... all over IP!

RUTENBECK

Program 2017

RUTENBECK
Quality products
Made in Germany

AC WLAN

WLAN-Accesspoint in a data jack –
safe mobility for any network

... all over IP!

RUTENBECK

AC WLAN additional variants starting on page 50

- WLAN in addition to data outlet
- 150 Mbit/s – IEEE 802.11 b/g/n
- all known encryption methods
- adjustable range
- with central management
- design without compromise, compatible to fit the design covers of the switching industry

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DATA TECHNOLOGY

shielded (STP)

- high mechanical stability
- flexible cable entry from all sides
- installation advantages at construction site
- various designs (compact/modular)
- consideration of different installation preconditions
- made to fit design wall plates from all well-known manufacturers of electrical installation material

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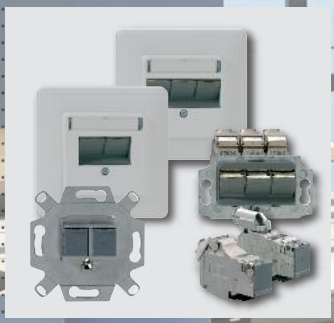
Also with the patch panels, the central components of the generic cabling emphasize the installation advantages for use at construction sites, either in compact connection technique, or in modular connection technique or as DIN-rail mounting housing for the electrical distribution box.



Compact-universal jacks
Cat.6A iso, ClassEA iso
page 24

Compact connection technique patch panel Cat.6A iso, ClassEA iso and patch panel PoE
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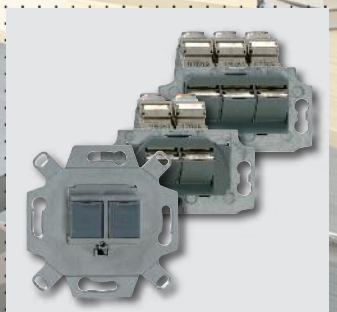


Modular connection technique jacks Cat.6A iso
page 10

Modular connection technique patch panel Cat.6A iso
page 20

STP – Cat.6A iso
Modular connection technique, for generic networks

Universal modular jacks – professional und practice-oriented

No compromising in design

Universal modular jacks from Rutenbeck are extending the selection of modular connecting systems with a type "direct" design compatibility. Meaning that, up to two Rutenbeck universal modular jacks can be completed with customary TAE wall plates. This allows the integration into any switch design. The mounting adapter of the universal modular jacks ensures the usual insertion direction of the plug with an insertion angle of 30°. In case three modular jacks are supposed to be put into one mounting box, this can be realized by using special mounting adapters and center plates.

Universal modular jacks from Rutenbeck fit the worldwide customary mounting openings of 19.3 x 14.7 mm.

Quick and easy connection

For mounting expensive and complicated special tools are not necessary. The cable only needs to be dismantled and prepared accordingly. For the following steps a cutting tool is completely sufficient. The mounting wedge of the Rutenbeck universal modular jacks helps in case of friction-locked contacting and allows an assembly without any additional installation effort.

Installation advantages:

- fits standard Keystone openings
- few pre-assembled parts, suitable for construction sites
- high mechanical stability and optimal shielding through zinc die cast housing
- terminals clearly labeled with color codes (A and B coding are of equal value)
- no tools needed for mounting due to mounting wedge
- 360°-screening
- quick one step mounting of strain relief and shielding connection
- for data cables Ø 6–10 mm
- for solid wires (AWG 24–22)
- for stranded wires (AWG 26)
- Module head can be connected up to 10 times without new cable assembly
- defined earthing connection via customary blade terminal
- bend-radius optimized cable feeding of 30°
- suitable for PoE+ and UPOE
- RJ11/12-protected against mismating
- minimum 750 insertion cycles
- built-in dust protection cap (removebale, if required, color exchangeable)
- for combination with design wall plates (TAE) of all well-known manufacturers of electrical installation material for single and double solutions
- triple flush mounting solution with special center plate
- 100 % quality-proof
- 25 years warranty
- made and tested in Germany

Fit for Future

Cat.6A-iso-Universal modules from Rutenbeck comply fully to the current highest data transmission product requirements according to ISO/IEC which therefore, fulfil the world-wide measurement requirements of data transmission links in combination with components with equal data transmission characteristics. Furthermore the higher requirements for PoE+ (Power over Ethernet) are also no problem for the Cat.6A-iso-Universal modules from Rutenbeck.

Of course, a terminal point for earthing has been provided in order to integrate the universal modular jack into the potential compensation.

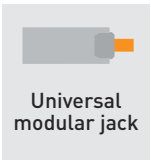
„Made and tested" in Germany

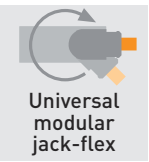
Rutenbeck products are being produced at a very high technological level. They have to pass in Germany a very strict quality tests. For the fulfillment of all performance parameters, Rutenbeck grants 25 years guarantee for these universal modular components!

10 Gbit/s conform
PoE+ IEEE 802.3at
RJ11/12 protected against mismating
25 Years Guarantee
UPOE conform
HDBaseT conform

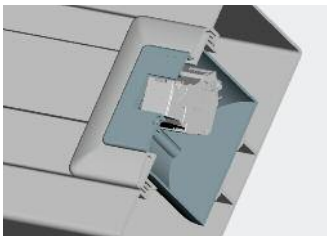
Universal modular jack

Universal modular jack-flex

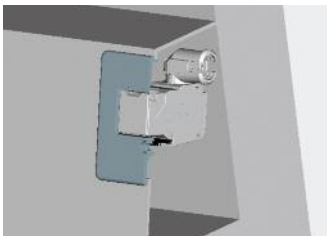




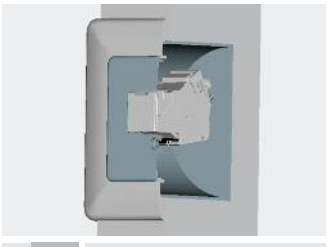
Installations in different environments



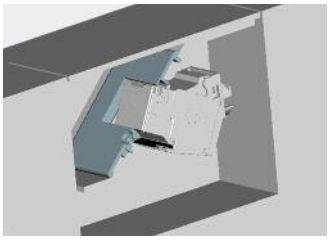
The 30°-cable entry of the universal modular jack prevents the data cable from touching the backside of the mounting box too soon. The cable can be laid without unacceptable kinks or too small bend radiuses.



With a straight cable entry, which can be change up to 360° if necessary – (cable entry from the back, front or from both sides) the universal modular jack-flex is perfect for very tight installation environments like baseboard ducts, module 45 systems, or in room-, table- or energy columns.



For flush mounting installation a special mounting adapter is available, which allows an accurate cable feeding from the top or bottom, even in difficult situations where only very limited space is available.
In order to accommodate the extra cable without bending the cable too much, a twin chamber mounting box should be installed.



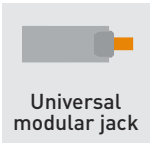
In under floor applications the cable will be led almost parallel to the bottom to the back, because of the bend radius optimized cable feeding. Perfect for small installation situation.

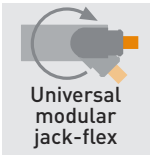
Mechanical characteristics	
General	
Housing of shielding	zinc die cast
Connection of cable shielding/ strain relief	360°-contacting, contacting bow for data cable Ø 6–10 mm, strain relief via cable tie
Ambient temperature	-40 °C bis +70 °C
Class according to EN 60529	IP21
Miscellaneous	free from halogen
Connector/outlet	
Design	DIN EN 60603-7-51
Connection technique	
Solid wire	IDC terminals for wires Ø 0.51–0.63 mm, AWG 24–22, outer diameter 0.7–1.6 mm at PE, 1 wire each contact, maximum connections 10 times (at the same or larger cross-section)
Stranded wire	IDC terminals for wires 0.13–0.22 mm², AWG 26 (PE-Foamskin) – AWG 24 (PE-solid), outer diameter 0.9–1.1 mm at PE, 1 wire each contact, maximum connections 10 times (at the same or larger cross-section)
Assembly	flexible printed circuit board made of polyimid with mechanical spring elements (patented)
Contact material/-surface	1,5 µm Ni/0,8 µm Au
Material housing	PBT
Life (insertion and withdrawals)	≥ 750 cycles with plugs according to IEC 60 603-7, RJ11/12-protected against mismating

Electrical characteristics	
Voltage	72 V DC, suitable for TNV circuits, according to EN 60 950-1:2011-01
Operation current	500 mA, at 50 °C ambient temperature
PoE-compliant	suitable for PoE+ (Power over Ethernet) according to IEEE 802.3at
Voltage withstand	1000 V (contact – contact), 1500 V (contact – housing)
Isolation resistance	≥ 500 MΩ
Contact resistance	signal contact: 20 mΩ, shielding contact: 100 mΩ
Color code	T568A and T568B according to TIA/EIA-568-B.2

Transmission characteristics	
ISO/IEC 11801 DIN EN 50173-1	Cat.6_A, shielded
DIN EN 60 603-7-51	500 MHz, shielded

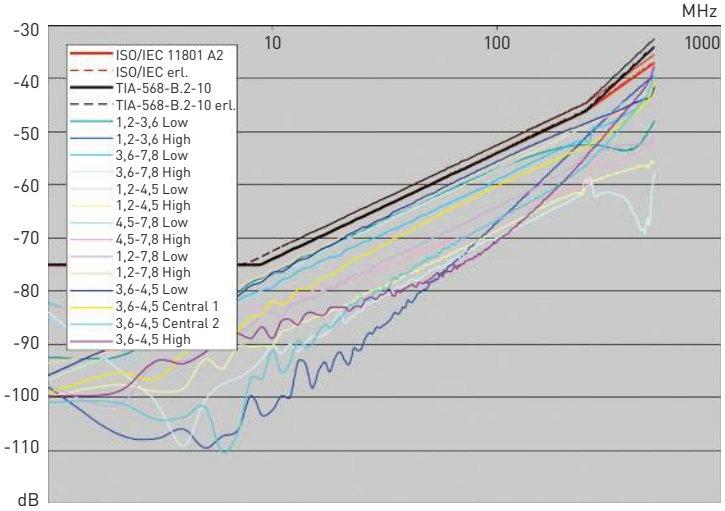
Technical data for shielded UM-Cat.6A-iso- and UMflex-Cat.6A-iso-components


Universal modular jack


Universal modular jack-flex

Test- and approval marks

CE



Extended NEXT for 10-Gigabit-Ethernet (typical values according to ISO/IEC)

Release January 2017, current product data sheets can be obtained on our website **www.rutenbeck.com**

Overview modular components (construction kit system)

Modular connecting hardware Cat.6A iso

Cat.6A iso

Universal modular jack

UM-Cat.6A iso A
139 003 04
Universal modular jack, keystone variant

Cat.6A iso

Universal modular jack-flex

UMflex-Cat.6A iso A
139 003 05*
Universal modular jack, with flexible cable entry

flush mounting

	UM-UMA 2 Up***
2-way	139 000 04

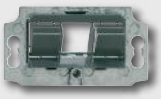
Flush mounting adapter, break off mounting ring can be converted into mounting bracket, without universal modular jacks

trunking system

under floor

	UM-MA 2 Up**, ***
2-way	139 000 01

Flush mounting adapter, without universal modular jacks



trunking system

under floor

	UM-MA 3 Up**, ***
3-way	139 000 02

Flush mounting adapter, without universal modular jacks

	UM-MA 2 Up**, ***
2-way	139 000 01

Flush mounting adapter, without universal modular jacks

	UM-MA 3 Up**, ***
3-way	139 000 02

Flush mounting adapter, without universal modular jacks

surface mounting

	UMflex-ApG rw*, **
3-way	139 115 01

Surface mounting housing, without universal modular jacks, cable entry only from top

	UMflex-ApG rw*, **
3-way	139 115 01

Surface mounting housing, without universal modular jacks, cable entry from all sides

DIN-rail

	UM-MA REG
1-way	139 000 03

DIN-rail mounting adapter, 1 DIN unit wide, without universal modular jack

	PP-UM A-24/1 **
24-way	239 000 00

Patchpanel, 19˝/1 U, for direct mounting, without universal modular jacks

surface mounting

	PP-UM A-6 Ap**
6-way	239 101 06

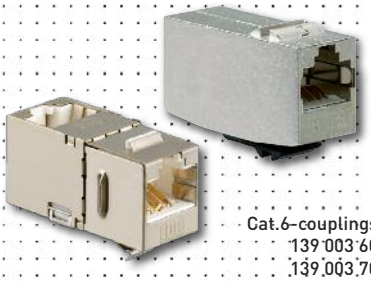
surface mounting-patch panel, without universal modular jacks

	PP-UM A-12 Ap**
12-way	239 101 16

surface mounting-patch panel, without universal modular jacks

	CP-UM A-12 Ap**
12-way	239 101 12

Consolidation point, without universal modular jacks



Cat.6-couplings
139 003 60
139 003 70
page 14

Multimedia patch panel
MM Ap 239 101 18
page 21

* rw = pure white, ** also suitable for **139 003 60**, *** also suitable for **139 003 70**

Overview modular components (complete version)

Modular connecting hardware Cat.6A iso

Cat.6A iso

UM-Cat.6A iso A
139 003 04
Universal modular jack, Keystone variant

Cat.6A iso

UMflex-Cat.6A iso A
139 003 05*
Universal modular jack, with flexible cable entry

	Ap rw*
2-way	139 111 020*
3-way	139 111 030*

	Up	Up rw*
2-way	139 102 070	139 112 070
3-way	139 102 100	139 112 100

	Up	Up rw*
2-way	139 102 040	139 112 040

break off mounting ring can be converted into mounting bracket

	Up 0
2-way	139 104 070
3-way	139 104 100

	Up 0
2-way	139 104 040

break off mounting ring can be converted into mounting bracket

patch panel for generic networks, or for direct mounting

Cat.6A iso

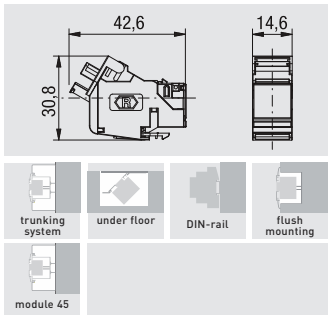
	PP-UM A 24/24/1
24-way	239 101 000

patch panel, 19″/1 U, for direct mounting, with 24 universal modular jacks

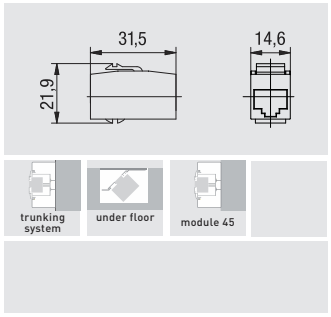
* phased out 2017

* rw = pure white

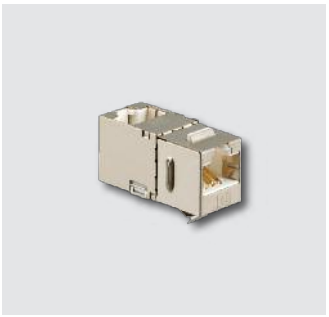
Universal modular jack
UM-Cat.6A iso,
shielded,
for generic networks

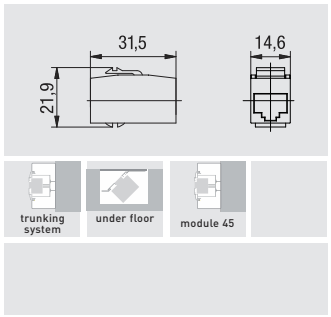


UM-Cat.6A iso A
139 003 04 ●
Universal modular jack,
suitable for standard
Keystone openings,
15 x 31 x 43 mm, 27 g



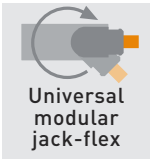
Cat.6 coupling
139 003 60 ●
coupling class E,
suitable for standard
keystone openings,
15 x 22 x 32 mm, 22 g

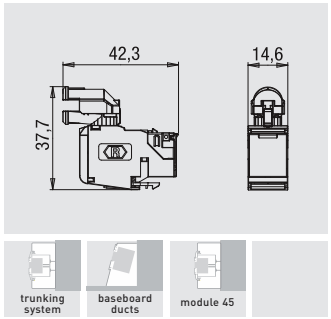




Cat.6 Angular coupling
139 003 70 ●
coupling class E_A,
with angular outlet 90°,
suitable standard keystone
openings,
15 x 22 x 36 mm, 22 g

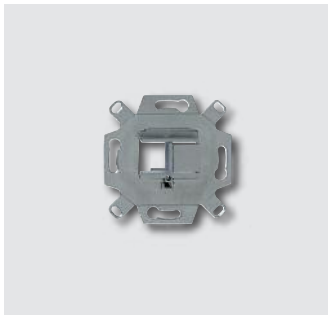
Universal modular jack-flex
UMflex-Cat.6A iso,
shielded,
for generic networks

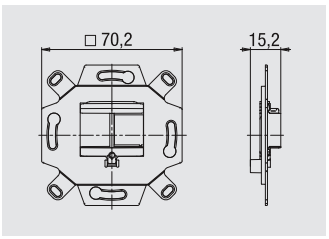




UMflex-Cat.6A iso A
139 003 05* ●
Universal modular jack,
with flexible cable entry,
for special installation situations,
suitable for standard
Keystone openings,
15 x 38 x 42 mm, 27 g

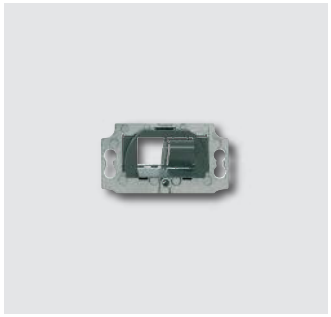
* phased out 2017

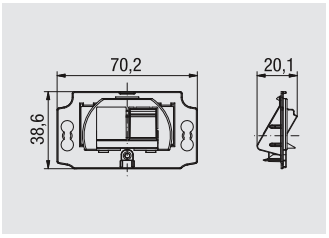




flush mounting

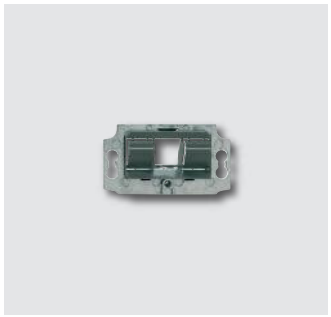
UM-UMA 2 Up
139 000 04 ●
Flush mounting adapter, 2-way,
for UM-Cat.6A iso A andUM-real.Cat.6 U A, for mounting
in flush mounting jacks,
for customary TAE center plates,
for combination with ZSt UM-MA 2 and wall plate AP,
break off mounting ring can be converted into mounting bracket,
70 x 70 x 15 mm, 20 g

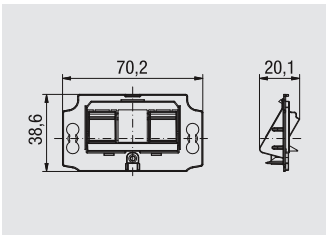




trunking system | under floor

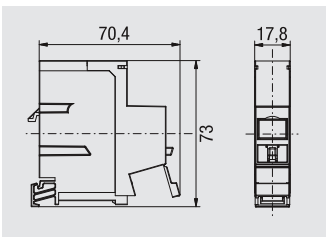
UM-MA 2 Up
139 000 01 ●
Mounting adapter, 2-way,
for all universal modular jacks and the Cat.6-module coupler,
for customary TAE center plates,
for combination with ZSt UM-MA 2 and wall plate AP,
70 x 39 x 20 mm, 20 g





trunking system | under floor

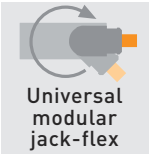
UM-MA 3 Up
139 000 02 ●
Mounting adapter, 3-way,
for all universal modular jacks and the Cat.6-module coupler,
for center plates ZSt UM-MA 3 and wall plates AP,
70 x 39 x 20 mm, 20 g



