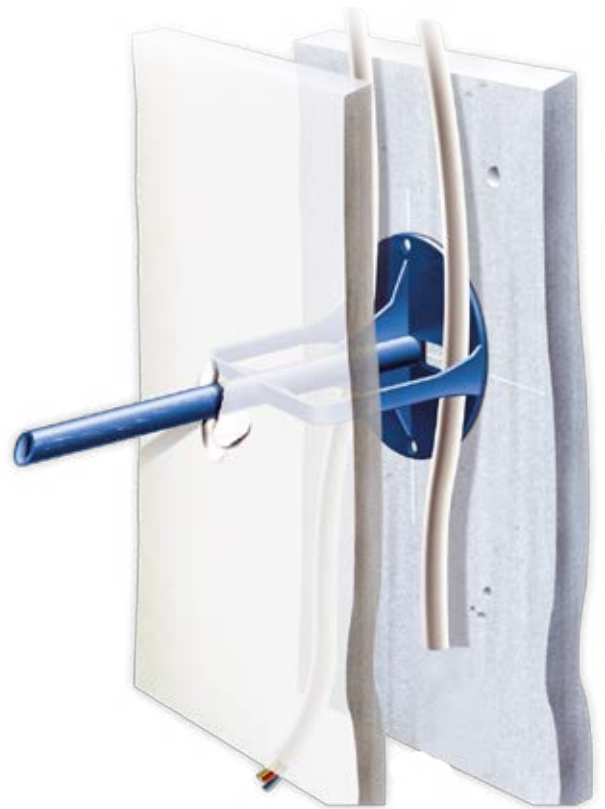


Pipe support

The self-adhesive pipe support or plunger makes it possible to quickly locate pipes in lightweight walls. The drywall builder makes a hole with a hammer allowing the spike to go through, serving as a center for the drill bit. Fast drilling without re-measuring the installation points is guaranteed.

Advantages at a glance

- Reliable location of pipes in closed walls
- Centering the hole to fit the installation sockets
- No unnecessary insulation removal
- No injuries from search-drilling in hollow walls, c-profiles and insulation materials
- Significant time and cost savings
- With combinations, only one pipe support must be glued, the other socket can be drilled out using the drill template



Pipe support

- Material: PP, recyclable

Article no.	Type	Model	SU	CB	PL
7390049	HWLT1	Pipe support including adhesive disk	50	50	5,600
7390048	BOS2	Drill template for hollow wall sockets with plastic bushing	1	42	840
7390074	KDKS	Adhesive disk	25	500	56,000



Video



Drill template
Ideal accessory for pipe supports

Drill template

for hollow wall sockets

- Straight and precise
- Quicker and more accurate work
- 5 way combinations are also possible



Adhesive disk
For pipe supports

Hollow wall installation accessories

Significant time savings – never search for pipes again



1 Adhere the pipe support to the back of the first plank.



2 Pull the wire or pipe through. (You will be amazed at the significant holding power of the adhesive disk).



3 The drywall builder makes a hole with a hammer allowing the spike to go through, serving as a center for the drill bit.



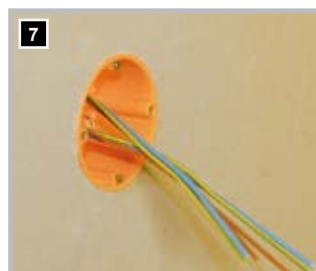
4 You can drill the hole without re-measuring the installation position.



5 Remove the pipe support and cables/ pipes from the wall.



6 You can now install the hollow wall socket without searching for the pipe.



7 Ready installation – easy and quick.



8 Can also be used as a collection holder in suspended ceilings. No drilling - simply adhere and you're done.

Significant time savings – never search for pipes again



1 Drilling the middle hole



2 Precise alignment with the integrated level.



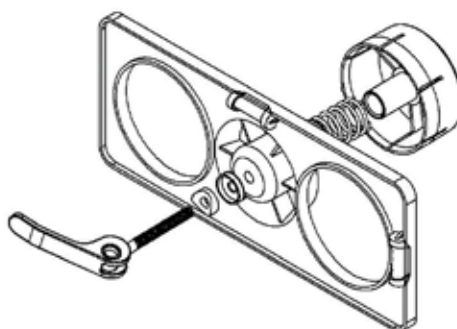
3 Then drill through the existing hole inserts.



4 Attach the drill template with the clamp.



5 Align the template.



Installing a hollow wall socket with the mounting/drill template

Mounting aid for a 68 mm hollow wall socket combination with a hole saw.

A must for anyone wanting to install an electrical hollow wall socket in wood stud walls, dry-wall or other hollow walls!



Universal screw on cover

- For VDE-compliant covering of device and junction sockets.
- Ø 92 mm
- Screw spacing 60 mm for device sockets and junction sockets Type E110
- With 5 imprinted screw holes for double and single screw mounting
- Including 2 mounting screws (15 mm)
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7390022	E112H	Suitable for all device and junction sockets screw spacing 60 and 70 mm, Including 2 screws	white	50	1,000	32,000



Spring socket cover

- Stable, impact resistant plastic
- Wide clamping spring
- With tapered cover edge for a clean finish to the wall
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7390016	E109A	for device socket Ø 60 mm	white	50	1,000	20,000
7390015	E109	for junction socket Ø 70 mm	white	50	800	16,000



Machine screws

Article no.	Type	Model	SU	CB	PL
9920005	E152/15	Slotted screw 3.2 x 15 mm	100	20,000	480,000
9920007	E152/25	Slotted screw 3.2 x 25 mm	100	15,000	360,000
9920009	E152/40	Slotted screw 3.2 x 40 mm	100	10,000	240,000



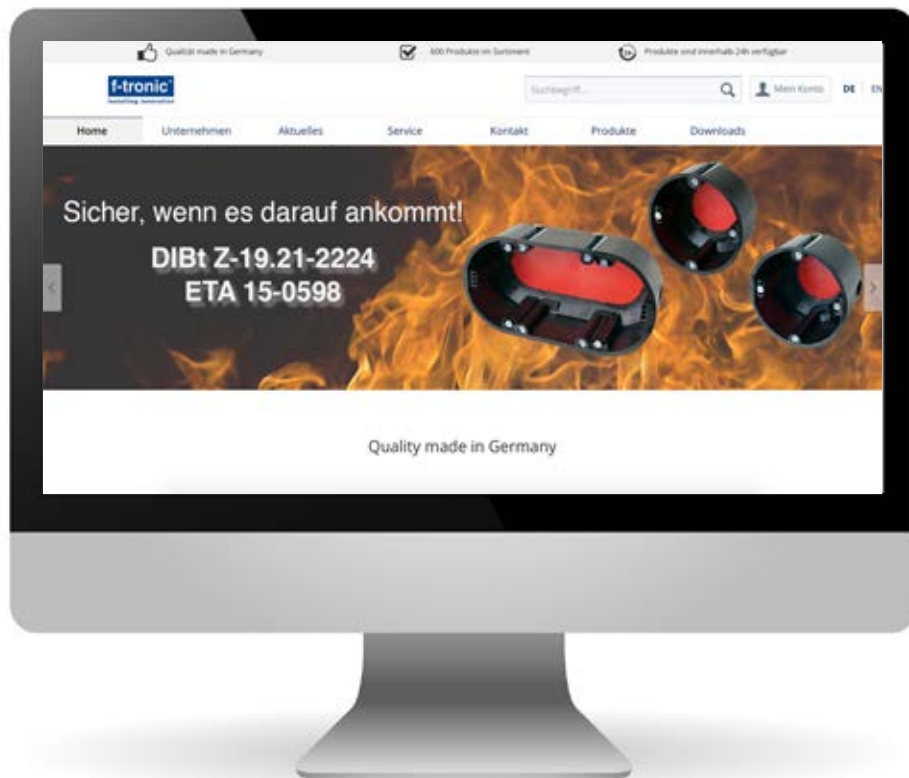
Pipe fittings

For a quick and secure connection

The pipe fittings are ideal for drywall walls, flush or surface mounted. Due to the milky appearance of the fitting, the connections are continuously controllable. The latches in the fitting serve as tension relief for a secure installation.

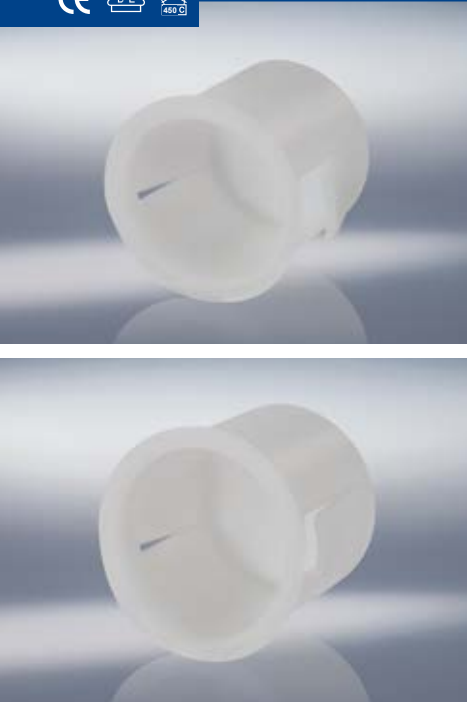
- Halogen free
- Connection of the pipes shown
- Material: PP, recyclable

Article no.	Type	Model	SU	CB	PL
7400032	RM20	Pipe fitting M20	25	300	21,600
7400033	RM25	Pipe fitting M25	25	250	18,000
7400034	RM32	Pipe fitting M32	25	150	10,800



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Lighting housings

Lighting housings shields the recessing lighting from dust, insects and any other material that could get into the cavity and come in contact with the back of the recessed light, potentially causing a fire. All housings are made of silicone.

- Suitable for low-voltage - recessed lighting: NV LED and NV Halogen
- Ceiling opening Ø 68 mm or Ø 75 mm
- Installation depth 70 mm
- Outlet opening Ø 66 mm or Ø 73 mm
- Light installation height max. 67 mm
- 2 lateral flaps for spring clips, length 50 mm, width 26 mm
- For lamps up to 35 W
- No Cool- Beam lamps
- Material: Silicone

Article no.	Type	Model	Socket depth (mm)	SU	CB	PL
7380001	LEG1	Lighting housings Ø outside 68 mm	70	10	340	2,720
7380002	LEG2	Lighting housings Ø outside 75 mm	70	10	300	2,400



© Video



Lighting housings - high voltage

- Suitable for high voltage - recessed lighting: HV LED and HV Halogen
- Suitable for low-voltage - recessed lighting: NV LED and NV Halogen
- Ceiling opening Ø 68 mm
- Installation depth 100 mm
- Outlet opening Ø 66 mm
- Light installation height max. 90 mm
- 2 lateral flaps for spring clips, length 50 mm, width 26 mm
- Suitable for LED, energy saving lamps
- For lamps up to 35 W
- No Cool- Beam lamps
- Material: Silicone

Article no.	Type	Model	Socket depth (mm)	SU	CB	PL
7380003	LEG-H3	Lighting housing for high voltage halogen recessed lighting Ø outside 68 mm	100	10	300	2,400



© Video

Lighting housings, windproof



Lighting housings- windproof

The windproof lighting housings have quick installation technology without using torsion springs. The circumferential sealing ribs are used for interlocking installation. The housings are suitable for installation in brittle materials such as drywall, insulation and fiberboard.

- Suitable for low-voltage - recessed lighting: NV LED and NV Halogen
- Absolute windproof
- Quick installation technology
- Ceiling opening Ø 68 mm
- Inside diameter 60 mm
- Light installation height NV max. 65 mm
- No Cool- Beam lamps
- Lamps up to 35 W with AL reflector
- Material: Silicone



Article no.	Type	Model	Socket depth (mm)	SU	CB	PL
7380004	LEG-WD4	Lighting housings- windproof Ø outside 68mm	65	10	300	2,400

Lighting spacers

Lighting spacers hold vapor barrier film and insulation wool away from hot lamps and extend the lamp life.

- Suitable for recessed lighting NV and HV
- Installation opening 60-82 mm
- Installation depth 75 mm
- Material: PA6, recyclable



Article no.	Type	Model	Socket depth (mm)	SU	CB	PL
7380005	LEAH1	Lighting spacers b= 60-82 mm	75	25	100	7,200

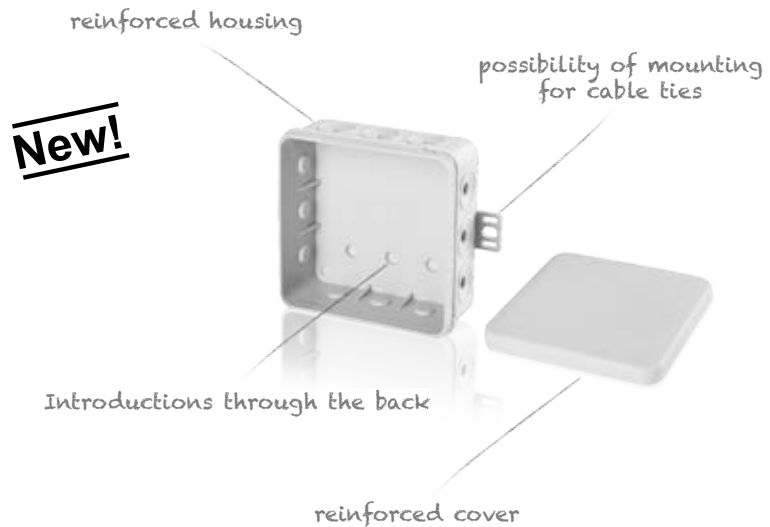


Damp area junction boxes IP 54

- Easy installation
- With up to 12 self sealing cut cable inlets for cables up to 5 x 2.5 mm²
- Exterior mounting flaps with transverse and oblong holes ensure subsequent alignment
- Material: PE housing, PP cover, recyclable
- Type E113/E125 housing + cover PE, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7340141	E126	75 x 37 x 40 mm	gray	10	300	6,000
7340139	E125	75 x 75 x 40 mm	gray	10	200	4,000
7340038	E113	85 x 85 x 40 mm	gray	10	150	3,000
7340044	E114	100 x 100 x 40 mm	gray	10	100	2,000
7340058	E126W	75 x 37 x 40 mm	white	10	300	6,000
7340142	E126K	75 x 37 x 40 mm, with 5 pole socket terminal	gray	10	300	6,000
7340140	E125K	75 x 75 x 40 mm, with 5 pole socket terminal	gray	10	200	4,000
7340111	E113R	85 x 85 x 40 mm	red	10	150	3,000
7340110	E113GN	85 x 85 x 40 mm	green	10	150	3,000
7340043	E113W	85 x 85 x 40 mm	white	10	150	3,000
7340134	E113S	85 x 85 x 40 mm	black	10	150	3,000
7390109	f-cutter	Insertion cutter to open the cable inlets	blue	10	200	-

THE NEW E113/E125



Damp area installation



Damp area junction boxes IP 54 with press-out membrane

- Easy installation
- Easy handling – no need to use expensive additional tools
- With integrated press-out membrane on all four sides
- With membrane inlet on the back side for cables up to 5 x 2.5 mm²
- Secure cover
- VDE tested - color gray/white
- Material: PP, TPE, recyclable



Article no.	Type	Model	Color	SU	CB	PL
7340138	E1000	75 x 75 x 40 mm	gray/white	10	160	3,200
7340034	E1100	85 x 85 x 45 mm	gray/white	10	120	2,400
7340033	E1000W	75 x 75 x 40 mm	white	10	160	3,200
7340037	E1100W	85 x 85 x 45 mm	white	10	120	2,400

Damp area junction boxes IP 65

The junction box for high standards and difficult usage requirements.

- High breakage resistance
- With pre-punched cable inlets
- With double membrane nozzle (IP 54)
- Cover with stainless steel screws
- Isolating and sealing plugs included

Number of cable and pipe inlets by type:

- FK110/111 => 7 x M20
- FK210/211 => 7 x M25, 2 x M20
- FK310/311 => 2 x M20, 5 x M20/25, 5 x M25/32
- FK410/411 => 2 x M20, 7 x M25/32, 2 x M25/32/40
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7340060	FK110	For pipes up to 4 mm ² , 80 x 80 x 63 mm	gray	1	70	2,240
7340063	FK210	For pipes up to 6 mm ² , 110 x 110 x 67 mm	gray	1	30	960
7340066	FK310	For pipes up to 10 mm ² , 140 x 140 x 79 mm	gray	1	24	768
7340069	FK410	For pipes up to 16 mm ² , 180 x 180 x 91 mm	gray	1	12	384
7340061	FK111	For pipes up to 4 mm ² , 80 x 80 x 63 mm	white	1	70	2,240
7340064	FK211	For pipes up to 6 mm ² , 110 x 110 x 67 mm	white	1	30	960
7340067	FK311	For pipes up to 10 mm ² , 140 x 140 x 79 mm	white	1	24	768
7340070	FK411	For pipes up to 16 mm ² , 180 x 180 x 91 mm	white	1	12	384





Front mounting conduit socket

■ Material: PP, recyclable

Article no.	Type	Manufacturer B-series Wall conduit	Manufacturer Rehau Signo BK,BS, BA	Manufacturer Gewiss Wall conduit	Manufacturer Licatec Installation conduit BR	Manufacturer Licatec Installation conduit BRS-F
7370008	E830	X				
7370037	E831		X	X	X	
7370038	E832					X
7370039	E833					X
7370040	E834		X	X	X	



Article no.	Type	Model	Color	SU	CB	PL
7370008	E830	Cable conduit device socket, single for DIN profile rails	black	20	200	4,000
7370037	E831	Single cable conduit socket for hanging attachment	black	20	200	4,000
7370038	E832	Single cable conduit socket for clamping attachment	black	20	200	4,000
7370039	E833	Double cable conduit socket for clamping attachment	black	10	100	2,000
7370040	E834	Single cable conduit socket for hanging attachment	black	10	100	2,000



Surface mounted junction socket IP 30

- For simple and quick surface installation
- Enclosed base with pre-punched lateral pipe inlets
- With mounted 5 pole socket terminal
- Lid with quick-seal screw
- Material: PS, FR, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7330007	E180	75 x 75 x 25 mm	white	10	250	4,000
7330008	E181	55 x 55 x 25 mm	white	10	400	6,400



Ceiling canopy

The junction canopy for VDE compliant ceiling outlet

- Made of impact resistant plastic
- Base with pre-punched cable outlets
- Including 2-part tension relief
- Cover with quick-seal screw
- Depth 25 mm
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7330006	DB1W	Ø 75 mm, individually welded	white	1	100	6,000
7330004	DB1B	Ø 75 mm, individually welded	brown	1	100	6,000



Stove connection socket

- Made of impact resistant plastic
- Suitable for surface and flush installation
- With spreader claws
- With 5-finger safe 6 mm² clamps
- Snap-on cover
- Material: PE, PS, IUT, PA6, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7370014	HAD01	80 x 80 x 25 mm	white	5	200	3,200



**The practical time
saver!**



Concrete socket program

The right product for every application.

The **f-tronic®** concrete socket program offers you a high level of flexibility and compatibility. It guarantees you a time saving and secure concrete installation. An assortment of over 30 products are available for in situ concrete installation and also for installation in prefabrication plants, making a professional and time-saving installation possible.

The right solution for every task.

Whether you need to install switches, outlets or electrical inserts, ceiling or wall-mounted lights, speakers or other electrical components, our versatile and dimensionally stable solutions give you the necessary security to perform a clean electrical installation even after concreting.

Advantages at a glance

- Complete concrete socket program with over 30 products
- Up to 70 % time savings
- Quick-Fix-Technique for quick installation
- Tool-free pipe insertion
- Clean installation, even after concreting
- Many combination possibilities
- Special solutions for ceiling and wall lighting
- Unbeatable in price performance



The Quick-Fix-Technique for a 70 % time saving during installation

Quick-Fix device socket/ lighting outlet socket

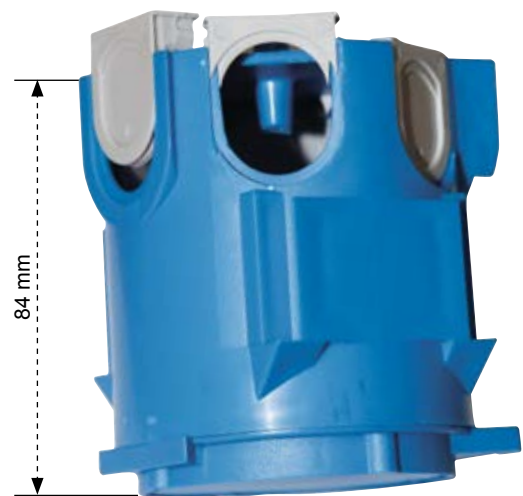
Application area

- Device connection socket to attach on the formwork with nails or mount with wings
- Light socket 35 mm to attach with nails or to mount with wings
- Ceiling socket with receptacle for ceiling hook



Advantages at a glance

- Pipe sizes M20 and M25 can be mounted without tools
- Secure tension relief of the pipe with the Quick-Fix-Technique
- 70% time saving during installation
- Can be combined, absolutely solid connection through proven sliding technology
- No reworking or trimming pipes necessary thanks to the Quick-Fix-Technique– absolutely sealed!
- Significant time savings with the tool-free pipe insertion of our Quick-Fix-Technique
- More clamping area, more space - rear pipe inlet
- 650° Fire resistance
- Device socket / lighting outlet socket is torsion-resistant, horizontally and vertically aligned with a combination distance of 71 mm
- Including slider 2 x M25, 2 x M20, 4 x closed



Slider M20/M25, closed can be reordered (SU of 100 pieces each).

Also ideal for assembly in prefabrication plants in double walls.

Simple installation that saves time



1 Device socket or lighting outlet socket to attach with nails on the formwork.



2 Press socket body onto the cover.



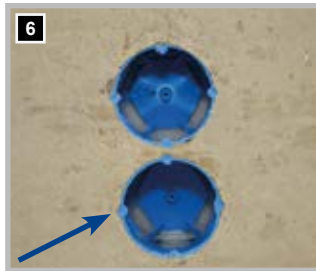
3 Close unnecessary openings with the slider.



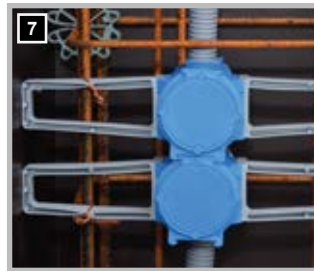
4 Insert and close the pipe with the Quick-Fix-Slider.



5 Finished - absolutely secure tension relief!



6 No pipes need to be cut. Significant time savings - absolutely sealed!



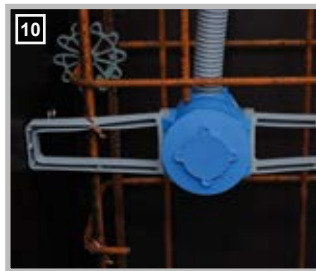
7 Installation with wings for different concrete covers, simply turn the wings.



8 For different concrete covers. Simply turn the wings.



9 Installation as ceiling socket, with clamping area and receptacle for ceiling hook.



10 Also available as lighting outlet socket with outlet opening of Ø 35 mm.

Quick-Fix device socket/lighting outlet socket

- Material: PP, recyclable
- Including slider 2x M25, 2x M20, 4x closed

Article no.	Type	Model	SU	CB	PL
7400030	B150	Concrete device socket including slider, screw spacing 60 mm, depth 84 mm	50	100	2,400
7400031	B155	Concrete lighting socket including slider Ø 35 mm, depth 84 mm	50	100	2,400
7400006	B1300	Wings for B150/B155/B400	50	250	9,000
7400016	B1000	Slider M25 open for B150/B155	100	2,000	80,000
7400017	B1050	Slider M20 open for B150/B155	100	2,000	80,000
7400018	B1100	Slider closed for B150/B155	100	2,000	80,000

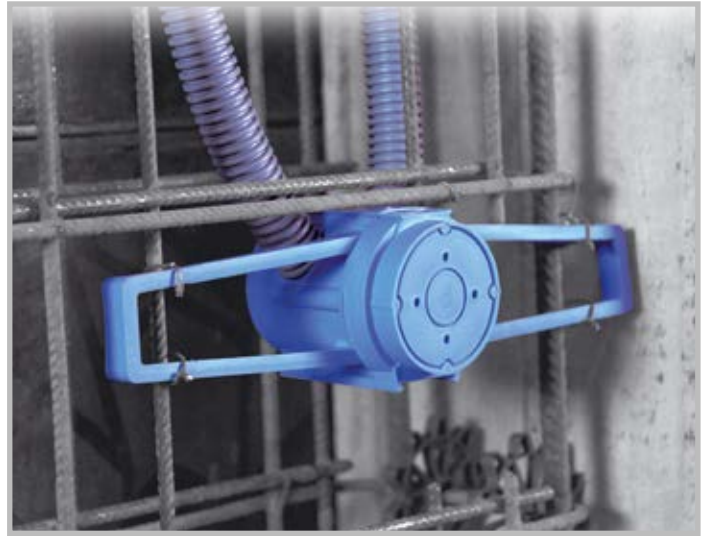


Video

Concrete wing socket

Advantages at a glance

- Simply attach to the steel reinforcement 4 times, and you're done
- 70% time saving during installation
- For different concrete covers, simply invert the socket 40–60 mm
- Just leave the wings on the door formwork
- Standard spacing to socket center 15 cm, without remeasuring
- Can be combined, absolutely solid connection through proven sliding technology
- Can be combined with the deep concrete socket



70% time saving - during installation



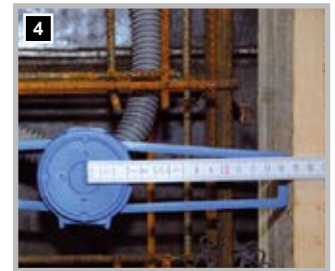
1 Drill the pipe holes.



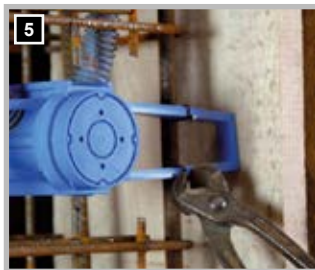
2 Insert the pipes.