DIN-rail

UM-MA REG
139 000 03 ●
DIN-rail mounting adapter,
for holding an universal modular jack UM-Cat.6A iso A,
UM-Cat.6A iso U A onto a DIN rail,
light grey (similar RAL 7035),
18 x 73 x 70 mm = 1 DIN unit wide,
25 g

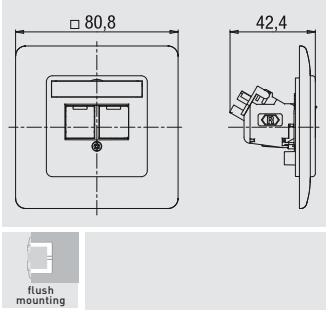
Mounting adapters for UM-Cat.6A iso, UMflex-Cat.6A iso, shielded



● Discount group 1

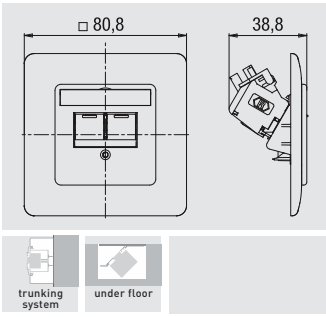
Modular jacks with
UM-Cat.6A iso,
shielded,
for generic networks

Universal modular jack



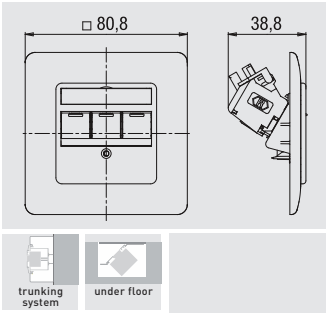
UM-Cat.6A iso-UMD 2 Up
139 102 040
Cat.6A iso modular jack, 2-way, with center plate, wall plate and 2 universal modular jacks, for flush mounting, break off mounting ring can be converted into mounting bracket, pearl white (similar RAL 1013), 80 x 80 x 42 mm, 91 g

UM-Cat.6A iso-UMD 2 Up rw
139 112 040
pure white (similar RAL 9010)



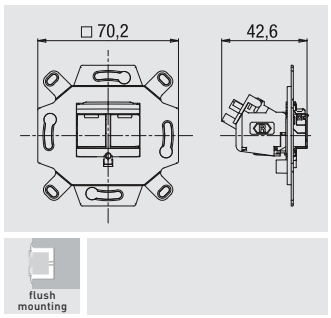
UM-Cat.6A iso-MD 2 Up
139 102 070
Cat.6A iso modular jack, 2-way, with center plate, wall plate and 2 universal modular jacks, pearl white (similar RAL 1013), 80 x 80 x 39 mm, 91 g

UM-Cat.6A iso-MD 2 Up rw
139 112 070
pure white (similar RAL 9010)



UM-Cat.6A iso-MD 3 Up
139 102 100
Cat.6A iso modular jack, 3-way, with center plate, wall plate and 3 universal modular jacks, pearl white (similar RAL 1013), 80 x 80 x 39 mm, 118 g

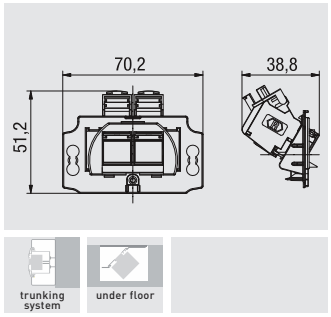
UM-Cat.6A iso-MD 3 Up rw
139 112 100
pure white (similar RAL 9010)



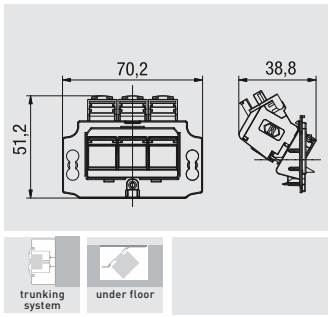
UM-Cat.6A iso-UMD 2 Up 0
139 104 040 ●
Cat.6A iso modular jack, 2-way, with 2 universal modular jacks, for combination with customary TAE center plates, for flush mounting, for combination with ZSt UM-MA 2 and wall plate AP, break off mounting ring can be converted into mounting bracket,
70 x 70 x 43 mm, 74 g

Modular jacks with UM-Cat.6A iso, shielded, for generic networks

Universal modular jack



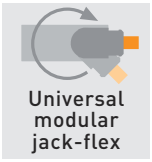
UM-Cat.6A iso-MD 2 Up 0
139 104 070 ●
Cat.6A iso modular jack, 2-way, with 2 universal modular jacks, for combination with customary TAE center plates, for combination with ZSt UM-MA 2 and wall plate AP ,
70 x 51 x 39 mm, 74 g

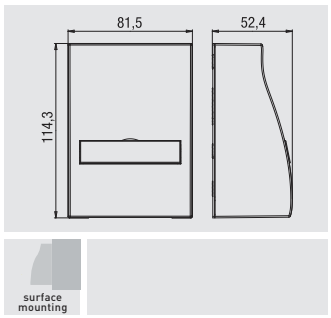


UM-Cat.6A iso-MD 3 Up 0
139 104 100 ●
Cat.6A iso modular jack, 3-way, with 3 universal modular jacks, for ZSt UM-MA 3 and wall plate AP,
70 x 51 x 39 mm, 101 g

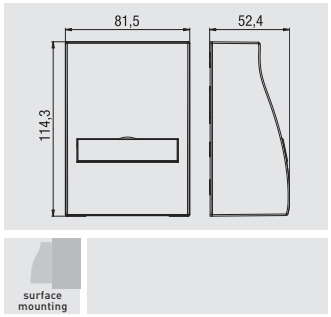
● Discount group 1

Modular jacks-flex,
surface mounting,
with UMflex-Cat.6A iso,
shielded,
for generic networks



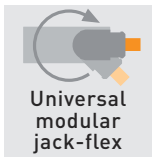


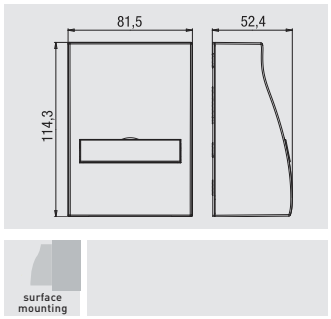
UMflex-Cat.6A iso Ap 2 rw
139 111 020* ●
Surface mounting-jack Cat.6A iso,
modular, 2-way, with 2 universal
modular jacks UMflex-real.Cat.6a A,
cable entry from all sides,
can be installed side by side,
pure white (similar RAL 9010),
82 x 114 x 52 mm, 199 g



UMflex-Cat.6A iso Ap 3 rw
139 111 030* ●
Surface mounting-jack Cat.6A iso,
modular, 3-way, with 3 universal
modular jacks UMflex-real.Cat.6a A,
cable entry from all sides,
can be installed side by side,
pure white (similar RAL 9010),
82 x 114 x 52 mm, 226 g

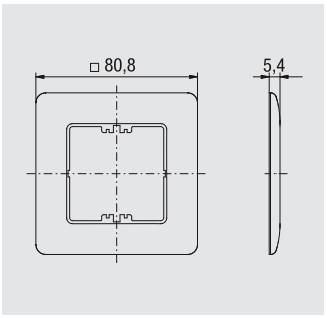
Surface mounting housing,
modular, for
UM-Cat.6A iso,
UMflex-Cat.6A iso,
shielded





UMflex-ApG rw
139 115 01 ●
Surface mounting housing, modular,
for up to 3 universal modular jacks
and the Cat.6 coupling,
pure white (similar RAL 9010),
82 x 114 x 52 mm, 145 g

* phased out 2017

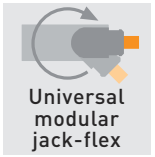


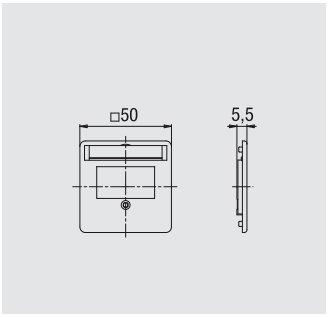
AP
100 100 01 ●
Wall plate,
pearl white (similar RAL 1013),
80 x 80 x 5 mm, 12 g

AP rw
100 100 51 ●
pure white (similar RAL 9010)

Wall plates, center plates and accessory for UM-Cat.6A iso, UMflex-Cat.6A iso, shielded

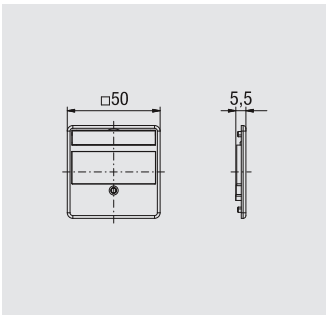
Wall plates and center plates made of ABS-plastic, available in pearl white (similar RAL 1013) pure white (similar RAL 9010)





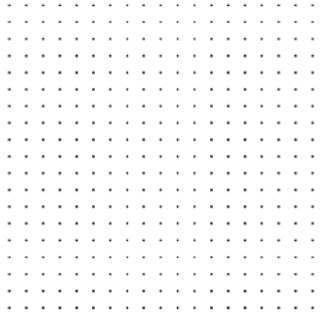
ZSt UM-MA 2
139 100 03 ●
Center plate for 3 outlets TAE,
with labeling strip,
pearl white (similar RAL 1013),
50 x 50 x 6 mm, 6 g

ZSt UM-MA 2 rw
139 100 53 ●
reinweiß (ähnlich RAL 9010)



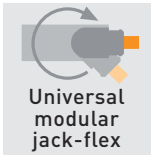
ZSt UM-MA 3
139 100 02 ●
Center plate for 3 outlets RJ45,
with labeling strip,
for UM-MA 3 Up,
pearl white (similar RAL 1013),
50 x 50 x 6 mm, 6 g

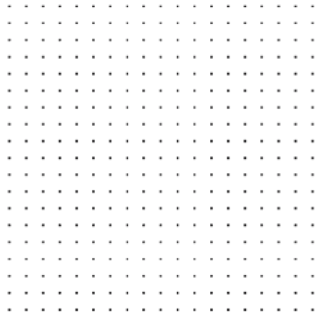
ZSt UM-MA 3 rw
139 100 52 ●
pure white (similar RAL 9010)



UA
392 000 02 ●
Universal wire stripping tool,
for data cable Ø 2–10 mm,
shielded or unshielded,
functions: cutting and stripping
of round and flat cables,
110 x 50 x 12 mm, 45 g

Accessory for UM-Cat.6A iso, UMflex-Cat.6A iso, shielded





EPS
392 000 03 ●
Electronic-precision-cutting tool,
155 x 95 x 15, 80 g

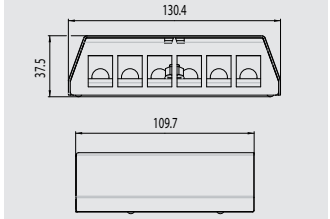
● Discount group 1

Patch panel for holding universal modular jacks

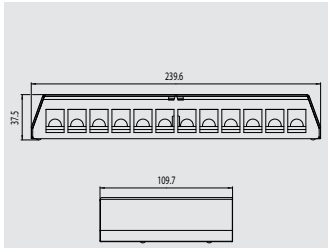
Universal modular jack

PP-UM A-24/1
239 000 00
Patch panel holding up to 24 universal modular jacks UM-Cat.6A iso A, UM-Cat.6A iso U A and KMK-keystone modules, for direct mounting, 19″/1 U, front color: light grey (similar RAL 7035), 483 x 44 x 108 mm, 1100 g

PP-UM-Cat.6A iso-24/24/1
239 101 000
Patch panel holding up to 24 universal modular jacks UM-Cat.6A iso A, UM-Cat.6A iso U A and KMK-keystone modules, or direct mounting, 19″/1 U, front color: light grey (similar RAL 7035), 483 x 44 x 108 mm, 1690 g



PP-UM A-6 Ap
239 101 06
Patch Panel for holding up to 6 universal modular jacks UM-Cat.6A, UM-Cat.6A iso U A and KMK-keystone modules, for desktop- or wall mounting, Din-rail mounting with DIN-rail mounting adapter 221 012, fully shielded, stable metal design quick mounting with latching lid light grey (similar RAL7035) 131 x 38 x 110 mm , 405 g



PP-UM A-12 Ap
239 101 16
Patch Panel for holding up to 12 universal modular jacks UM-Cat.6A, UM-Cat.6A iso U A and KMK-keystone modules, for desktop- or wall mounting, DIN-rail mounting with DIN-rail mounting adapter 221 012, fully shielded, stable metal design quick mounting with latching lid light grey (similar RAL7035) 240 x 38 x 110 mm , 710 g

Consolidation point

CP-UM A-12 Ap
239 101 12
Consolidation point holding up to 12 universal modular jacks UMCat. 6A iso A, UM-Cat.6A iso U A and KMK-keystone modules, swivel lid for the connection of patch cords, with dust protection brushes, black (similar RAL 9005), 236 x 303 x 56 mm, 2150 g

RUTENBECK
Quality products
Made in Germany

MULTIMEDIA PATCH PANEL

In times where the digital multimedia world has become more significant in private homes and surroundings, it is of great importance to have a cleancut cabling and connection between all devices for different applications. In order to meet these high standards, there must be sufficient connection jacks provided in case of new installations or retrofitting.

A central distributor should not only represent the starpoint of the home cabling but must also host the active devices which are necessary for the different applications. Basic devices like the router, its service functions and indications as well as the WiFi antennas should always be freely accessible. Having an elegant design is very important for the overall appearance of a room in many environments.

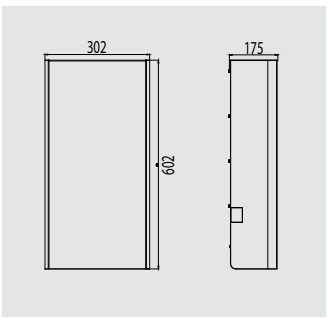
The new Rutenbeck Multimedia Patch Panel fulfills all these requirements to its fullest extent.

Flexible on „3 levels“

The Rutenbeck Multimedia Patch Panel consists of base plate and lid and is suitable for wall mounting. The base plate is designed for the installation of various devices. For the best possible flexibility two mounting rails should be attached first. Active devices such as switches or antenna amplifiers will be mounted on these rails. If the bottom level is completely equipped, a second mounting level can be set up by means of a perforated steel plate. The devices can be mounted on the perforated steel plate at any point. The mounting space can be increased considerably with this second mounting level. For instance an active antenna amplifier with 8 connections including cabling can be installed in the lower section. The upper section could be used for the switches of a home network. After the installation of the lid, the router will be mounted on the "3. level" on frontside of the lid. The fastening screws of the router can be mounted with a slotted hole at any suitable distance in the lid. Now, the router can be attached. The installation on the lid is necessary in order not to restrict the function of the WiFi antenna.

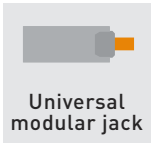
For fixed and flexible cabling

The Rutenbeck Multimedia Patch Panel has 15 keystoneopenings at its bottom side and can be equipped with different keystonemodules from the product branches "Data technology" and "Multimedia". They form the interface for the connection of the fixed external cabling (antenna, network etc.). The keystoneopenings are positioned on level 2, above the base plate. After finishing the installation work, the lid will be easily attached beeing the final working step. As protection against manipulation and theft, the lid can be secured with a conventional padlock. The robust metal design of the Multimedia Patch Panel protects the installed devices against damages.



MM Ap
239 101 18 ●
Multimedia Patch Panel for holding up to 15 Universal-modular jacks UM-Cat. 6A iso A, UM-Cat. 6A iso U A and KMK-Keystonemodules, as home distributor, for wall mounting, fully shielded metal design, slotted hole for router front mounting,
pure white (similar RAL 9010)
302 x 602 x 175 mm, 6800 g

Multimedia patch panel, for holding communications adapter keystone-design
(from page 81)



● Discount group 1

Accessories for
PP-UM

PP-BK
239 100 01
Sealing cover for
PP-UM-openings,
mousegrey (similar RAL 7005),
16 x 18 mm, 0,32 g

PP-SSK sw
235 100 02
Retrofitting dust cover for
patch panel and
for all universal modular jacks
from Rutenbeck,
black (similar RAL 9005),
14 x 16 mm, 1 g

PP-SSK rw
235 100 07
pure white (similar RAL 9010)

UA
392 000 02
Universal wire stripping tool,
for data cable Ø 2–10 mm,
shielded or unshielded,
functions: cutting and stripping
of round and flat cables,
110 x 50 x 12 mm, 45 g

EPS
392 000 03
Electronic-precision-cutting tool,
155 x 95 x 15, 80 g

Cat 7 data cable,
shielded,
for generic networks

NWK-S/FTP Cat.7 AWG 23
212 070 00
Simplex cable, for the transmission
of digital and analog speech-
picture-, multi-media- and
data signals up to
class F (600 MHz) according to
EN 50173-1 and ISO/IEC 11801,
for CATV up to 862 MHz according
to IEC 15018, Poe+ suitable,
FRNC (flame retardant),
LSOH (zero halogen),
orange (similar RAL 2003),
cable drum,1.000 m, 60.000 g

PK Cat.6A iso 0,5 m grey
215 000 05 ●
Patch cord, Category 6_A,
Class E_A, shielded,
S/FTP, LSHF,
grey (similar RAL 7035),
500 mm, 45 g

PK Cat.6A iso 1,0 m grey
215 000 10 ●
1000 mm, 85 g

PK Cat.6A iso 2,0 m grey
215 000 20 ●
2000 mm, 170 g

PK Cat.6A iso 3,0 m grey
215 000 30 ●
3000 mm, 255 g

PK Cat.6A iso 5,0 m grey
215 000 50 ●
5000 mm, 425 g

PK Cat.6A iso 10,0 m grey
215 000 00 ●
10000 mm, 850 g

Cat.6A-iso-Patch-cord,
shielded,
for generic networks

PKV Cat.6A iso 1,0 m grey
216 000 10 ●
Patch cord, Category 6_A,
Class E_A, shielded,
S/FTP, LSHF, lockable
grey (similar RAL 7035),
1000 mm, 80 g

PKV Cat.6A iso 2,0 m grey
216 000 20 ●
2000 mm, 120 g

PKV Cat.6A iso 3,0 m grey
216 000 30 ●
3000 mm, 170 g

PKV Cat.6A iso 5,0 m grey
216 000 50 ●
5000 mm, 255 g

PKV Cat.6A iso 10,0 m grey
216 000 00 ●
10000 mm, 490 g

PKV S
392 000 11 ●
key,
for unlocking patch cords,
for PKV Cat.6A iso,
2 g

STP – Cat.6A iso, ClassEA iso
Compact connection technique, for generic networks

High quality materials as well as the standard conform design with outstanding data transmission characteristics, guarantee a safe data-transmission in all datatechnology applications.

The solid construction allows the use in every popular built-in situation, with only one product – universal and always accurate due to the variable cable entry from all directions.

High quality, cost effectiveness and perfect shielding are self-evident.

High performance assets

Cat.6A-iso-jacks from Rutenbeck comply fully to the current highest data transmission product requirements according to ISO/IEC 11801 for 500 MHz bandwidth (10 Gbit/s).