3 Press on the socket cover.



4 The wings to socket center (15 cm long) can be simply left on the door formwork.



5 Simply attach to the steel reinforcement. Concrete cover up to 40 mm.



6 Installing an inverted concrete wing socket also allows for a concrete cover up to 60 mm.



7 Punch out the socket cover.



8 Remove the socket cover - finished!

Concrete wing socket

- Material: PP, recyclable

Article no.	Type	Model	Depth (mm)	SU	CB	PL
7400001	B210	Concrete wing socket	90	50	50	1,200



© Video

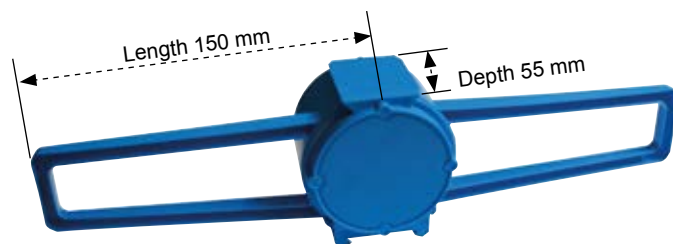


Concrete installation

Concrete wing socket flat

Advantages at a glance

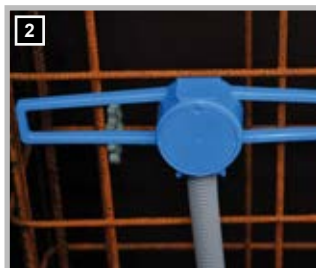
- Simply attach to the steel reinforcement 4 times, and you're done
- 70% time saving during installation
- For different concrete covers, simply invert the socket 20-45 mm
- Just leave the wings on the door formwork; standard spacing to socket center 15 cm, without remeasuring
- Can be combined, absolutely solid connection through proven sliding technology
- Optionally available with lighting outlet



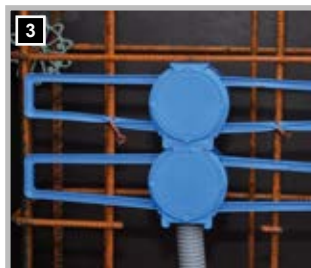
Installation instructions



1 Insert the pipe and simply attach to the steel reinforcement.



2 For concrete covers over 20 mm, simply invert the socket.



3 For combinations solid connection through proven sliding technology.



4 Also available as lighting outlet socket Ø 35 mm.

Concrete wing socket flat

For prefabrication plants or thin concrete walls

- Material: PP, recyclable

Article no.	Type	Model	Depth (mm)	SU	CB	PL
7400015	B200	Concrete wing socket flat	55	50	50	1,600
7400019	B205	Concrete wing socket with lighting outlet Ø 35 mm	55	50	50	1,600



Video



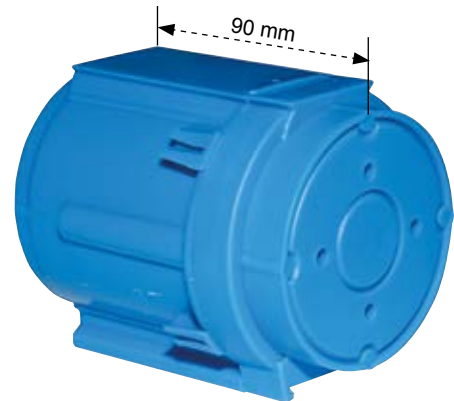
Concrete socket deep

Application area

- Ceiling socket with ample clamping area
- Receptacle for ceiling hook
- Device connection socket to install on the formwork with nails
- Can be combined with the proven concrete wing socket

Advantages at a glance

- Socket as ceiling socket (receptacle for ceiling hook) and device connection socket (can be combined with the proven concrete wing socket)
- 2 part concrete socket for pipe sizes M20 and M25
- Can be combined, absolutely solid connection through proven sliding technology
- Unbeatable in price performance



Installation instructions



1 Attach device cover to the formwork with nails



2 Punch out the pipe or cable inlet with the punching pliers.



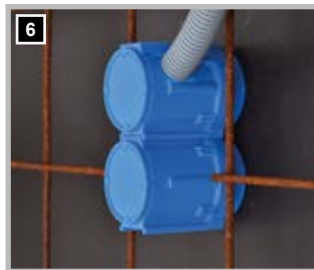
3 Insert pipe.



4 Finished!



5 Sockets can be combined and stacked.



6 For combinations solid connection through proven sliding technology along the entire length of the socket.

Concrete socket deep

2 part

- Material: PP, recyclable

Article no.	Type	Model	Depth (mm)	SU	CB	PL
7400029	B450	Concrete socket deep, screw spacing 60 mm	90	50	100	2,400



© Video



Universal socket

Advantages at a glance

- More clamping room than with conventional sockets
- To be installed as a ceiling socket, receptacle for ceiling hook
- Customized application, such as ceiling or wall installation, installation with wings
- Installation possible with or without wings
- 650° Fire resistance
- Halogen free
- Suitable for installation in all types of formwork



Universal socket

For panel ceilings and much more

- Material: PP, recyclable

Article no.	Type	Model	Depth (mm)	SU	CB	PL
7400002	B400	Universal concrete socket Screw spacing 60 mm	111	50	50	1,000
7400006	B1300	Wings for B150/B155/B400	n.s.	50	250	9,000

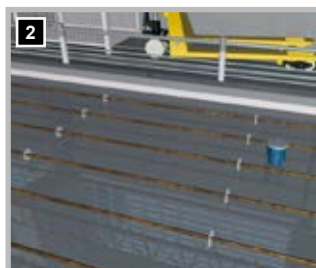


Video

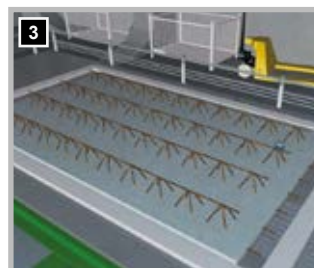
Installation in prefabrication plants



1 Adhere the universal socket with hot glue on the formwork table.



2 Steel reinforcement is inserted.



3 Prefabricated concrete is poured.

Concrete installation



1 Punch out hole with punching pliers.



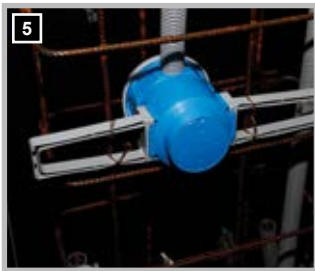
2 Open the cover.



3 Install as a ceiling socket.

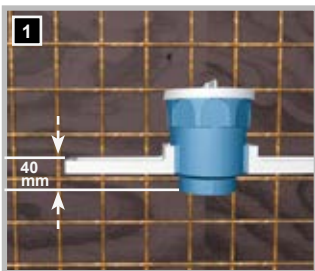


4 Wall installation as electrical socket.

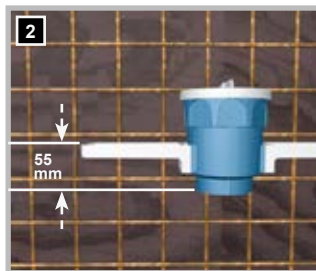


5 Install as an electrical socket with wings.

Wall installation with or without wings



1 Slide wings with a distance of 40 mm, for other distances rotate the wings.



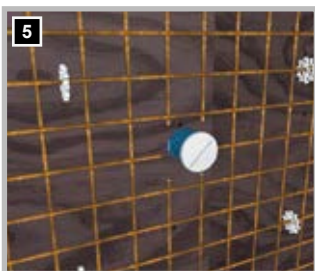
2 At a distance of 55 mm, slide the wings rotated.



3 Assemble with wings on the steel reinforcement/electric socket.



4 Universal socket can be easily installed using the wings.



5 Universal socket can also be mounted in the wall with nails.

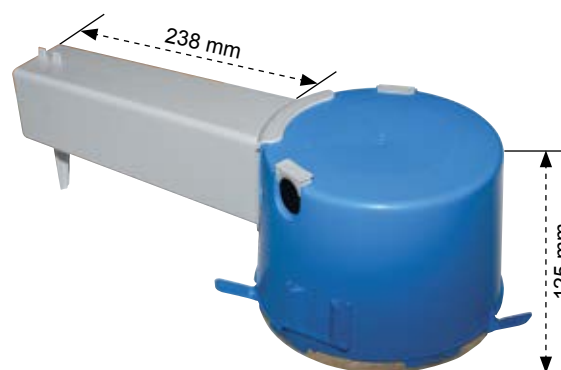
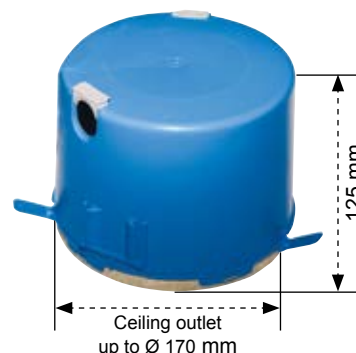


6 Insert the pipes and use as electrical socket or large clamping socket.

XL 170 large socket

Advantages at a glance

- Pipe sizes M20 and M25 can be mounted without tools
- Secure tension relief of the pipe with the Quick-Fix-Technique
- No reworking or trimming pipes necessary, absolutely sealed thanks to the Quick-Fix-Technique!
- Significant time savings with the tool-free pipe insertion of our Quick-Fix-Technique
- One housing and one size for all installation parts
- For covers starting with 16 cm thick
- The slim housing does not affect the structure, insertion of reinforcements is much easier
- Tested quality, as our housing is tested with various lighting manufacturers; lights are installed in an endurance test and checked (with testing protocol)
- 650° Fire resistance/halogen free
- For the installation of speakers, halogen spots, high-voltage halogen, LED, low-voltage halogen, energy saving lighting, halogen metal halide lamps, compact fluorescent lamps and many more.
- More installation space thanks to the large Ø 170 mm, 15 mm thick, stable mineral fiberboard



© Video

XL 170 large socket with mineral fiberboard

Lighting and installation housing

- Material: PP, recyclable

Article no.	Type	Model	SU	CB	PL
7400009	B500	Large socket Ø 170 mm with mineral fiberboard including slider	14	14	280
7400010	B550	Large socket Ø 170 mm with transformer tunnel, mineral fiberboard, including slider	10	10	240
7400006	B1300	Wings for B150/B155/B400	50	250	9,000

Replacement parts

Article no.	Type	Model	SU	CB	PL
7400016	B1000	Slider M25 open for B150/B155	100	2,000	80,000
7400017	B1050	Slider M20 open for B150/B155	100	2,000	80,000
7400018	B1100	Slider closed for B150/B155	100	2,000	80,000
7400013	B1200	Replacement mineral fiberboard for XL 170, 15 mm thick	10	10	400

Concrete installation



1 Mineral fiberboard with pictogram "Do not smash!"



2 For in situ concrete, nail on the formwork or glue on the formwork table at prefabrication plants.



3 Simply slide on the transforming tunnel.



4 Quick-Fix-Technique. Tool-free pipe insertion, secure tension relief.

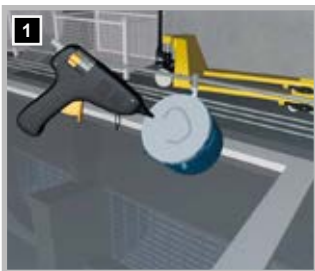


5 Install with wings and transforming tunnel.

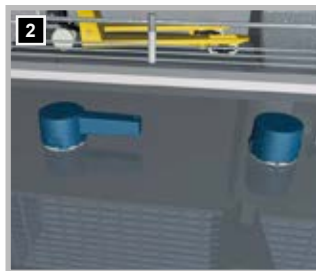


6 XL 170 without transforming tunnel, installation with wings.

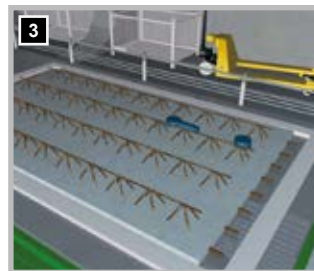
Installation in prefabrication plants



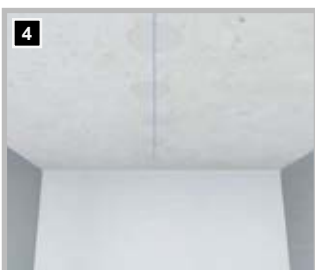
1 Glue the XL 170 large socket onto the formwork table with hot glue.



2 Install the XL 170 large socket either with or without transformer tunnel.



3 Steel reinforcement is inserted and the concrete is poured.



Final assembly: Mark the alignment and correct any inaccuracies.



5 Cut out the individual opening with a hole cutter and plaster onto the mineral fiberboard.



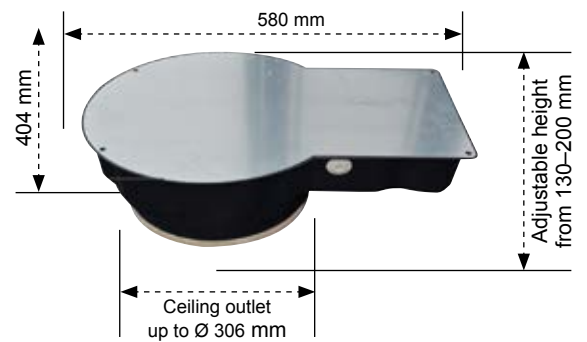
6 The spot light or other built-in devices can now be installed.

XXL 306 large socket/ XXL 306 compact

Advantages at a glance

- Customized cutouts with 306 mm mineral fiberboard
- No support pipe necessary due to the stable metal plate
- One housing and one size for all installation parts
- Tested quality, as our housing is tested with various lighting manufacturers; lights are installed in an endurance test and checked (with testing protocol).
- 650° Fire resistance/halogen free
- Structure is not affected
- Stable, 15 mm thick mineral fiberboard

XXL 306 large socket



XXL 306 large socket with mineral fiberboard

Lighting and installation housing

- Customized height adjustments from 130 – 200 mm
- Material: PP, recyclable



Video

Article no.	Type	Model	SU	CB	PL
7400011	B600	Large socket Ø 306 mm, with 15 mm mineral fiberboard	5	5	20
7400014	B1250	Replacement mineral fiberboard Ø 306 mm	5	5	150

XXL 306 compact socket with mineral fiberboard

Lighting and speaker installation housing

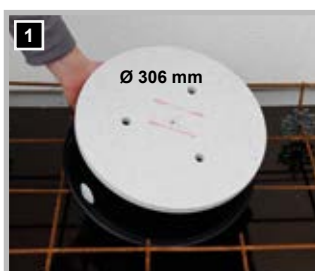
- Material: PP, recyclable



Video

Article no.	Type	Model	SU	CB	PL
7400027	B610	Compact socket Ø 306 mm, with 15 mm mineral fiberboard	5	5	20
7400014	B1250	Replacement mineral fiberboard Ø 306 mm	5	5	150

Installation example for the XXL 306 Compact in situ concrete



Mineral fiberboard with pictogram "Do not smash!"



For in situ concrete, nail on to the formwork; for prefabrication plants, glue to the formwork table.

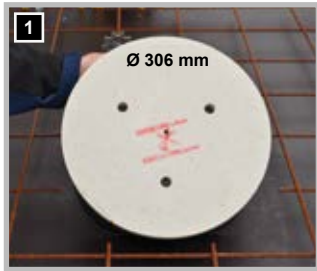


Insert pipe/cable and secure the stable metal plate with cable ties.



Finished!

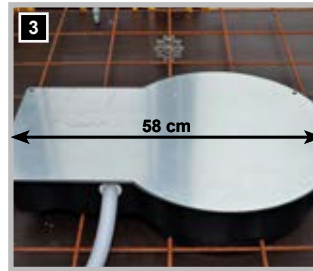
Installing large socket in situ concrete



Mineral fiberboard with pictogram "Do not smash!"



For in situ concrete, nail on to the formwork; for prefabrication plants, glue to the formwork table.

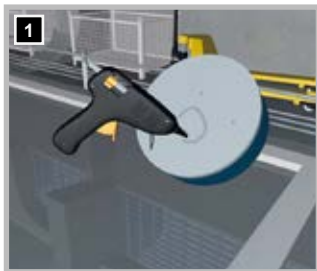


Simply attach the top – reinforcement runs under the socket, no restriction of the structure.

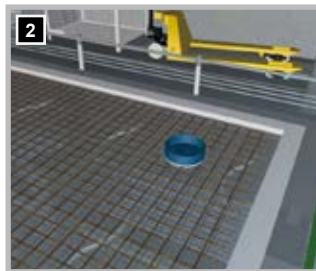


Adjustable height from 130 to 200 mm. Easy support with special threaded rods.

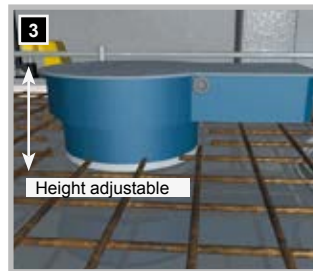
Installing large sockets in prefabrication plants



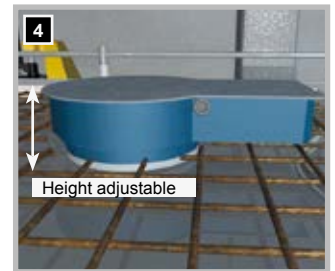
Glue the 306 mm Ø base/cover with hot glue onto the formwork table.



Steel reinforcement is inserted.



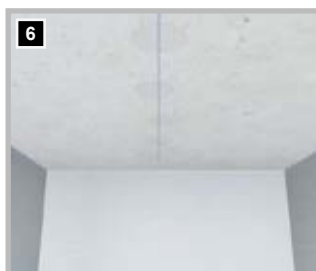
Slide the XXL large socket onto the cover 130–200 mm.



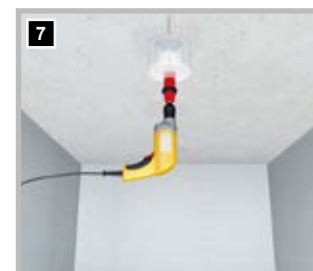
Slide the XXL large socket to the desired distance.



Concrete is poured.



Final assembly: Mark the alignment and correct any inaccuracies.



The individual openings are cut with a hole cutter ...



... and plastered onto the mineral fiberboard...



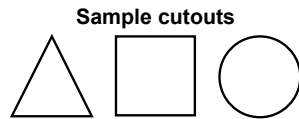
... the downlights or other built-in devices can now be installed.

XXL Flex size socket/ XXL 306 Flex compact

Advantages at a glance

- With individual ceiling cutouts up to \varnothing 300 mm (specify when ordering)
- Custom cutouts can be made at short notice
- Structure is not affected
- No additional stiffening is necessary with the Flex large socket and the Flex compact
- Ideal as an object size socket, economical and simple installation
- Installation in both exposed and in situ concrete
- No additional components necessary
- 650° Fire resistance/halogen free
- Orders for as little as 1 piece can have further custom ceiling cutouts made at no additional cost; for example, round or rectangular, available within 10 working days
- Ideal for exposed concrete

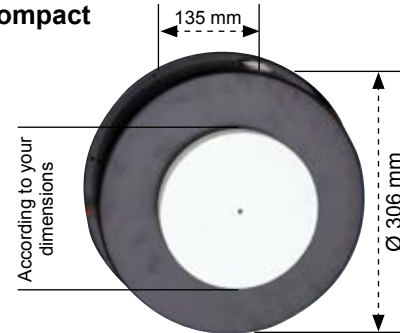
Further custom ceiling cutouts, such as round or rectangular, are available within 10 working days.



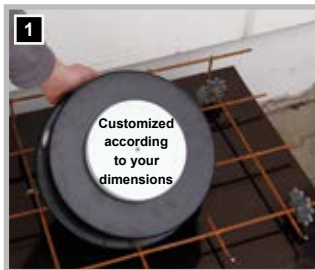
XXL Flex size socket



XXL 306 Flex Compact



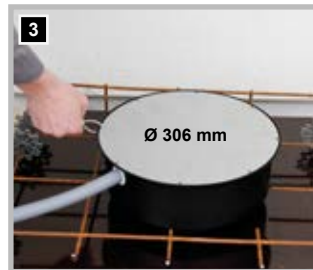
Installation example for the XXL 306 Flex compact in situ concrete



Custom made outlet opening.



For in situ concrete, nail on to the formwork; for prefabrication plants, glue to the formwork table.

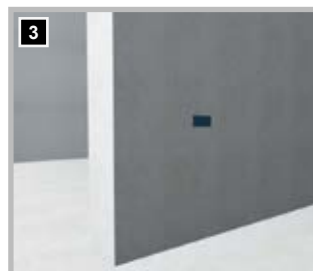
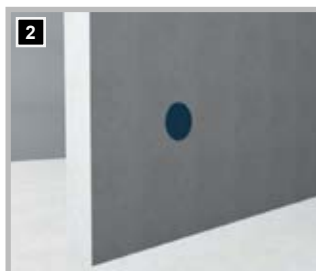
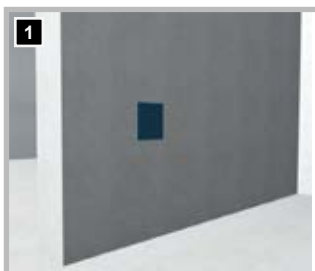


Insert pipe/cable and secure the stable metal plate with cable ties.

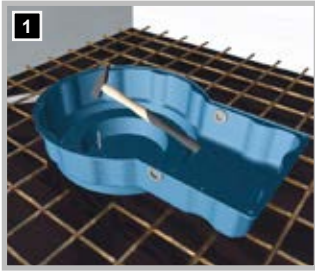


Finished!

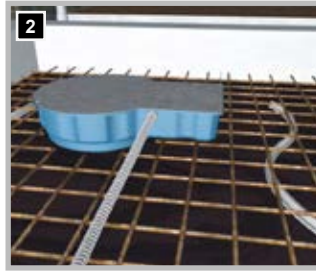
Custom cutouts can be produced



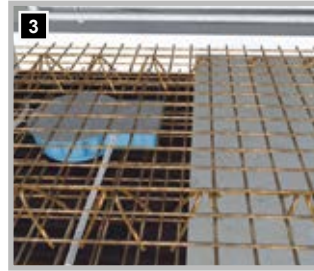
Installing Flex size socket in situ concrete



1 Attach the XXL Flex size socket with nails to the formwork.

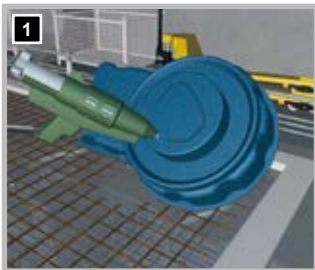


2 Attach the cover with the cable ties provided and insert the pipes.

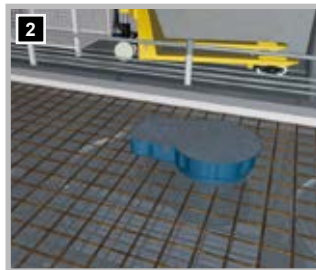


3 Steel reinforcement is inserted and the concrete is poured.

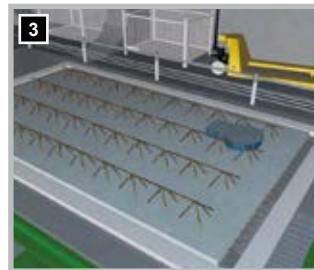
Installing Flex size sockets in prefabrication plants



1 Glue the XXL Flex size socket on the formwork table with hot glue.



2 Steel reinforcement is inserted.



3 Prefabricated concrete is poured.



4 Knock out the opening with the hammer.



5 Finished, no reworking necessary.

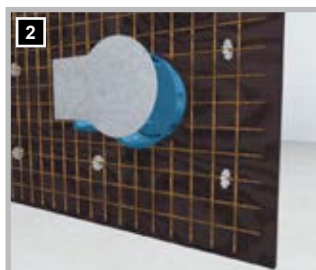


6 The downlights or other built-in devices can now be installed.

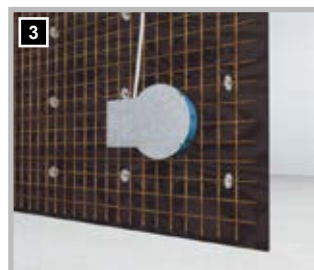
Flex size socket as special solution for wall installation



1 Attach the XXL Flex size socket with nails to the formwork.



2 Attach the lid with the cable ties provided.



3 Insert the installation pipe or cable, then the concrete is poured.



XXL Flex size socket

Lighting and installation housing

- Material: PP, recyclable

Article no.	Type	Model	SU	CB	PL
7400012	B650	Flex size socket Ø 306 mm	1	1	20



XXL 306 Flex compact

Lighting and speaker installation housing

- Material: PP, recyclable

Article no.	Type	Model	SU	CB	PL
7400028	B660	Flex compact socket Ø 306 mm	1	1	20



📺 Video

Wall and ceiling manifold 30°

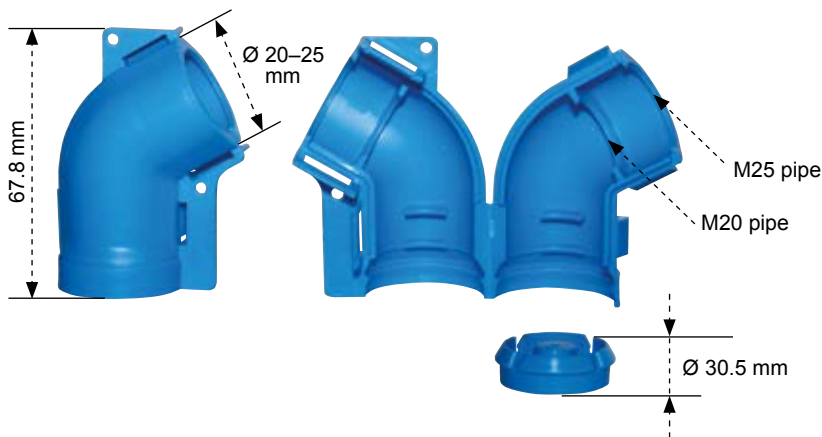
For 20 or 25 mm pipes

- Installation as wall or ceiling manifold possible
- Pipe sizes M20 and M25 can be mounted without tools
- Absolute secure tension relief of the pipe
- Secure continuation of the M20 or M25 pipes possible
- 650° Fire resistance
- Halogen free
- Material: PP, recyclable



Video

Article no.	Type	Model	SU	CB	PL
7400007	B300	Wall/ceiling manifold 30°, M20, M25	50	400	9,600



1 Nail the base to the framework..



2 Click in the M20 or M25 pipe.



3 Simply fold together.



4 Adhere to the base.
Absolute secure tension relief!



End / transition grommets

For pipes M20/M25/M32

- Suitable for all formwork
- Suitable for connecting pipes or as ceiling outlet
- Simply fasten to the formwork with a nail
- 650° Fire resistance
- Halogen free
- Material: PP, recyclable

Article no.	Type	Model	SU	CB	PL
7400020	B820	End / transition grommets M20 pipe	50	500	12,000
7400021	B825	End / transition grommets M25 pipe	25	100	5,400
7400022	B832	End / transition grommets M32 pipe	25	100	5,400



1 Nail the base to the framework.



2 Put the top together.



3 Push in the pipe.



4 Finished!

Folding coupler

The folding coupler is suitable for shaken, vibrated or tamped concrete and for laying underground.