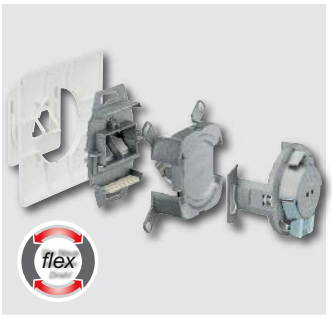
For the fulfillments of the performance parameter, Rutenbeck grants a 25 years guarantee for these products.

Power supply by the network

Jacks and panels completely fulfill the requirements of PoE+ (Power over Ethernet) according to IEEE 802.3at and therefore, allow the power supply of data-terminals, for example, IP-telephones or IP-cams directly through the network cable – in addition to the data! With this method you will not only save the power supply cable, respectively, the plug power supply for the terminal, you will also save the installation effort for the normally necessary power outlets.

Long term high performance guaranteed

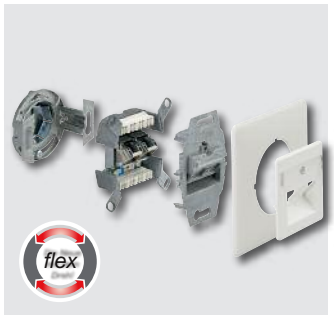
Data-technology products from Rutenbeck are quality products "Made in Germany" certified according to ISO 9001.



Appropriate for all situations
The UAE-compact-universal-jacks

Whether surface mounting, duct systems or flush mounting, complying with standards, the flat universal design enables the use of this jack in many various installation areas.

The cable entry is flexible and can be adjusted to all installation needs. The size of the compact-universal-jack complies with all standards and requirements of conventional flush mounting jacks.



The assembly – fast, flexible and economical!

The complete installation of the jack requires only one screw. The cover parts can easily be latched,this saves valuable installation time.

The connection of the wires takes place from the front at the LSA-terminal strips. Therefore, the required length of the cable for the connection can be kept short.

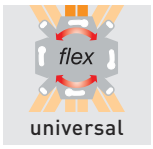
If the space is extremely limited, a connection of the wires is even possible at the mounted jacks.

The Rutenbeck universal jacks can be combined with wall plates from all well-known manufacturers of electrical installation material.

Patch panel for generic networks

The patch panel represents the central connecting hardware of a network installation. In combination with the universal jacks, it enables the perfect setup of a structured cabling with optimal coordinated products.

High quality material guarantee for safe installation and data transmission.



Additional installation advantages are achieved by:

- high stability and optimal shielding through zinc die cast housing
- few parts, suitable for construction sites
- proven, connection safe LSA terminals
- Terminals clearly labelled with color codes and numbers
- universal, flexible cable entry (+/- 30°)
- quick one step mounting of strain-relief and shielding connection
- complete connecting process with only one screw
- quick mounting cover (latching)
- for combination with design wall plates of all well-known manufacturers of electrical installation
- RJ11/12-protected against mismating
- min. 1000 cycles

Technical data for shielded Cat.6A iso and ClassEA iso - connecting hardware

Mechanical characteristics Cat.6A iso, ClassEA iso - General	
Housing of shielding	zinc die cast
Connection of cable shielding/ strain relief	combined shielding and strain relief with flexible cable entry (+/- 30°)
Ambient temperature	-40 °C to +70 °C
Class according to EN 60 529	IP21
Miscellaneous	free from halogen
Connector/outlet Cat.6A iso, ClassEA iso	
Design Cat.6A iso	DIN EN 60 603-7-51
Design ClassEA iso	DIN EN 60 603-7-51
Connection technique	LSA-terminals for wires 0.4–0.63 mm Ø, AWG 26–22, outer diameter 0.7–1.6 mm at PE, 1 wire at each terminal, number of connections ≥ 50 x
Assembly Cat.6A iso	flexible printed circuit board made of polyimid with mechanical spring elements (patented)
Assembly ClassEA iso	flexible printed circuit board made of polyimid with mechanical spring elements (patented)
Contact material/-surface	1,5 µm Ni/0,8 µm Au
Material housing	PBT
Life (insertion and withdrawals)	
Cat.6A iso	≥ 1000 cycles — with plugs according to IEC 60 603-7
ClassEA iso	≥ 1000 cycles — with plugs according to IEC 60 603-7

Electrical characteristics Cat.6A iso, ClassEA iso	
Voltage	72 V DC, suitable for TNV circuits, according to DIN EN 60 950-1:2011-01
Operation current	500 mA, at 50 °C ambient temperature
PoE-compliant	suitable for PoE+ (Power over Ethernet) according to IEEE 802.3at
Voltage withstand	1000 V (contact – contact), 1500 V (contact – housing)
Isolation resistance	≥ 500 MΩ
Contact resistance	signal contact: 20 mΩ, shielding contact: 100 mΩ
Color code	T568A and T568B according to TIA/EIA-568-B.2

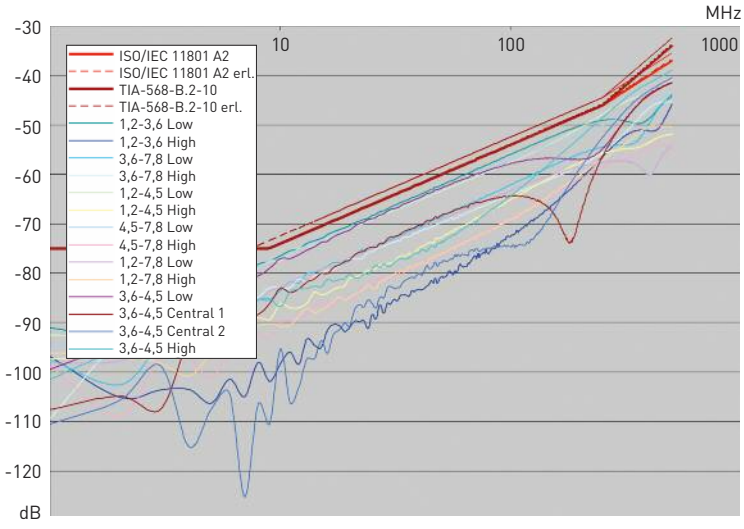
Transmission characteristics Cat.6A iso	
ISO/IEC 11801 DIN EN 50173-1	Cat.6_A, shielded
DIN EN 60 603-7-51	500 MHz, shielded

Transmission characteristics ClassEA iso	
ISO/IEC 11801 DIN EN 50173-1	ClassE_A, shielded
DIN EN 60 603-7-51	500 MHz, shielded

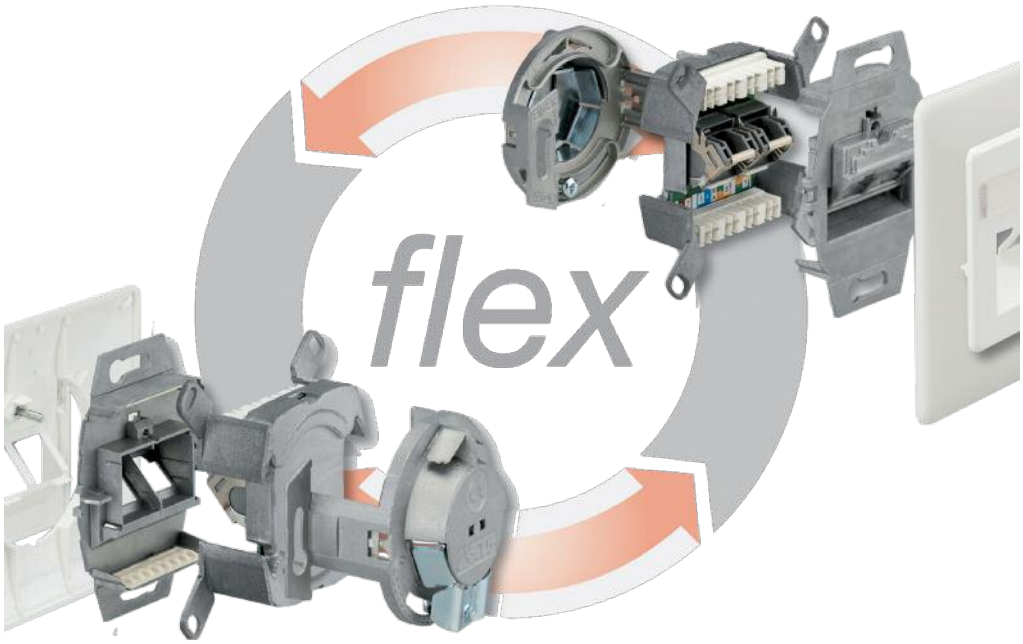
Test- and approval marks

CE

GHMT AG · IN DER KOLLING 13 · 66450 Bexbach



Extended NEXT for 10-Gigabit-Ethernet (typical values according to ISO/IEC)



- suitable for HDBaseT-applications

- suitable for Cisco UPOE-standard

- Cat.6A iso-components
- ClassEA iso-components

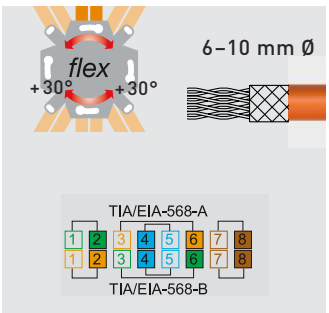
- Cat.6A iso-components
- ClassEA iso-components

- suitable for mix-and-match use
- free choice of cable
- high reserves at cable lengths ≤ 90 m

- suitable for PoE+ (Power over Ethernet) according to IEEE 802.3at

- for combination with design wall plates of all well-known manufacturers of electrical installation material for single and double flush mounting-solutions

- special socket construction guarantees reliable data transmission even if the RJ11/12 jack is inadvertently plugged in incorrectly
- at least 1000 insertion cycles with standardized RJ45 jacks (250 more than the standard requirement)



- universal, flexible cable entry (+/- 30°)
- for data cable with a diameter of 6–10 mm
- coding of terminals A and B in accordance with TIA/EIA-568-B.2
- shielding and strain relief in one step
- earthing terminal

- made and tested in Germany
- 25 years guarantee

Overview compact components ClassEA iso and Cat.6A iso

Compact connecting hardware ClassEA iso and Cat.6A iso

...for the Channel-Link

ClassEA iso

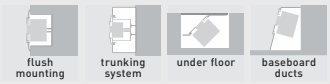
ClassEA iso-compact-jacks
for generic networks

...for the Permanent-Link

Cat.6A iso

Cat.6A iso-compact-jacks
for generic networks

25 Years Guarantee

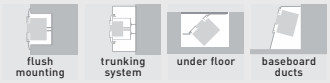


	Up	Up rw*
1-way	138 102 030	138 112 030
2-way	138 102 070	138 112 070

break off mounting ring
can be converted into
mounting bracket

	Up	Up rw*
1-way	136 102 030	136 112 030
2-way	136 102 070	136 112 070

break off mounting ring
can be converted into
mounting bracket



	Up 0
1-way	138 104 030
2-way	138 104 070

break off mounting ring
can be converted into
mounting bracket

	Up 0
1-way	136 104 030
2-way	136 104 070

break off mounting ring
can be converted into
mounting bracket

Patch panel for generic networks

	PP-24/1
24-way	238 101 100

patch panel, 19''/1 U,
for direct mounting

	PP-24/1
24-way	236 101 100

patch panel, 19''/1 U,
for direct mounting

surface mounting-patch panel for generic networks

	PP-ClassEA iso-6 Ap
6-way	238 101 06

	PP-Cat.6A iso-6 Ap
6-way	236 101 06

	PP-ClassEA iso-12 Ap
12-way	238 101 12

	PP-Cat.6A iso-12 Ap
12-way	236 101 12

Surface mounting housing for flush mounting designs

	UAE-Cat. ApG
	135 105 03

	UAE-Cat. ApG rw*
	135 115 03

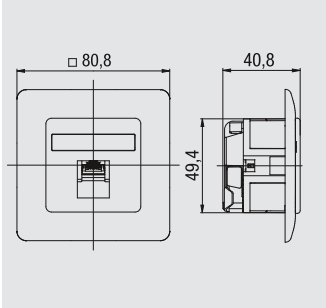
	UAE-Cat. ApG
	135 105 03

	UAE-Cat. ApG rw*
	135 115 03

*rw = pure white

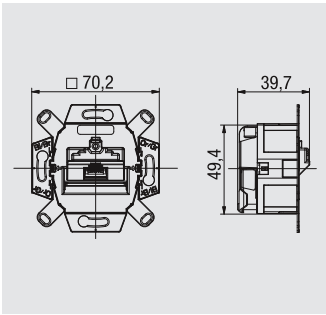
Compact-universal-jacks

UAE-Cat.6A iso, shielded, for generic networks

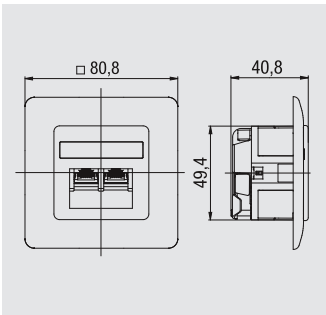


UAE-Cat.6A iso-8 Up
136 102 030
with center plate and wall plate, break off mounting ring can be converted into mounting bracket, pearl white (similar RAL 1013), 80 x 80 x 41 mm, 183 g

UAE-Cat.6A iso-8 Up rw
136 112 030
pure white (similar RAL 9010)

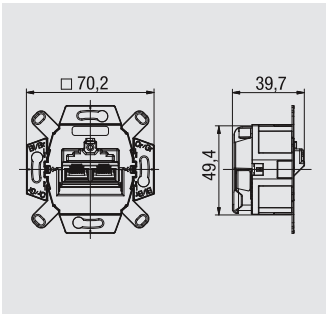


UAE-Cat.6A iso-8 Up 0
136 104 030
break off mounting ring can be converted into mounting bracket, 70 x 70 x 40 mm, 142 g



UAE-Cat.6A iso-8/8 Up
136 102 070
with center plate and wall plate, break off mounting ring can be converted into mounting bracket, pearl white (similar RAL 1013), 80 x 80 x 41 mm, 186 g

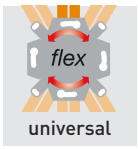
UAE-Cat.6A iso-8/8 Up rw
136 112 070
pure white (similar RAL 9010)

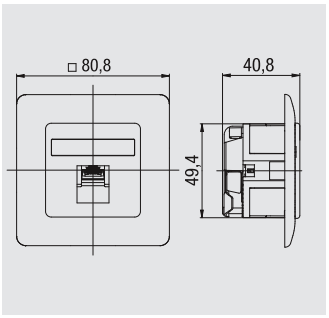


UAE-Cat.6A iso-8/8 Up 0
136 104 070
break off mounting ring can be converted into mounting bracket, 70 x 70 x 40 mm, 145 g

Compact-
universal-jacks

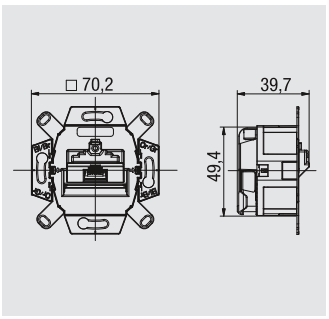
UAE-ClassEA iso,
shielded,
for generic networks



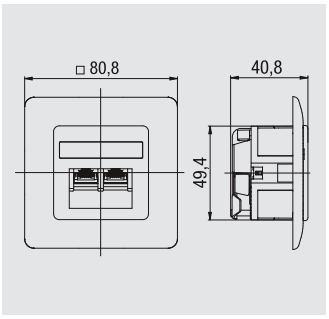


UAE-ClassEA iso-8 Up
138 102 030 ●
with center plate and wall plate, break off mounting ring can be converted into mounting bracket, pearl white (similar RAL 1013), 80 x 80 x 41 mm, 183 g

UAE-ClassEA iso-8 Up rw
138 112 030 ●
pure white (similar RAL 9010)

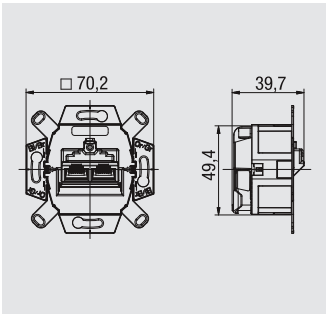


UAE-ClassEA iso-8 Up 0
138 104 030 ●
break off mounting ring can be converted into mounting bracket, 70 x 70 x 40 mm, 142 g



UAE-ClassEA iso-8/8 Up
138 102 070 ●
with center plate and wall plate, break off mounting ring can be converted into mounting bracket, pearl white (similar RAL 1013), 80 x 80 x 41 mm, 186 g

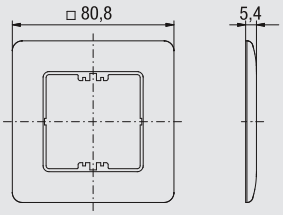
UAE-ClassEA iso-8/8 Up rw
138 112 070 ●
pure white (similar RAL 9010))



UAE-ClassEA iso-8/8 Up 0
138 104 070 ●
break off mounting ring can be converted into mounting bracket, 70 x 70 x 40 mm, 145 g

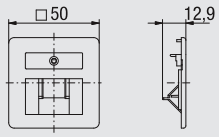
Wall plates, center plates and surface mounting housing for UAE-Cat.6A iso, UAE-ClassEA iso shielded AP, ZSt, AP V, ApG

Wall plates and center plates made of ABS-plastic, available in pearl white (similar RAL 1013) pure white (similar RAL 9010)



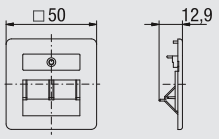
AP
100 100 01
Wall plate,
pearl white (similar RAL 1013),
80 x 80 x 5 mm, 12 g

AP rw
100 100 51
pure white (similar RAL 9010)



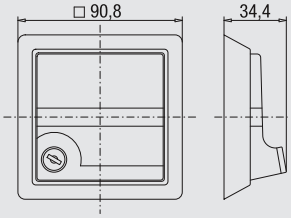
ZSt UAE-Cat. 8
135 100 02
Center plate with 1 outlet
and inscription label,
pearl white (similar RAL 1013),
50 x 50 x 13 mm, 6 g

ZSt UAE-Cat. 8 rw
135 100 52
pure white (similar RAL 9010)

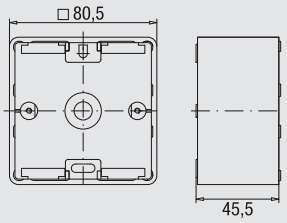


ZSt UAE-Cat. 8/8
135 100 03
Center plate with 2 outlets
and inscription label,
pearl white (similar RAL 1013),
50 x 50 x 13 mm, 6 g

ZSt UAE-Cat. 8/8 rw
135 100 53
pure white (similar RAL 9010)



AP V rw
100 100 55
Wall plate,
lockable, IP44,
all keys individually locking for all
Rutenbeck flush-mounting sets
in connection with center plates
50 x 50 x 13 mm,
pearl white (similar RAL 1013),
91 x 91 x 34 mm, 10 g



UAE-Cat. ApG
135 105 03
Surface mounting housing*,
for flush mounting designs,
pearl white (similar RAL 1013),
80 x 80 x 46 mm, 93 g

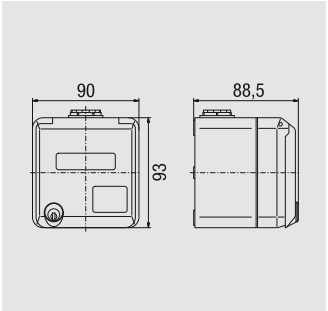
UAE-Cat. ApG rw
135 115 03
pure white (similar RAL 9010)

*for standard-conform Cat.6 surface mounting-solutions in modular design
see page 18

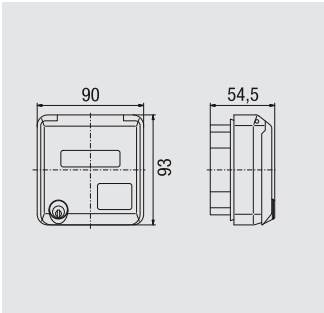
Schematic diagram of the mounting housings

IP44-mounting housing according to EN 60 529 for Rutenbeck-UAE-jacks with metal mounting bracket

The new industrial housing for UAE jacks has been designed, so that all Cat.-double-jacks can be installed without any problems. With this solution standard RJ45 patch cords can be used. After closing the lid the protection class IP44 is reached. The cable entry to the jacks can be done from the top or bottom.

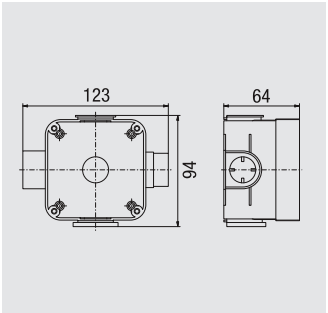


ApG-I g**
100 100 56
Surface mounting housing,
individually locking,
for industrial use, IP44,
for UAE-data jacks,
light grey (similar RAL 7035),
90 x 93 x 89 mm, 260 g

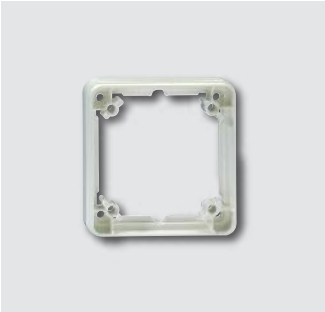


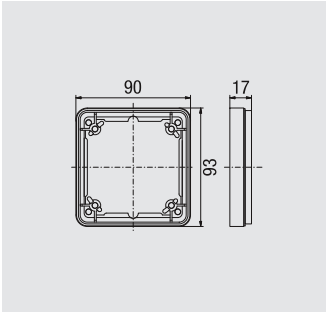
UpG-I g**
100 100 57
Flush mounting housing,
individually locking,
for industrial use, IP44,
light grey (similar RAL 7035),
90 x 93 x 55 mm, 157 g

UpG-I rw**
100 100 58
pure white (similar RAL 9010)



UpG-UpEd
100 100 62
Wall box,
for flush mounting housing UpG-I,
light grey (similar RAL 7035),
123 x 94 x 64 mm, 97 g





UpG-DR g
100 100 60
Wall box,
for flush mounting housing UpG-I,
light grey (similar RAL 7035),
90 x 93 x 17 mm, 27 g

UpG-DR rw
100 100 61
pure white (similar RAL 9010)

ApG-KVS
100 100 59
Cable gland, M 25,
for surface mounting housing ApG-I,
light grey (similar RAL 7035),
31 x 28 x 43 mm, 8 g

Performance features

- for Cat.6A iso- and Class EA-double jacks
- IP44, with conventional patch cords (when plugged in)
- Hit-proof according to DIN 18 032
- all membrane-cable glands M25 for two cables from 3–10 mm
- cable entry from top or bottom
- tamperproof by use of safety lock (identical keys upon request)
- labeling strips

Application areas

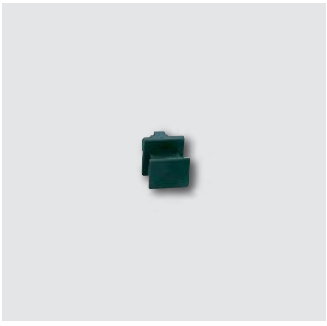
The mounting housings can be used in both private and industrial areas for the classical light switches and power sockets, e. g. terraces, outdoor storage places, workshops, marinas, stadiums, airports, industries area, control center, production-, research- and development areas.

**product diversification planned

● Discount group 1

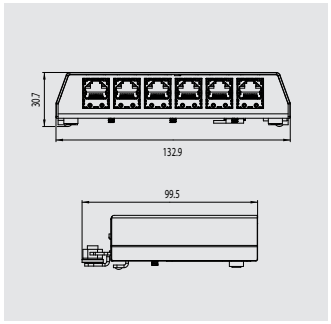
Accessory for UAE-Cat.6A iso and UAE-ClassEA iso-jacks, shielded

AW 2
392 000 00
Connection tool for LSA- and LSA-Plus-terminals, with pressure sensor and cutting blade, 38 x 177 x 21 mm, 80 g

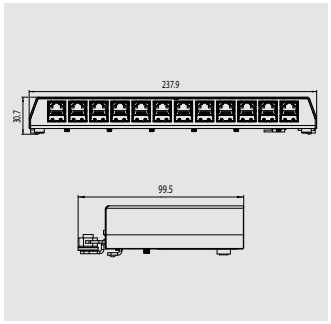


UAE-Cat. BS
135 105 05
Dummy plug for the protection of unused RJ45-outlets, black (similar RAL 9005), 15 x 15 x 20 mm, 2 g

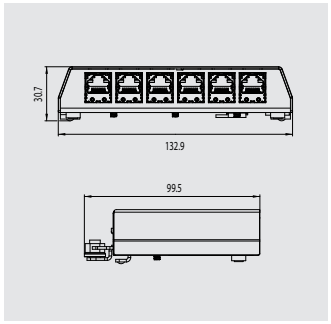
Cat.6A iso- and ClassEA iso-surface mounting patch panel shielded, for generic networks



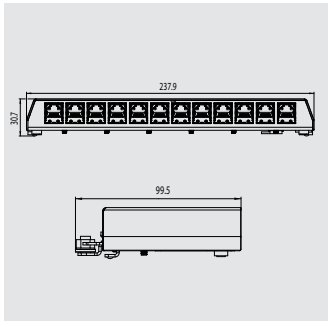
PP-Cat.6A iso-6 Ap
236 101 06
Category 6_A Patch Panel, 6 RJ45 outlets, for desktop- or wall mounting, DIN-rail mounting with DIN-rail mounting adapter 221 012, fully shielded, stable metal design, quick mounting with latching lid light grey (similar RAL7035) 133 x 31 x 98 mm, 360 g



PP-Cat.6A iso-12 Ap
236 101 12
Category 6_A Patch Panel, 12 RJ45 outlets, for desktop- or wall mounting, DIN-rail mounting with DIN-rail mounting adapter 221 012, fully shielded, stable metal design, quick mounting with latching lid light grey (similar RAL7035) 238 x 31 x 98 mm, 650 g



PP-ClassEA iso-6 Ap
238 101 06
Class E_A Patch Panel, 6 RJ45 outlets, for desktop- or wall mounting, DIN-rail mounting with DIN-rail mounting adapter 221 012, fully shielded, stable metal design, quick mounting with latching lid light grey (similar RAL7035) 133 x 31 x 98 mm, 360 g



PP-ClassEA iso-12 Ap
238 101 12
Class E_A Patch Panel, 12 RJ45 outlets, for desktop- or wall mounting, DIN-rail mounting with DIN-rail mounting adapter 221 012, fully shielded, stable metal design, quick mounting with latching lid light grey (similar RAL7035) 238 x 31 x 98 mm, 650 g

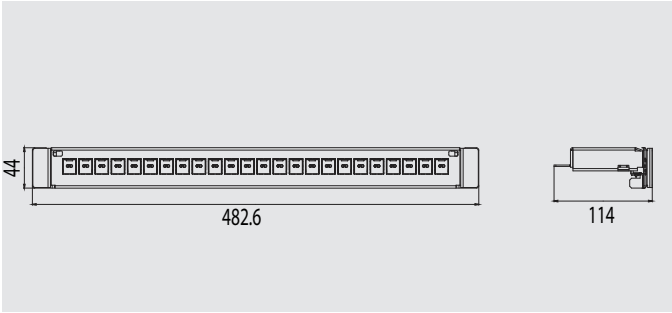
PP-Cat.6A iso-24/1
236 101 100 ●
Patch panel according to Category 6_A, 19"/1 U, with 24 RJ45-ports, for direct mounting
front color:
light grey (similar RAL 7035),
482 x 44 x 114 mm, 1660 g

Cat.6A-iso-, ClassEA iso-patch panel, shielded, for generic networks

PP-ClassEA iso-24/1
238 101 100 ●
Patch panel according to Class E_A, 19"/1 U, with 24 RJ45-ports, for direct mounting
front color:
light grey (similar RAL 7035),
482 x 44 x 114, 1660 g

PP-24/1 PoE**
235 103 02 ●
PoE-patch panel, Midspan solution, 12 x RJ45-Port data inputs, 12 x RJ45-Port outputs, data + PoE, Power supply according to IEEE 802.3af,
Datarate 10/100 Mbit/s,
Nominal operating voltage:
48 V DC, Power consumption: 4 A,
for direct mounting, front color:
light grey (similar RAL 7035),
482 x 44 x 114 mm, 1815 g

PoE-patch panel PP-PoE



SV-PP 48 V PoE
235 103 03 ●
PoE-power supply for PP-24/1 PoE,
Output power: 60 W, for up to 3 PoE-devices (class 0–3), 4 x necessary for complete set up of the panel,
Operating voltage:
100–240 V~/50–60 Hz,
black (similar RAL 9005),
130 x 60 x 32 mm, 475 g

**product diversification planned ● Discount group 1 ● Discount group 2

Accessory for patch pane PP-Cat.6A iso and PP-ClassEA iso, shielded

PP-SSK sw
235 100 02
Dust cover for retrofitting, suitable for all patch panes universal modular jacks from Rutenbeck, grey (similar RAL 7005), 14 x 16 mm, 1 g

PP-SSK rw
235 100 07
pure white (similar RAL 9010)

AW 2
392 000 00
Connection tool for LSA- and LSA-Plus-terminals, with pressure sensor and cutting blade, 38 x 177 x 21 mm, 80 g

Cat 7 data cable, shielded, for generic networks

NWK-S/FTP Cat.7 AWG 23
212 070 00
Simplex cable, for the transmission of digital and analog speech-picture-, multi-media- and data signals up to class F (600 MHz) according to EN 50173-1 and ISO/IEC 11801, for CATV up to 862 MHz according to IEC 15018, Poe+ suitable, FRNC (flame retardant), LSOH (zero halogen), orange (similar RAL 2003), cable drum,1.000 m, 60.000 g

PK Cat.6A iso 0,5 m grey
215 000 05 ●
Patch cord, Category 6_A,
Class E_A, shielded,
S/FTP, LSHF,
grey (similar RAL 7035),
500 mm, 45 g

PK Cat.6A iso 1,0 m grey
215 000 10 ●
1000 mm, 85 g

PK Cat.6A iso 2,0 m grey
215 000 20 ●
2000 mm, 170 g

PK Cat.6A iso 3,0 m grey
215 000 30 ●
3000 mm, 255 g

PK Cat.6A iso 5,0 m grey
215 000 50 ●
5000 mm, 425 g

PK Cat.6A iso 10,0 m grey
215 000 00 ●
10000 mm, 850

Cat.6A-iso-patch-cord,
shielded,
for generic networks

PKV Cat.6A iso 1,0 m grey
216 000 10 ●
Patch cord, Category 6_A,
Class E_A, shielded,
S/FTP, LSHF, lockable
grey (similar RAL 7035),
1000 mm, 80 g

PKV Cat.6A iso 2,0 m grey
216 000 20 ●
2000 mm, 120 g

PKV Cat.6A iso 3,0 m grey
216 000 30 ●
3000 mm, 170 g

PKV Cat.6A iso 5,0 m grey
216 000 50 ●
5000 mm, 255 g

PKV Cat.6A iso 10,0 m grey
216 000 00 ●
10000 mm, 490 g

PKV S
392 000 11 ●
key,
for unlocking patch cords,
for PKV Cat.6A iso,
2 g

● Discount group 1

STP – Cat.6A iso
Field assembly RJ 45 plug shielded, for generic networks

Always the right choice

Field assembly universal plugs from Rutenbeck are the perfect solution, if a permanent terminal equipment connection is needed in private as well as in commercial environment. The slim design, high mechanical stability as well as optimal shielding and strain relief at data rates up to 10 Gbit/s make the Rutenbeck universal plug suitable for use in all situations.

Easy and safe assembly

The assembly can be done on the construction site fast, safe and without any special tools. The universal plug is designed for being used with the most popular types of cables no matter whether you are using customary Cat.7 cable (solid wires) or flexible patch cords (stranded wires).

Safe in function

The robust zinc die cast housing with 360° shielding characteristics guarantees a trouble-free data transmission in any environment. Outside interferences will have no chance.

Easy assembly

During the assembly all contacts and the PCB are protected by an integrated assembling aid. Therefore, damages will be prevented. The insertion of the wire manager in the housing is anti-twist protected. Shielding connection and strain relief take place by simple closing the plug in one step. When closing up to three audible clicks can be heard. The universal plug is now ready for use.

Fit for Future

Cat. 6A iso – universal plugs from Rutenbeck fully comply to the current highest data transmission product requirements according to ISO/IEC11801. Therefore, data rates up to 10 Gbit/s are no problem. Furthermore, the requirements for PoE+ are also fulfilled.

Product advantages:
Universal plug Cat.6A iso

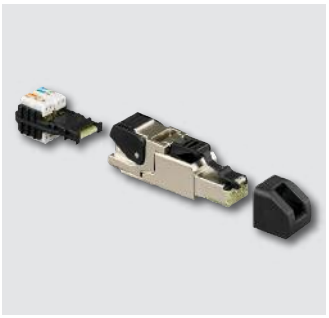
- Cat.6A iso performance
- downward compatible to Cat.6A / Cat.6 / Cat.5e
- few pre-assembled parts, suitable for constructions sites
- quick and safe assembly without special tools
- multi-port capable
- zinc die cast housing for high mechanical stability and optimal shielding
- non-interchangeable terminal marking, B-coding
- 360° screening
- Protection class: IP20 according to IEC 60529
- minimum 750 insertion cycles
- reconnectable up to 4 times
- suitable for PoE+, according to IEEE 802.3at
- for solid wires AWG 24/1 – AWG 22/1 (0,51 – 0,64mm)
- for stranded wires AWG 27/7 –AWG 22/7 (0.46 – 0.76 mm)
- temperature range: -40°C - +85°C

The Cat.6A iso – universal plugs comply to the following standards:

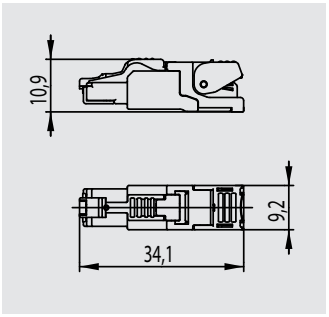
- IEC 60 603-7-51, shielded, 500 MHz
- Color code T568B according to TIA/EIA-568-B.2
- 10 Gbit-Ethernet according to IEEE 802.3an

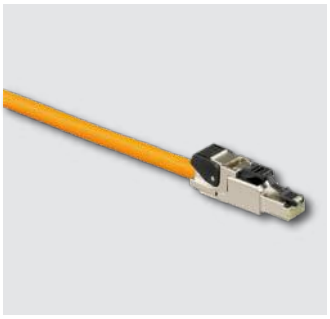
10 Gbit/s conform

PoE+ IEEE 802.3at



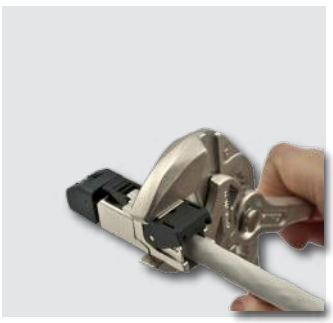
US-Cat.6A iso B
139 003 20
Cat. 6A iso- universal plug, RJ 45, shielded, for field assembly, without special tools, AWG 27 - 22, TIA/EIA 568B, 49 x 14 x 17 mm, 22 g





Universal plug
US Cat.6A iso

Few pre-assembled parts, suitable for construction sites



Assembly without special tools

RUTENBECK
Quality products
Made in Germany

STP – Class F_A
Field assembly universal connection module for data cables, shielded, for generic networks

The safe connection

If data cables are damaged or need to be extended, the field assembly universal connection module from Rutenbeck is the perfect solution. Due to its round shape the established connections are protected against dust, water and interferences.

Easy and safe assembly

The assembly can be done on the construction site fast, safe and without any special tools. The universal plug is designed for being used with the most popular types of cables no matter whether you are using customary Cat.7 cable (solid wires) or flexible patch cords (stranded wires).

Safe in function

The robust zinc die cast housing with 360° shielding characteristics guarantees a trouble-free data transmission in any environment. Outside interferences will have no chance.

The additional coating of the universal connection module guarantees a potential separation to neighbouring connection modules.

Easy assembly

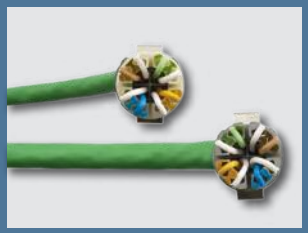
After the assembly of the clearly marked wire managers at each cable end, the connection takes place by simply screwing them together. Special tools are not necessary. The wire managers are distinctively coded, which makes the assembly easy and safe.

Product advantages:
Universal connection module ClassF_A

- ClassF_A iso performance (1000MHz)
- downward compatible to Cat.6_A / Cat.6A / Cat.6 / Cat.5e
- few pre-assembled parts, suitable for constructions sites
- zinc die cast housing for high mechanical stability and optimal shielding
- round shape
- 360° screening
- insulated
- Protection class: IP67 according to IEC 60529
- reconnectable up to 4 times
- suitable for PoE+, according to IEEE 802.3at
- for solid wires AWG 24/1 – AWG 22/1 (0,51 – 0,64mm)
- for stranded wires AWG 27/7 – AWG 22/7 (0,46 – 0,76mm)
- temperature range: -40°C - +85°C

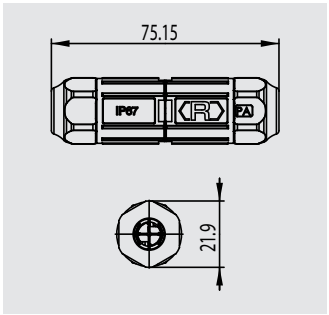
The ClassF_A - universal connection module from Rutenbeck complies to the following standards:

- 10 Gbit-Ethernet according to IEEE 802.3an
- Class F_A according to ISO/IEC 11801 and DIN EN 50173-1
- Cat. 6_A according to ISO/IEC 11801 and DIN EN 50173-1



ClassF_A-universal connection module from Rutenbeck comply fully to the current highest data transmission product requirements according to ISO/IEC 11801. Therefore, data rates up to 10 Gbit/s are no problem. Furthermore, the requirements for PoE+ are also fulfilled.