It can of course also be used for drywall walls, flush or surface mounted installations.

- Color: gray
- Plastic, halogen and silicone free.
- Simple to open and close.
- Material: PP, recyclable



Article no.	Type	Model	SU	CB	PL
7400025	B920	Folding coupler M20, connection coupler M20	50	50	21,600
7400026	B925	Folding coupler M25, connection coupler M25	40	40	17,280



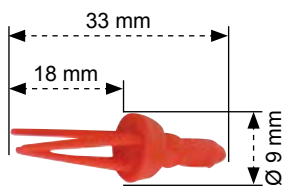
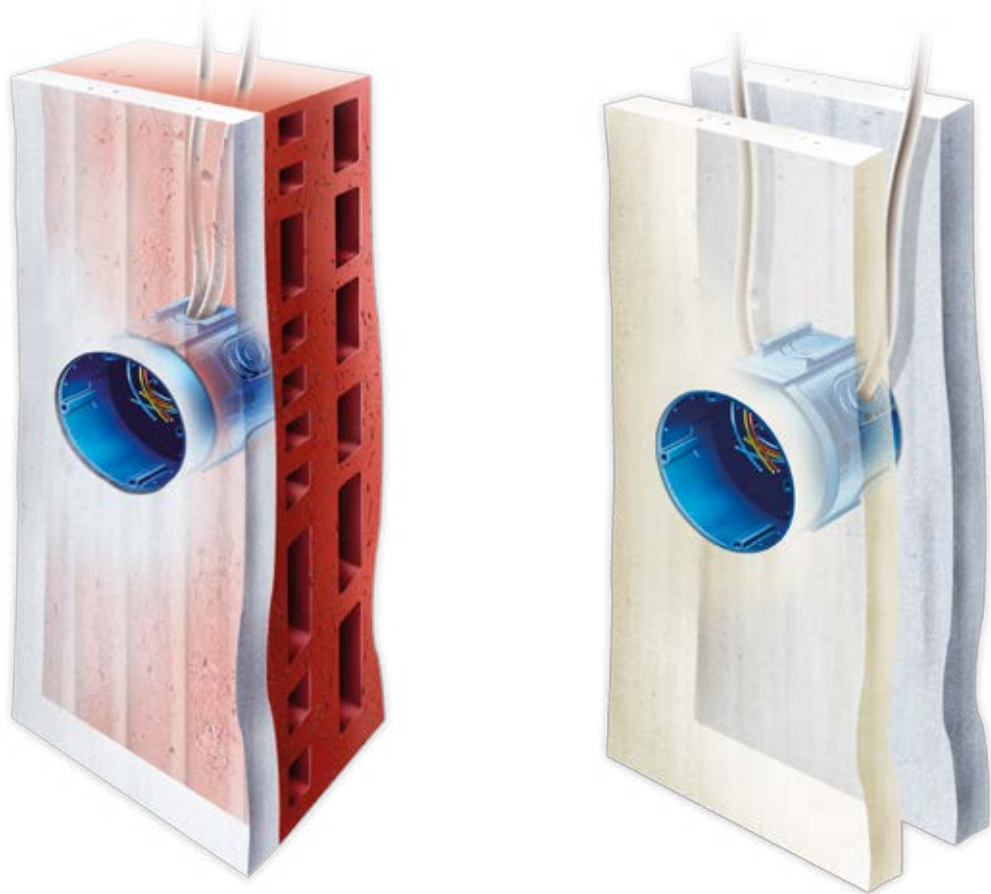
1 Lay pipe.



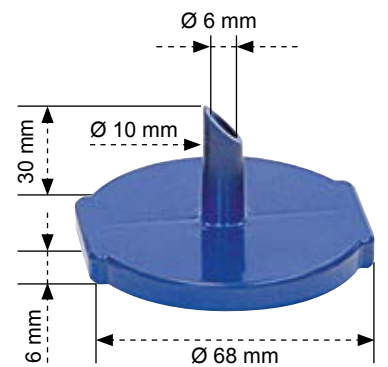
2 Close the folding coupler.



3 Secure the tension relief – finished!



Plaster tongue
For multi-function socket

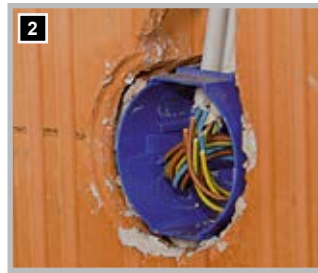


Multi-function socket

Multi-function socket – flush according to VDE with height adjusting flush installation



1 Set the socket base flush with the masonry.



2 Insert the electrical cable or pipe.



3 Snap the socket cover down once or twice.



4 The cover will still be protruding approx. 2.5–3 cm.



5 The plasterer presses the socket top flush while applying the plaster with the aluminum lathe



6 The socket is quick to locate using the plaster tongue.



7 Punch in the socket cover ...



8 ... And remove the plaster film – finished!

Advantages of the flush installed multi-function socket at a glance

- No more searching for the socket with a hammer
- Integrated plaster cover
- The sockets can be stacked and combined
- Socket interior remains clean
- Flush by snapping the cover:
 - The socket cover can be adjusted flush by the plasterer. The plasterer no longer has to plaster around the socket as with conventional sockets.
- The plaster tongue is reusable
- VDE tested

Multi-function socket – flush according to VDE with height adjustment Intended installation



1 Set the socket base ...



2 ... so that it protrudes approx. 1 cm outside of the masonry.



3 Press on the drill cover.



4 The protruding spike serves as a centering for the Ø 68 mm drill bit.



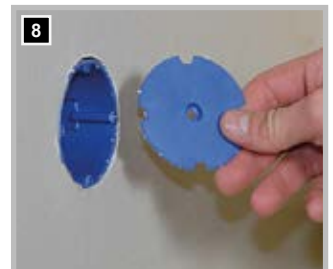
5 You can now drill the hole for the socket without re-measuring the installation position.



6 Gently remove the drilled cover.



7 Insert the top of the socket and push until it is flush.



8 Remove the socket cover - finished!

Advantage of the intended installation at a glance

- Never search for a cable again
- Easy to find; with the protruding drill cover spike, the socket can be immediately located
- Significant time savings. The device cover and the device are attached in a single operation
- No more unnecessary wall damage. Damage caused by the electrician when searching in the hollow wall is eliminated
- Clean work. The top has an integrated “plaster cover”. This prevents paint (sprayed paint) from getting into the socket during the painting process
- The multi-function socket can be stacked

Technical Data:

Multi-function socket dimensions

Adjustable depth from 58 mm to 75mm
 Ø outside = 66 mm
 hole spacing inside = 60 mm

Drill cover dimensions

Total height = 36 mm
 Spike height = 30 mm
 Ø Drill (inside) = 6 mm
 Ø Cover = 68 mm

Adhesive disk dimensions

Ø = 60 mm

Adhesive disk for plunger



Multi-function socket

Multi-function socket – flush according to VDE with height adjustment Hollow wall installation



1 Adhere to the back of the first panel and insert the electrical cable or pipe.



2 Press on the drill cover.



3 The hole for the socket can now be drilled without re-measuring the installation position.



4 The protruding spike serves as a centering for the Ø 68 mm drill bit.



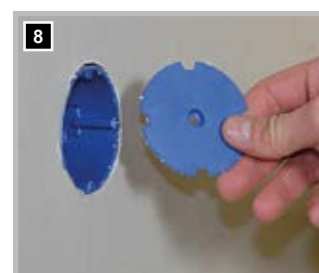
5 The hole for the socket can now be drilled without re-measuring the installation position.



6 Gently remove the drilled cover.



7 Insert the top of the socket and push until it is flush.



8 Remove the socket cover - finished.

Advantage of hollow wall installation at a glance

- Easy cable insertion!
The circuits can be clamped before the wall is closed. If you discover that a cable is missing or that the number of cables is not sufficient, an additional cable can be easily drawn
- Easy to find! With the protruding drill cover spike, the socket can be immediately located

- No more searching for cables! The sockets can also be drilled out after the painting work since the time-consuming cable search has been eliminated
- Significant time savings! The device cover and the device are mounted in a single operation
- Clean work! The top has an integrated “plaster cover”. This prevents paint (sprayed paint) from getting into the socket during the painting process
- No more unnecessary wall damage!
Damage caused by the electrician when searching in the hollow wall is eliminated
- The multi-function socket can be stacked

Multi-function socket

- Material: PP, recyclable

Article no.	Type	Model	SU	CB	PL
7310134	KD66	Combi socket Ø 66 mm, depth adjustable	25	100	2,000
7390050	KDBD	Drill cover for combi socket	50	400	12,000
7390073	KDPF	Plaster tongue for combi socket	25	1,000	168,000
7390074	KDKS	Adhesive disc for combi socket	25	500	56,000



The price conscious safety experts!



Fire protection systems

Intelligent technology that protects when things gets hot.

The innovative technology reacts immediately to fire and heat and effectively prevents the spread of fire. Special material inside the socket foams up and completely seals the installation opening. In this way, our fire protection sockets guarantee effective fire protection and ensure the function of the fire protection walls for at least 90 minutes. And all that with an extremely simple installation that even allows for opposite installation and subsequent installation.

Safety when it matters!

Get to know our Europe-wide certified fire protection socket range now, and fulfill not only the legal requirements for fire protection but also ensure verifiable safety in areas and escape routes when it matters! Especially in the area of public buildings such as hospitals, schools and kindergartens. In order to protect the safety of people in the event of a fire, it is important to guarantee the usability of rescue routes and access for the fire department and rescue services for as long as possible.

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f-tronic fire protection sockets are available in three models; flat, deep and double. All fire protection sockets are guaranteed with **SAFE 90**, an integrated safety function for at least 90 minutes.



Fire protection sockets

Intelligent technology that protects when things gets hot.

The innovative technology reacts immediately to fire and heat and effectively prevents the spread of fire. Special material inside the socket foams up and completely seals the installation opening. In this way, our fire protection sockets guarantee effective fire protection and ensure the function of the fire protection walls for at least 90 minutes. And all that with an extremely simple installation that even allows for opposite installation and subsequent installation.

Get to know our Europe-wide certified fire protection socket range now and fulfill not only the legal requirements for fire protection but also ensure verifiable safety in areas and escape routes when it matters!

- With fire resistance rating EI90
- ETA15/0598
- DIBt Z-19.21-2224
- Subsequent and opposite installation possible
- Available in three versions: flat, deep and double
- Halogen-free
- Material: high strength, temperature-resistant special plastic "SAFE 90"
- Stackable up to 5 sockets
- BS115: for 2 cables each with a maximum Ø 14.4 mm
- BS117: for 4 cables each with a maximum Ø 11.6 mm or 4 pipe entries maximum Ø 20 mm outside
- BS118: for 4 cables each with a maximum Ø 11.6 mm

Article no.	Type	Model	Depth	SU	CB	PL
7500001	BS115	Installation socket, drilled opening Ø 74 mm **	45	12	192	3,744
7500002	BS117	Installation socket, drilled opening Ø 74 mm **	54	12	192	3,456
7500003	BS118	Double installation socket, drilled opening Ø 74 mm **	54	6	96	1,584
7500030	BS112	Cover single	n.s.	10	100	9,000
7500031	BS112/2	Cover double	n.s.	5	20	4,800

** Please consult the local building authorities and fire protection commissioner prior to installing the products.





Fire protection foam

Approved for S30 Z-19.15-1764 and S90 Z-19.15-1588

Flexible fire protection foam for wall and ceiling ducts for isolating individual or bundled electrical cables and cables of all kinds (cable diameter up to 32 mm for S 90), also fiber optics and load-bearing construction (cable ducts, trays, ladders) made of steel, aluminum or plastic. Single steel and plastic pipes ≤ 15 mm.

- Foam does not drip when inserted
- Isolation requires no additional coating
- Simple retrofitting as the foam remains soft and flexible
- 180 g cartridges can be used with commercially available press guns
- Easy handling by pressing
- Trimmed off remains can be reused
- No pre-flow
- Processing is dust and fiber free
- Highly flexible isolating system for different forms and requirements of openings
- High yield at appropriate working temperature (23 °C)
- No doubled cable support construction required

Article no.	Type	Model	Content	SU	CB	PL
7500005	BSSCH18	Fire protection foam	180 g	1	12	432
7500006	BSSCH48	Fire protection foam	480 g	1	12	432



Scope of application

S 30 installation in min. 7.5 cm thick walls of masonry, concrete or aerated concrete in min. 7.5 cm thick light partition walls.

Approved isolation dimensions: max. 25 x 25 cm or 25 cm diameter (for example with core drilling).

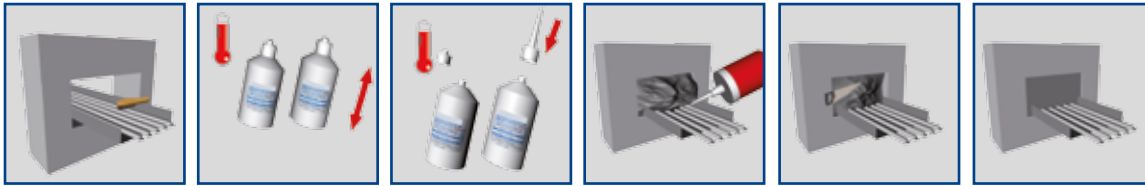
S 90 installation in min. 10 cm thick walls of masonry, concrete or aerated concrete in min. 10 cm thick light partition walls, and in min. 15 cm thick concrete or aerated concrete ceilings.

Approved isolation dimensions: max. 22 x 22 cm or 22 cm diameter (for example with core drilling).

Technical Data

Installation data	Solid wall Light partition wall F30	Solid ceiling F90	Solid wall Light partition wall F 0
Wall Ceiling thickness	min. 75 mm	min. 150 mm	min. 100 mm
Max. isolation dimensions (W x H L)	250 x 250 mm	220 x 220 mm	220 x 220 mm
Isolation thickness min.	75 mm	200 mm	200 mm
Work spaces S30	Distance between individual cable positions ≥ 40 mm and between top cable position and component reveal ≥ 40 mm distance laterally, together and below ≥ 0 mm.		
Work spaces S90	Distance between individual cable positions ≥ 35 mm and between top cable position and component reveal ≥ 15 mm distance laterally, between, on the wall and below ≥ 0 mm.		
Doubled on component (according to approval)			

Processing



Installation instructions

The entire cartridge content is usable, no pre-flow. Clean and remove dust from the component opening before installing. Close the gusset between the cables with **f-tronic® BSSCH**.

S30 Distance between individual cable positions min. 40 mm and between top cable position and component reveal min. 40 mm, distance laterally and below 0 mm.

S90 Distance between individual cable positions min. 35 mm and between top cable position and component reveal min. 15 mm, distance laterally and below 0 mm.

Wear gloves, safety goggles and appropriate work clothes when preparing and working with the cartridge (See Safety Information Sheet).

The cable isolation must be permanently labeled by the installation firm with an identification plate attached to the component next to each cable isolation. The identification plates are available at **f-tronic® GmbH**.

Subsequent installation

f-tronic® BSSCH remains flexible even after curing making subsequent installation problem-free. Here a minimum 1 cm ring gap must be made and then sealed with BSSCH.

Be sure to use the cartridges in accordance with the assembly instructions!

Foam isolation S90 at 60% application - calculation chart at 18 °C working temperature

Isolation area	180 g cartridge	480 g cartridge
0.005 m ²	0.62 unit	0.23 unit
0.010 m ²	1.23 unit	0.46 unit
0.020 m ²	2.46 unit	0.91 unit
0.030 m ²	3.69 unit	1.37 unit
0.040 m ²	4.92 unit	1.83 unit
0.048 m ²	5.96 unit	2.21 unit



f-tronic® Fire protection systems FOR SAFETY IN ALL AREAS AND ESCAPE ROUTES.

When fire strikes, every second counts. In the time it takes for the fire department to arrive on the scene, valuable time can pass in which lives could be saved.

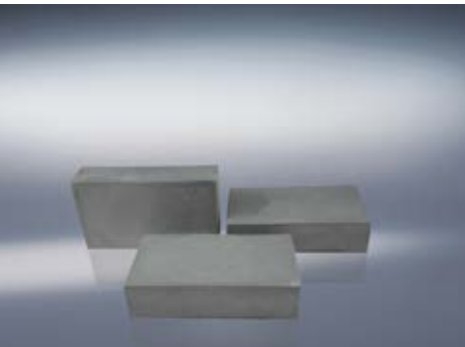
The planners and electricians for building technology have a special responsibility therefore, when dealing with the topic of structural fire prevention.

Our focus is to consciously safeguard human lives and to minimize personal and property damage. **f-tronic®** offers you reliable fire protection solutions for walls and ceilings that guarantee safety in the event of a fire up to the required resistance rating.



f-tronic®

FIREFIGHTERS



Fire protection block

Approved for S30 - S60 Z-19.15-1762 wall isolation

Flexible fire protection blocks for wall ducts for isolating individual or bundled electrical cables and cables of all kinds (including fiber optic). Without limitation of the total cable cross section of the individual cables and load-bearing construction (cable ducts, trays, ladders) of steel, aluminum or plastic. Individual steel and plastic pipes ≤ 15 mm.

- Can be combined with fire protection foam for subsequent assignment and gusset
- Condensation and moisture resistant
- Plugs do not have to be glued at installation
- Resistant to aging
- Stones are flexible and return to their original form after compressing
- Trimmed off remains can be reused
- No additional coating necessary
- Dust and fiber-free processing
- Smoke-proof in compliance with DIN 4102, part 9
- Highly flexible isolating system for different forms and requirements of openings

Article no.	Type	Model	Dimensions	SU	CB	PL
7500010	BSB	Fire Protection Block	60 x 130 x 230 mm	1	20	400



Scope of application

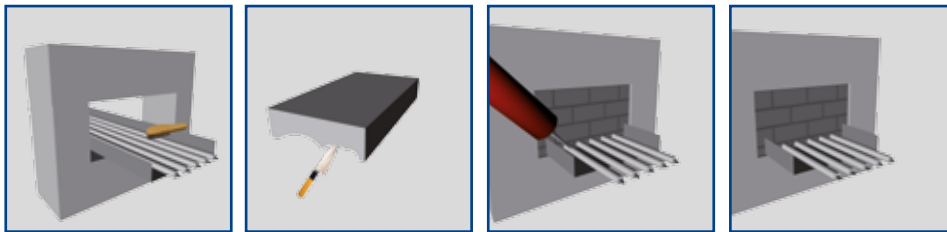
In all fire protection classified walls
(masonry | concrete | aerated concrete | light partition walls ≥ 75 mm)

Approved isolation size: Wall (W x H) max. 70 cm x 40 cm

Technical Data

Installation data	Solid wall F30 F60 Light partition wall
Wall thickness	min. 75 mm
Max. isolation dimensions (W x H L)	700 x 400 mm
Isolation thickness min.	130 mm
Work areas	Wall isolation: Distance between individual cable positions ≥ 40 mm and between top cable position and component reveal ≥ 40 mm, distance laterally and below ≥ 0 mm
Frame at S 60 + Cable bundle	At cable tray distance < 20 mm to reveal, a 20 x 30 mm strip of BSB is to be applied on the underside of both sides of the isolation on the cable support structure

Processing



Installation instructions

Clean and remove dust from the component opening before installing. Precisely cross cut the **f-tronic®** BSB for S30-S60 and install with offset joints (13 cm), so that a tight connection to the component is made. Seal existing gaps with **f-tronic®** BSSCH.

Wall: Distance between individual cable positions and between top cable position and component reveal min. 40 mm, distance laterally and below 0 mm.

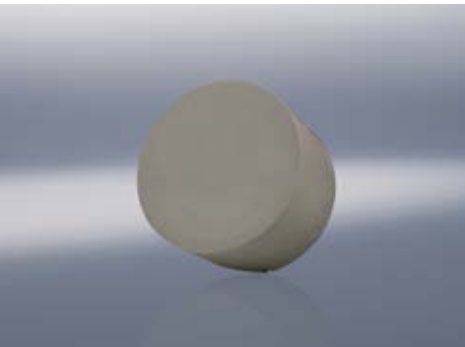
The cable isolation must be permanently labeled by the installation firm with an identification plate attached to the component next to each cable isolation. Identification plates are available at **f-tronic®** GmbH.

Subsequent installation

f-tronic® BSB | BSSCH remains flexible even after curing making subsequent installation problem-free. Here a minimum 1 cm ring gap must be made and then sealed with **f-tronic®** BSB | BSSCH.

Number of blocks: Guide values at 40% and 60% isolation application (S30-S60)

Isolation area	40%	60%
0.005 m ²	0.22 unit	0.14 unit
0.01 m ²	0.43 unit	0.29 unit
0.05 m ²	2.17 unit	1.45 unit
0.10 m ²	4.35 unit	2.90 unit
0.20 m ²	8.70 unit	5.80 unit
0.28 m ²	12.17 unit	8.12 unit
0.40 m ²	17.39 unit	11.59 unit
0.50 m ²	21.74 unit	14.49 unit
0.60 m ²	26.09 unit	17.39 unit



Fire protection plugs | Fire protection blocks

Approved for S 90 - S 120 **Z-19.15-1762 Wall isolation**
Z-19.15-1763 Ceiling isolation

Flexible fire protection blocks for wall and ceiling ducts for isolating individual or bundled electrical cables and cables of all kinds (including fiber optics). Without limitation of the total cable cross section of the individual cables and load-bearing construction (cable ducts, trays, ladders) of steel, aluminum or plastic. Single steel and plastic pipes ≤ 15mm.

- Can be combined with fire protection foam for subsequent assignment and gusset
- Condensation and moisture resistant
- Blocks do not have to be glued at installation
- Resistant to aging
- Blocks are flexible and return to their original form after compressing
- Easy processing by cutting the fire protection stones
- No additional coating necessary
- Dust and fiber-free processing
- Smoke-proof in compliance with DIN 4102, part 9
- Highly flexible isolating system for different forms and requirements of openings
- The width of the frame (when necessary) is only 2.5 cm

Article no.	Type	Model	Dimensions	SU	CB	PL
7500010	BSB	Fire Protection Block	60 x 130 x 230 mm	1	20	400
7500012	BSST62	Fire protection plugs Ø 62 mm	Ø 62 mm	1	32	1,536
7500013	BSST77	Fire protection plugs Ø 77 mm	Ø 77 mm	1	20	960
7500014	BSST107	Fire protection plugs Ø 107 mm	Ø 107 mm	1	10	480
7500015	BSST132	Fire protection plugs Ø 132 mm	Ø 132 mm	1	14	280
7500016	BSST158	Fire protection plugs Ø 158 mm	Ø 158 mm	1	10	200



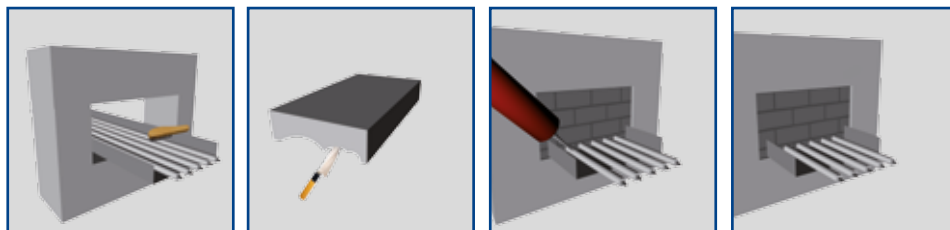
Scope of application

Wall S 90 - S 120: Installation in min. 10 cm thick walls of masonry, concrete and in min. 10 cm thick light partition walls, ceilings S 90: Installation in min. 15 cm thick ceilings of concrete, thickness of the isolation S 90 - S 120: Isolation thickness 23 cm.
Max. allowed isolation size: Wall (W x H) max. 70 x 40 cm, ceiling (W x L) max. 40 cm x ∞

Technical Data

Installation data	Solid wall Light partition wall F90 F120	Ceiling
Wall Ceiling thickness	min. 100 mm	min. 150 mm
Max. isolation dimensions (W x H L)	700 x 400 mm	400 x ∞ mm
Isolation thickness min.	230 mm	230 mm
Work areas	<p>Wall isolation: Distance between individual cable positions ≥ 40 mm and between top cable position and component reveal ≥ 40 mm, distance laterally and below ≥ 0 mm</p> <p>Ceiling isolation: Distance between individual cable positions ≥ 40 mm and laterally between the cable positions ≥ 30 mm. Distance laterally and below ≥ 0 mm</p>	

Processing



Installation instructions

Clean and remove dust from the component opening before installing. Precisely cross cut the **f-tronic**® BSB and install with offset joints (23 cm), so that a tight connection to the component is made. Seal existing gaps with **f-tronic**® BSSCH.

Wall: Distance between individual cable positions and between top cable position and component reveal min. 40 mm, distance laterally and below 0 mm. Ceiling: Perimeter min. 0 mm, between cable positions min. 40 mm.

The cable isolation must be permanently labeled by the installation firm with an identification plate attached to the component next to each cable isolation. Identification plates are available at **f-tronic**® GmbH.

Subsequent installation

f-tronic® BSB | BSSCH remains flexible even after curing making subsequent installation problem-free. Here a minimum 1 cm ring gap must be made and then sealed with **f-tronic**® BSB | BSSCH.