UV-Class FA
139 003 30 ●
Class F_A-universal connection module, shielded, insulated construction, for field assembly, without special tools,
for solid wires: AWG 24/1 – AWG 22/1, for stranded wires: AWG 27/7 – AWG 22/7,
75 x 22 (ø) mm, 56 g



Universal connection module ClassF_A

Few pre-assembled parts, suitable for construction sites

Assembly without special tools

● Discount group 1

DATA TECHNOLOGY

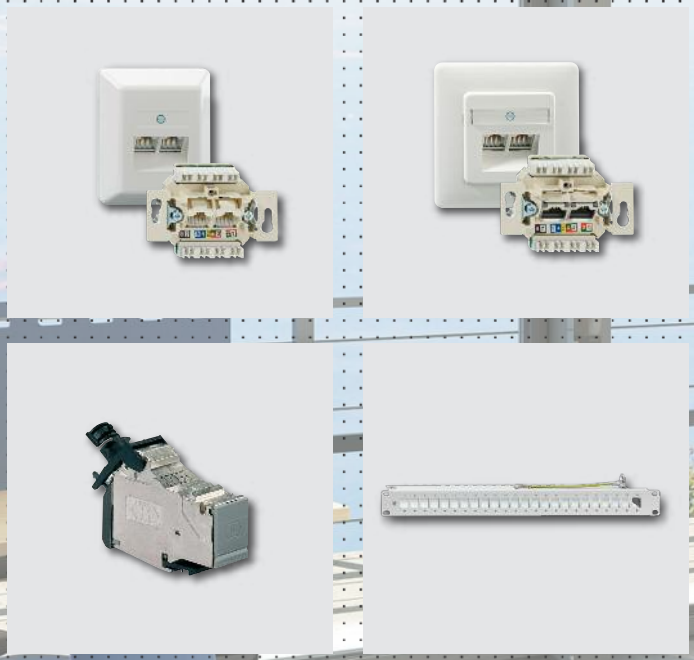
unshielded (UTP)

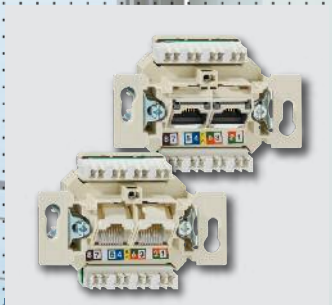
World-wide there is a large market for unshielded connecting hardware in data installations. Differing from the shielded products, the parts are made of zinc die cast only, if the mechanical stability is required. Otherwise, they are made of high quality plastic. Outstanding data transmission values allow the use in all data technical applications without having to use one single system.

Installation advantages and a solid construction guarantee a high cost-effectiveness.

Data jacks from Rutenbeck can be combined with the design wall plates (50 x 50 mm) from all well-known manufacturers of electrical installation material.

All products can be found in detail at www.rutenbeck.com





Compact-universal jacks
Cat.6A iso U, ClassEA iso U
page 40

Compact connection technique, patch panel
Cat.6A iso U, ClassEA iso U
page 40

Modular connection technique Cat.6A iso U
page 44

Modular connection technique, unshielded, construction kit system
page 46

UTP –
Cat.6A iso U and ClassEA iso U, compact-jacks and patch panel, unshielded,
for generic networks

Unshielded data processing products of Cat.6A iso and ClassEA iso from Rutenbeck guarantee a safe data-transmission at high quality and cost-effectiveness.

All unshielded data processing products from Rutenbeck are quality products "Made in Germany" certified according to ISO 9001.

Various designs enables the installation in different installation situations.

All unshielded data-technology jacks are suited to the use in 10-Gigabit-Ethernet-networks.

- for solid wires (AWG 26–22)
- for combination with design wall plates (UAE) of all well-known manufacturers of electrical installation
- 100% quality-proof
- 25 years guarantee
- made and tested in Germany
- suitable for PoE+ and UPOE

High performance assets

Unshielded Cat.6A iso U-jacks from Rutenbeck comply to the data transmission product requirements according to EIA/TIA as well as with the requirements on the transmission channel according to EIA/TIA for 500 MHz bandwidth (10 Gbit/s). Furthermore, PoE+ (Power over Ethernet) is no problem for the Cat.6A iso U-jacks from Rutenbeck.

Surface mounting design – ideal for supplementary installation

The surface mounting design is recommended for the backfitting and retrofitting of networks. The compact design fits perfectly in any installation environment.

With constantly increasing requirements of transmission characteristics, a fault-free and standard-conform installation has become of greater importance.

Flush mounting design – the universal solution

The praxis-proven design of the flush mounting data-jacks guarantees a safe connection and various installation advantages:

- proven, connection safe LSA-terminals
- clearly labeled terminals
- metric srews suitable for design wall plates of all well-known manufacturers of electrical installation material

Patch panel for generic networks

The patch panel represents the central connecting hardware of a network installation. In combination with the universal jacks, it enables the perfect setup of a structured cabling with optimal coordinated products.

High quality material guarantee for safe installation and data transmission.

Technical data for unshielded Cat.6A iso-U and ClassEA iso U-connecting hardware

Mechanical characteristics	
General	
Housing	ABS, unshielded
Ambient temperature	-40 °C bis +70 °C
Class according to EN 60 529	IP21
Connector/outlet Cat.6A iso U, ClassEA iso U	
Design Cat.6A iso U Design ClassEA iso U	DIN EN 60603-7-51 DIN EN 60603-7-41
Connection technique	LSA-terminals for wires 0.4–0.63 mm Ø, AWG 26–22, outer diameter 0.7–1.6 mm at PE, 1 wire at each terminal, number of connections ≥ 50 x
Assembly Cat.6A iso U Assembly ClassEA iso U	flexible printed circuit board made of polyimid with mechanical spring elements (patented) flexible printed circuit board made of polyimid with mechanical spring elements (patented)
Contact material/-surface	1,5 µm Ni/0,8 µm Au
Material housing	PBT
Life (insertion and withdrawals)	Cat.6A iso U ≥ 1000 cycles with plugs according to IEC 60 603-7 ClassEA iso U ≥ 1000 cycles with plugs according to IEC 60 603-7

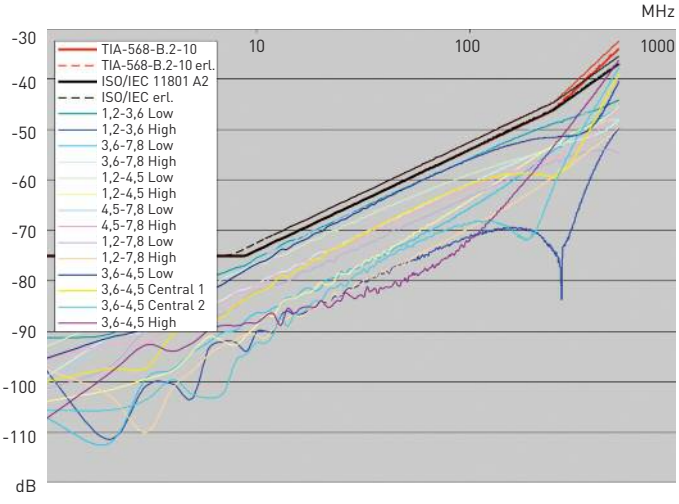
Electrical characteristics Cat.6A iso U, ClassEA iso U	
Voltage	72 V DC, suitable for TNV circuits, according to EN 60 950-1:2011-01
Operation current	500 mA, at 50 °C ambient temperature
PoE-compliant	suitable for PoE+ (Power over Ethernet) according to IEEE 802.3at
Voltage withstand	1000 V (contact – contact)
Isolation resistance	≥ 500 MΩ
Contact resistance	signal contact: 20 mΩ
Color code	T568A and T568B according to TIA/EIA-568-B.2

Transmission characteristics Cat.6A iso U	
ISO/IEC 11801 DIN EN 50173	Cat.6_A, unshielded
DIN EN 60603-7-41	500 MHz, unshielded
TIA/EIA-568-C.2	Cat.6A, unshielded

Transmission characteristics ClassEA iso U	
ISO/IEC 11801 DIN EN 50173	ClassE_A, unshielded
DIN EN 60603-7-41	500 MHz, unshielded
TIA/EIA-568-C.2	Class EA, unshielded

Test- and approval marks

CE



Extended NEXT for 10-Gigabit-Ethernet (typical values according to ISO/IEC and EIA/TIA)

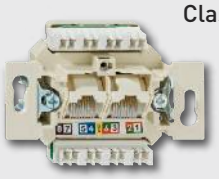
Release January 2017, current product data sheets can be obtained on our website **www.rutenbeck.com**

All products can be found in detail at www.rutenbeck.com

Overview compact components Cat.6A iso U, ClassEA iso U, unshielded

Compact components ClassEA iso U, Cat.6A iso U

...for the Channel-Link ClassEA iso U



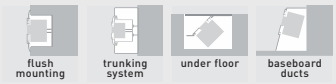
ClassEA iso U-Universal data jacks for generic networks

...for the Permanent-Link Cat.6A iso U

Cat.6A iso U-Universal data jacks for generic networks

	Ap rw*
1-way	132 115 010 ●
2-way	132 115 030 ●

	Ap rw*
1-way	134 115 01 ●
2-way	134 115 03 ●



	Up rw*
1-way	132 112 010 ●
2-way	132 112 050 ●

	Up rw*
1-way	134 112 01 ●
2-way	134 112 05 ●

Up 0

	UP 0
1-way	132 104 010 ●
2-way	132 104 050 ●

	UP 0
1-way	134 104 01 ●
2-way	134 104 05 ●

Patch panel for generic networks, direct mounting

ClassEA iso U

	PP-24/1 U
24-way	232 101 100 ●

patch panel, 19", 1U, for direct mounting

Cat.6A iso U

	PP-24/1 U
24-way	234 101 100 ●

patch panel, 19", 1U, for direct mounting

*rw = pure white ● Discount group 1

- Cat.6A iso U-components
- ClassEA iso U-components

- Cat.6A iso U-components
- ClassEA iso U-components

mix + match

- suitable for mix-and-match use
- free choice of cable
- high reserves at cable lengths ≤ 90 m

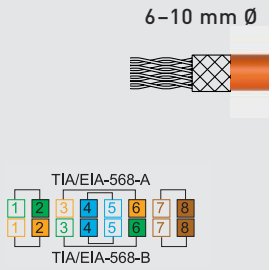
PoE+ IEEE 802.3at

- suitable for PoE+ (Power over Ethernet) according to IEEE 802.3at

- for combination with design wall plates of all well-known manufacturers of electrical installation material for single and double flush mounting-solutions

RJ11/12 protected against mismating

- special socket construction guarantees reliable data transmission even if the RJ11/12 jack is inadvertently plugged in incorrectly
- at least 1000 insertion cycles with standardized RJ45 jacks (250 more than the standard requirement)



- for data cable with a diameter of 6–10 mm
- coding of terminals A and B in accordance with TIA/EIA-568-B.2

25 Years Guarantee

- made and tested in Germany
- 25 years guarantee

HDBaseT conform

- suitable for HDBaseT-applications

UPOE conform

- suitable for Cisco UPOE-standard

UTP – Cat.6A iso U
Modular connection technique, unshielded,
for generic networks

Universal modular jacks – professional und practice-oriented

No compromising in design

Universal modular jacks from Rutenbeck are extending the selection of modular connecting systems with a type "direct" design compatibility. Meaning that, up to two Rutenbeck universal modular jacks can be completed with customary TAE wall plates. This allows the integration into any switch design.

In case three modular jacks are supposed to be put into one mounting box, this can be realized by using special mounting adapters and center plates.

Universal modular jacks from Rutenbeck fit the worldwide customary mounting openings of 19.3 x 14.7 mm.

Quick and easy connection

For mounting expensive and complicated special tools are not necessary. The cable only needs to be dismantled and prepared accordingly. For the following steps a cutting tool is completely sufficient. The mounting wedge of the Rutenbeck universal modular jacks helps in case of friction-locked contacting and allows an assembly without any additional installation effort.

Product advantages:

- fits standard Keystone openings
- few pre-assembled parts, suitable for construction sites
- high mechanical stability
- terminals clearly labeled with color codes (A and B coding are of equal value)
- no tools needed for mounting due to mounting wedge
- quick one step mounting of strain relief
- for data cables Ø 6–10 mm
- for solid wires (AWG 24–22)
- for stranded wires (AWG 26)
- Module head can be connected up to 10 times without new cable assembly
- bend-radius optimized cable feeding of 30°
- built-in dust protection cap (removebale, if required, color-exchangeable)
- for combination with design all plates (TAE) of all well-known manufacturers of electrical installation material for single and double solutions
- triple flush mounting solution with special center plate
- 100% quality-proof
- 25 years warranty
- made and tested in Germany
- suitable for PoE+

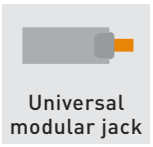
High performance assets

Unshielded Cat.6A iso U-Universal modules from Rutenbeck comply to the data transmission product requirements according to EIA/TIA as well as with the requirements on the transmission channel according to EIA/TIA and ISO/IEC for 500 MHz bandwidth (10 Gbit/s). Furthermore, PoE+ (Power over Ethernet) is no problem for the Cat.6A iso U Universal modules from Rutenbeck.

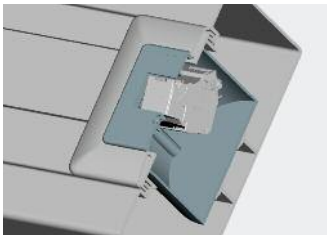
„Made and tested" in Germany

Rutenbeck products are being produced at a very high technological level. They have to pass in Germany a very strict quality tests. For the fulfillment of all performance parameters, Rutenbeck grants 25 years guarantee for these universal modular components!

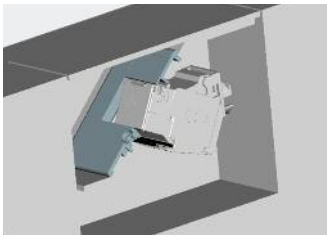
Universal modular jack



Installations in different environments



The 30°-cable entry of the universal modular jack prevents the data cable from touching the backside of the mounting box too soon. The cable can be laid without unacceptable kinks or too small bend radiuses.



In under floor applications the cable will be led almost parallel to the bottom to the back, because of the bend radius optimized cable feeding. Perfect for small installation situation.

For flush mounting installation a special mounting adapter is available, which allows an accurate cable feeding from the top or bottom, even in difficult situations where only very limited space is available. In order to accommodate the extra cable without bending the cable too much, a twin chamber mounting box should be installed.

Technical data for unshielded UM-Cat.6A iso-U-connecting hardware

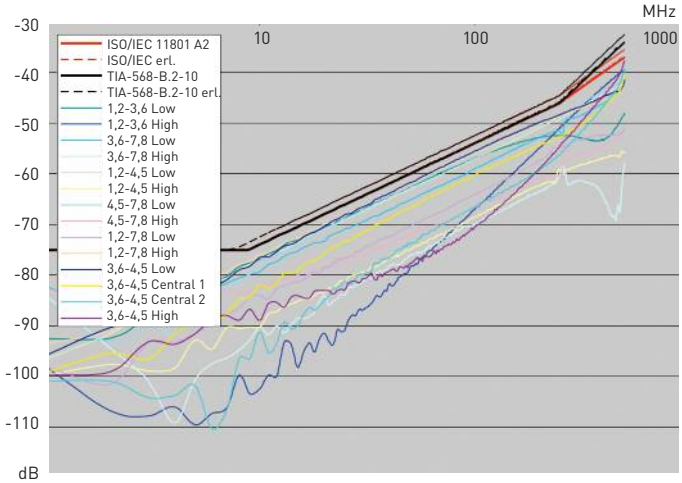
Mechanical characteristics	
General	
Housing	ABS, unshielded
Ambient temperature	-40 °C to +70 °C
Class according to EN 60529	IP21
Connector/outlet	
Design	DIN EN 60603-7-41:2011-01
Connection technique	
Solid wire	IDC terminals for wires Ø 0.51–0.64 mm, AWG 24–22, outer diameter 0.7–1.6 mm at PE, 1 wire each contact, maximum connections 10 times (at the same or larger cross-section)
Stranded wire	IDC terminals for wires 0.13–0.22 mm2, AWG 26 (PE-Foamskin) – AWG 24 (PE-solid), outer diameter 0.9–1.1 mm at PE, 1 wire each contact, maximum connections 10 times (at the same or larger cross-section)
Assembly	flexible printed circuit board made of polyimid with mechanical spring elements (patented)
Contact material/-surface	1,5 µm Ni/0,8 µm Au
Material housing	PBT
Life (insertion and withdrawals)	≥ 750 cycles with plugs according to IEC 60 603-7

Electrical characteristics	
Voltage	72 V DC, suitable for TNV circuits, according to EN 60 950-1:2011-01
Operation current	500 mA, at 50 °C ambient temperature
PoE-compliant	suitable for PoE+ (Power over Ethernet) according to IEEE 802.3at
Voltage withstand	1000 V (contact – contact)
Isolation resistance	≥ 500 MΩ
Contact resistance	signal contact: 20 mΩ
Color code	T568A and T568B according to TIA/EIA-568-B.2

Transmission characteristics	
ISO/IEC 11801 DIN EN 50173-1	Cat.6_A, unshielded
DIN EN 60603-7-41	500 MHz, unshielded
TIA/EIA-568-C.2	Cat.6A, unshielded

Test- and approval marks

CE



Extended NEXT for 10-Gigabit-Ethernet (typical values according to ISO/IEC and EIA/TIA)

Overview unshielded modular components (construction kit system)

All products can be found in detail www.rutenbeck.com

Modular connecting hardware, Cat.6A iso U

Cat.6A iso U

Universal-modul jack

UM-Cat.6A iso U A
137 003 00
Universal modular jack, suitable for standard Keystone openings

Accessory

	UM-UMA 2 Up
2-way	139 000 04

Flush mounting adapter, break off mounting ring can be converted into mounting bracket, without universal modular jacks

	UM-MA 2 Up
2-way	139 000 01

Flush mounting adapter, without universal modular jacks

	UM-MA 3 Up
3-way	139 000 02

Flush mounting adapter, without universal modular jacks

	UMflex-ApG rw*
3-way	139 115 01

Surface mounting housing, without universal modular jacks, cable entry only from top

	UM-MA REG
1-way	139 000 03

DIN-rail mounting adapter, 1 DIN unit wide, without universal modular jack

	PP-UM A-24/1
24-way	239 000 00

patch panel, 19″/1 U, for direct mounting, without universal modular jacks

	PP-UM A-6 Ap
6-way	239 101 06

surface mounting-patch panel, without universal modular jacks

	PP-UM A-12 Ap
12-way	239 101 16

surface mounting-patch panel, without universal modular jacks

	CP-UM A-12 Ap
12-way	239 101 12

Consolidation point, without universal modular jacks

All products can be found in detail www.rutenbeck.com

Overview unshielded modular components (construction kit system)

Modular connecting hardware, Cat.6A iso U

Cat.6A iso U

Universal modular jack

UM-Cat.6A iso U A
137 003 00
Universal modular jack, suitable for standard Keystone openings

Accessory

	Ap	Ap rw*
for center plate 2-way a. 3-way	100 100 01 ●	100 100 51 ●
	Wall plate	

	ZSt UM-MA 2	ZSt UM-MA 2 rw*
2-way	139 100 03 ●	139 100 53 ●
	Center plate	

	ZSt UM-MA 3	ZSt UM-MA 3 rw*
3-way	139 100 02 ●	139 100 52 ●
	Center plate	

● Discount group 1 *rw = pure white

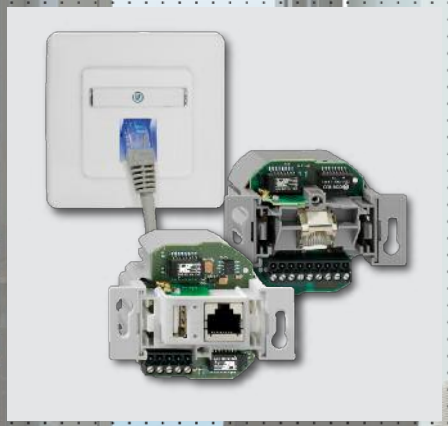
DATA TECHNOLOGY

SOHO and special solutions

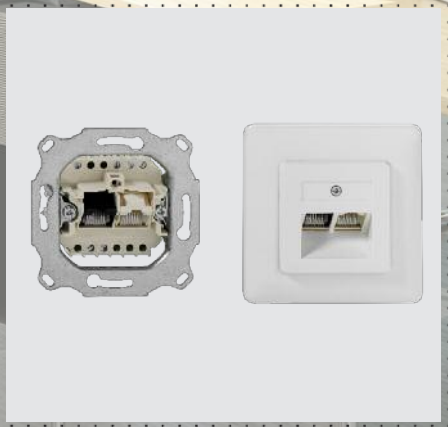
Innovative products, for example, for the installation in electrical distribution boxes enable the installation of smaller networks in private homes as well as in commercial buildings (SOHO).

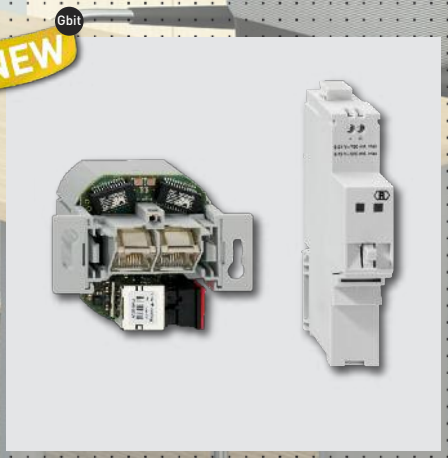
We especially designed our **line21**®- and our DATA LIGHT® POF products for retrofitting.

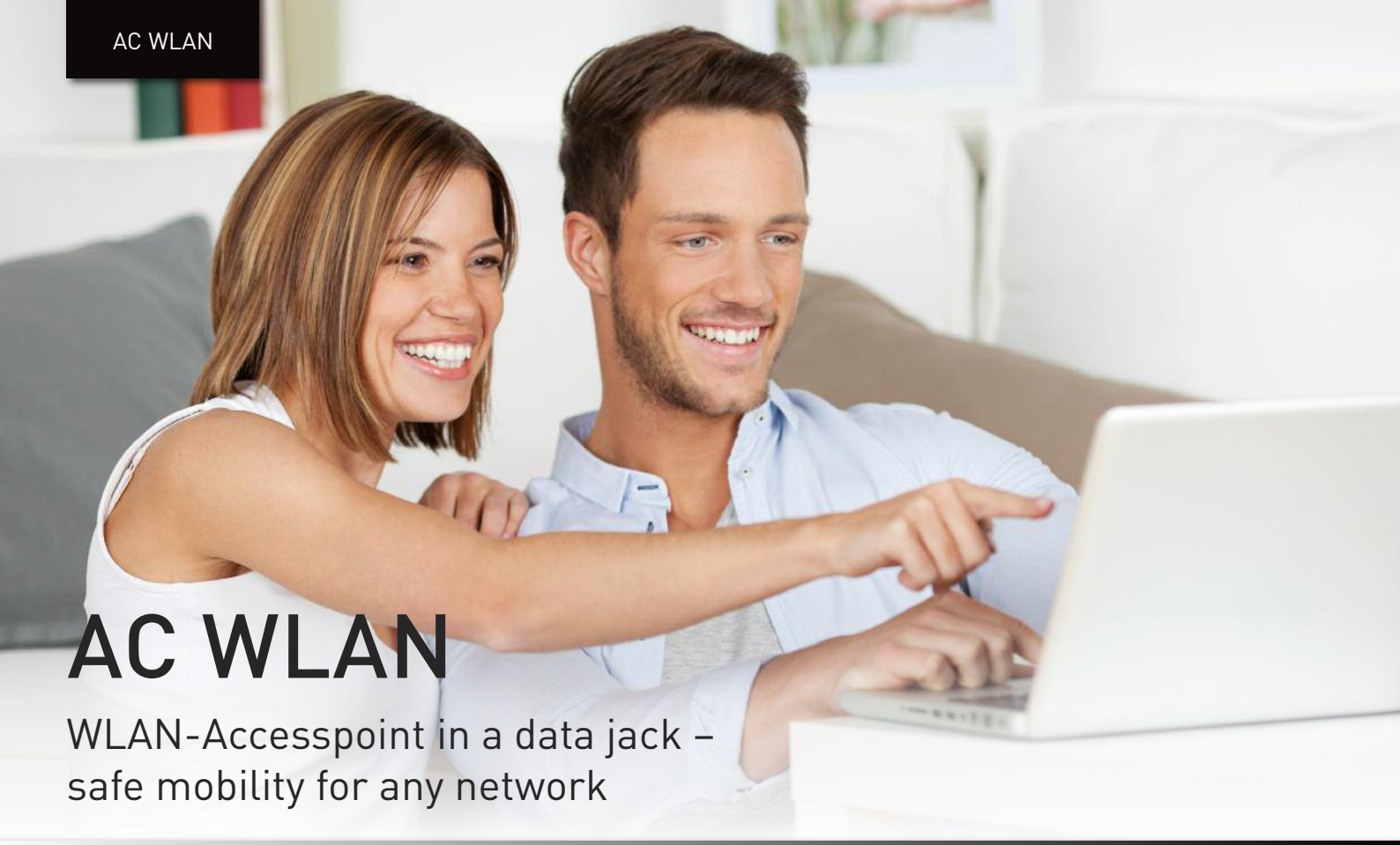
DATA LIGHT® is a registered trademark of Fränkische Rohrwerke Gebr. Kirchner GmbH&Co.KG



NEW
Gbit




NEW
Gbit

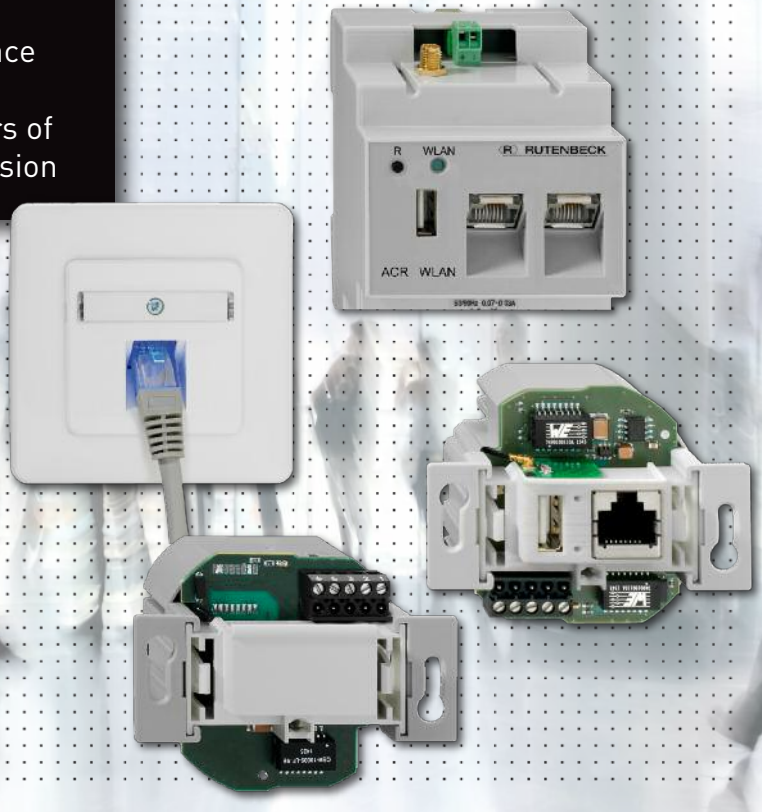


AC WLAN

WLAN-Accesspoint in a data jack –
safe mobility for any network

AC WLAN

- WLAN in addition to data outlet
- 150 Mbit/s – IEEE802.11 b/g/n
- all known encryption methods
- adjustable range
- time profiles for LAN and WLAN
- indication of functions with illuminated jack
- guest access for easy surfing
- printer-/data connection via USB-interface
- with central management
- design compatible to fit the design covers of the switching industry or as DIN-rail version



WLAN – efficient and exactly as needed

The flush-mounting WLAN-Access-point offers an excellent alternative to meet the requirements for modern network infrastructures according to DIN 18015-2 and RAL RG 678 without sacrificing the flexible use of modern mobile technologies such as tablet PCs or laptops or limit the wireless data rates. In addition, the AC WLAN works like a normal wireless data outlet with an RJ45 jack for a conventional data terminal device (data rate of 100 Mbit/s). The power supply is directly over 230 V at the back of the unit. The AC WLAN is connected with the local data network via conventional copper data cable or via polymer optical fiber (POF). The WLAN range can be adapted and limited to the conditions of the area. This creates powerful area radio cells, which ensure max. bandwidth within the area while working with low power consumption and low radiation.

Traditional WLAN-Accesspoints try to reach as many points in an object by using the highest possible output power. In addition to the high-energy requirement and increased radio emission for such solutions, this leads to delineation problems of the access-points with each other and thus to overcoupling of the WLAN areas and reduced data rates.

The Rutenbeck WLAN-Accesspoints are the world's first that fits into a commercial flush mounting installation box and is compatible with all the design programs of well known switch manufactures.

Time management

New software features allow the individual, time-controlled activation of the WLAN or the front RJ-45 outlet.

For example, in private areas the WLAN-network access can be activated for children's use for only a limited time. During the week different times can be programmed than on the weekends. Holiday programs are also possible.

In commercial areas not only the WLAN-network will be activated in the conference room according to the occupancy. The front RJ45 data outlet is only activated during that time and therefore, the network access is protected against misuse in addition to the protection of a firewall if no conference takes place.

The function of the WLAN as well as the front RJ 45-outlet will be indicated with an LED in the RJ-45 outlet area. If the illumination of the data jack is disturbing, i.e. in the bedroom, this function can be switched off.

Easy access to the internet – the guest access

The new guest access allows i.e. visitors the uncomplicated access to the internet without access to the local network. For this guest access different access data will be stored for the guests in the AC WLAN.

PoE for retro-fitting

The PoE-version can be exchanged directly against existing data jacks, even if there is no 230-V supply available. It will not only be supplied with power and data by PoE, (PoE class 0), it also feeds devices connected at the RJ-45 outlet with PoE (PoE class 2, max. 6.49 W).

USB for additional functions

The AC WLAN UAE/USB offers additional possibilities for the network integration of USB-devices.

The power supply (2.5 W) is being done by the USB-interface.

Application examples:

- the Data Stick can be used as a network drive
- the USB-printer can be used as a network printer
- the AC WLAN can be used as a router by connecting a GSM/LTE stick

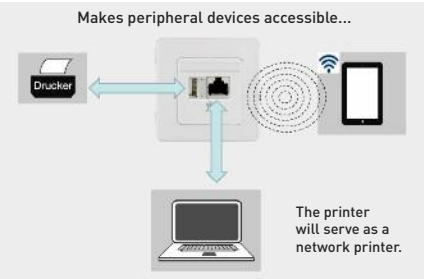
The AC WLAN UAE/USB is also available for mounting on a DIN-rail.

New software brings management

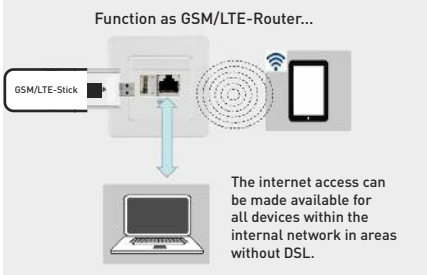
The current software supports a central management of all devices in the network.
When using several AC WLANs are being, the controlling and management will be simplified significantly. The number of managed AC WLANs is unlimited.

Connection USB-Data Stick

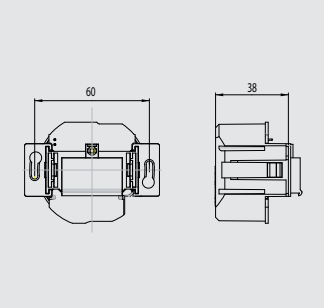
Connection USB-Printer



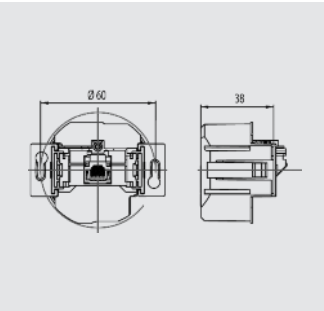
Extended Function GSM/LTE-Router



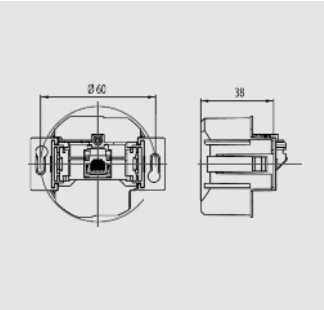
WLAN-Accesspoint
AC WLAN 230V



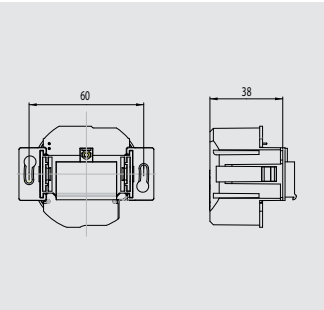
AC WLAN Up rw
226 104 10
Flush mounting WLAN-Accesspoint, with center plate and wall plate, 150 Mbit/s, 802.11 b/g/n, WEP/WPA2, operating mode as well as bridge, repeater, with timer- and time switching function, indication of functions via LED, reset with reset magnet, network connection with screw terminals, rated operating voltage 100-240 V~ / 50-60 Hz, 3 VA typical, pure white (similar RAL 9010), 80 x 80 x 50 mm, 112 g



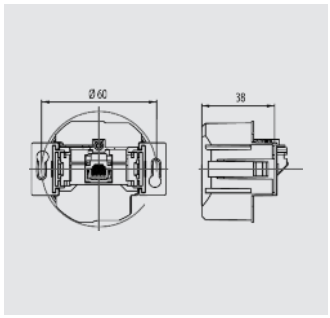
AC WLAN UAE Up rw
226 104 030
Flush mounting WLAN-Accesspoint, with center plate and wall plate, 150 Mbit/s, 802.11 b/g/n, WEP/WPA2, operating mode as well as bridge, repeater, indication of functions at RJ45–outlet (can be switched off), reset with reset magnet, integrated data outlet (RJ45) 100 Mbit/s, network connection with screw terminals, rated operating voltage 100-240 V~ / 50-60 Hz, 3 VA typical, pure white (similar RAL 9010), 80 x 80 x 50 mm, 112 g



AC WLAN POF/UAE
1xUp rw 2,2 mm
226 104 050
Flush mounting WLAN-Accesspoint, with center plate and wall plate, 150 Mbit/s, 802.11 b/g/n, WEP/WPA2, operating mode as well as bridge, repeater, indication of functions at RJ45–outlet (can be switched off), reset with reset magnet, integrated data outlet (RJ45) 100 Mbit/s, POF network connection (2.2 mm), rated operating voltage 100-240 V~ / 50-60 Hz, 3 VA typical, pure white (similar RAL 9010), 80 x 80 x 50 mm, 115 g

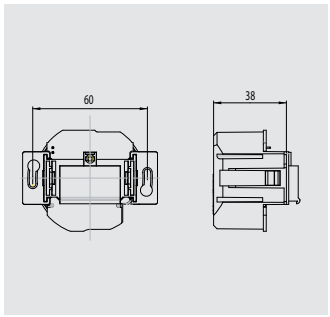


AC WLAN UAE/USB Up rw
226 104 07
Flush mounting WLAN-Accesspoint, with center plate and wall plate, 150 Mbit/s; 802.11 b/g/n, WEP/WPA2, operating mode as well as bridge, repeater, with timer- and time switching function, indication of functions at RJ45 – outlet (can be switched off), reset with reset magnet, integrated data outlet (RJ45), 100 Mbit/s; integrated USB-2.0 interface (USB A / 2.5 W), network connection with screw terminals, rated operating voltage: 100-240 V~ / 50-60 Hz, 3 VA typical, pure white (similar RAL 9010), 80 x 80 x 50 mm, 112 g



AC WLAN UAE PoE Up rw
226 104 06
Flush mounting WLAN-Accesspoint, with center plate and wall plate, 150 Mbit/s, 802.11 b/g/n, WEP/WPA2, operating mode as well as bridge, repeater, with timer- and time switching function, indication of functions at RJ45–outlet (can be switched off), reset with reset magnet, integrated data outlet (RJ 45), 100 Mbit/s with PoE-feeding (class 2), Network- and power supply (PoE) with screw terminals, rated operating voltage: PoE (class 0), 3 VA typical, pure white (similar RAL 9010), 80 x 80 x 50 mm, 112 g

WLAN-Accesspoint
AC WLAN PoE



AC WLAN UAE/USB PoE Up rw
226 104 09
Flush mounting WLAN-Accesspoint, with center plate and wall plate, 150 Mbit/s, 802.11 b/g/n, WEP/WPA2, operating mode as well as bridge, repeater, with timer- and time switching function, indication of functions at RJ45–outlet (can be switched off), reset with reset magnet, integrated data outlet (RJ 45), 100 Mbit/s with PoE-feeding (class 2), integrated USB-2.0 interface (USB A/2.5 W), Network- and power supply (PoE) with screw terminals, rated operating voltage: PoE (class 0), 3 VA typical, pure white (similar RAL 9010), 80 x 80 x 50 mm, 112 g

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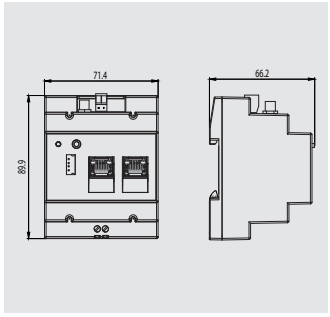
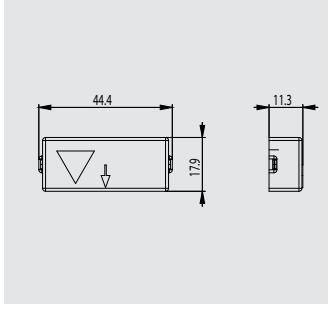


ACR WLAN 3xUAE/USB
226 104 08
WLAN-Accesspoint for mounting on a DIN-rail, 150 Mbit/s, 802.11 b/g/n, WEP/WPA2, 2 integrated data outlets (RJ 45), 100 Mbit/s, integrated USB-2.0 interface (USB A/2.5 W), operating mode as well as bridge, repeater, with timer- and time switching function, indication of functions via LED, reset with push-button, power supply output: 12 V DC, 3 W rated operating voltage: 100-240 V~ / 50-60 Hz, 3 VA typical, alternatively 12 V DC / 3 W light grey (similar RAL 7035), 72 x 90 x 65 mm,155 g

WLAN-Accesspoint
ACR WLAN



RM
392 000 10
Reset-magnet, for AC WLAN 40 x 17 x 10 mm, 11 g

WLAN-Accesspoint
Accessory

Components for Small Office- and Home Office-Applications (SOHO)

Increasing requirements in the performance and flexibility of data use and distribution in private homes as well as in commercial building (SOHO) demand specialized installation solutions.

International standards underline these requests with clear guidelines. As stated in the current drafts of the DIN 18 015-2 (minimum provisions for new installations in building), a network connection is required even for the minimum provision of an apartment. Under the aspect of long term maintenance value, this will be a very important issue in the future.

The components in DIN-rail mounting design for new as well as supplementary installations optimize the built-in installations and mounting. Data rates up to 1000 Mbit/s cover the needs of future applications and increase the value of the respective building.

Installation in conventional electrical distribution boxes or separate Multimedia patch panel omit the data cabinets. The often needed additional devices can embedded central and safely with an optimal optical impression.