Number of blocks: Guide values at 40% and 60% isolation application (S90-S120)

Isolation area	40%	60%
0.005 m ²	0.38 unit	0.26 unit
0.01 m ²	0.77 unit	0.51 unit
0.05 m ²	3.85 unit	2.56 unit
0.10 m ²	7.69 unit	5.13 unit
0.20 m ²	15.38 unit	10.26 unit
0.28 m ²	21.54 unit	14.36 unit
0.40 m ²	30.77 unit	20.51 unit
0.50 m ²	38.46 unit	25.64 unit
0.60 m ²	46.15 unit	30.77 unit



Mounting kit for fire protection sleeve
See page 71

Fire protection sleeve

Approved ETA-13/0792
Fire resistance rating EI 120

Wall opening: Two fire protection sleeves
Ceiling opening: A fire protection sleeve on ceiling underside

Feed through of:

- Electrical installation pipes, either assigned or unassigned, in this case, cable diameter max. 21 mm
 - Individual pipes up to max. 63 mm outside diameter
 - In bundles up to max. 125 mm outside diameter
- Ideal for installation shafts, for example in older building renovations
 - Minimum space requirements due to low installation height
 - Approved for light partition walls
 - Closure of the remaining opening possible with commercially available materials such as concrete, cement mortar, gypsum plaster
 - Possible for use on already installed pipes using a simple locking technique
 - Sleeve housings may be adjacent in ceiling installation (zero distance)
 - Electrical installation pipes either assigned or unassigned (so that a reserve exists for subsequent installation)

One-piece sleeve for electrical installation pipes | pipe isolation

Article no.	Type	Model	Diameter	SU	CB	PL
7500017	BSMS32	Fire protection sleeve size 32	32 mm	1	10	2,000
7500018	BSMS40	Fire protection sleeve size 40	40 mm	1	10	1,800
7500019	BSMS50	Fire protection sleeve size 50	50 mm	1	10	1,500
7500020	BSMS63	Fire protection sleeve size 63	63 mm	1	10	850
7500021	BSMS75	Fire protection sleeve size 75	75 mm	1	10	800
7500022	BSMS90	Fire protection sleeve size 90	90 mm	1	10	400
7500023	BSMS110	Fire protection sleeve size 110	110 mm	1	10	350
7500024	BSMS125	Fire protection sleeve size 125	125 mm	1	10	220

One-piece sleeve for pipe isolation

Article no.	Type	Model	Diameter	SU	CB	PL
7500025	BSMS140	Fire protection sleeve size 140	140 mm	1	5	150
7500026	BSMS160	Fire protection sleeve size 160	160 mm	1	5	150
7500027	BSMS180	Fire protection sleeve size 180	180 mm	1	5	80
7500028	BSMS200	Fire protection sleeve size 200	200 mm	1	5	70

Scope of application

In all conforming EN 13501-2 classified

- Walls (masonry | concrete | aerated concrete | light partition wall ≥ 100 mm)
- Ceilings (concrete or aerated concrete ≥ 150 mm)

Technical Data Fire protection isolation

Type	Exterior diameter	Interior diameter	Installation height	Quantity of sheet metal plates
Size 32	50 mm	36 mm	26 mm	2
Size 40	58 mm	44 mm	26 mm	2
Size 50	68 mm	54 mm	26 mm	2
Size 63	94 mm	67 mm	26 mm	4
Size 75	106 mm	79 mm	26 mm	4
Size 90	132 mm	94 mm	27 mm	4
Size 110	155 mm	114 mm	27 mm	4
Size 125	172 mm	129 mm	40 mm	4
Size 140	200 mm	144 mm	40 mm	6
Size 160	220 mm	164 mm	40 mm	6
Size 180	264 mm	184 mm	40 mm	8
Size 200	284 mm	204 mm	40 mm	8

Processing



Installation instructions

Fire protection isolation from **f-tronic**® can be installed in solid walls, solid ceilings and light partition walls in accordance with the specified chart.

Type and minimum thickness of the walls / ceilings

Solid wall	Light partition wall	Solid ceiling
≥ 100 mm	≥ 100 mm	≥ 150 mm

The wall must have a minimum thickness of 100 mm and be made of wood or steel studs, covered on both sides with at least 2 layers of 12.5 mm thick panels. For wood stud walls, there must be a minimum distance of 100 mm from the isolation to each stud and the cavity between the stud and isolation must be sealed with a minimum of 100 mm insulation with the rating A1 or A2 (according to EN-13501-1).

Guidelines for installation:

Walls require one sleeve per side, ceilings require only one below the ceiling. The electrical installation pipes can be run individually or bundled through the isolation. The bundle may have a maximum diameter of 125 mm for a minimum of 100 mm thick walls or a minimum 150 mm thick solid ceilings. The individual electrical installation pipes may have a maximum of 63 mm outside diameter, the cables run through may not exceed a maximum of 21 mm outside diameter. The smallest type of fire protection sleeve from type BSMS should be selected for the respective empty pipe bundles.

The minimum length of the electrical installation pipes must be 200 mm on both sides of the wall / ceiling, measured from the wall / ceiling surface. All remaining openings to the empty pipe bundle in walls or ceilings must be filled with concrete, cement mortar or gypsum plaster. It is not necessary to fill the gusset between the individual empty pipes. Attach sleeves to the walls or ceilings with fire protection approved anchors.

Fire protection sleeves must be attached to light partition walls using M6 or M8 continuous threaded rods. For ceilings, multiple sleeves with zero distance may be laid side by side. The ends of the empty electrical pipes must be filled with an intumescent, minimum 20 mm deep, for smoke protection.

When installing cable isolation in walls, the first brackets (supports) of the cable should be arranged on both sides of the wall at a distance of ≤ 450 mm, above the ceiling ≤ 420 mm. The fire resistance of the support construction must correspond to the intended usage.



Intumescent

Approved Z-19.11-2014

- Subject to third-party monitoring due to certification (building material approval)
- Only for individual wires according to LAR (if necessary, observe the difference in the LARs of the individual states!) Model Wiring Guidelines (MLAR) of the DiBt can vary partially in individual states
- The cured product may not be directly exposed to the effects of weather (driving rain, frost-dew UV rays)

- Suitable for individual wiring ducts in solid components
- Suitable for cladding pipes of non-flammable material in light partition walls, according to the rules of the MLAR
- Cartridges can be used with commercially available press guns
- Resistant to aging, water based
- Good processing even with small ring joints
- Can be used in areas with high humidity

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



Scope of application

MLAR Guidelines: Routing of individual lines in individual openings.

- Electrical lines
- Pipes lines with an outside diameter up to 160 mm made of non-flammable material (with the exception of aluminum and glass) also with a coating of flammable material up to 2 mm thick
- Pipes lines for non-flammable media and installation pipes for electrical lines with an outside diameter up to 32 mm made of flammable material, aluminum or glass

Processing



Installation instructions

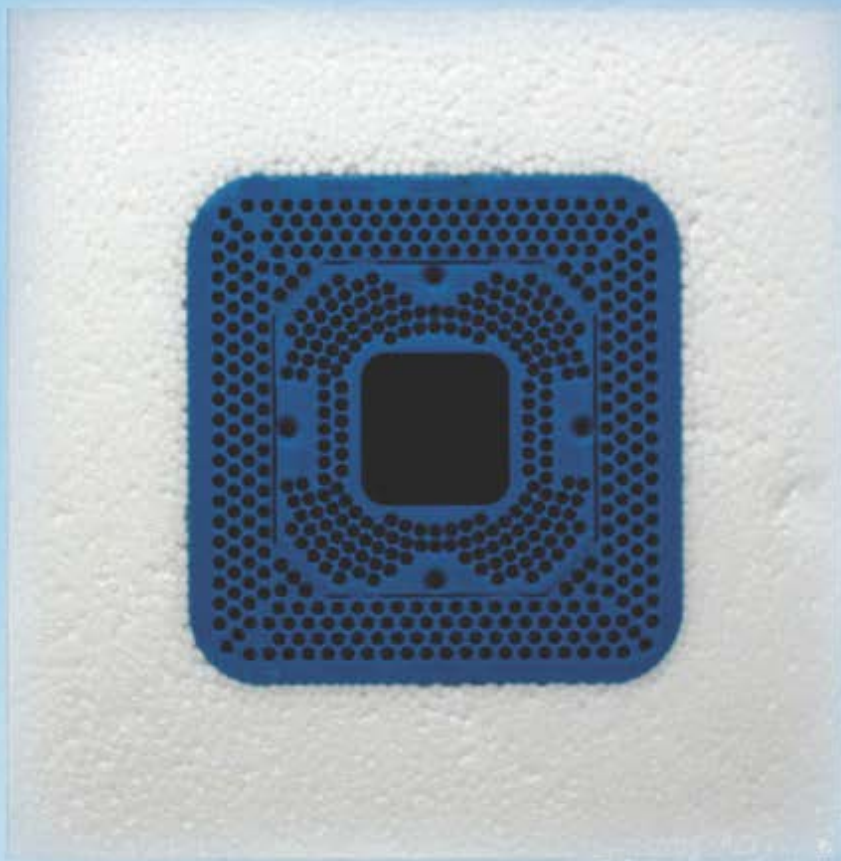
- Routing of lines according to MLAR Section 4.2 and 4.3.2
- Routing of individual lines through walls and ceilings (4.3.1 and 4.3.2):
 - Close ring joints up to 15 mm with intumescent f-tronic BSDSB
 - Close ring joints up to 50 mm with mineral fiber wool (melting point > 1000 °C plugged as tightly as possible) or cement mortar
- Close ring joints over 50 mm with cement mortar
- Routing of lines without the minimum distance connected together through fire resistant walls (observe excluded walls), see MLAR Section 4.2.

Fire protection accessories

Article no.	Type	Model	SU	CB	PL
7500007	BSPI	Press guns for 480 g cartridges	1	-	150
7500008	BSM	Mixing pipe	10	10	8,000
7500009	BSMV	Extension for mixing pipe 200mm	10	10	8,000
7500029	BSKS	Universal identification plate	20	-	-
7500032	BSBF50	Mounting kit for fire protection sleeve size 32-50	1	-	-
7500033	BSBF125	Mounting kit for fire protection sleeve size 63-125	1	-	-
7500034	BSBF160	Mounting kit for fire protection sleeve size 140-160	1	-	-
7500035	BSBF200	Mounting kit for fire protection sleeve size 180-200	1	-	-



The cost savers!



Device supports for WDVS / TIE

TIE System

Thermal insulated electrical systems

TIE systems are newly developed, ground-breaking electrical installation elements for a consistent, thermal bridge-free compact building facade. The system elements consist of foamed, permanently integrated electrical elements such as a device socket or a device support and a highly insulated shell in the form of rectangular blocks made of PU foam, EPS and Neopor[®].

Regardless of whether it is the device socket or the device support, all components are ready to use, insulated and can be installed quickly. TIE system elements are further characterized by their generous mounting area and high stability for a wide variety of electrical installation applications.

A summary of their thermal insulation capabilities can be found on page 142.

Device supports for WDVS / TIE 72

TIE device sockets.....	78
TIE junction boxes	79
TIE device supports	79
TIE corner elements	80
TIE Hybrid adhesive.....	80
TIE accessories.....	81



All TIE system elements are delivered in two basic sizes: 100–140 mm and 160–200 mm insulation thickness. Special sizes of 220–240 mm and 260–300 mm insulation thickness are available upon request.

TIE System

While the facade itself achieves a high insulation value, thermal bridges can often occur in electrical installation areas. This can cause condensation and mold to form after only a short time. With TIE-Systems, the installation elements are made of the same insulation materials integrated in the insulation and have the same insulation thickness – this means continuous insulation quality and a seamless thermal insulation system (WDVS).

Convention electrical installation elements that have been used up until now on compact facades, only partially meet the requirements for seamless thermal insulation systems (WDVS). Even when such construction elements are labeled as “free of thermal bridges”, they do not meet the current insulation regulations of system components of the same materials.

All TIE system elements have clear rectangular and right-angled lines. This allows the facade builder to easily install his insulation panels around the TIE elements already installed by the electrician, without any gaps.

Adapting the individual installation elements to the insulation thickness of the facade is possible without any great effort using the removable plates.

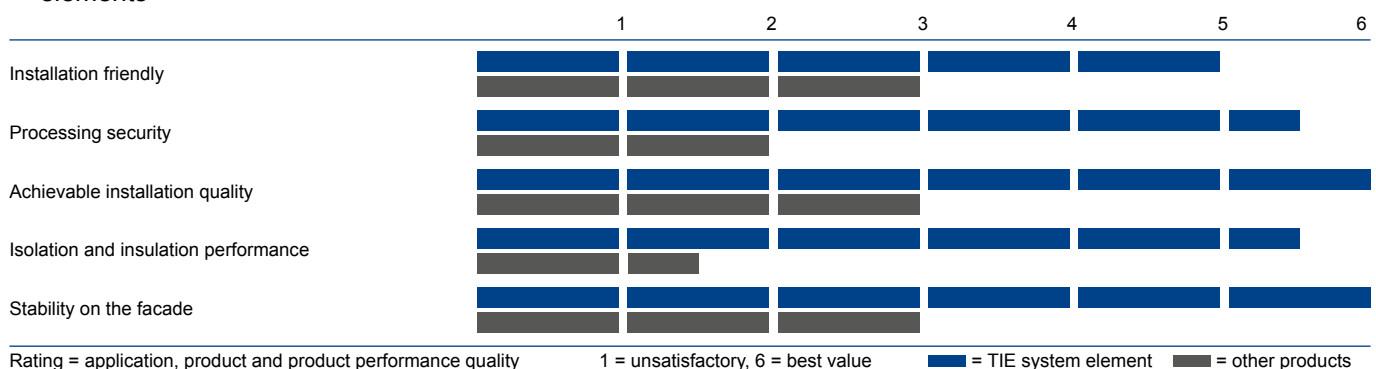
All our system elements are equipped with our well-known device installation sockets. All system elements are available with an insulation thickness of respectively 100–140 mm and 160–200 mm (220–260 and 260–300 mm available upon request). The TIE system elements are attached to the facade with a special hybrid adhesive; the universal device bracket, for devices up to 80 kg, is also mounted to the facade using the universal frame anchors provided.

The thermally insulated electrical system is currently the most efficient electrical installation element for insulated facades. TIE system elements are absolutely free of thermal bridges and are made of the same insulating material as the entire facade insulation. If all electrical installation is professionally carried out with TIE system elements, there will be no discoloration or condensation build-up on the facade and, therefore, no mold. Professionally installed TIE system elements allow for a system warranty in the insulation composition of a building shell.

NEW: Up to 300 mm insulation thickness available upon request!

TIE system to competitive products – the comparison

- TIE system elements are made of the same insulating material as the facade insulation
- All TIE system elements have the same insulation thickness and the same insulation quality as the facade insulation
- All TIE system elements are characterized by a generous mounting surface and high stability for a variety of electrical installations on an insulated facade. Electrical switches, power sockets, lights, motion detectors, wind meters, cameras, alarm systems, spot lights and satellite dishes among others, can be attached to TIE system elements

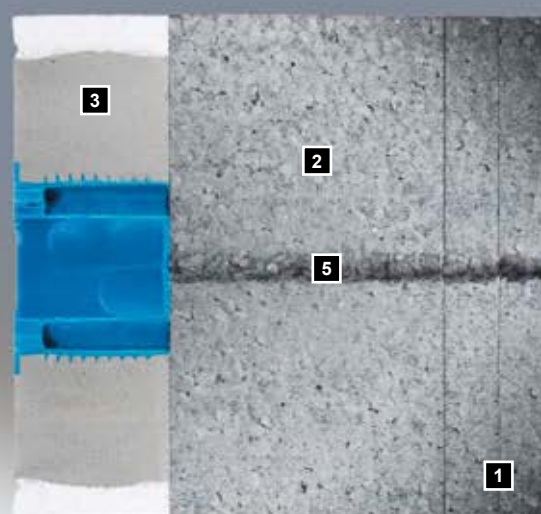
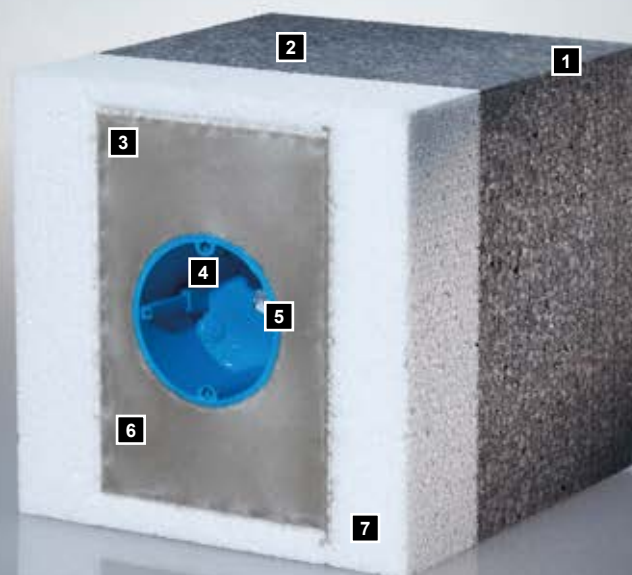


Advantages at a glance

- Significant time and cost savings
- Quick and easy installation
- No additional sealing or insulating work required
- Versatile mounting options
- With corner element and device support up to 80 kg load capacity
- Homogeneous, thermal bridge-free compact facade
- High inherent and overall stability
- No discoloration and no condensation on the facade, no mold or algae build-up
- Completely integrated in the facade
- 20 mm detachable plates

Construction of TIE system elements

- 1** Available insulation thicknesses from 100–140 mm and from 160–200 mm (220–240 and 260–300 mm available upon request), insulation thickness adjustment with individually detachable 20 mm plates
- 2** Neopor[®] 15 insulating material with increased insulating properties to compensate for insulating loss through the device socket
- 3** Polyurethane insulating material (2-component rigid foam)
- 4** Integrated device socket, junction box or universal device support
- 5** Pre-drilled Ø 10 mm cable duct
- 6** Installation ready material, which can hold Spax screws, for example
- 7** Insulation material EPS 20 white





TIE System – the right element for every application

TIE system elements are the ideal solution for all electrical installations on thermally insulated building facades such as switches and power sockets, lights, motion detectors, thermometers, wind meters, cameras, security systems, speakers, satellite dishes and neon signs.

In addition, TIE system elements are characterized by a generous mounting surface and high stability for a variety of electrical installation applications. The simple and efficient installation of the elements is one convincing advantage. Another is the quick and uncomplicated attachment of the insulation panels around the rectangular TIE system elements in the compact facade. The design of the TIE system elements makes easy integration in the thermal insulation system (WDVS) possible.

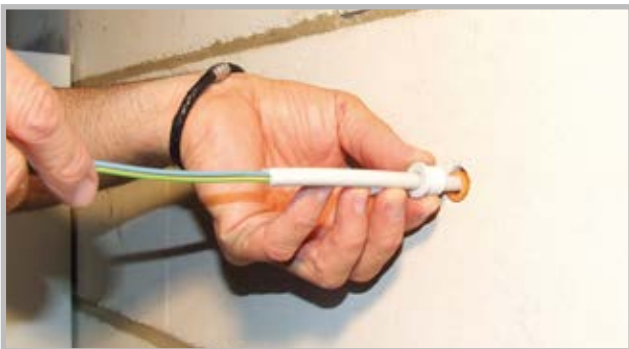
Easy and quick installation



1. Adjust the insulation thickness, therefore, detach 20 mm of the insulation panel.



2. Cut the installation pipe flush to the wall.



3. Seal the installation pipe with the windproof sealing plug (included in the delivery).



4. Apply a thin (5-6mm) bead shaped amount of the TIE hybrid adhesive.



5. Insert the pipe in the pre-drilled duct.



6. Press on the element – adheres after approx. 2 min.



The Price breaker!



Video

TIE 2.0 Thermofix Multi-function device socket

Through our fully-automatic manufacturing process and new tools, the elements are more stable and, above all, at an unbeatable price.

- Thermofix device socket, single and device support plate up to 180 NM
- For EPS facade insulation with insulation thickness 80 – 200 mm
- System parts with fixed integrated multi-function socket for power sockets and switches according to DE, CH and FR standards
- Included in delivery: additional device support plate with load capacity up to 12 kg for direct wall mounting, screw on with device socket and pipe fittings M20 (E07) and M25 (E08)
- Pre-drilled cable duct Ø 10 mm
- Material: PU

Article no.	Type	Model	H x W x D (mm)	SU	CB	PL
7810041	EPS20-MULTI	for 80–200 mm insulation	184 x 184 x 205	1	12	192



TIE device socket, single

- For EPS facade insulation with insulation thickness: 100–300 mm
- System parts with fixed integrated device socket E 115
- Delivery with pipe fittings M20 (E07) and M25 (E08)
- Pre-drilled cable duct Ø 10 mm
- Material: PU

Article no.	Type	Model	Socket depth (mm)	H x W x D (mm)	SU	CB	PL
7810015	EPS14-115	for 100–140 mm insulation	47	194 x 194 x 145	1	48	192
7810021	EPS20-115	for 160-200 mm insulation	47	194 x 194 x 205	1	48	192
7810027	EPS24-115*	for 220-240 mm insulation	47	194 x 194 x 245	1	36	144
7810033	EPS30-115*	for 260-300 mm insulation	47	194 x 194 x 305	1	36	144

*EPS24-115 and EPS30-115 on request. Delivery time approx. 3 weeks.



TIE device sockets, double

- For EPS facade insulation with insulation thickness: 100–300 mm
- System parts with fixed integrated device socket E 118
- Delivery with pipe fittings M20 (E07) and M25 (E08)
- Pre-drilled cable duct Ø 10 mm
- Material: PU

Article no.	Type	Model	Socket depth (mm)	H x W x D (mm)	SU	CB	PL
7810017	EPS14-118	for 100–140 mm insulation	47	194 x 194 x 145	1	48	192
7810023	EPS20-118	for 160-200 mm insulation	47	194 x 194 x 205	1	48	192
7810029	EPS24-118*	for 220-240 mm insulation	47	194 x 194 x 245	1	36	144
7810035	EPS30-118*	for 260-300 mm insulation	47	194 x 194 x 305	1	36	144

*EPS24-118 and EPS30-118 on request. Delivery time approx. 3 weeks.



TIE junction box

- For EPS facade insulation with insulation thickness: 100–300 mm
- System parts with fixed integrated junction boxes E 116, dimensions 104 x 104 mm
- Delivery with pipe fittings M20 (E07) and M25 (E08)
- Pre-drilled cable duct Ø 10 mm
- Material: PU

Article no.	Type	Model	H x W x D (mm)	SU	CB	PL
7810016	EPS14-116	for 100–140 mm insulation	194 x 194 x 145	1	48	192
7810022	EPS20-116	for 160-200 mm insulation	194 x 194 x 205	1	48	192
7810028	EPS24-116*	for 220-240 mm insulation	194 x 194 x 245	1	36	144
7810034	EPS30-116*	for 260-300 mm insulation	194 x 194 x 305	1	36	144

*EPS24-116 and EPS30-116 on request. Delivery time approx. 3 weeks.



TIE device support, up to 20 kg

- For EPS facade insulation with insulation thickness: 100–140 mm, 160–200 mm
- System part T20 load capacity for attachment parts up to 20 kg
- Delivery with pipe fittings M20 (E07) and M25 (E08)
- Installation-ready mounting surface, thickness 220 kg/m³, size 110 x 160 mm
- Pre-drilled cable duct Ø 10 mm
- Support element: Ø outside 85 mm
- Material: PU

Article no.	Type	Model	Deep support (mm)	H x W x D (mm)	SU	CB	PL
7810019	EPS14-T20	for 100–140 mm insulation	47	194 x 194 x 145	1	48	192
7810025	EPS20-T20	for 160-200 mm insulation	47	194 x 194 x 205	1	48	192
7810031	EPS24-T20*	for 220-240 mm insulation	47	194 x 194 x 245	1	36	144
7810037	EPS30-T20*	for 260-300 mm insulation	47	194 x 194 x 305	1	36	144

*EPS24-T20 and EPS30-T20 upon request. Delivery time approx. 3 weeks.



TIE device support, up to 80 kg

- For EPS facade insulation with insulation thickness: 100–140 mm, 160–200 mm
- System part T80 load capacity for attachment parts up to 80 kg, mounting screws included in delivery
- Delivery with pipe fittings M20 (E07) and M25 (E08), two universal frames, anchors with screws and washers, two PU sealing plugs
- Installation-ready mounting surface, thickness 220 kg/m³, size 194 x 194 mm
- Support element: Ø outside 85 mm
- Material: PU

Article no.	Type	Model	Deep support (mm)	H x W x D (mm)	SU	CB	PL
7810020	EPS14-T80	for 100–140 mm insulation	47	250 x 250 x 145	1	24	96
7810026	EPS20-T80	for 160-200 mm insulation	47	250 x 250 x 205	1	24	96
7810032	EPS24-T80*	for 220-240 mm insulation	47	250 x 250 x 245	1	18	72
7810038	EPS30-T80*	for 260-300 mm insulation	47	250 x 250 x 305	1	18	72

*EPS24-T80 and EPS30-T80 on request. Delivery time approx. 3 weeks.





TIE Corner Element

- For EPS facade insulation with insulation thickness: 100–300 mm
- Delivery with pipe fittings M20 (E07) and M25 (E08)
- Installation-ready mounting surface, thickness 220 kg/m³, size 100 x 100 mm
- Pre-fabricated pipe inlet Ø 20 mm
- Load capacity up to 12 kg
- Material: PU

Article no.	Type	Model	H x W x D (mm)	SU	CB	PL
7810018	EPS14-ECK	for 100–140 mm insulation, device support for corner mounting	140 x 450 x 145	1	32	128
7810024	EPS20-ECK	for 160-200 mm insulation, device support for corner mounting	140 x 450 x 205	1	32	128
7810030	EPS24-ECK*	for 220-240 mm insulation, device support for corner mounting	140 x 450 x 245	1	17	68
7810036	EPS30-ECK*	for 260-300 mm insulation, device support for corner mounting	140 x 450 x 305	1	16	64

*EPS24-ECK and EPS30-ECK on request. Delivery time approx. 3 weeks



TIE Hybrid adhesive

- Adhesion time 1–2 Min.
- Cured after only 24 hours
- Adequate for approx. 12 system elements

Article no.	Type	Model	SU	CB	PL
7810014	251-KL	Hybrid adhesive, 310 ml	1	20	360



TIE Styrocutter

The mobile device for quick use! The professional hand cutter for insulation and insulating boards made of Styrodur, Styropor and polystyrene-hard foam, is the ideal addition to large filament cutters.

- Delivery includes blades and accessories in a practical carrying case
- 16-level regulator for cutting temperature
- 3 m long power cable with euro plug

Article no.	Type	Model	SU	CB	PL
7820001	253-SC	TIE Styrocutter including 200 mm blade in a practical carrying case	1	1	500
7820002	253-SC-EK	Replacement blades 200 mm	1	1	5,000

TIE System Accessories

TIE mounting bracket set

As an alternative to quick glue mounting, we now also offer a mounting bracket which can be attached with nails or screws.

- Bracket set for attaching with nails or screws
- Material: Steel

Article no.	Type	Model	SU	CB	PL
7810042	252-WK	TIE mounting bracket, 2 pieces in set	1	10	4,000



Insulation anchor

For subsequent mounting of attachments such as doorbells, lamps, mailboxes, drainpipes and motion detectors in an existing WDVS.

- Material: PA, recyclable
- Can be rotated with a 5mm Allen wrench

Article no.	Type	Model	SU	CB	PL
7820004	DSD50	Insulation anchor 50 mm length, Support plate Ø 28 mm	25	750	30,000
7820003	DSD85	Insulation anchor 85 mm length, Support plate Ø 28 mm	25	400	19,200





Connection terminals

- Material: Nickel-plated brass

Article no.	Type	Model	SU	CB	PL
7510006	ASK1	For rod/cross ground, single, for round conductor 8–10 mm ²	10	200	4,800



Bath area grounding terminals

The contact pins for proper grounding of bathtubs and showers.

- Connection possibility for round conductors up to 16 mm²
- Material: Nickel-plated brass
- Bolt thread M6

Article no.	Type	Model	SU	CB	PL
7510007	BEK16	For round conductors up to 16 mm ² , with bolt thread M6	10	100	16,000



Grounding strap clamps

Grounding strap clamp according to VDE 0190/5.73 for galvanized steel and copper pipes.

- Material: Clamp strap stainless steel 1.4301, clamp body steel

Article no.	Type	Model	SU	CB	PL
7510008	EBS1	$\frac{1}{8}$ – $1\frac{1}{2}$ " for 2.5–16 mm ² connection, installed	10	200	6,400
7510009	EBS2	$\frac{1}{8}$ – $\frac{3}{8}$ " for 2.5–16 mm ² connection, installed	10	200	6,400
7510010	EBS4	$\frac{1}{8}$ – 4" for 2.5–16 mm ² connection, installed	10	200	6,400



Grounding pipe clamps

- Material: Nickel-plated copper

Article no.	Type	Model	SU	CB	PL
7510011	ERS1/2	$\frac{1}{2}$ " (18–22 mm) with connection terminal	10	200	8,000
7510012	ERS1/4	$\frac{1}{4}$ " (13–15 mm) with connection terminal	10	200	8,000
7510013	ERS3/8	$\frac{3}{8}$ " (15–18 mm) with connection terminal	10	200	8,000

Potential compensation rail

Potential compensation rail according to VDE 0618, part 1.

- 7 terminals for cable cross sections 2.5–16 mm²
- For 1 grounding strap 30 x 3.5 mm
- For 1 solid round conductor Ø 7–10 mm (lightning protection)
- Attachment possibility through 4 long holes in the plastic base
- Robust, sealable plastic cover to snap on
- Material: PA6, recyclable



Article no.	Type	Model	SU	CB	PL
7510003	PAS01	For grounding strap 30 x 3.5 mm, round conductor Ø 7–10 mm, 7 connections 2.5–16 mm ²	1	50	2,000

Simply strong!



Fastening material

**Quick and easy to plug-in,
won't throw you off!**

CMS - Cable Management System

Installers can now leave their tools at home. Because the new **f-tronic®** CMS product can be installed simply by hand. How can that be possible? Thanks to a simple snap system that needs nothing more than a Ø 6 mm hole, for all fastening systems. No matter whether for surface or flush mount, for maximum flexibility.

Advantages offered by the new CMS products "Made in Germany": Extremely easy handling without changing tools, significant time savings during assembly and an uncomplicated installation and attachment. You could also say: Select terminal, snap in, finished!

Within this product range, each order is delivered in a resealable bag with a tamper-evident closure.

- Work time and cost savings through quick and easy installation
- Secure hold thanks to tensile strength up to 40 kg
- UV stabilized
- Halogen free
- Working temperature range -20°C - +84°C
- Up to 750°C filament
- Each product in a resealable bag
- All products require a 6 mm drilled diameter

Cable Management System.....84

The cost saving example:

- One working hour costs on average a minimum of 25-30€
- An average sized construction site can quickly add up to over 10,000 parts installed.
- Time saving per part: approx. 30 seconds
- Time savings using the CMS, approx. 100 hours and therefore a very considerable cost saving of 2,500-3,000€ per construction site



The CMS from **f-tronic®**: DRILL - PLUG IN - STRONG!



Plug-in tabs

- For easy fastening of single cables, bundled cables and flexible pipes
- All sizes area also available in black
- In resealable bag with tamper-proof closure
- For 6 mm drilled diameter
- Material: PP, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7440012	CMS1	Plug-in tab, clamping range 3-13 mm	gray	200	3,000	192,000
7440037	CMS1S	Plug-in tab, clamping range 3-13 mm*	black	200	3,000	192,000
7440013	CMS2	Plug-in tab, clamping range 6-20 mm	gray	200	2,000	128,000
7440038	CMS2S	Plug-in tab, clamping range 6-20 mm*	black	200	2,000	128,000
7440014	CMS3	Plug-in tab, clamping range 8-28 mm	gray	100	1,500	96,000
7440039	CMS3S	Plug-in tab, clamping range 8-28 mm*	black	100	1,500	96,000
7440015	CMS4	Plug-in tab, clamping range 20-40 mm	gray	100	1,000	64,000
7440040	CMS4S	Plug-in tab, clamping range 20-40 mm*	black	100	1,000	64,000

*UV stabilized



Double Plug-in anchor

- For easy fixation of two parallel cables and pipes
- In resealable bag with tamper-proof closure
- For 6 mm drilled diameter
- Material: PP, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7440016	CMS11	Double Plug-in anchors, clamping range 4-12 mm for cable	gray	200	2,000	128,000
7440017	CMS12	Double Plug-in anchors, clamping range 20-25 mm for pipes	gray	100	1,500	96,000
7440018	CMS13	Double Plug-in anchors, clamping range 25-32 mm for pipes	gray	100	1,000	64,000



Clamping bracket

- For aligned installation of cables
- With gripping lip for easy insertion or re-working of cables
- In resealable bag with tamper-proof closure
- For 6 mm drilled diameter
- Material: PA6, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7420017	CMS9	Clamping bracket for up to 10 cables	gray	50	800	16,000
7420018	CMS10	Clamping bracket for up to 20 cables	gray	50	600	12,000



Multi-cable bracket

- For laying cable bundles
- Universal fastening with system anchor CMS5-8 or with screws
- Type CMS15 for wall and ceiling attachment
- For 6 mm drilled diameter
- Material: PA6, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7430007	CMS15	Multi-cable bracket for up to 15 cables	gray	50	400	8,000
7430008	CMS30	Multi-cable bracket for up to 30 cables	gray	25	250	5,000





New!



System anchor

- For fastening multi-cable bracket CMS15-30
- In resealable bag with tamper-proof closure
- For 6 mm drilled diameter
- Material: PA6, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7440024	CMS5	System anchor, anchor length 11mm	gray	100	2,000	128,000
7440025	CMS6	System anchor, anchor length 27mm	gray	100	1,500	96,000
7440026	CMS7	System anchor, anchor length 42mm	gray	100	1,000	64,000
7440027	CMS8	System anchor, anchor length 80mm	gray	100	600	38,400

New!



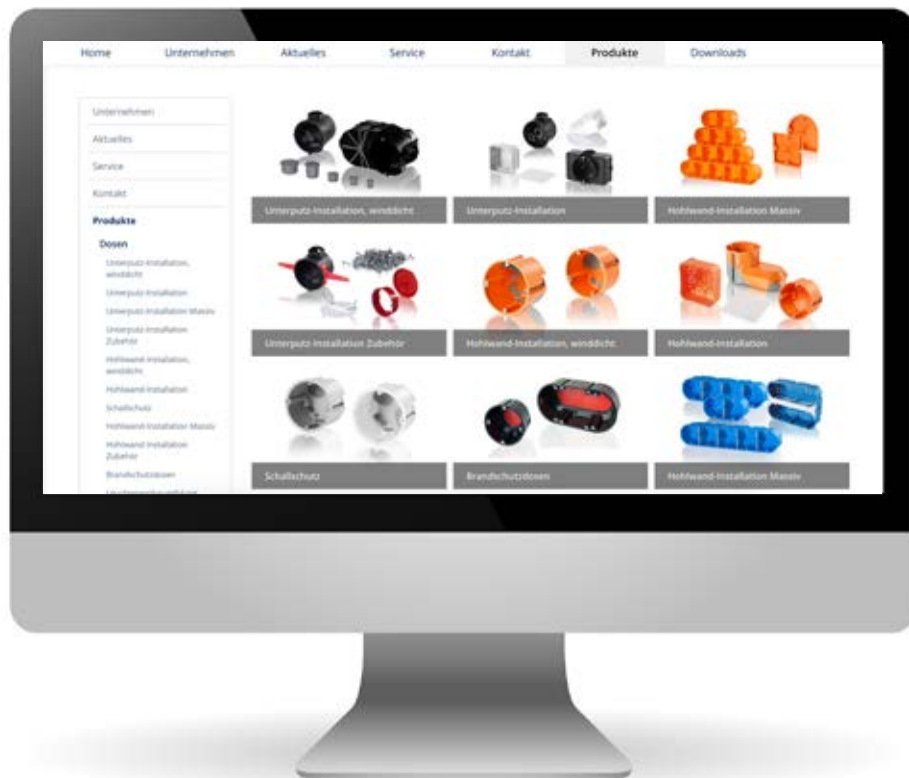
Cable laying rail

- Installation aid for cables and pipes (M16, M20, M25)

Article no.	Type	Model	Color	SU	CB	PL
7390084	KVS	Cable laying rail	gray (silver color)	1	-	-



Video



www.f-tronic.de/produkte/

Over 650 products in our product range

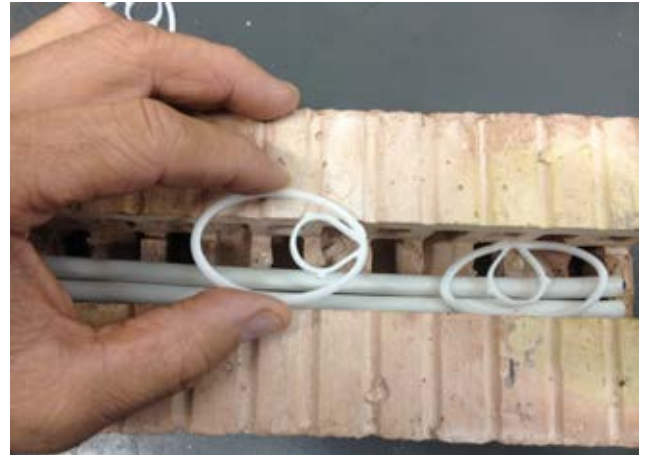
Made in Germany

The F-Clip

Laying cables and pipes can often be a test of patience as both, due to their delivered form (drum goods), do not adequately hold in the provided masonry slots. For precisely for these time consuming applications, **f-tronic®** delivers a simple but compelling tool: the F-Clip.

While conventional installation requires hammering (nail clamps, etc.), the F-Clip allows cables and pipes to be attached to the wall with one hand. Especially when working with difficult masonry such as reinforced concrete or brick, the F-Clip offers you a clear advantage. The white color does not show through the applied plaster and the installation material is held securely in place.

This development from **f-tronic®** holds cables and pipes up to 60 mm in place – without nails, no danger of injury and no additional tools – one hand is enough.



Advantages at a glance

- Fast and tool-free cable attachment in masonry slots up to 60 mm
- High clamping force
- Does not shine through the plaster thanks to its neutral color
- No possibility of cable damage
- Easy installation thanks to the practical finger loop
- Significant reduction of installation time - 50% quicker!

HALOGEN FREE



F-Clip

- Halogen free
- Material: POM, recyclable

Article no.	Type	Model	SU	CB	PL
7410003	F-Clip	Fixing clip for pipes and cables to slot widths of 60 mm	50	6,000	96,000

Multi-cable bracket

- Installation possible with or without universal bracket
- With quick-release fastener for quick and easy allocation
- High material flexibility
- Material: Polyamide, flame retardant
- Halogen free
- Material: PA6, recyclable

Article no.	Type	Model	SU	CB	PL
7430001	KSH15	15 x NYM 3 x 1,5 mm ²	50	400	8,000
7430002	KSH30	30 x NYM 3 x 1,5 mm ²	25	250	5,000
7430003	KSH30B	30 x NYM 3 x 1.5 mm ² , flush to wall	20	320	6,400
7430004	UH1	Universal bracket for KSH15 and KSH30	50	3,000	48,000



Nail washer

- With hardened, galvanized nail
- Material: PP, recyclable

Article no.	Type	Model	SU	CB	PL
7440001	NS28/230	Nail washer with installed steel nail, 28 mm Ø, nail 2 x 30 mm	100	3,000	96,000
7440002	NS28/240	Nail washer with installed steel nail, 28 mm Ø, nail 2 x 40 mm	100	3,000	96,000
7440003	NS28/250	Nail washer with installed steel nail, 28 mm Ø, nail 2 x 50 mm	100	3,000	96,000
7440004	NS35/340	Nail washer with installed steel nail, 35 mm Ø, nail 3 x 40 mm	100	3,000	48,000
7440005	NS35/350	Nail washer with installed steel nail, 35 mm Ø, nail 3 x 50 mm	100	3,000	48,000
7440006	NS35/360	Nail washer with installed steel nail, 35 mm Ø, nail 3 x 60 mm	100	3,000	48,000
7440007	NS35/370	Nail washer with installed steel nail, 35 mm Ø, nail 3 x 70 mm	100	3,000	48,000





Clamping bracket

- Flat design for a low installation height
- Wide and sturdy brackets with gripping lip for easy insertion or refitting
- Easy and quick installation with nails or nail anchors, mounting holes Ø 6 mm
- High material flexibility
- Material: PA6, flame retardant, recyclable
- Halogen free

Article no.	Type	Model	Color	SU	CB	PL
7420011	FT8	for 8 x NYM 3 x 1.5 mm ²	gray	50	1,200	24,000
7420007	FT10	for 10 x NYM 3 x 1,5 mm ²	gray	50	800	16,000
7420009	FT16	for 16 x NYM 3 x 1,5 mm ²	gray	50	600	12,000

The robust variety!





Industrial Housings IP 66

With robust PVC industrial housings, **f-tronic**® offers a solution for application areas in which oil, dust and moisture, or a harsh industrial atmosphere, make standard electrical installations insufficient: such as in industrial and production warehouses, workshops, greenhouses, farms, etc.

With our selection of different housing sizes, some with transparent covers, and an extensive accessory program, we have the appropriate design for virtually any application. All housings have a circumferential seal and insulating plugs for wall mounting screws which meet the high protection rating IP 66.

PVC is a low-cost, industrial grade plastic, that has been in use for decades in many industrial applications, especially in building technology such as: cable attachment systems, cable ducts, housing technology and plug connections.

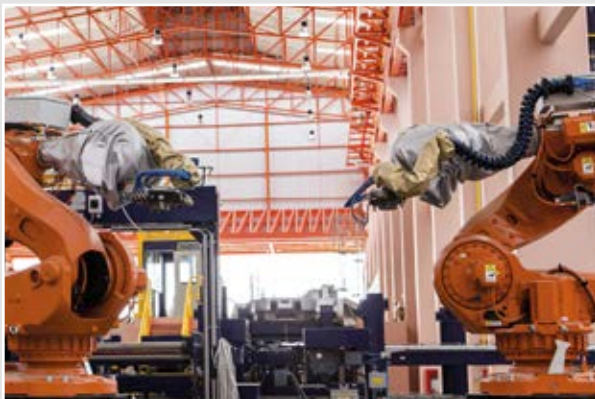
- The right size for every application: 15 models in nine different sizes
- Designed for use in harsh industrial environments: Circumferential seal and protection rating IP 66
- Custom processing according to customer requirements

Industrial housings..... 94

PVC housings	97
PVC housings accessories.....	98



All housings are temperature resistant from -20 to +70 °C in protection rating IP 66



Maximum protection for use at the highest level: f-tronic® Industrial housings!

With the new industrial standard 4.0, IT is becoming more and more prevalent in industrial processes resulting in a steady increase in the decentralization of controllers, sensors, measuring points and actuators. This increasing decentralization requires smaller and more robust industrial housings.

Also, highly sensitive industrial technology is used which can only provide maximum performance with the necessary protection from dust, oil and moisture. The perfect solution for this: Industrial housings from **f-tronic®**. These housings are extremely versatile, protect reliably and provide the necessary order in industrial environments such as:

- Machine and plant engineering
- PC and data technology, also for industrial applications
- Automation technology
- Communication and MSR technology
- Food and beverage industry
- Agriculture
- Traffic engineering

f-tronic® offers a wide range of industrial housings that set the standard. Available in various models and sizes, they protect sensitive technical installations and guarantee safe and reliable production.

With our industrial housings we make a small contribution to the big picture – we look forward to the innovation of the future.

PVC Industrial Housings



PVC Industrial housings, cover in housing color

- Circumferential seal
- IP 66 protection rating
- Security against mechanical damage: IK 05
- Temperature resistant: -20 to +70 °C
- Insulating plugs for wall mounting
- Self extinguishing
- Including cover in housing color

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
8110001	IBP1	Housing + cover made of PVC	105 X 105 X 66	gray / gray	4	112	1,344
8110002	IBP2	Housing + cover made of PVC	110 X 75 X 60	gray / gray	5	205	2,460
8110003	IBP3	Housing + cover made of PVC	135 X 74 X 72	gray / gray	6	132	1,584
8110004	IBP4	Housing + cover made of PVC	170 X 105 X 82	gray / gray	2	66	792
8110005	IBP5	Housing + cover made of PVC	170 X 135 X 85	gray / gray	2	48	576
8110006	IBP6	Housing + cover made of PVC	220 X 170 X 107	gray / gray	1	25	300
8110007	IBP7	Housing + cover made of PVC	270 X 220 X 105	gray / gray	1	14	168
8110008	IBP8	Housing + cover made of PVC	313 X 253 X 116	gray / gray	1	10	120
8110009	IBP9	Housing + cover made of PVC	340 X 270 X 105	gray / gray	1	9	108



PVC Industrial housings, transparent cover

- Circumferential seal
- IP 66 protection rating
- Security against mechanical damage: IK 05
- Temperature resistant: -20 to +70 °C
- Insulating plugs for wall mounting
- Self extinguishing
- Including transparent cover

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
8110010	IBP1T	PVC housing + PC cover	105 X 105 X 66	gray / transparent	4	112	1,344
8110011	IBP2T	PVC housing + PC cover	110 X 75 X 60	gray / transparent	5	205	2,460
8110012	IBP3T	PVC housing + PC cover	135 X 74 X 72	gray / transparent	6	132	1,584
8110013	IBP4T	PVC housing + PC cover	170 X 105 X 82	gray / transparent	2	66	792
8110014	IBP5T	PVC housing + PC cover	170 X 135 X 85	gray / transparent	2	48	576
8110015	IBP6T	PVC housing + PC cover	220 X 170 X 107	gray / transparent	1	25	300



Special processing for industrial housings

f-tronic® offers you a fast and easy solution for the mechanical processing of industrial housings. We drill or mill your housings, also in small batches, customized for your application. Just send us a drawing with dimensions for the drilled or milled holes and the type of industrial housings you need - we will create a custom offer.

Please send your request to our sales office
 Telephone +49 6893 / 9483-0
 Fax +49 6893 / 9483-94
 E-Mail info@f-tronic.de





Ventilation insert

- Material: BAY, recyclable

Article no.	Type	Model	Color	SU	CB	PL
8120001	IBP-VI32	M32 – Ø 32 mm	RAL 7035	2	100	1,200
8120002	IBP-VI29	PG29 – Ø 37 mm	RAL 7032	2	100	1,200



Wall mounting straps

- Material: Galvanized and chrome plated steel

Article no.	Type	Model	SU	CB	PL
8120003	IBP-MS	Set 4 pieces	4	250	9,100



Drainage plug

- Guarantees IP 55 protection rating
- Material: PA6, recyclable

Article no.	Type	Model	Color	SU	CB	PL
8120004	IBP-DP	For 9 mm holes	RAL 7035	10	100	8,400

Stepped nipple IP 54

- Guarantees IP 54 protection rating
- Material: PVC

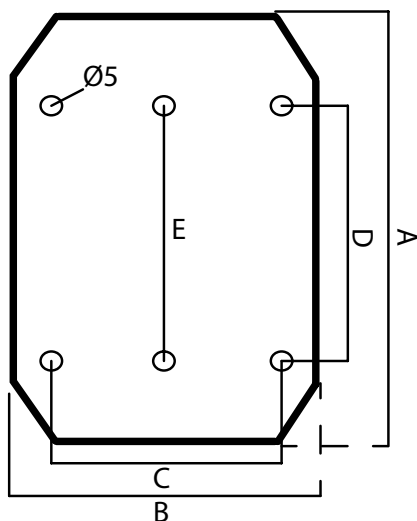
Article no.	Type	Model	Color	SU	CB	PL
7290086	STM25	Stepped nipple M25	gray	20	800	51,200
7290087	STM32	Stepped nipple M32	gray	20	600	38,400
7290088	STM40	Stepped nipple M40	gray	20	400	25,600



Mounting plate

- Material: Sheet metal

Article	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	SU	CB	PL
8120006	IBP-MP1	156	95	-	-	130	1	20	1,000
8120007	IBP-MP2	156	120	65	130	-	1	20	790
8120008	IBP-MP3	160	212	-	-	-	1	20	430
8120009	IBP-MP4	205	156	130	150	-	1	20	460
8120010	IBP-MP5	258	208	161	221	-	1	10	270
8120011	IBP-MP6	295	235	156	216	-	1	10	180
8120012	IBP-MP7	320	250	210	250	-	1	10	150



A real space-saving miracle!



Small distributors

The right distributor for every application

The **f-tronic®** small distributors are unsurpassed in their diversity. Whether it be flush, hollow wall, or surface mounted, communication or damp area distributors – **f-tronic®** has them all! With our small distributor range, we offer you the right product for every application.

The JUMBO and VISION series allow the electrical circuit distribution and the communication application to be combined in the same design.

For installation in damp areas, you have the choice of a robust and resistant distributor with a protection rating IP 65 and a size up to 70 TE.

A high degree of quality is self explanatory, for example the separate neutral conductor terminal fittings to meet the requirements of DIN VDE 0100-410 to additional FI protection.

Small distributors 100

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Surface, hollow wall and flush-mounted distributor series each including a communication distributor



Damp area small distributors

The small distributor JUMBO

The name is the program: Our JUMBO is the small distributor with extra large volume, offering two advantages at once: On the one hand, it takes on more power dissipation thus allowing for real 12 + 2 module positions in up to four rows. On the other hand, the large connection areas provide ample space for a more convenient installation.

Advantages at a glance

- Plus 50% wiring area compared to conventional small distributors: upper connection area 165 mm, lower connection area 145 mm plus lateral wiring areas
- Improved heat dissipation thanks to integrated ventilation slots
- Tension relief possibilities above and below
- Integrated levels to align the masonry box
- Screw-less two-point fastening of the fuse cover
- Modern and convenient terminal technology

12+2 24+4 36+6 48+8



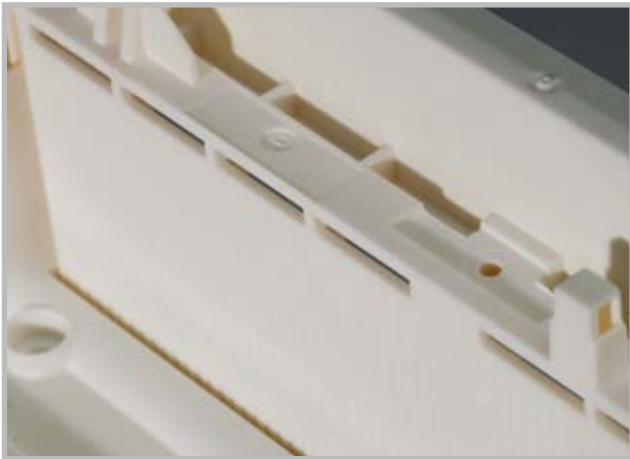
Width mm Exterior dimensions including frame	365	365	365	365
Width mm Niche dimensions for masonry box	359	359	359	359
Width mm Cutout dimension for hollow wall installation	323	323	323	323
Height mm Exterior dimensions including frame	400	525	650	775
Height mm Niche dimensions for masonry box	393	518	643	768
Height mm Cutout dimension for hollow wall installation	360	485	610	735

Strong argument for a strong distributor



TRIPLE POWER SOCKET:

In the JUMBO communication distributor, the hardware components are simply and clearly mounted on a perforated plastic plate. In order to supply the components with mains voltage, the distributor is equipped with a triple power socket with increased contact protection. Here the mains socket can be inserted either horizontally or vertically.



UNIQUE!

The integrated air vents provide for the circulation and dissipation of heat loss. The 165 mm upper and 145 mm lower connection area and additional lateral connection gives you plenty of space for a convenient installation.



With the integrated level in the JUMBO, the masonry box can be used as a template during installation. The 1 and 2 row manifolds of the JUMBO flush installed small distributor series are equipped with a divided PE/N terminal and an additional FI terminal. The 3 and 4 row manifolds are equipped with a continuous PE and N terminal and an additional divided N/N terminal. Due to the three N-potentials (smallest N-potential 14 plug positions 1.5 to 4 mm² and three screw terminals 2.5 to 25 mm²), fitting the power circuit distributor with group FI or FI-LS switches allows the wiring to be easily accomplished. The terminals are arranged in the wiring area in a space saving manner which allows for optimal utilization. The JUMBO is optionally available with screw terminal technology.