Therefore, the requirements in the structural cabling according to EN 50173-1 are fulfilled as well as the requirements of DIN VDE, for example, Insulation Class II.

Active as passive components only need to be installed. The wide range of functions supports the performance without any additional programming or setting of parameters.

Just connect and all is set!

Saving natural resources and environmental protection

All active components will work at the same time with less power consumption. Green-IT-aspects derived from the professional environment will consequently be fulfilled even in smaller applications.

New installation in the electrical distribution box...

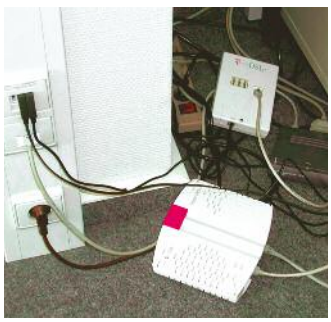
...or with separat Multimedia patch panel

Suitable applications

- PC networking
- connection to Internet of one or several PCs
- telephone (analog/ISDN/ Internet-telephony, voice over IP)
- multimedia-applications (video-, picture-, sound-transmission)

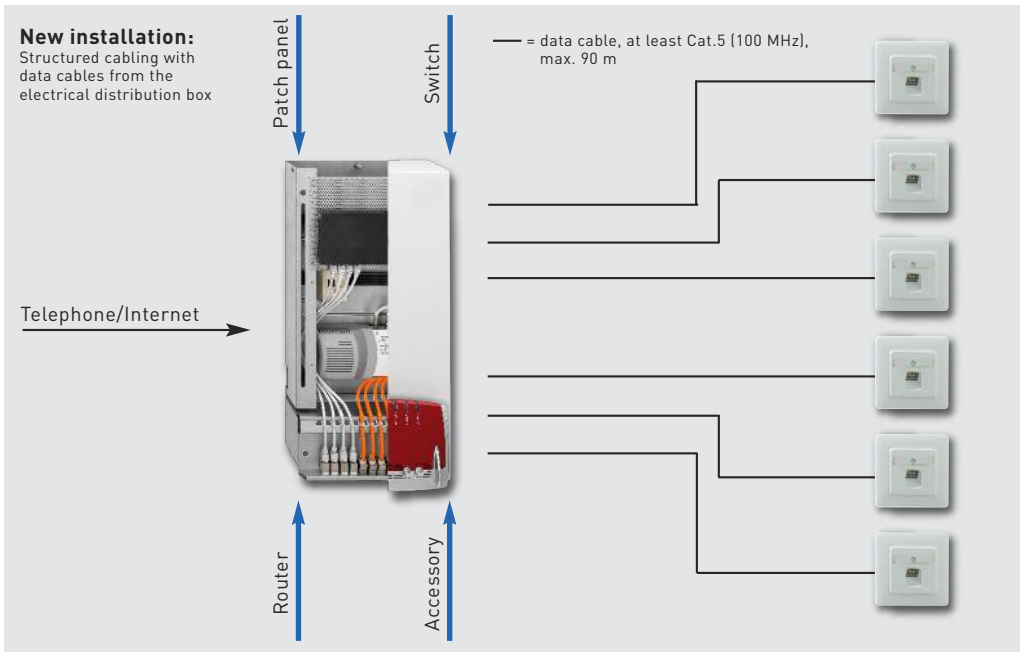
System advantages

- structured, standard conform solution
- solution for DIN-rail-mounting according to Insulation Class II
- use in conventional installation surroundings
- easy installation and to put into operation
- expandable, if necessary
- compatible with present and future solutions
- "Green IT" – environmental friendly and preserving the natural resources



Nowadays, often like this ...

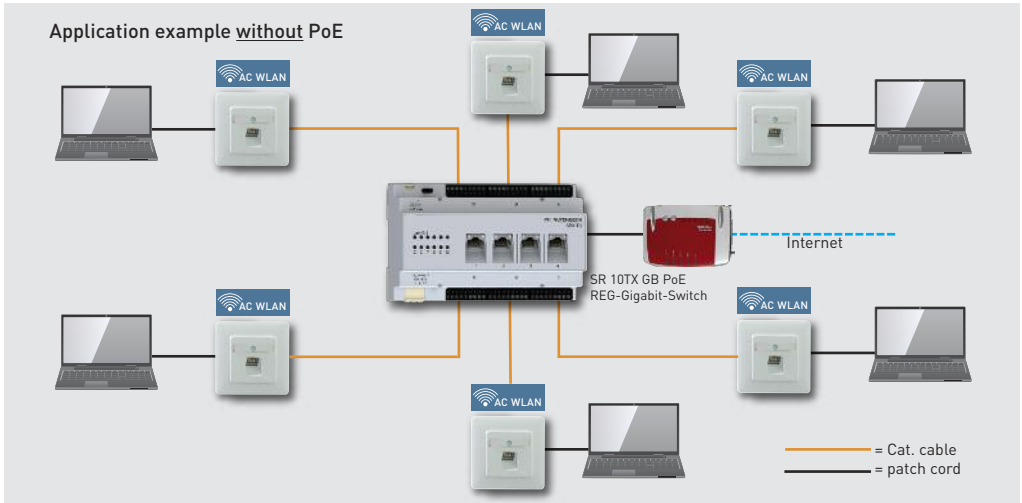
... and tomorrow maybe like this.

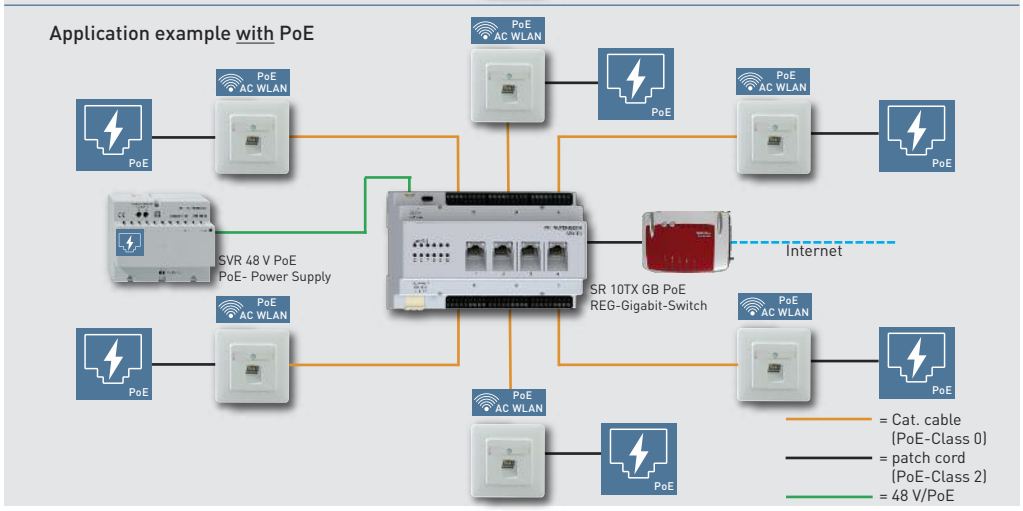


The generic network for new installations according to EN 50 173-4

With new installations, only structures which fulfill all the requirements of future applications should be installed, today. For this reason, a data jack is necessary at all present and not only at places where telephone- or PC applications should be used, but also at places where TV- or video will be used or music will be desired in the future.

The basis of this installation is represented by the central component, the patch panel for mounting on a DIN-rail or the patch panel for surface mounting in combination with our data jacks in compact or modular design.





PoE – data and power from one connection

PoE (Power over Ethernet) is a standardized method to power feed data terminals directly from the network, in addition to the data without influencing any data. The transmission takes place by use of conventional data cables. The data terminals will be connected with RJ45 with 8 contacts, like it always has been.

Actual powers are up to 15.4 W at PoE, 30 W at PoE+ and 60 W at UPOE (Cisco-standard).
In addition new standards up to 100 W (PoE++) are in preparation.

Active system devices
Switch
SR 5TX GB

Gigabit-Switch for DIN-rail mounting SR 5TX GB

The SR 5TX GB is the best choice for dependable and permanent connection of IT-equipment to the network.
After the connection of the 230 V five devices can be linked. If more devices need to be linked, another SR 5TX GB can be connected for cascading to any front port.
Each port has a service LED which indicates the operating state.

Performance features

- 6 DIN units wide
- 5 x RJ45-ports (slanted outlet)
- Protection class: IP20 according to EN 60529
- Insulation class II
- integrated power supply 100-240 V
- LEDs for operation and function
- cascadable by using front ports
- extended temperature range (-40 - 55°C)

Functional features

- data rate 10/100/1000 Mbit/s
- multicast-capable
- autosensing, autonegotiation
- autopartitioning, MDI/MDIx
- port trunking/monitoring/ mirroring
- VLAN support according to IEEE 802.3Q
- energy efficient according to IEEE 802.3az
- wake-on-LAN-functionality

Passive system devices
Midspan patch panel
PPR 6 PoE

Midspan patch panel PPR 6 PoE

With PoE (Power over Ethernet) it is possible to power feed data terminals like IP webcams or IP telephones directly from the network – additional to the data without influencing them.
Midspan solutions have the advantage of being able to use the already existing switches.
The midspan patch panel joins the data ports of the switches with the power supply.

The PoE Midspan patch panel contains all necessary methods for an uncomplicated plug-and play of the connected data terminals.

Performance features

- 6 DIN units wide
- standard-conform system solution
- for up to 3 PoE-devices
- max. 15.4 W at each port (class 0–3)
- 6 x RJ45-ports, 3 x data inputs, 3 x data+PoE-outputs (slanted outlet)
- closable ports, dust cover
- Protection class: IP20 according to EN 60529
- Insulation class II

PoE-Power Supply SVR 48 V PoE

The PoE-power supply is optimal customized for the midspan patch panel PPR 6 PoE. Up to 3 PoE-devices (class 0–3) can be powered from the electrical distribution box.
The connection takes place with screw terminals, therefore, the PoE patch panel and power supply can be installed flexible and independently of each other in the electrical distribution box.

Performance features

- 6 DIN units wide
- 48-W- PoE-Power
- LED for operation
- Protection class: IP20 according to EN 60529
- Insulation class II

NEW Gbit

Gigabit-Switch for DIN-rail mounting SR 10TX GB PoE

The number of IP-based system devices is permanently increasing. In addition many devices are powered with Power over Ethernet (PoE). The needed space in central IP-distributor solutions increases accordingly, while the available space is anyway limited.

The SR 10TX GB PoE opens a totally new installation method in the market. Since additional patch panels are no longer needed, space can be saved in the electrical distribution box. Besides 4 Gigabit-front ports, additional 6 Gigabit ports are available at detachable screw terminals, which are located behind the cover after being mounted. Patch panels are not needed at this "direct connection" and the direct connected devices can be power fed with PoE. Up to total power of 45 W is at disposal. If more power is needed, a separate PoE power supply can be connected. Depending on the available power of the power supply, all 6 installation ports can be supplied with 25.5 W.

A special variant is available for applications where PoE is not needed.

Performance features

- 8 DIN units wide
- 4 x RJ45-ports (slanted outlet)
- 6 installation ports (detachable screw terminal block, 9poles)
- Protection class: IP20 according to EN 60529
- Insulation class II
- integrated power supply 230 V
- 45 WPoE-power at the installation ports
- 48 V-input for PoE- power extension to max. 30 W at the installation ports each
- LEDs for operation and service function

Functional features

- data rate 10/100/1000 Mbit/s
- multicast-capable
- autosensing, autonegotiation
- autopartitioning, MDI/MDIx
- Port Trunking/Monitoring/ Mirroring
- VLAN support according to IEEE 802.3Q
- energy efficient according to IEEE 802.3az
- wake-on-LAN-functionality

Active system devices
PoE-Switch
SR 10TX GB PoE

Active and passive
FO (fibre optical)
system components

Splice box FO for DIN-rail mounting PPR 3SC-M

Since the introduction of fiber optic applications in private homes (FTTH=Fibre To The Home) the desire to use the high performance of the optical fibre has consistantly increased.
The splice box serves as the central distribution component in the electrical distribution box.
The splice box is fully equipped with splice tray, couplings, pigtails and cable gland/strain relief, which is located upper top right or upper top left (M20 bolting).
Due to the extended temperature range from -40°– 75°C, the splice box can also be used for various applications in industrial areas.
The standard design consists of 3 SC-Duplex –couplings (62 µm), however, additional variants are available upon request.

Performance features

- 6 DIN units wide
- 3 x SC Duplex (MM), (slanted outlet)
- integrated splice comb
- integrated with splice tray
- ready-to-splice couplings/ pigtails
- with cable gland/strain relief
- Protection class: IP20 according to EN 60529
- Insulation class II
- extended temperature range for applications in industrial areas
- according to EN 60529 and DIN 43880

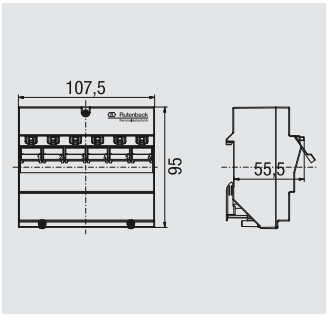
Switch FO for DIN-rail mounting SR 2TX/2SC

The FO-switch can be used for the connection of FO-data jacks and/or terminal devices at homes – or industrial networks and is the optimal supplement for the splice box PPR 3SC-M. All switches support Fast Ethernet (100 Mbit/s), which means more bandwidth than most Internet connection can supply. The connection to the router or to other switches of the network takes place with the RJ-45 front ports. Two SC-Duplex ports for single- or multimode fibres are located at the front for fiber optical applications. For Datalight an according variant with 4 connections is available. The power supply must be done with 12-60V DC, whereas extra redundancy requests from industrial areas can also be fulfilled. The temperature range for this environment has also been defined: -40° – 55°C.
Additional variants are available upon request.

Performance features

- 6 DIN units wide
- 2 x SC Duplex (SM or MM)
- 2 x RJ45
- data rate 10/100Mbit/s
- LEDs for operation and service function
- Protection class: IP20 according to EN 60529
- Insulation class II
- extended temperature range for applications in industrial areas
- according to EN 60529 and DIN 43880

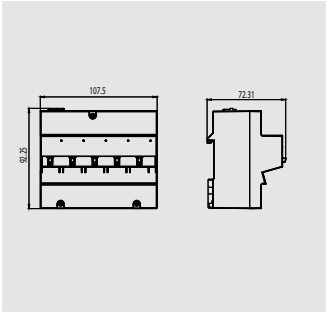
Active and passive system components for mounting in an electrical distribution box



PPR 6*
238 102 00
Patch panel for DIN-rail mounting, 6 x RJ45-ports, Cat.5e, Class D, suitable for Gigabit-Ethernet, light grey (similar RAL 7035), 108 x 95 x 56 mm = 6 DIN units wide, 199 g

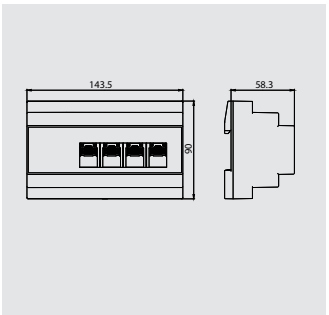
* modular version see page 15

NEW Gbit



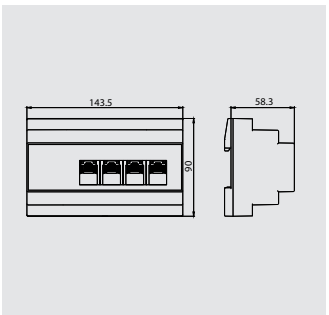
SR 5TX GB
235 105 03
Gigabit-switch for DIN-rail mounting, 5 x RJ45-port 10/100/1000Mbit/s, multicast-capable, VLAN-support, nominal operating voltage: 100–240 V~/50–60 Hz, ⩽ 4,3VA, ⩽ 0,6VA in standby mode, light grey (similar RAL 7035), 108 x 93 x 73 mm = 6 DIN units wide, 350 g

NEW Gbit



SR 10TX GB PoE
235 105 04
Gigabit-switch for DIN-rail mounting, 4 x RJ45-front ports 10/100/1000 Mbit/s, 6 x installation ports 10/100/1000 Mbit/s, 45 W-PoE-power at the installations-ports – expandable to 180 W with external 48 V-power supply (DC), multicast-capable, VLAN-Support, nominal operating voltage: 100–240 V~/50–60 Hz, ⩽10VA, light grey (similar RAL 7035), 144 x 90 x 59 mm = 8 DIN units wide, 350 g

NEW Gbit



SR 10TX GB
235 105 05
Gigabit-switch for DIN-rail mounting,4 x RJ45-front ports10/100/1000 Mbit/s, 6 x installation ports 10/100/1000 Mbit/s, multicast-capable, VLAN-support, nominal operating voltage: 100–240 V~/50–60 Hz, ⩽10VA, light grey (similar RAL 7035), 144 x 90 x 59 mm = 8 DIN units wide, 350 g

Discount group 2

Passive system components for mounting in an electrical distribution box

PPR 6 PoE
235 103 00 ●
PoE-Patch panel for DIN-rail mounting, Midspan solution,
3 x RJ45-ports data inputs,
3 x RJ45-ports outputs,
Data + PoE,
suitable for 10/100 Mbit/s,
Nominal operating voltage:
48 V DC, power consumption 1 A,
light grey (similar RAL 7035),
108 x 95 x 56 mm = 6 DIN units wide,
190 g

SVR 48 V PoE**
235 103 01 ●
PoE-power supply
for DIN-rail mounting,
Output power: 48 W, for up
to 3 PoE-devices (class 0–3),
Operating voltage:
100–240 V~/50–60 Hz,
light grey (similar RAL 7035),
108 x 95 x 56 mm = 6 DIN units wide,
300 g

Accessory for SOHO-Components

PK 0,35 m
235 102 01 ●
Patch cord, 0.35 m
for connection of
DIN-components
in the subdistribution,
350 mm, 30 g

PK 0,23 m ●
235 102 02
Patch cord,
230 mm, 30 g

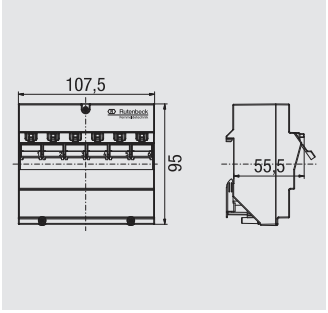
AW 2
392 000 00 ●
Connection tool
for LSA- and LSA-Plus-terminals,
with cutting blade,
38 x 177 x 21 mm, 80 g

ADAP UAE/TAE 3x6 NFN
154 006 02 ●
Adaptercord RJ 45/UAE, 0.15 m,
for analog telephones in generic networks or for use with a line21®-UAE (8/8), black,
40 x 47 x 26 mm, 23 g

**product diversification planned

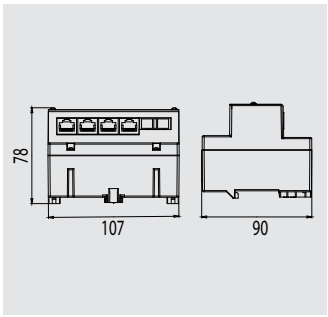
● Discount group 1 ● Discount group 2

NEW



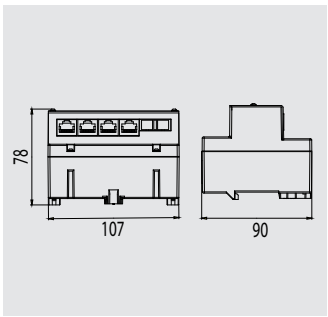
PPR 3SC-M
228 102 01
FO-splice box for DIN-rail mounting,
3 x SC Duplex (MM/62µm),
with splice comb and -tray,
with couplings and pigtails,
with cable glands and strain relief (M20),
temperature range -40 - 75°C,
light grey (similar RAL 7035),
108 x 90 x 80 mm = 6 DIN units wide,
220 g