Hollow wall anchor set

Combi small distributor JUMBO with plug in terminal for flush and hollow wall installation

- Can be used for flush or hollow wall installation
- PE/N plug in terminals depending on the model
- Enclosed FI additional terminals
- Generous wiring area
- Tension relief possibility
- 12+2 dividing units per row
- For devices up to 63 A
- Including frame and door made of metal
- Packaging can be used as plaster protection
- Material: PS, recyclable / door and frame - steel sheet metal, high quality powder coated
- Frame construction 9 mm

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7250012	JUMBO12+2	1 row, 12+2 module, with metal frame and door	400 x 365 x 98	white	1	1	90
7250017	JUMBO24+4	2 row, 24+4 module, with metal frame and door	525 x 365 x 98	white	1	1	60
7250022	JUMBO36+6	3 row, 36+6 module, with metal frame and door	650 x 365 x 98	white	1	1	45
7250028	JUMBO48+8	4 row, 48+8 module, with metal frame and door	775 x 365 x 98	white	1	1	45
7290079	HWA-SET	Hollow wall anchor set for Jumbo distributors	n.s.		1	10	2,880
7290098	MH-SET	Mounting bracket set for flush installation	n.s.		1	30	2,160

JUMBO accessories available separately, see page 106
 Fitting/accessory table, see page 140



Combi small distributor JUMBO with screw terminal and support frame for flush and hollow wall installation

- Can be used for flush or hollow wall installation
- PE/N screw terminals depending on the model
- Enclosed FI additional terminals
- Generous wiring area
- Tension relief possibility
- 12+2 dividing units per row
- For devices up to 63 A
- Including frame and door made of metal
- Packaging can be used as plaster protection
- Material: PS, recyclable / door and frame - steel sheet metal, high quality powder coated
- Frame construction 9 mm

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7250015	JUMBO12+2-XX	Combi distributor, 1 row, 12+2 module	400 x 365 x 98	white	1	1	90
7250020	JUMBO24+4-XX	Combi distributor, 2 row, 24+4 module, including support frame	525 x 365 x 98	white	1	1	60
7250025	JUMBO36+6-XX	Combi distributor, 3 row, 36+6 module, including support frame	650 x 365 x 98	white	1	1	45
7250031	JUMBO48+8-XX	Combi distributor, 4 row, 48+8 module, including support frame	775 x 365 x 98	white	1	1	45
7290079	HWA-SET	Hollow wall anchor set for Jumbo distributors	n.s.		1	10	2,880
7290098	MH-SET	Mounting bracket set for flush installation	n.s.		1	30	2,160

Fitting/accessory table, see page 140



Flush-mounted small distributor JUMBO with screw terminal

- For flush installation
- PE/N screw terminals depending on the model
- Generous wiring area
- Tension relief possibility
- 12+2 dividing units per row
- For devices up to 63 A
- Including frame and door made of metal
- Packaging can be used as plaster protection
- Material: PS, recyclable
- Frame construction 9 mm



Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7210028	UPV12+2ST	1 row, 12+2 module, with metal frame and door	400 x 365 x 98	white	1	1	90
7210029	UPV24+4ST	2 row, 24+4 module, with metal frame and door	525 x 365 x 98	white	1	1	60
7210030	UPV36+6ST	3 row, 36+6 module, with metal frame and door	650 x 365 x 98	white	1	1	45
7210031	UPV48+8ST	4 row, 48+8 module, with metal frame and door	775 x 365 x 98	white	1	1	45

Fitting/accessory table, see page 140

Hollow wall small distributor JUMBO with screw terminal

- For hollow wall installation
- PE/N screw terminals depending on the model
- Generous wiring area
- Tension relief possibility
- 12+2 dividing units per row
- For devices up to 63 A
- Including frame and door made of metal
- Packaging can be used as plaster protection
- Material: PS, recyclable
- Frame construction 9 mm



Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7230015	HWV12+2ST	1 row, 12+2 module, with metal frame and door	400 x 365 x 98	white	1	1	90
7230016	HWV24+4ST	2 row, 24+4 module, with metal frame and door	525 x 365 x 98	white	1	1	60
7230017	HWV36+6ST	3 row, 36+6 module, with metal frame and door	650 x 365 x 98	white	1	1	45
7230018	HWV48+8ST	4 row, 48+8 module, with metal frame and door	775 x 365 x 98	white	1	1	45

Fitting/accessory table, see page 140



Universal cover strips

- Self-extinguishing up to 850 °C – suitable for all distributor types
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7290032	ADS12W	12 module	white	10	500	16,000
7290031	ADS12GR	12 module	gray	10	500	16,000



TSV

JUMBO accessories

Article no.	Type	Model	SU	CB	PL
7220086	TSV	Door lock with two keys	1	20	8,400
7290097	MK-SET	Masonry claw set (4 piece)	1	10	8,400
7290098	MH-SET	Mounting bracket set for flush installation (4 piece)	1	30	2,160
7290107	VK-SET	Connecting clip set (2 piece)	1	30	5,760
7290079	HWA-SET	Hollow wall anchor set (4 piece)	1	10	2,880
7290090	T+RJUMBO12+2	Door and frame for Jumbo distributor, 1 row	1	12	96
7290091	T+RJUMBO24+4	Door and frame for Jumbo distributor, 2 row	1	12	96
7290092	T+RJUMBO36+6	Door and frame for Jumbo distributor, 3 row	1	12	48
7290093	T+RJUMBO48+8	Door and frame for Jumbo distributor, 4 row	1	12	24



MK-Set



MH-Set



VK-Set



Plug in terminals

Article no.	Type	Model		SU	CB	PL
9910009	SKN17N	N-N Plug in terminal, 3 x 25 mm ² screw in and 14 x 4 mm ² plug in	blue	1	20	1,440
9910010	SKN17PE	PE-N Plug in terminal, 3 x 25 mm ² screw in and 14 x 4 mm ² plug in	blue/yellow	1	20	1,440
9910011	SKN34	N Plug in terminal, 6 x 25 mm ² screw in and 28 x 4 mm ² plug in	blue	1	20	1,440
9910012	SKPE34	PE Plug in terminal, 6 x 25 mm ² screw in and 28 x 4 mm ² plug in	yellow	1	20	1,440
7110238	PEN310	PEN bridge blue, 10 mm ² , 310 mm	blue	1	20	4,320
7110239	N14	N Plug in terminal, 14 pole	blue	1	10	4,000



Screw terminals

Article no.	Type	Model		SU	CB	PL
7290084	PEN143-2	PE/N Terminal, 2 x connections for each 3 x 16 mm ² and 14 x 10 mm ²		1	20	1,440
7290083	PE286-1	PE Terminal, connections for 6 x 16 mm ² and 28 x 10 mm ²		1	20	1,440
7290081	N286-1	N Terminal, connections for 6 x 16 mm ² and 28 x 10 mm ²		1	20	1,440
7290082	NN143-2	NN Terminal, 2 x connections for 3 x 16 mm ² and 14 x 10 mm ²		1	20	1,440
7290002	160030	FI Terminal for 3 x 16 mm ² and 2 x 10 mm ²		1	30	8,400



Triple power socket

- Offers space for 3 euro plug
- Mains socket can be inserted either horizontally or vertically
- Suitable for all **f-tronic®** distributors in the JUMBO and VISION series
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7290113	STECKD3	Triple power socket for f-tronic JUMBO and VISION distributors	white	1	32	1,280



More space for your communication – the JUMBO K

“In order to do justice to the significance of the internet in multi media applications (including telephony), an application-neutral communication cable system may be necessary.“ (DIN 18015 part 2). An installed communication distributor is a configuration criterion for electrical installations carried out according to RAL-RG 678 and thus, a business card for the craft of a future-oriented electrical installation technology.

With the JUMBO K communication distributor for hollow wall and flush installation, **f-tronic®** offers installers and builders a future-oriented and standardized technology to provide multi medial applications such as telecommunications and BK distribution. In addition to the JUMBO distributors, **f-tronic®** offers the communication distributor in 3 and 4 row models that are suitable for flush or hollow wall installation. The communication distributor completes the functionality of our full range of small distributors for electrical circuit distribution. In addition, the installer provides the client with convenient access to the hardware components such as modem, wireless network, router or switch. The supply with the mains voltage is ensured by the standard triple power socket with staggered slots. The space saving use of transformer plugs is easily accomplished thanks to the arrangement of the slots. Clients appreciate tidy solutions such as this from **f-tronic®**. The heat loss generated in the distributor is dissipated through the ventilation slots in the door.

The communication distributor from **f-tronic®** meets all the requirements of DIN 18015-1 to DIN 18015-4. At the same time, it guarantees ease of installation and makes it possible to access the hardware components at any time.

- Plus 50% additional wiring area compared to conventional distributors: upper connection area 165mm, plus lateral wiring areas
- Improved heat dissipation thanks to integrated ventilation slots
- Tension relief possibilities above and below
- Integrated levels to align the masonry box
- Plastic support plate for simple mounting
- Including HWA Set and connecting terminals (2 piece)



Future-oriented installation technology – the JUMBO K



The connection terminal set provided allows for both vertical and horizontal connection. This means that the communication distributor and the electrical circuit distributor can be easily combined.



The patch field integrated at the top allows for a simple installation of patch modules in a "keystone-format".



The hardware components are mounted potential-free on the plastic support plate and supplied with mains voltage over the triple power socket for euro plugs.



The integrated level allows for quick and exact alignment of the distributor.

JUMBO K communication distributor for flush and hollow wall installation

- Door and frame - steel sheet metal, high quality powder coated
- Packaging can be used as plaster protection
- Material: PS, recyclable, patch field - steel
- Frame construction 9 mm

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7250027	JUMBO36K	For flush and hollow wall installation, 3 row, with patch field, mounting plate and triple power socket including HWA and connection terminal set (each 2 piece)	650 x 365 x 98	white	1	1	45
7250033	JUMBO48K	For flush and hollow wall installation, 4 row, with patch field, mounting plate and triple power socket including HWA and connection terminal set (each 2 piece)	775 x 365 x 98	white	1	1	45
7290116	PATCH12	Patch field for simple installation of patch modules in "keystone format"	n.s.	n.s.	1	20	960
7290094	T+R JUMBO36K	Door and frame for Jumbo K 3-Row distributor	n.s.	n.s.	1	12	48
7290095	T+R JUMBO48K	Door and frame for Jumbo K 4-Row distributor	n.s.	n.s.	1	12	24

Fitting/accessory table, see page 140



Our VISION for your installation of tomorrow

This series of surface-mounted small distributors leaves nothing to be desired. Each has seven cable inlet possibilities in the upper, middle and lower connection area significantly simplifying work in the renovation branch. A large wiring area behind the DIN rail is provided of course, as is an additional lateral wiring area. In addition, this distributor series offers a plastic strip in both the upper and lower connection areas for tension relief of the inserted cables. The scope of delivery includes either plug in or screw terminals for the PE and N conductor connections, exceeding the requirements of DIN 43871.

The attractive and equally sturdy device cover offers additional lateral cable inlet openings so that lateral insertion can be easily achieved. In addition to the numerous door systems of steel sheet metal or plastic, the doors can also be optionally fitted with a key lock.

Advantages at a glance

- Large wiring areas
- PE/N plug terminal included in delivery
- Tension relief possibility for inserted cables both above and below
- Rear cable inlet possibility in the upper, middle and lower connection area
- Numerous door systems in metal and plastic

Vision accessories available separately, see page 112

Fittings / accessory table, see page 140

12+2 24+4 36+6 48+8



	APV12+2	APV24+2	APV36+6	APV48+8
Height mm	250	375	515	640
Width mm	305	305	305	305
Depth mm	99	99	99	99

Surface-mounted small distributor VISION with plug in terminal

- 12+2 modules per row
- Insertion possibilities on all sides
- Generous wiring area
- Tension relief possibility
- For devices up to 63 A
- Material: PS, recyclable

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7220044	APV12+2	1 row, 12+2 module, with plug in terminal PE/N and FI terminal, housing without door	250 x 305 x 99	white	1	12	144
7220050	APV24+4	2 row, 24+4 module, with plug in terminal PE/N and FI terminal, housing without door	375 x 305 x 99	white	1	8	96
7220056	APV36+6	3 row, 36+6 module, with plug in terminal PE/N and NN, housing without door	515 x 305 x 99	white	1	6	72
7220061	APV48+8	4 row, 48+8 module, with plug in terminal PE/N and NN, housing without door	640 x 305 x 99	white	1	5	60

Fittings / accessory table, see page 140



Surface-mounted small distributor VISION with screw terminal

- 12+2 modules per row
- Insertion possibilities on all sides
- Generous wiring area
- Tension relief possibility
- For devices up to 63 A
- Material: PS, recyclable

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7220045	APV12+2PEN	1 row, 12+2 module, with screw terminal PE/N, housing without door	250 x 305 x 99	white	1	12	144
7220051	APV24+4PEN	2 row, 24+4 module, with screw terminal PE/N, housing without door	375 x 305 x 99	white	1	8	96
7220057	APV36+6PEN	3 row, 36+6 module, with screw terminal PE/N, housing without door	515 x 305 x 99	white	1	6	72
7220062	APV48+8PEN	4 row, 48+8 module, with screw terminal PE/N, housing without door	640 x 305 x 99	white	1	5	60

Fittings / accessory table, see page 140



HALOGEN
FREE



Door system for surface-mounted small distributor VISION

- The corresponding doors for our surface-mounted small distributor VISION
- White design in glossy plastic or metal
- With snap closure, optionally with door lock
- Right / left placement possible
- Material: Metal door - steel sheet metal, high quality powder coated
- Material: Plastic door - PC, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7220046	APV12+2TM	Metal door for 1 row distributor VISION	white	1	10	560
7220052	APV24+4TM	Metal door for 2 row distributor VISION	white	1	10	320
7220058	APV36+6TM	Metal door for 3 row distributor VISION	white	1	20	160
7220063	APV48+8TM	Metal door for 4 row distributor VISION	white	1	40	160
7220048	APV12+2TW	Plastic door, glossy, for 1 row distributor VISION	white	1	10	560
7220054	APV24+4TW	Plastic door, glossy, for 2 row distributor VISION	white	1	15	480
7220060	APV36+6TW	Plastic door, glossy, for 3 row distributor VISION	white	1	20	160
7220065	APV48+8TW	Plastic door, glossy, for 4 row distributor VISION	white	1	40	160

CE



Triple power socket

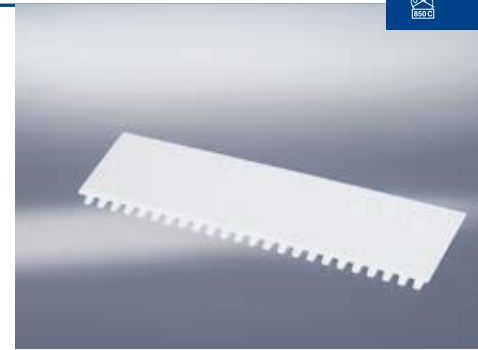
- Offers space for 3 euro plug
- Mains socket can be inserted either horizontally or vertically
- Suitable for all f-tronic® distributors in the JUMBO and VISION series
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7290113	STECKD3	Triple power socket for f-tronic JUMBO and VISION distributors	white	1	32	1,280

Universal cover strips

- Self-extinguishing up to 850 °C – suitable for all distributor types
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7290032	ADS12W	12 module	white	10	500	16,000
7290031	ADS12GR	12 module	gray	10	500	16,000



Door lock with two keys

Article no.	Type	Model	SU	CB	PL
7220086	TSV	Door lock with two keys	1	20	8,400



Plug in terminals

Article no.	Type	Model	SU	CB	PL
9910009	SKN17N	N-N Plug in terminal, 3 x 25 mm ² screw in and 14 x 4 mm ² plug in	1	20	1,440
9910010	SKN17PE	PE-N Plug in terminal, 3 x 25 mm ² screw in and 14 x 4 mm ² plug in	1	20	1,440
9910011	SKN34	N Plug in terminal, 6 x 25 mm ² screw in and 28 x 4 mm ² plug in	1	20	1,440
9910012	SKPE34	PE Plug in terminal, 6 x 25 mm ² screw in and 28 x 4 mm ² plug in	1	20	1,440
7110238	PEN310	PEN bridge blue, 10 mm ² , 310 mm	1	20	4,320
7110239	N14	N Plug in terminal, 14 pole	1	10	4,000



Screw terminals

Article no.	Type	Model	SU	CB	PL
7290084	PEN143-2	PE/N Terminal, 2 x connections for each 3 x 16 mm ² and 14 x 10 mm ²	1	20	1,440
7290083	PE286-1	PE Terminal, connections for 6 x 16 mm ² and 28 x 10 mm ²	1	20	1,440
7290081	N286-1	N Terminal, connections for 6 x 16 mm ² and 28 x 10 mm ²	1	20	1,440
7290082	NN143-2	NN Terminal, 2 x connections for 3 x 16 mm ² and 14 x 10 mm ²	1	20	1,440
7290002	160030	FI Terminal for 3 x 16 mm ² and 2 x 10 mm ²	1	30	8,400

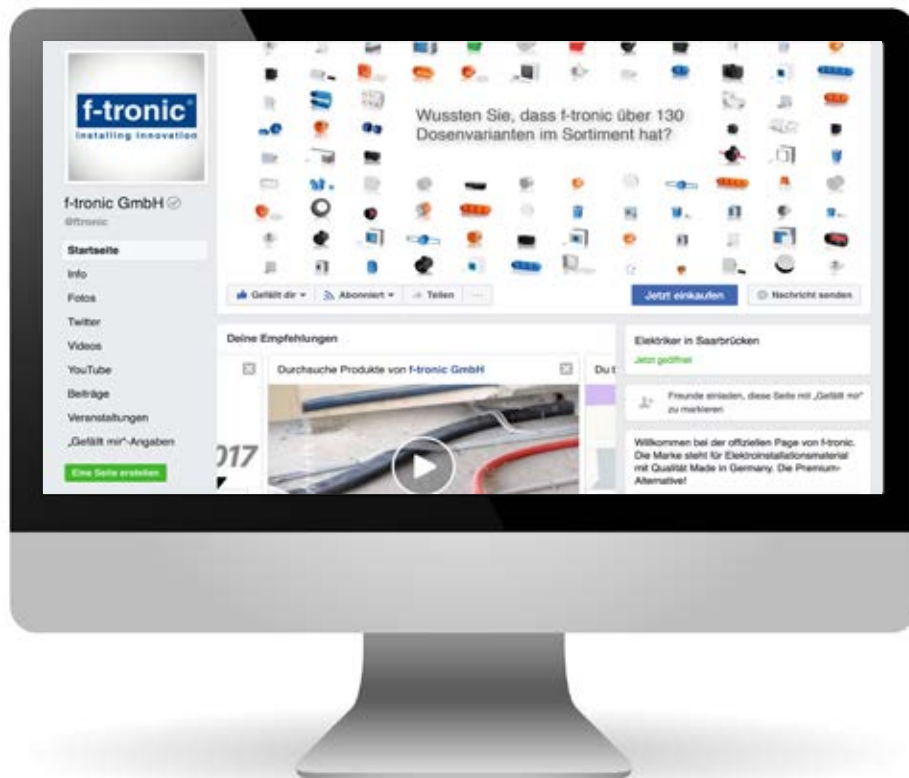




Surface-mounted machine boxes

- For devices up to 63 A
- With back wall
- With integrated standard profile rail
- Material: PS, recyclable

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7260010	KV02	2 module without terminals	140 x 50 x 65	white	1	80	2,560
7260011	KV02K	2 module with PE/N terminals	140 x 50 x 65	white	1	80	2,560
7260012	KV04	4 module without terminals	160 x 94 x 65	white	1	84	1,344
7260013	KV04K	4 module with PE/N terminals	160 x 94 x 65	white	1	84	1,344
7260014	KV06	6 module without terminals	160 x 140 x 65	white	1	56	896
7260015	KV06K	6 module with PE/N terminals	160 x 140 x 65	white	1	56	896



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Offers you current news around the clock about events, new products and a look behind the scenes.

VISION K

The DIN 18015 part 2 gives craftsmen a clear directive to take with them: "In order to do justice to the significance of the internet in multi media applications (including telephony), an application-neutral communication cable system may be necessary." (DIN 18015 part 2). A communication distributor is a configuration criterion for an electrical installation carried out according to RAL-RG 678 and thus, a business card for the craft of a future-oriented electrical installation technology.

With the VISION K communication distributor **f-tronic®** offers installers and clients a future-oriented and standardized technology to provide multi medial applications such as telecommunications and BK distribution in an AP distributor. In addition to the VISION electrical circuit distributor, **f-tronic®** offers the communication distributor in 3 and 4 row models for surface-mounted installation.

The patch field integrated at the top allows for a simple installation of patch modules. The hardware components, such as modem, wireless network router or switch, are mounted potential-free on the plastic support plate. The installed hardware components are supplied with mains voltage over the standard triple power socket. The optimum arrangement allows for use of the space saving transformer plugs. The communication distributor completes the functionality of our full range of small distributors for electrical circuit distribution. The heat loss generated in the distributor is dissipated through the ventilation slots in the door.

The communication distributor from **f-tronic®** meets all the requirements of DIN 18015-1 to DIN 18015-4. At the same time, it guarantees ease of installation and makes it possible to access the hardware components at any time.

- Large wiring areas
- Tension relief possibility for inserted cables both above and below
- Rear cable inlet possibility in the upper, middle and lower area
- Plastic support plate for simple mounting





The hardware components are mounted potential-free on the plastic support plate and supplied with mains voltage over the triple power socket for euro plugs.



The patch field integrated at the top allows for a simple installation of patch modules in a "keystone-format"

Surface-mounted communication distributor VISION K

- Material: PS, recyclable
- Including door and frame - steel sheet metal, high quality powder coated
- Patch field - steel

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7220087	APV36K	for AP installation 3 row, with patch field, mounting plate, triple power socket and a metal door	515 x 305 x 99	white	1	6	72
7220088	APV48K	for AP installation 4 row, with patch field, mounting plate, triple power socket and a metal door	640 x 305 x 99	white	1	5	60
7220166	APVTK36TM	Metal door for VISION K 3 row	n.s.	white	1	12	48
7220167	APVTK48TM	Metal door for VISION K 4 row	n.s.	n.s.	1	12	24
7290113	STECKD3	Triple power socket for f-tronic JUMBO and VISION distributors	n.s.	white	1	32	1,280
7290116	PATCH12	Patch field for simple installation of patch modules in "keystone format"	n.s.	n.s.	1	20	960

Fittings / accessory table, see page 140



Robust damp area small distributors IP 65

With these modular small distributors, we offer you a robust, resistant product for difficult installation environments in industrial plants, workshops, basements or garages. The housings are suitable for protected outside areas and have the corresponding protection rating. For use in unprotected outdoor areas, the housing must be protected from weather conditions such as rain, ice, snow or UV rays by installing it in an outdoor housing.

The IP 65 EN 60 529/DIN VDE 0470 distributors are made of impact-resistant plastic and are suitable for devices up to 63 A.

Multiple system housings can be combined as desired. The models APV14AR to APV56AR are available with 150 mm extra connection space when you need additional room for supply and output wiring. These AR models are also ideal for equipment with built-in sockets for use as robust power socket distributors.

Advantages at a glance

- Generous space for a convenient installation
- From a compact 4 to spacious 70 module units
- Also available with extra connection area
- With integrated level to align the distributor during installation
- For industrial warehouses, workshops, garages and cellars
- Standard cable cover from APV 14



Damp area distributor IP 65

Also available with 150 mm extra connection area. The 1 to 4 row distributors of the AR series are fitted with an additional connection area.



Available from a compact 4 to 70 subunits – the robust damp area-small distributors from **f-tronic**[®].



Additional connection area with the AR models. Suitable for the construction of power socket distributors.



The integrated level allows for quick alignment of the distributor during installation.





Damp area small distributors IP 55

- Splash proof model
- Small distributor for devices up to 63 A
- Bottom and top made of high-quality plastic
- With a door made of transparent, impact and weather resistant plastic
- Ideal for difficult installation environments in industrial plants, workshops, basements or garages
- For use in protected outside areas with the corresponding protection rating
- For use in unprotected outdoor areas, the housing must be protected from weather conditions by installing it in an outdoor housing
- Including PE/N terminals
- Including double membrane nozzle M20/M25
- Material: PS, recyclable / door: PC clear, recyclable

Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7240050	KV04WDKE	1 row, 4 module, with cable inlets M20	180 x 125 x 90	gray	1	50	600
7240051	KV06WDKE	1 row, 6 module, with cable inlets M20	180 x 160 x 90	gray	1	40	480
7240052	KV10WDKE	1 row, 10 module, with cable inlets M20/M25	180 x 230 x 90	gray	1	25	300

Damp area small distributors

CE A IP 65

Damp area small distributor IP 65

- Small distributor for devices up to 63 A
- Robust model made of impact resistant plastic
- With integrated level for quick and professional alignment (as of APV 14)
- Interchangeable single doors in smoky topaz for right or left placement possible, also lockable if desired
- Also available upon request with transparent door
- Multiple system housings can be connected together as desired or laterally arranged and combined
- Ideal for difficult installation environments in industrial plants, workshops, basements or garages
- For use in protected outside areas with the corresponding protection rating
- For use in unprotected outdoor areas, the housing must be protected from weather conditions by installing it in an outdoor housing
- Including PE/N screw terminals, FI-2 circuit terminal optionally available
- Including double membrane nozzle M20/M25/M32
- Including cable cover (from APV 14)
- Can be sealed
- Material: PS, recyclable, door: PC smoky topaz, recyclable



Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7240026	APV4	1 row, 1 x 4+1 module	197 x 122.5 x 120	gray	1	210	420
7240031	APV6	1 row, 1 x 6+1 module	200 x 160 x 120	gray	1	170	330
7240022	APV14	1 row, 1 x 12+2 module	300 x 300 x 142	gray	1	1	90
7240024	APV28	2 row, 2 x 12+2 module	450 x 300 x 142	gray	1	1	60
7240027	APV42	3 row, 3 x 12+2 module	600 x 300 x 142	gray	1	1	48
7240029	APV56	4 row, 4 x 12+2 module	750 x 300 x 142	gray	1	1	40
7240032	APV70	5 row, 5 x 12+2 module	900 x 300 x 142	gray	1	1	30

CE A IP 65

Damp area small distributor IP 65 – with extra connection area - AR

- 150 mm additional connection area for supply and output wiring
- Small distributor for devices up to 63 A
- Robust model made of impact resistant plastic
- With integrated level for quick and professional alignment (as of APV 14)
- Interchangeable single doors in smoky topaz for right or left placement possible, also lockable if desired
- Also available upon request with transparent door
- Multiple system housings can be connected together as desired or laterally arranged and combined
- Ideal for difficult installation environments in industrial plants, workshops, basements or garages
- For use in protected outside areas with the corresponding protection rating
- For use in unprotected outdoor areas, the housing must be protected from weather conditions by installing it in an outdoor housing
- Including PE/N screw terminals, FI-2 circuit terminal optionally available
- Including double membrane nozzle M20/M25/M32
- Including cable cover (from APV 14)
- Can be sealed
- Material: PS, recyclable



Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7240023	APV14AR	1 row, 1 x 12+2 module	450 x 300 x 142	gray	1	1	60
7240025	APV28AR	2 row, 2 x 12+2 module	600 x 300 x 142	gray	1	1	48
7240028	APV42AR	3 row, 3 x 12+2 module	750 x 300 x 142	gray	1	1	40
7240030	APV56AR	4 row, 4 x 12+2 module	900 x 300 x 142	gray	1	1	30



Plug in terminals

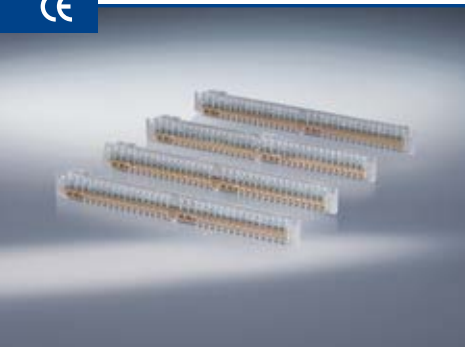
Article no.	Type	Model	SU	CB	PL
9910009	SKN17N	N-N Plug in terminal, 3 x 25 mm ² screw in and 14 x 4 mm ² plug in	1	20	1,440
9910010	SKN17PE	PE-N Plug terminal, 3 x 25 mm ² screw in and 14 x 4 mm ² plug in	1	20	1,440
9910011	SKN34	N Plug terminal, 6 x 25 mm ² screw in and 28 x 4 mm ² plug in	1	20	1,440
9910012	SKPE34	PE Plug in terminal, 6 x 25 mm ² screw in and 28 x 4 mm ² plug in	1	20	1,440
7110238	PEN310	PEN bridge blue, 10 mm ² , 310 mm	1	20	4,320
7110239	N14	N Plug in terminal, 14 pole	1	10	4,000



Terminal adapter for IP 65

- Adapter for all terminal installations with IP65 damp area distributor

Article no.	Type	Model	SU	CB	PL
7290111	KAIP65	Terminal adapter set (2 piece) for damp area distributor (terminals not included in delivery.)	1	10	7,680



Screw terminals

Article no.	Type	Model	SU	CB	PL
7290084	PEN143-2	PE/N Terminal, 2 x connection for each 3 x 16 mm ² and 14 x 10 mm ²	1	20	1,440
7290083	PE286-1	PE Terminal, connection for 6 x 16 mm ² and 28 x 10 mm ²	1	20	1,440
7290081	N286-1	N Terminal, connection for 6 x 16 mm ² and 28 x 10 mm ²	1	20	1,440
7290082	NN143-2	NN Terminal, 2 x connection for 3 x 16 mm ² and 14 x 10 mm ²	1	20	1,440
7290002	160030	FI Terminal for 3 x 16 mm ² and 2 x 10 mm ²	1	30	8,400



Universal cover strips

- Self-extinguishing up to 850 °C – suitable for all distributor types
- Material: PS, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7290032	ADS12W	12 module	white	10	500	16,000
7290031	ADS12GR	12 module	gray	10	500	16,000

Damp area small distributors accessories

Stepped nipple IP 54

- Guarantees IP54 protection rating
- Material: PVC

Article no.	Type	Model	Color	SU	CB	PL
7290086	STM25	Stepped nipple M25	gray	20	800	51,200
7290087	STM32	Stepped nipple M32	gray	20	600	38,400
7290088	STM40	Stepped nipple M40	gray	20	400	25,600



Double membrane nozzle IP 65

- Material: PVC

Article no.	Type	Model	Color	SU	CB	PL
7290059	DMS20	Double membrane nozzle M20	gray	20	1,000	64,000
7290060	DMS25	Double membrane nozzle M25	gray	20	800	51,200
7290061	DMS32	Double membrane nozzle M32	gray	20	600	38,400



Accessories and replacement parts for the IP 65 damp area distributor

- Material: Replacement doors - PC smoky topaz, recyclable

Article no.	Type	Model	Color	SU	CB	PL
7240060	TS1	Replacement door including hinges	Smoky topaz	1	15	960
7290114	APV4T	Type APV4 replacement door	Smoky topaz	1	12	3,072
7290115	APV6T	Type APV6 replacement door	Smoky topaz	1	7	2,240
7240059	TS3	Complete door lock	n.s.	1	20	8,400



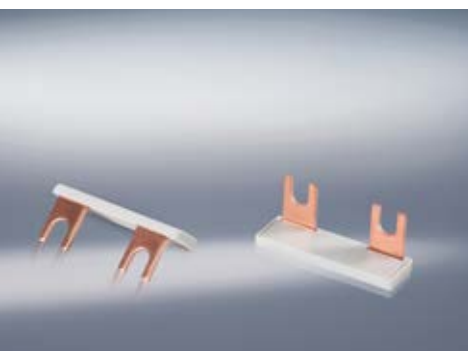


Phase distributor blocks

Phase distribution block 100 A

- 1 pole for any configuration
- Connections:
 - 1 x 2.5–25 mm²
 - 1 x phase rail fork M6 or 1 x 1.5–16 mm² (round conductor)
 - 3 x 1.5–10 mm² (round conductor)
 - 2 x 1.5–25 mm² (round conductor)
- Quick installation on 35 mm DIN rail or mountable on installation plate
- Certified according to DIN VDE EN 60947-7-1

Article no.	Type	Model	Color	SU	CB	PL
7110260	PVB100gr	Phase distribution block 100 A	gray	1	28	1,344



Accessories: Phase rail for PVB 100 A

- Cable lug design (for a maximum of M6 screws)
- For connecting 2 or 3 modules

Article no.	Type	Model	Color	SU	CB	PL
7110263	PVB100B2	Phase rail bridge for PVB 100, 2 module	gray	20	360	14,400
7110264	PVB100B3	Phase rail bridge for PVB 100, 3 module	gray	20	360	14,400

Phase distribution block 125 A

- 1 pole for any configuration
- Connections:
 - 1 x 4–35 mm² (round connector)
 - 1 x phase rail fork M6 or 1 x 1.5–16 mm² (round conductor)
 - 3 x 1.5–16 mm² (round conductor)
 - 2 x 2.5–25 mm² (round conductor)
- Quick installation on 35 mm DIN rail or mountable on installation plate
- Certified according to DIN VDE EN 60947-7-1

Article no.	Type	Model	Color	SU	CB	PL
7110261	PVB125gr	Phase distribution block 125 A	gray	1	28	1,344

Accessories: Phase rail for PVB 125 A

- Cable lug design (for a maximum of M6 screws)
- For connecting 2 or 3 modules

Article no.	Type	Model	Color	SU	CB	PL
7110265	PVB125B2	Phase rail bridge for PVB 125, 2 module	gray	20	360	14,400
7110266	PVB125B3	Phase rail bridge for PVB 125, 3 module	gray	20	360	14,400

Phase distribution block 160 A

- 1 pole for any configuration
- Connections:
 - 1 x 10–70 mm² (round conductor)
 - 1 x flat conductor, 15 mm wide, 3–5 mm thick
 - 3 x 25 mm² (round conductor)
 - 2 x 35 mm² (round conductor)
- Quick installation on 35 mm DIN rail or mountable on installation plate
- Certified according to DIN VDE EN 60947-7-1

Article no.	Type	Model	Color	SU	CB	PL
7110209	PVB160gr	Phase distribution block 160 A	gray	1	28	1,344



Phase distributor blocks

Phase distribution block 230 A

- 1 pole for any configuration
- Connections:
 - 1 x 16–95 mm² (round conductor)
 - 2 x 4–35 mm² (round conductor)
 - 8 x 2.5–25 mm² (round conductor)
- Quick installation on 35 mm DIN rail or mountable on installation plate
- Certified according to DIN VDE EN 60947-7-1



Article no.	Type	Model	Color	SU	CB	PL
7110262	PVB230gr	Phase distribution block 230 A	gray	1	18	1,440

Phase distribution block 250 A

- 1 pole for any configuration
- Connections:
 - 1 x 35–120 mm² (round conductor)
 - 1 x flat conductor, 24 mm wide, 3–5 mm thick
 - 2 x 35 mm² (round conductor)
 - 3 x 25 mm² (round conductor)
 - 4 x 16 mm² (round conductor)
- Quick installation on 35 mm DIN rail or mountable on installation plate
- Certified according to DIN VDE EN 60947-7-1

Article no.	Type	Model	Color	SU	CB	PL
7110210	PVB250gr	Phase distribution block 250 A	gray	1	18	648

Phase distribution block 400 A

- 1 pole for any configuration
- Connections:
 - 1 x 95–185 mm² (round conductor)
 - 1 x flat conductor, 24 mm wide, 3–5 mm thick
 - 2 x 35 mm² (round conductor)
 - 3 x 25 mm² (round conductor)
 - 4 x 16 mm² (round conductor)
- Quick installation on 35 mm DIN rail or mountable on installation plate
- Certified according to DIN VDE EN 60947-7-1

Article no.	Type	Model	Color	SU	CB	PL
7110211	PVB400gr	Phase distribution block 400 A	gray	1	18	648



Main line junction terminals (Cu) Type C

Main line junction terminals 25 mm²

- Supply 2 x 25 mm², output 2 x 16 mm²
- Certified connection according to DIN VDE 0603-2
- With snap attachment for horizontal installation and with triple block for vertical installation
- Practical terminal width of 18 mm
- For copper conductors
- Aluminum conductors upon request

Article no.	Type	Model	Color	SU	CB	PL
7110188	HAK1p25gr*	Main line junction terminal, 1 pole, 25 mm ² ("L")	gray	5	60	3,840
7110189	HAK1p25bl*	Main line junction terminal, 1 pole, 25 mm ² ("N")	blue	5	60	3,840
7110190	HAK1p25gnge*	Main line junction terminal, 1 pole, 25 mm ² ("PE")	green, yellow	5	60	3,840
7110191	HAK1p25br*	Main line junction terminal, 1 pole, 25 mm ² ("L")	brown	5	60	3,840
7110192	HAK1p25sw*	Main line junction terminal, 1 pole, 25 mm ² ("L")	black	5	60	3,840

Article no.	Type	Model	Color	SU	CB	PL
7110194	HAK3p25gr*	Main line junction terminal, 3 pole, 25 mm ² ("3L")	gray	2	24	1,536

Article no.	Type	Model	Color	SU	CB	PL
7110233	HAK4p25gr*	Main line junction terminal, 4 pole, 25 mm ² ("L")	gray	1	12	960
7110234	HAK4p25grgn*	Main line junction terminal, 4 pole, 25 mm ² ("L"/"PE")	gray, green	1	12	960
7110235	HAK4p25grbl*	Main line junction terminal, 4 pole, 25 mm ² ("L"/"N")	gray, blue	1	12	960

Article no.	Type	Model	Color	SU	CB	PL
7110236	HAK5p25gr*	Main line junction terminal, 5 pole, 25 mm ² ("L")	gray	1	12	768
7110237	HAK5p25grblgn*	Main line junction terminal, 5 pole, 25 mm ² ("L"/"PE"/"N")	gray, blue, green	1	12	768

*for aluminum conductors upon request



Main line junction terminals (Cu) Type C

Main line junction terminals 35 mm²

- Supply 2 x 35 mm², output 2 x 25 mm²
- Certified connection according to DIN VDE 0603-2
- With snap attachment for horizontal installation
- For copper conductors
- Aluminum conductors upon request

Article no.	Type	Model	Color	SU	CB	PL
7110195	HLAK1p35gr*	Main line junction terminal, 1 pole, 35 mm ² ("L")	gray	5	60	2,880
7110196	HLAK1p35bl*	Main line junction terminal, 1 pole, 35 mm ² ("N")	blue	5	60	2,880
7110197	HLAK1p35gnge*	Main line junction terminal, 1 pole, 35 mm ² ("PE")	green, yellow	5	60	2,880
7110198	HLAK1p35br*	Main line junction terminal, 1 pole, 35 mm ² ("L")	brown	5	60	2,880
7110199	HLAK1p35sw*	Main line junction terminal, 1 pole, 35 mm ² ("L")	black	5	60	2,880

*for aluminum conductors upon request

Main line junction terminals 35 mm² double block

- Supply/output 4 x 35 mm², 4 x 25 mm²
- According to DIN VDE 0603-2
- With snap attachment for horizontal and vertical installation
- For copper conductors
- Aluminum conductors upon request

Article no.	Type	Model	Color	SU	CB	PL
7110267	HLAK1p35Dgr*	Main line junction terminal, 1 pole, 35 mm ² /double block ("L")	gray	2	24	1,536
7110268	HLAK1p35Dbl*	Main line junction terminal, 1 pole, 35 mm ² /double block ("N")	blue	2	24	1,536
7110269	HLAK1p35Dgnge*	Main line junction terminal, 1 pole, 35 mm ² /double block ("PE")	green, yellow	2	24	1,536
7110270	HLAK1p35Dbr*	Main line junction terminal, 1 pole, 35 mm ² /double block ("L")	brown	2	24	1,536
7110271	HLAK1p35Dsw*	Main line junction terminal, 1 pole, 35 mm ² /double block ("L")	black	2	24	1,536

*for aluminum conductors upon request

Main line junction terminals 70 mm²

- Supply 2 x 70 mm², output 2 x 50 mm²
- Certified connection according to DIN VDE 0603-2
- With snap attachment for horizontal installation
- For copper conductors
- Aluminum conductors upon request

Article no.	Type	Model	Color	SU	CB	PL
7110201	HLAK1p70gr*	Main line junction terminal, 1 pole, 70 mm ² ("L")	gray	3	36	1,728
7110202	HLAK1p70bl*	Main line junction terminal, 1 pole, 70 mm ² ("N")	blue	3	36	1,728
7110203	HLAK1p70gnge*	Main line junction terminal, 1 pole, 70 mm ² ("PE")	green, yellow	3	36	1,728
7110204	HLAK1p70br*	Main line junction terminal, 1 pole, 70 mm ² ("L")	brown	3	36	1,728
7110205	HLAK1p70sw*	Main line junction terminal, 1 pole, 70 mm ² ("L")	black	3	36	1,728

*for aluminum conductors upon request





Main line junction terminals Type A

Main line junction terminals 25 mm²

- Supply 2 x 25 mm², output 2x 16 mm²
- Certified connection according to DIN VDE 0603-2/03.98
- With snap attachment for horizontal and vertical installation

Article no.	Type	Model	Color	SU	CB	PL
7110212	HAK1p25a2	Main line junction terminal, 1-pole, 2 x 25 mm ² , 2 x 16 mm ²	gray	20	20	4,800
7110213	HAK1p25a4	Main line junction terminal, 1-pole, 2 x 25 mm ² , 4 x 16 mm ²	gray	20	20	3,200
7110214	HAK1p25a6	Main line junction terminal, 1-pole, 2 x 25 mm ² , 6 x 16 mm ²	gray	10	10	2,800
7110215	HAK1p25a12	Main line junction terminal, 1-pole, 2 x 25 mm ² , 12 x 16 mm ²	gray	10	10	1,800

Article no.	Type	Model	Color	SU	CB	PL
7110216	HAK4p25a4	Main line junction terminal, 4-pole, 2 x 25 mm ² , 4 x 16 mm ²	gray	10	10	1,200

Article no.	Type	Model	Color	SU	CB	PL
7110217	HAK5p25a2	Main line junction terminal, 5-pole, 2 x 25 mm ² , 2 x 16 mm ²	gray	10	10	1,100

Main line junction terminals 35 mm²

- Supply 2 x 35 mm², output 25 mm²
- Certified connection according to DIN VDE 0603-2/03.98
- With snap attachment for horizontal and vertical installation

Article no.	Type	Model	Color	SU	CB	PL
7110218	HAK1p35a2	Main line junction terminal, 1-pole, 2 x 35 mm ² , 2 x 25 mm ²	gray	20	20	3,200



N/PE screw terminals

Article no.	Type	Model	SU	CB	PL
7510001	N15S	N screw terminal for 3 x 16 mm ² , 12 x 10 mm ² connection	5	25	3,600
7510002	N8S	N screw terminal for 3 x 16 mm ² , 5 x 10 mm ² connection	5	25	5,400
7510004	PE15S	PE screw terminal for 3 x 16 mm ² , 12 x 10 mm ² connection	5	25	3,600
7510005	PE8S	PE screw terminal for 3 x 16 mm ² , 5 x 10 mm ² connection	5	25	5,400
9910006	N3S	N screw terminal for 2 x 16 mm ² , 1 x 10 mm ² connection	5	25	8,400
9910008	PE3S	PE screw terminal for 2 x 16 mm ² , 1 x 10 mm ² connection	5	25	8,400



Sub distribution blocks

- 100 A
- 1 pole for any configuration
- 2 Supply terminal points 2.5–25 mm²
- 6 Distributor terminal points 1.5–10 mm²
- Quick installation on 35 mm DIN rails according to EN 60715, 1 pole horizontal
- Multi-pole (minimum 2 piece), block combination, horizontal and vertical installation possible
- Certified according to DIN VDE EN 60998-1 / 60998-2-1



Article no.	Type	Model	Color	SU	CB	PL
7110206	UVB100gr	Sub distribution block, 1 pole, 2 x 25 mm ² ,+ 6 x 10 mm ²	gray	3	42	2,688
7110207	UVB100bl	Sub distribution block, 1 pole, 2 x 25 mm ² ,+ 6 x 10 mm ²	blue	3	42	2,688
7110208	UVB100gng	Sub distribution block, 1 pole, 2 x 25 mm ² ,+ 6 x 10 mm ²	green, yellow	3	42	2,688

Busbar testing terminal

Connection: 2 x 16 mm² (isolated) for flat copper 3–10 mm thick

- 1 pole for any configuration
- 2 outlets 1.5 mm–16 mm²
- Round conductor Cu (single and multi-wired)
- 1–10 mm², fine wired with wire end ferrule



Article no.	Type	Model	Color	SU	CB	PL
7110219	SSAK16	Busbar testing terminal 2 x 16 mm ²	gray	12	96	4,608

Power bars

For the right connection in the right place

Our power and communication bars with attractive design are characterized by high functionality, simple assembly and an innovative installation concept.

PowerBar Small & Large

The **f-tronic®** power and communication bars impress with their robust, impact resistant, shock-proof, and splash-proof design - IP44. Ideal for use in the workplace in workshops, laboratories, industry and production or harsh environments as well. We guarantee you an optimal price-performance ratio and a easy operation.

The simplest installation - PLUG & PLAY: stand as a free-standing column on the floor, plug in and fasten when necessary. Cable entry is possible from below through the floor plate.

Advantages at a glance

- High functionality
- Simple assembly
- Innovative installation
- Robust construction
- IP 44
- Short processing and delivery time
- Project discounts possible
- Custom production possible



Power bars

IP 44

PowerBar small

- Closed aluminum profile
- Anodized surface, natur
- Including floor plate (L= 200 mm x W= 150 mm)
- Including quick mounting screws for concrete
- Column is delivered unassembled

Article no.	Type	Model	H x W x D (mm)	SU	CB	PL
7710009	PowerBar small	4X power socket 16A/230V, 1x CEE power socket 16A/380V	500 x 150 x 100	1	1	-



PowerBar large

- Closed aluminum profile
- Anodized surface, natur, with design strips
- Including floor plate (L= 300 mm x W= 200 mm)
- Including quick mounting screws for concrete
- Column is delivered unassembled

Article no.	Type	Model	H x W x D (mm)	SU	CB	PL
7710010	PowerBar large	6x power socket 16A/230V, 1x CEE power socket 16A/380V 1x safety unit, 6 module	1200 x 220 x 130	1	1	-



IP 44

Field distributors

f-tronic® Field distributors - intelligent installation technology for commercial and public buildings as well as residential construction. Especially when dealing with large-scale projects, where time and cost minimization have priority, our field distributors (FV) and distribution cabinets (VS) give you the advantage.

Advantages at a glance

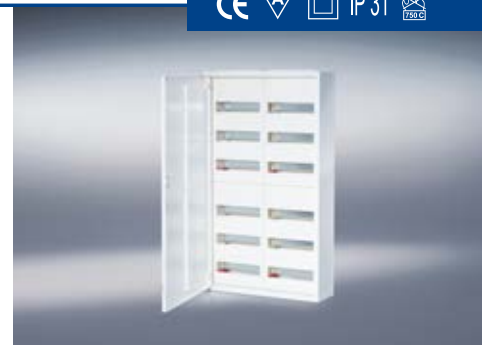
- Attractive housing design of 1 mm thick powder coated steel sheet metal
- Unique slide-out attachment system allowing for quick and flexible wall mounting
- Door can be removed without tools and mounted for either left or right opening
- Generous door opening angle
- Cover strips and PE/N plug terminals included in delivery
- Retractable DIN rails
- Large wiring area behind the DIN rails



Field distributors

Field distributors

- Cabinet depth 165 mm
- Generous cable inlets on the bottom, top and back of each field width
- Upper and lower cable inlets with press-out membrane, allowing for quick and easy handling without additional tools
- All covers with lateral isolation
- With double door as of three field widths
- Various lock variants possible – also DIN cylinder lock
- Including 1 x ZSSKN17N and 1 x ZSSKPE34 plug terminal per field
- Material: Steel sheet metal, high quality powder coated



Article no.	Type	Model	H x W x D (mm)	Color	SU	CB	PL
7110220	FV2-3	2 field, 3 row, 72 module	500 x 550 x 165	white	1	1	24
7110221	FV3-3	3 field, 3 row, 108 module	500 x 800 x 165	white	1	1	15
7110222	FV1-4	1 field, 4 row, 48 module	650 x 300 x 165	white	1	1	40
7110223	FV2-4	2 field, 4 row, 96 module	650 x 550 x 165	white	1	1	24
7110224	FV3-4	3 field, 4 row, 144 module	650 x 800 x 165	white	1	1	15
7110225	FV1-5	1 field, 5 row, 60 module	800 x 300 x 165	white	1	1	20
7110226	FV2-5	2 field, 5 row, 120 module	800 x 550 x 165	white	1	1	16
7110227	FV3-5	3 field, 5 row, 180 module	800 x 800 x 165	white	1	1	10
7110228	FV4-5	4 field, 5 row, 240 module	800 x 1050 x 165	white	1	1	6
7110229	FV1-6	1 field, 6 row, 72 module	950 x 300 x 165	white	1	1	18
7110230	FV2-6	2 field, 6 row, 144 module	950 x 550 x 165	white	1	1	10
7110231	FV3-6	3 field, 6 row, 216 module	950 x 800 x 165	white	1	1	8
7110232	FV4-6	4 field, 6 row, 288 module	950 x 1050 x 165	white	1	1	6

Distributor cabinets

- Designed like the field distributors
- Cabinet depth including 210 mm mounting lugs
- Including 1 x ZSSKN17N and 1 x ZSSKPE34 plug terminal per field
- Material: Steel sheet metal, high quality powder coated



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

General terms and conditions for f-tronic GmbH

§ 1 General

- (1) The following General Terms and Conditions (GTC) apply to commercial business transactions with customers of f-tronic, for non-commercial business transactions, these General Terms and Conditions apply according to paragraph 7.
- (2) Terms and conditions of customers or third parties do not apply even when f-tronic does not dispute their validity in each individual case. Even if f-tronic refers to a document that contains or makes reference to terms and conditions of a customer or third party, there is no consent to the validity of those terms and conditions.
- (3) Offer and Contract Conclusion
 - a. All offers from f-tronic are without obligation and non-binding unless they are expressly marked as binding or contain a specific deadline. Orders or contracts can be accepted by f-tronic within 14 days of receipt.
 - b. The legal relationship between f-tronic and the customer is solely governed by the written purchase contract, including these GTC. This fully reflects all agreements between the contracting parties with regard to the subject matter of the contract. Verbal agreements from f-tronic, prior to the conclusion of this contract, are legally non-binding and verbal agreements of the contracting parties shall be replaced by the written contract unless they are expressly stated to be binding.
 - c. Additions and amendments to the affected agreements, including the GTC, are only valid when made in writing. With the exception of management or authorized signatories, employees of f-tronic are not authorized to make any verbal agreements that differ from this.
 - d. Information from f-tronic regarding delivery or performance (for example, weight, dimensions, performance values, load capacity, tolerances and technical data) as well as representations by f-tronic thereof (for example, drawings and illustrations) are only approximately applicable, unless its applicability for contractual purposes requires precise conformity. They represent no guaranteed quality features rather they are only descriptions or designations of the delivery or performance. Standard deviations and deviations that result from legal regulations or technical improvements, and the replacement of components with equivalent parts, are approved as long as they do not impair the contractually intended usage.
 - e. f-tronic reserves the ownership or copyright to all offers and cost estimates as well as any drawings, illustrations, brochures, catalogs, tools and other documents and resources provided to the customer. The customer may not, without the express consent from f-tronic, make these objects or their content available to third parties, or disclose or reproduce them in any form. At the request of f-tronic, the customer must return these objects in their entirety and, when applicable, destroy any copies made of them, when they are no longer needed or if negotiations do not result in the conclusion of a contract.

§ 2 Price

- (1) Net Price
The price applies to the scope of performance and delivery services stated in the order confirmation. Additional or special services will be invoiced separately. Packaging costs are always included in the product price. Special packaging will be invoiced to the customer at cost price. Prices are given in Euros ex works plus the statutory value added tax, customs for export deliveries, duties and other public taxes. Additional special labels are not included in the price.
- (2) Surcharge
In so far as the agreed prices are based on the list prices of f-tronic and should delivery be more than four months following contract conclusion, the applicable list prices from f-tronic apply at time of delivery (each minus agreed percentage or fixed discount). Exceptions to this are the agreed prices in the master contract.
- (3) Due Date
Invoices are to be paid within 30 days without discount except where otherwise agreed upon in writing. Payments made within ten calendar days after invoice are granted a 2% discount on the net price by f-tronic. The relevant date of payment is the date of receipt by f-tronic. Checks are only valid once they have been redeemed.
- (4) Default
If the customer does not pay by the due date, interest will be charged at an annual rate of 5% on the outstanding balance from the due date, the assertion of higher interest and additional damages in cases of default are unaffected.
- (5) Offset
Any offset with counterclaims by the customer or the withholding of payment due to such claims is only permissible if the claims are indisputable or legally binding.
- (6) Advance Payment / Deposit
f-tronic is entitled to demand advance payment or a deposit for outstanding deliveries or services only, if after conclusion of the contract, circumstances which considerably reduce the customer's credit worthiness become known which could jeopardize payment by the customer of the outstanding invoices from f-tronic from the relevant contractual relations (including those from other individual orders for which the same master contract applies). For customers that are not familiar to f-tronic, f-tronic delivers only against advance payment and grants the customer a 2% discount.

§ 3 Delivery

- (1) Deliveries take place ex works.
- (2) If the contract value of an order exceeds €250.00 net, the delivery is carried out with a delivery warehouse to the customer's delivery address free of freight charges within Germany. For orders within Germany; for orders under €250.00 and over €125.00, there is a €16.00 shipping charge. For orders under €125.00, there is a €24.00 shipping charge plus a minimum order charge. Third party deliveries, special products and special arrangements or special sizes are shipped freight collect to the customer.
- (3) Dates and deadlines announced by f-tronic for delivery and performance are deemed to apply unless a fixed date or a fixed deadline has been agreed to in writing or agreed to. If shipping has been agreed to, delivery dates and deadlines refer to the time of transfer to the forwarder, carrier or other third party assigned to transport the goods.
- (4) Notwithstanding their rights with respect to defaulting on the customer's part, f-tronic can demand the customer to extend the terms of the delivery and service or to postpone the delivery and service deadlines by a period of time for which the customer fails to meet his contractual obligations with respect to f-tronic.
- (5) f-tronic shall not be liable for the impossibility of delivery or for delays in deliv-

ery due to force majeure or other events that were unforeseeable at the time of contract conclusion (for example operating malfunctions of any kind, difficulties in material or energy procurement, transport delays, strikes, lawful lockouts, insufficient personnel, energy or raw materials, difficulty in procuring necessary regulatory approvals, governmental actions or the lack thereof, incorrect or non-timely delivery from suppliers) for which f-tronic is not responsible.

Should such events render delivery or performance by f-tronic substantially more difficult or impossible and the obstruction is not of a temporary nature, f-tronic is entitled to withdraw from the contract. In the case of a temporary obstruction, the delivery and service periods are extended or the delivery and service periods are postponed, by the period of the obstruction, to an appropriate acceptance period. If it is unreasonable for the customer to accept the delay of delivery or service, he may withdraw from the contract by means of an immediate written notification to f-tronic.

- (6) f-tronic is entitled to make partial deliveries when
 - the partial delivery can be used by the customer in the framework of the contractually agreed intended use,
 - the supply of the remaining ordered goods is guaranteed and
 - the customer does not thereby become subject to significant extra or additional costs.

(7) If f-tronic is delayed with a delivery or service or if a delivery or service becomes impossible, for whatever reason, then f-tronic's liability is limited to compensation in accordance with Section 7 of these general delivery terms.

§ 4 Place of Fulfillment, Delivery, Transfer of risk, Acceptance

- (1) Place of Fulfillment
Place of fulfillment of all obligations from the contract is Saarbrücken, unless otherwise specified. If f-tronic is also responsible for the installation, the place of fulfillment is the location where the goods are to be installed.
- (2) Delivery
The delivery type and packaging to be used is left to the dutiful discretion of f-tronic.
- (3) Transfer of Risk
The transfer of risk to the customer occurs at the latest with the handover of the delivery item, whereby the commencement of the loading process is decisive, to the forwarding agent, freight carrier or other third party designated to dispatch the goods. This also applies in the case of partial deliveries or where f-tronic has agreed to undertake other services (for example, delivery or installation). If the delivery or handover is delayed due to circumstances where the customer is responsible, the risk passes to the customer on the day that the delivery object is ready for delivery and f-tronic has notified the customer.
- (4) Storage Costs
Storage costs incurred following the transfer of risk are the responsibility of the customer. When the goods are stored by f-tronic, storage costs will be 0.25% of the invoice amount of the stored goods per full week. The right to pursue further storage or provide evidence of lower storage costs is reserved by both parties.
- (5) Insurance
f-tronic will insure the shipment against theft, transport, fire and water damage and other insurable risks, only at the express request of the customer and at his expense.
- (6) Acceptance
If an acceptance it to be made, the goods are deemed accepted if
 - the delivery and, if f-tronic is also responsible for installation, installation is complete,
 - f-tronic has informed the customer with reference to the implied acceptance in accordance with Paragraph 6, and requested the acceptance of the delivery,
 - twelve workdays have passed since the delivery or installation, or if the customer has begun to use the goods (for example, begun operation with the delivered system) and in this case six workdays have passed since delivery or installation, and
 - the customer has failed to accept the goods within this period for any reason other than a defect reported by f-tronic that renders the goods either impossible to use or presents a significant hindrance to its usage.

§ 5 Retention of Title

The goods remain property of f-tronic until complete payment of all claims including subsidiary claims, damage claims and payment of checks and bills. Retention of title also remains in place if individual claims from f-tronic are incorporated into a running account and the balance is drawn and recognized. The purchaser is authorized to further process and resell the goods under the following conditions: The purchaser's authority to process the goods in orderly business practices ends with cessation of payment by the purchaser or with an application for or the opening of insolvency proceedings. The purchaser does not become owner of the goods by processing them according to § 950 of the German Civil Code (BGB). The processing is carried out for f-tronic without f-tronic incurring any liability. If the goods are processed, combined or blended with other goods, f-tronic acquires co-ownership of the new items in a ratio of the value of the reserved goods to the total goods value. The purchaser hereby assigns f-tronic all claims from the resale of the reserved goods along with all ancillary rights, and if the goods have been processed, combined or blended, then f-tronic acquires co-ownership of such goods in the amount of the invoice value. In the latter case, f-tronic is entitled to the assignment fraction equal to the ratio of the invoice value of the reserved goods to the respective invoice value claim of the new items. If the purchaser sells the claim within the framework of genuine factoring, the purchaser hereby assigns to f-tronic the accounts receivable from the factor that replace such claim. f-tronic accepts this assignment. f-tronic shall not collect the assigned claims provided that the purchaser meets his financial obligations. The authority to collect the claims expires at the time of payment default by the purchaser. In this case, f-tronic is authorized by the purchaser to inform his buyers about the assignment and to collect the claims himself.

Upon request, the purchaser will be obligated to provide a precise list of claims with the name and address of customers, the amount of each claim, the dates of invoices, etc., and to give f-tronic information required to assert the assigned claims and to permit verification of this information. The purchaser is authorized to collect the claims himself as long as f-tronic gives him no instructions to the contrary. Should the total value of the existing securities exceed f-tronic's claims by more than 20 %, f-tronic is obligated, upon purchaser's request, to release the securities at their own discretion.

§ 6 Warranty, Material Defects

- (1) Warranty Period
The warranty period is one year from the date of delivery or, if an acceptance is required, as of the acceptance.
- (2) Obligation to Inspect and Give Notice of Defects
The delivered goods are to be carefully inspected immediately following delivery to the customer or to a third party authorized by the customer. They shall be deemed approved when f-tronic has not received a written notification of defects in respect to obvious defects or other defects which were recognizable during the thorough and immediate inspection, within seven workdays following delivery of the delivered goods or otherwise within seven workdays of the discovery of the defect or an earlier point in time when the customer became aware of the defect during the normal usage of the delivered items. Upon request by f-tronic, the defective goods will be sent back to f-tronic at no charge to the purchaser. If the defect complaint is justified, f-tronic will reimburse the costs of the most inexpensive shipment method; this does not apply if the costs increase because the delivered objects are at a different location than that of the intended use.
- (3) Improvement
In the case of material defects of the goods delivered, f-tronic shall, at its own discretion and within a reasonable period, be obliged and entitled to either rework the delivered goods or make a delivery of replacement goods. In the event of the failure, in particular the impossibility, impracticality, refusal or unreasonable delay in reworking delivered goods or delivering replacement goods, the customer shall be entitled to withdraw from the contract or reduce the purchase price appropriately.
- (4) Fault
Should a defect be attributable to the responsibility of f-tronic, the customer is entitled to demand compensation in accordance with Section 7.
- (5) Exclusion / Additional Costs
The warranty is void if the customer modifies the delivered item or has it modified by a third party, without the consent of f-tronic, thus rendering the remedy of the defect either impossible or unreasonable. In all cases, the customer is responsible for the additional costs for remedying defects caused by the modification.

§ 7 Liability

- (1) The liability of f-tronic for compensation of damages, regardless of legal grounds, in particular due to impossibility, default, defective or incorrect deliveries, breach of contract, infringement of duties during contract negotiations and unauthorized actions is, insofar as there is a question of blame in each case, limited in accordance with Section 7.
- (2) f-tronic is not liable in cases of simple negligence by its management, legal representatives, employees or other agents unless it is a question of a violation of obligations essential to the contract. Considered essential to the contract are the obligations for prompt delivery of goods free of significant defects, duties of consultation, protection and care, which will make the use of the delivered item in accordance with the contract possible for the customer or which serve the purpose of protecting the life and limb of personnel of the customer or the customer's property against considerable damage.
- (3) Insofar as f-tronic is liable for damages in accordance with Section 7, this liability is limited to damage which f-tronic has foreseen when concluding the contract as a possible consequence of a contractual infringement or by applying due care and diligence, he should have foreseen. Indirect damages and consequential damages resulting from defects in the goods can only be replaced provided that such damages are typically expected when using the goods as intended.
- (4) In the event of liability for simple negligence, f-tronic's obligation to make compensation for property damage and the resulting further financial losses is limited to the amount of 6 million Euro per loss event (corresponding to the current cover sum of his product liability insurance or third party insurance), even when it is a question of a violation of obligations essential to the contract.
- (5) The aforementioned exclusions of liability and limitations of liability also apply to the same extent for our management, legal representatives, employees or other agents from f-tronic.
- (6) In so far as f-tronic provides technical information or acts as an adviser and this information or advice is not part of the contractually agreed scope of services owed by him, this is done free of charge and with the exclusion of any liability.
- (7) The limitations of this Section 7 do not apply to f-tronic's liability on account of deliberate actions, for guaranteed characteristics, on account of injury to life, limb or health or according to the product liability law.

§ 8 Returns

The customer has no entitlement to exchange or return goods delivered that are in accordance with the contractual terms. Should f-tronic make an exception and be prepared to exchange or take back the goods, the following applies: Before returning the goods, the exchange or return must be agreed in writing with f-tronic. The goods must be returned carriage paid and free of charge to an f-tronic warehouse at the customer's risk. The goods must be delivered to f-tronic in perfect condition; they may not be used, already fitted, broken, defective or constructionally overhauled. It is understood that f-tronic will invoice the customer 15% of the value of the replaced or returned goods, unless another sum was agreed separately in writing.

§ 9 Final Clauses

(1) Place of Jurisdiction

The place of jurisdiction for all possible disputes arising from the business relationship between f-tronic and its customers is decided upon by f-tronic as either Saarbrücken or the customer's registered office. For actions against f-tronic, Saarbrücken is the exclusive place of jurisdiction. Mandatory legal provisions regarding exclusive jurisdictions remain unaffected by this regulation.

(2) Choice of law

The relationship between f-tronic and its customers is governed solely by the law of the Federal Republic of Germany. The UN Convention on Contracts for the International Sale of Products from April 11, 1980 (CISG) does not apply.

(3) Interpretation

In so far as the contract or these GTC contain any loopholes, those legally effective provisions which the contracting partners would have agreed according to the commercial aims of the contract and the purpose of these GTC if they had been aware of the loopholes are considered to be agreed for filling these loopholes.

Status: 3/2014

With the publication of these GTC, all previous terms and conditions of f-tronic cease to be valid.

Imprint:

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Design & Layout: f-tronic GmbH

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Our GTC are available to download at anytime under: www.f-tronic.de

Catalog Status: 2/2017

Our Corporate Principles

Corporate Values

Sustainable security and the further development of the company stand in the forefront of all decisions. Humanity, trust, respectful interaction with one another and loyalty characterize our daily actions. We stand behind our word (or handshake). A professional approach and short, clear decision making processes are the hallmarks of our success. Our company objectives are determined together and independently implemented. We demonstrate our mission on a daily basis.

Sustainable performance for our customers

We are oriented towards the wishes and objectives of our customers. We guarantee our customers to always deliver the best performance and top quality. In return, we expect a fair return. Only satisfied customers and long-term partnerships can guarantee the success of our company.

Employees and Management

Humanity, trust, tolerance, respectful treatment, truth and loyalty in cooperation are the basis for satisfaction and create fun at work. We expect continuous high performance and support our employees through targeted measures in their education and training. We train young employees in the industrial and commercial sector and support them in their career development. Our management is the benchmark of our actions.

f-tronic Management:



Competitive advantage, creativity and innovation

Together with our customers, employees and suppliers, we must work together to develop innovative products and solutions and implement them quickly and cost-effectively. Our customers must also achieve sustainable benefits and a competitive advantage. This is an ongoing challenge and ensures us an edge over the competition.

Suppliers are partners

We rely on our long-term partnerships with suppliers and expect high performance / attractive prices, reliability, flexibility, high quality consciousness and sustainable actions.

Profit orientation

We must generate profits. These ensure our investments for our future so that we can meet our obligations to our customers, employees, partners and shareholders. Profits are our confirmation of the viability of our actions.

Future and sustainability

We see the future as a challenge for us all and have a positive attitude toward people and our unique environment. We continuously improve our products with regard to minimal environmental impact, resource conservation and energy efficiency. Our actions are based on long-term objectives. Those who have goals are concerned about the future.

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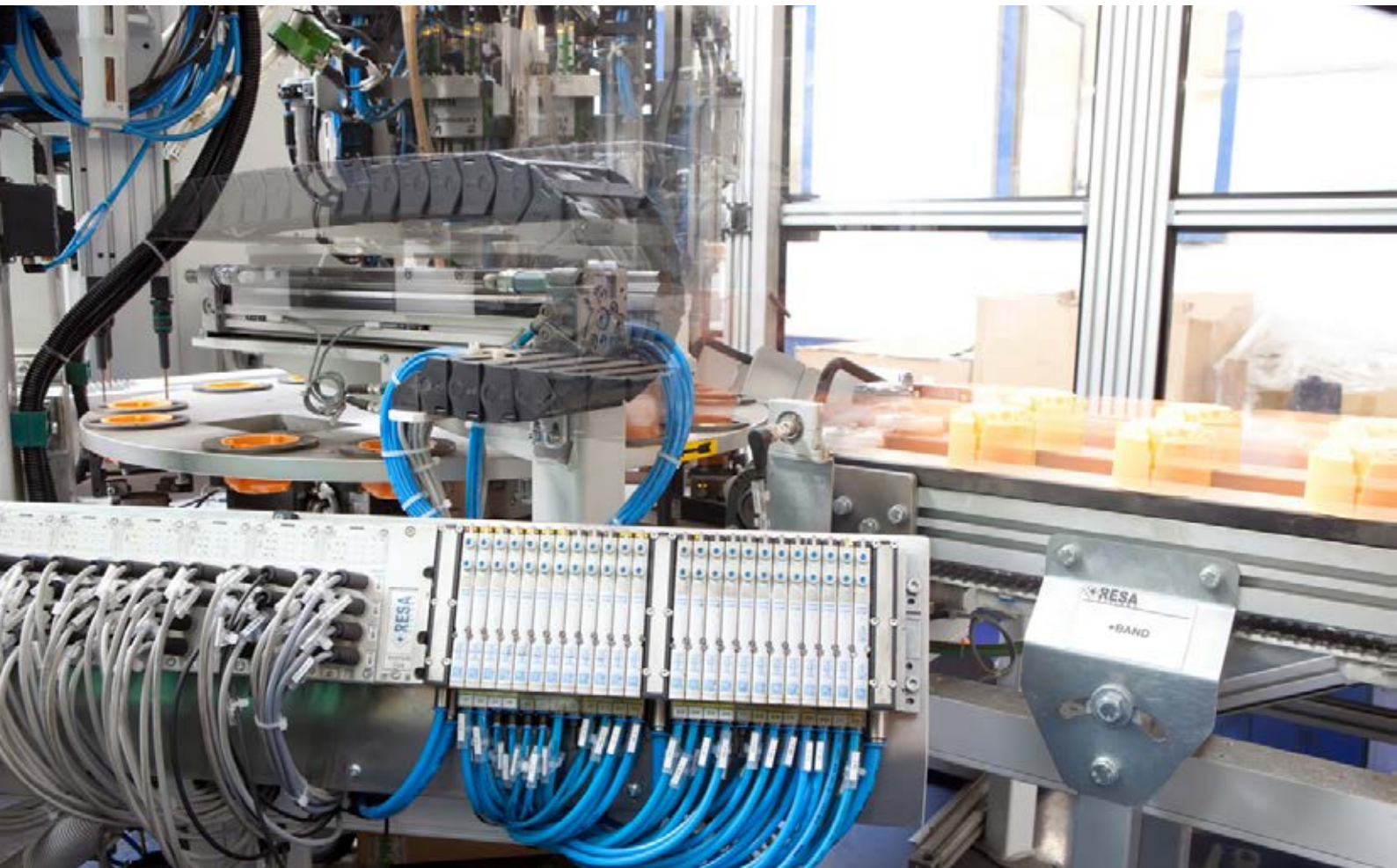
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Innovation has no limits!



The supreme discipline - plastics manufacturing

Are you looking to launch a new product on the market? Do you have an idea for a new development? Do you see the need for improvement in your delivery structure? Or are you about to re-design one of your purchased plastic components? Are you looking for another reason, for a new, innovative system supplier who will react with reliability and yet extreme flexibility to your wishes? Many years of experience in plastics technology have influenced us and made us a specialist in development, construction and processing. We prove this time and time again with our national and international customers. Let us prove it to you too!

f-tronic® supports you not only with component design but also with the choice of materials. We handle the production of injection moulding tools very precisely – to provide you with exactly the result you want. This is guaranteed by our strong team and our state of the art machinery, with over 35 injection moulding machines

from 200 to 12500 kN clamping force and a shot weight from a few grams to over 2 kg.

f-tronic® is a full service provider in the plastic injection moulding branch, with over 27 years of experience in the business. From development to tooling to production, we operate with absolute professionalism for you. In addition to our original plastic injection moulding, we are also able to process plastic solutions for you with our multi-component technology. Our core business areas are:

- Thermoplastics - Thermosets -
- 2-Component injection moulding - assembly injection
- high performance plastics PPS, PPA.

Engineering at the highest level

SERVICE is our top priority. Our team of construction and development departments accompany you in the form of our project management, from the first idea to series production, within the framework of strong,

continuous process and quality monitoring. In this way, we distinguish ourselves as an international company with flat hierarchies, close cooperation and very short communication paths in all phases of the process to meet your needs.

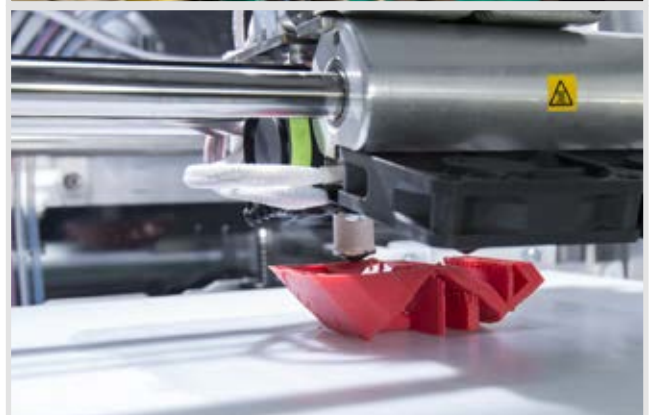
Tools with maximum speed

Tools “MADE IN GERMANY“:

You can have your tools constructed and produced with our in-house tool making or we can source finished tools for you from inland or abroad. Outsource your complete tooling management to us - our customer specific tool construction has a lot to offer: minimum cycle times and the optimal number of cavities. We currently manage approximately 450 tools with different requirements and sizes. We manage your tools through the entire product life cycle, beginning with development and construction through to repair, maintenance, adaptation and storage. In this way, you reduce your costs and preserve your resources.

You can profit from unbeatable prices through low process costs. We are also unmatched in our fast and competent coordination of design and manufacturing. We never lose sight of the details. The proof: We guarantee storage of your tools in a fire-proof tool warehouse and in-house training for qualified specialists is self explanatory.

- Modern development tools: Solidworks, and 3D printers
- Mold-Flow Simulation: improved form filling, warpage and shrinkage analysis, DoE for a high component quality
- A high degree of automation guarantees quick turnaround times
- A close working relationship with universities and international granulate manufacturers ensures the availability of optimal materials.
- Didn't find the material you were looking for? We'll develop it for you.
- We work according to international standards: REACH, RoHS and national regulations, VDE, ÖVE.



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What we need to know – Your path to a quick offer:

1. Your complete contact details including contact person
2. Product description with drawing or photo when applicable
3. Exact dimensions and weight
4. Annual quantities and lot orders
5. Existing tools? If yes, exact description
6. Target price when available
7. Schedule for realization

1A LOGISTIC SERVICE 24 HOURS PER DAY

Our long-standing, well-known national and international customers appreciate us as an innovative and professional development partner in plastics technology. We provide the highest quality and the shortest delivery times combined with maximum customer orientation.

The least that we can do for you: timely commissioning and free delivery in your required transport containers (tray) – when necessary even with the Kanban-System. This also includes smooth worldwide delivery:
"JUST-IN-TIME"

f-tronic® - YOUR FULL-SERVICE PARTNER!
- MADE IN GERMANY -























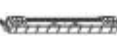









Bild	Typ	Art. Nr.	Aufputzverteiler VISION mit Steckklemmen / Wall-mounted distributors Vision with plug clamp				Aufputzverteiler VISION mit Schraubklemmen / Wall-mounted distributors Vision with screw clamps				Kommunikationsverteiler VisionK / Communication distributors Vision K	
			1 reihig / 1-row / 12+2	2 reihig / 2-row / 24+4	3 reihig / 3-row / 36+6	4 reihig / 4-row / 48+8	1 reihig / 1-row / 12+2PEN	2 reihig / 2-row / 24+4PEN	3 reihig / 3-row / 36+6PEN	4 reihig / 4-row / 48+8PEN	3 reihig / 3-row	4 reihig / 4-row
	ADS12	7290032	○	○	○	○	○	○	○	○	—	—
	TSV	7220086	○	○	○	○	○	○	○	○	—	—
	SKN17N	9910009	○	○	●	●	○	○	○	○	—	—
	SKN17PE	9910010	●	●	○	○	○	○	○	○	—	—
	SKN34	9910011	○	○	●	●	○	○	○	○	—	—
	SKPE34	9910012	○	○	●	●	○	○	○	○	—	—
	PEN143-2	7290084	○	○	○	○	●	●	○	○	—	—
	PE286-1	7290083	○	○	○	○	○	○	●	●	—	—
	N286-1	7290081	○	○	○	○	○	○	●	●	—	—
	NN143-2	7290082	○	○	○	○	○	○	○	○	—	—
	160030	7290002	●	●	○	○	○	○	○	○	—	—
	STECKD3	7290113	○	○	○	○	○	○	○	○	●	●
	PATCH12	7290116	○	○	○	○	○	○	○	○	●	●
●	Serienausstattung / Standard equipment											
○	Zubehör / Accessories											
—	nicht kompatibel / not compatible											

Bild	Typ	Art. Nr.	Kombiverteiler Jumbo / Combination distributor Jumbo				Kombiverteiler JumboXX / Combination distributor JumboXX				Hohlwandverteiler Jumbo / Cavity wall distributor Jumbo				Multimediaverteiler JumboK / Communication distributors JumboK	
			1 reihig / 1-row 12+2	2 reihig / 2-row 24+4	3 reihig / 3-row 36+6	4 reihig / 4-row 48+8	1 reihig / 1-row 12+2(XX)	2 reihig / 2-row 24+4(XX)	3 reihig / 3-row 36+6(XX)	4 reihig / 4-row 48+8(XX)	1 reihig / 1-row 12+2	2 reihig / 2-row 24+4	3 reihig / 3-row 36+6	4 reihig / 4-row 48+8	3 reihig / 3-row	4 reihig / 4-row
	VK-SET	7290107	○	○	○	○	○	○	○	○	○	○	○	○	●	●
	ADS12	7290032	●	●	●	●	●	●	●	●	●	●	●	●	—	—
	HWA-SET	7290079	○	○	○	○	○	○	○	○	●	●	●	●	●	●
	MH-SET	7290098	○	○	○	○	○	○	○	○	○	○	○	○	—	—
	MK-SET	7290097	○	○	○	○	○	○	○	○	○	○	○	○	—	—
	TSV	7220086	○	○	○	○	○	○	○	○	○	○	○	○	—	—
	SKN17N	9910009	○	○	●	●	○	○	○	○	○	○	○	○	—	—
	SKN17PE	9910010	●	●	○	○	○	○	○	○	○	○	○	○	—	—
	SKN34	9910011	○	○	●	●	○	○	○	○	○	○	○	○	—	—
	SKPE34	9910012	○	○	●	●	○	○	○	○	○	○	○	○	—	—
	PEN143-2	7290084	○	○	○	○	●	●	○	○	●	●	○	○	—	—
	PE286-1	7290083	○	○	○	○	○	○	●	●	○	○	●	●	—	—
	N286-1	7290081	○	○	○	○	○	○	●	●	○	○	●	●	—	—
	NN143-2	7290082	○	○	○	○	○	○	○	○	○	○	○	○	—	—
	160030	7290002	●	●	○	○	○	○	○	○	○	○	○	○	—	—
	STECKD3	7290113	○	○	○	○	○	○	○	○	○	○	○	○	●	●
	PATCH12	7290116	○	○	○	○	○	○	○	○	○	○	○	○	●	●

- Serienausstattung / Standard equipment
- Zubehör / Accessories
- nicht kompatibel / not compatible

TIE Elements

Thermal conductivity λ

Thermal insulation U

Thermal conductivity (λ) (Greek: Lambda) indicates the amount of heat that penetrates one cubic meter of material within one second, at a temperature gradient of one degree Celsius (1 K in the absolute temperature scale). Basically, the smaller the value the better. Therefore, the higher the thermal conductivity (λ) of a material, the lower its thermal insulation (U).

Construction of the TIE Elements ...-115 / ...-116 / ...-118 / ...-T20 is as follows:

60mm EPS20 white + PU rigid foam	
+ 45mm NEOPOR® 15 (insulation thickness 100mm)	→ U = 0.33 W/m ² K
+ 65mm NEOPOR® 15 (insulation thickness 120mm)	→ U = 0.27 W/m ² K
+ 85mm NEOPOR® 15 (insulation thickness 140mm)	→ U = 0.23 W/m ² K
+ 105mm NEOPOR® 15 (insulation thickness 160mm)	→ U = 0.20 W/m ² K
+ 125mm NEOPOR® 15 (insulation thickness 180mm)	→ U = 0.18 W/m ² K
+ 145mm NEOPOR® 15 (insulation thickness 200mm)	→ U = 0.16 W/m ² K

Construction of the TIE Elements ...-T80 is as follows:

60mm EPS20 white + PU rigid foam	
+ 45mm XPS (insulation thickness 100mm)	→ U = 0.36 W/m ² K
+ 65mm XPS (insulation thickness 120mm)	→ U = 0.30 W/m ² K
+ 85mm XPS (insulation thickness 140mm)	→ U = 0.26 W/m ² K
+ 105mm XPS (insulation thickness 160mm)	→ U = 0.23 W/m ² K
+ 125mm XPS (insulation thickness 180mm)	→ U = 0.21 W/m ² K
+ 145mm XPS (insulation thickness 200mm)	→ U = 0.19 W/m ² K

Construction of the TIE Elements ...-ECK is as follows:

100mm EPS20 white + PU rigid foam	
+ 0mm NEOPOR® 15 (insulation thickness 100mm)	→ U = 0.37 W/m ² K
+ 25mm NEOPOR® 15 (insulation thickness 120mm)	→ U = 0.29 W/m ² K
+ 45mm NEOPOR® 15 (insulation thickness 140mm)	→ U = 0.25 W/m ² K
+ 65mm NEOPOR® 15 (insulation thickness 160mm)	→ U = 0.21 W/m ² K
+ 85mm NEOPOR® 15 (insulation thickness 180mm)	→ U = 0.19 W/m ² K
+ 105mm NEOPOR® 15 (insulation thickness 200mm)	→ U = 0.17 W/m ² K

Construction of the TIE 2.0 EPS20 – Multi

200 mm EPS (insulation thickness 200mm)	→ U = 0.17 W/m ² K
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Catalog Status: 3/2017
Layout and design
f-tronic® GmbH

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