NEW



SR 2TX/2SC-M
228 105 02
Switch for DIN-rail mounting,
(2 x UAE/2 x SC Duplex (MM /62µm)),
for applications up to 100 Mbit/s,
nominal operating voltage:
12-60V DC, 1A,
temperature range -40-55°C,
light grey (similar RAL 7035),
108 x 90 x 77 mm = 6 DIN units wide,
300 g

NEW



SR 2TX/2SC-S
228 105 01
Switch for DIN-rail mounting,
(2 x UAE/2 x SCDuplex(SM/9/125µm)),
for applications up to 100 Mbit/s,
nominal operating voltage:
12-60V DC, 1A,
temperature range -40-55°C,
light grey (similar RAL 7035),
108 x 90 x 77 mm = 6 DIN units wide,
300 g

Active and passive FO (fibre optical)-system components for mounting in an electrical

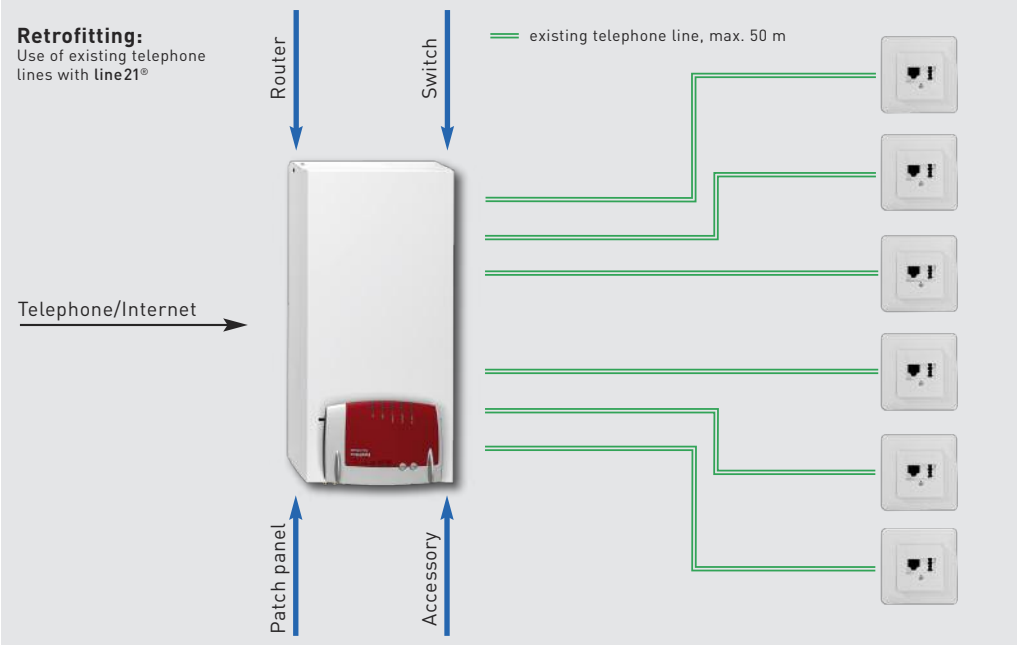
Discount group 2

line21® for retrofitting

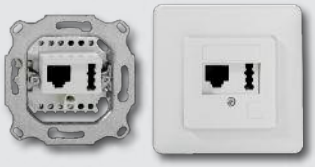
New technologies allow numerous applications without complex cable installations also in retrofitting. The technology of **line21®** allows the use of the existing analog telephone lines for the additional networking of PCs as well as for retrofitting of DSL-accesses, simply by replacing the existing jacks. The line still can be used for telephone calls, since the applications run parallel without interfering one another. Data rates up to 100 Mbit/s on telephone lines up to 30 m do not cause any problems. At a transmission rate of 10 Mbit/s, the telephone line can be up to 50 m long. There are no application restrictions at all, neither for the telephone nor for the network.

The installation

The installation is safe and easy. The jacks at the connection points of the terminal equipment will be replaced with **line21®**-jacks. The telephone line will be connected with terminal screws. The outlets in the front are suitable for the terminal equipment with UAE-plugs. As always, these jacks can be used with the design covers of all well-known manufacturer of electrical installation material giving the user an optimal optical impression after the installation. If a whole network and not only single link should be retrofitted, a patch panel as a central distributor sets up the necessary premises for the installation of up to 6 **line21®**-lines. The connection of all cables takes place with the proven LSA-Plus-technique. The DIN-rail-mounting patch panel as well as aditionally available products for DIN-rail mounting e. g. switch and router allow the use of standard distribution boxes for installing these and other necessary devices. An optimal optical solution for small installations by omitting additional 10´´- or 19´´-cabinets.

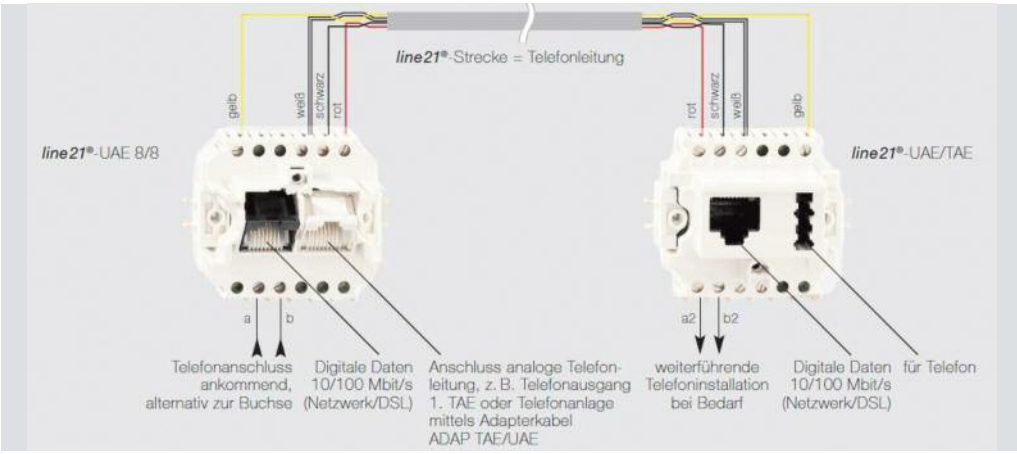


line21®-patch panel

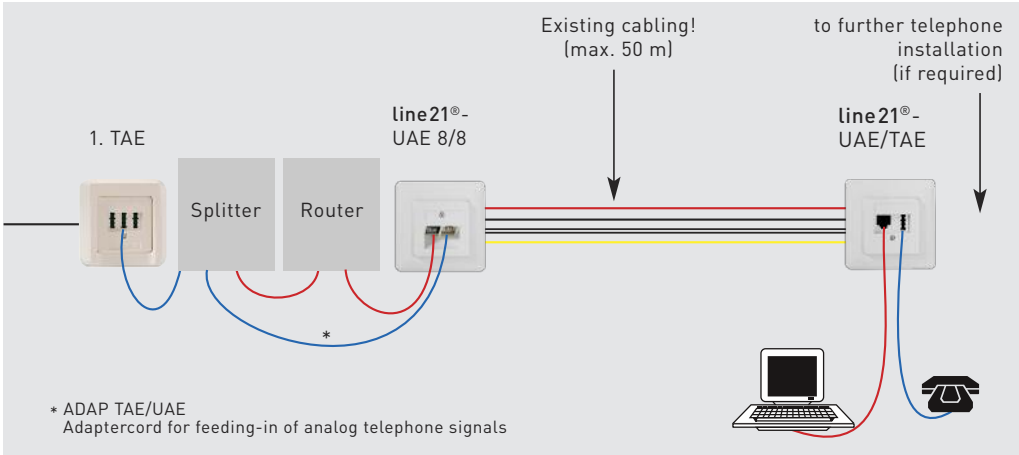

line21®-UAE/TAE

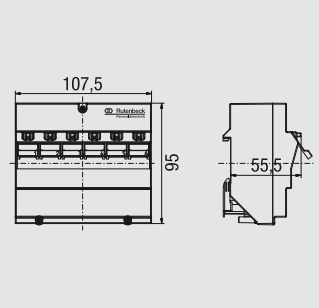
line21®-UAE 8/8

Connection examples



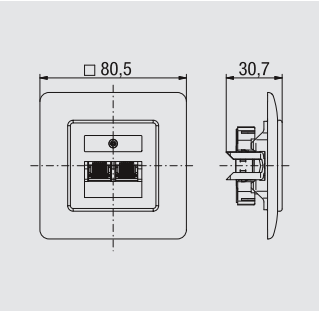
The application



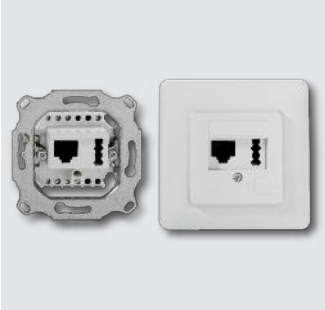


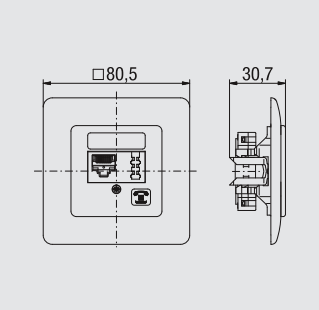
line21®-PPR 6
225 100 01
Patch panel for DIN-rail mounting,
6 x RJ45-ports, for applications
up to 100 Mbit/s,
light grey (similar RAL 7035),
108 x 95 x 56 mm = 6 DIN units wide,
182 g

line21®-System devices for retrofitting



line21®-UAE 8/8 Up rw
225 112 01
Connection jack, 2 x 8 way,
2 x 4 screw terminals for **line21®**-
system line and fixed telephone
connection data/telephone,
with spreading claws,
for applications up to 100Mbit/s,
pure white (similar RAL 9010),
80 x 80 x 31 mm, 52 g





line21®-UAE/TAE Up rw
225 112 02
Connection jack, 2 x 6 way,
2 x 4 screw terminals for **line21®**-
system line and fixed telephone
connection data/telephone,
with spreading claws,
for applications up to 100Mbit/s,
pure white (similar RAL 9010),
80 x 80 x 31 mm, 52 g

line21®-ADAP TAE/UAE
225 100 10
Adaptercord TAE/UAE,
for feeding-in analog telephone
signals in a **line21®**-line
(i.e. 1. TAE to **line 21®**-UAE 8/8),
black, 500 mm, 15 g

Accessory for line21®-system devices

POF – The trendsetting cabling alternative

POF-cables (Polymer optical fibre) are being used in automobile- and lighting applications for years. Robust, easy, uncomplicated and safe connection as well as high data rates at very low costs are some of reasons for this success.

The next step is to use these advantages for home networking as well. With the multitude of new network based services in the home area (like "Triple-Quad-Play") the use of POF offers numerous of advantages for new installations and retrofitting.

The cable/fibre

Duplex cable with 2.2 mm diameter is being used. The cables are very thin and at the same time so robust that they can be installed without any trouble underneath wallpapers, baseboards or carpets. The maximum bending radiuses are much more uncritical than with glass fibre and therefore don't break as easily.

The connection

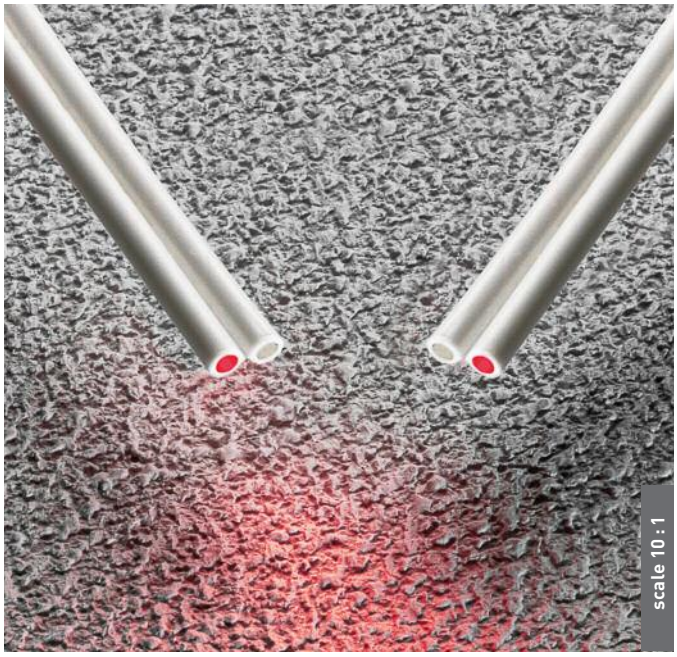
The connection takes place at the push-pull connector without any tools. After trimming the cable length, the fibres will be inserted in the optical push-pull connector and latched. Finished.

The tool

A simple cutting tool is necessary for parallel trimming of the cable. Basically, all sharp blades could be used for cutting.

The light

A visible light with a wave length of 650 nm is being used for the transmission. Unlike the laserlight, which is used for glass fibre, the light of POF is totally harmless. Furthermore, the function of the link can be checked "optically" at any time.



The installation

Because of the small bending radiuses and the high robustness, the installation is very easy. Even a later retrofitting e. g. in pipes is possible. The installation next to 230-V-power cables is allowed. The maximum cable length is 100 m at data rates up to 100 Mbit/s and 55 m at 1000 Mbit/s.

The most important advantages at a glance:

- safe, radiation-free data transmission
- robust and safe connection up to 1000 Mbit/s
- easy, tool-free installation and handling
- transmission with visible light (= function control at the same time)

The applications

For all applications with data rates up to 1000 Mbit/s. The high data rates meet the requirement of applications like "Triple-Quad-Play" (IP-TV and many more).

Application areas

All network application for new installations and retrofitting (up to 1000 Mbit/s):

- PC-networking
- internet access
- multimedia/"Triple-Quad-Play"
- IP-TV
- IP-telephony
- IP-building technology
- online-Gaming
- multiroom-Audio
- and any more

DATA LIGHT

DATA LIGHT is a trademark and stands for high-quality installation components in the area of POF-applications. All DATA LIGHT -products are mechanically and electrically compatible and use consistent connector-systems and POF-cable.

Certification

All POF-products are according the current standard requirements:
Cable:
IEC 60793-1/2 class A4a.2
Application/tests:
ETSI TS 105 175-1-1/1-2 soo supplemented with IEEE 802.3bv

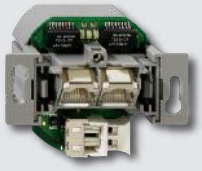
Cable and Installation pipe solutions

Suitable cable and installation pipe solutions with integrated POF-fibre can be obtained at Fränkischen Rohrwerke.

FRÄNKISCHE

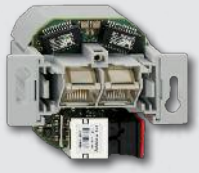
DATA LIGHT® is a registered trademark of Fränkische Rohrwerke Gebr. Kirchner GmbH&Co.KG

100 Mbit/s

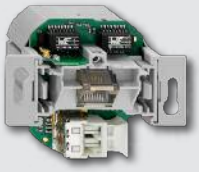


1000 Mbit/s

NEW Gbit



AC WLAN



POF-flush mounting solution

The permanent solution for fixed installations. Suitable for the commercially available design wall plates.
Depending on the application there are solutions for 100 Mbit/s or 1000 Mbit/s are available.
For retrofitting of WIFI in all rooms, the AC WLAN POF/UAE is the right choice!

Performance features

- transmission length
  100 m with POF 2.2 mm
  (100 Mbit/s)
  55 m with POF 2.2 mm
  (1000 Mbit/s)
- Nominal operating voltage:
  100–240 V~/50–60 Hz
- optical connector:
  2.2 mm Duplex POF
  (650 nm typically)

Functional features

- transmission rate 100 Mbit/s Ethernet 10/100 TX Ethernet 100 FX (Half-/full duplex, MDI/MDIX)

  alternatively

  Ethernet 10/100/1000 TX Ethernet 1000 FX (Half-/full duplex, MDI/MDIX)
- for commercially available flush-mounting installation
- integrated 230-V-power supply
- safe, radiation-free data transmission
- harmless for the eyes
- suitable for IP-TV, Multimedia and data transmission (multicast-capable)

NEW Gbit

POF-DIN-rail mounting solution

The central component for the fixed installation. Enables the setup of a central POF-distributor in a conventional electrical distribution box.

Performance features

- transmission length
  100 m with POF 2.2 mm
  (100 Mbit/s)
  55 m with POF 2.2 mm
  (1000 Mbit/s)
- Nominal operating voltage:
  SELV; AC/DC, via screw terminals
- optical connector:
  2.2 mm Duplex POF
  (650 nm typically)
- 1 DIN unit wide = 18 mm
- insulation class II

Functional features

- transmission rate 100 Mbit/s Ethernet 10/100 TX Ethernet 100 FX (Half-/full duplex, MDI/MDIX)

  alternatively

  Ethernet 10/100/1000 TX Ethernet 1000 FX (Half-/full duplex, MDI/MDIX)
- safe, radiation-free data transmission
- harmless for the eyes
- suitable for IP-TV, Multimedia and data transmission (multicast-capable)

POF-switch-solutions

POF-switch-solutions for DIN-rail mounting or Desktop solutions complete the portfolio.
Depending on the application there are devices with various interfaces available.

Performance features

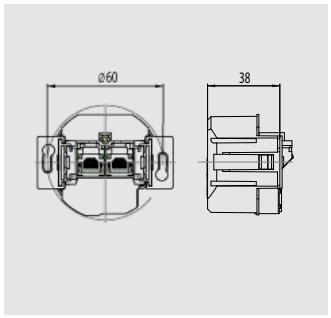
- transmission length
  100 m with POF 2.2 mm
  (100 Mbit/s)
- optical connector:
  2.2 mm Duplex POF
  (650 nm typically)

Functional features

- transmission rate 100 Mbit/s Ethernet 10/100 TX Ethernet 100 FX (Half-/full duplex, MDI/MDIX)
- safe, radiation-free data transmission
- harmless for the eyes
- suitable for IP-TV, Multimedia and data transmission (multicast-capable)

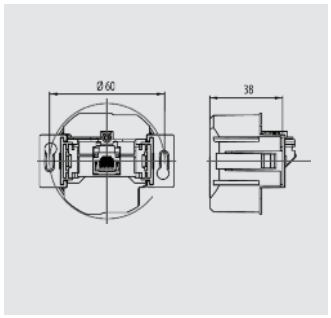
POF – The trendsetting cabling alternative

Media converter/
AC WLAN, Switches,
POF/UAE

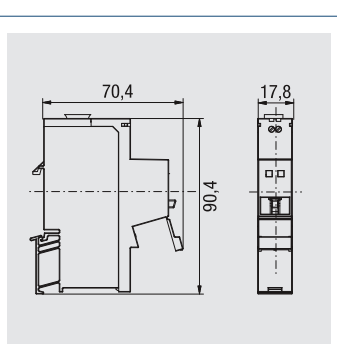


POF GB/UAE 2xUp rw 2,2 mm
180 105 070
Flush-mounting media converter, 2-way, for applications up to 1000 Mbit/s,
Nominal operating voltage: 100–240 V~/50–60 Hz, 2,8 VA typ.,
70 x 53 x 50 mm, 100 g

POF/UAE 2xUp rw 2,2 mm
180 104 070
for applications up to 100 Mbit/s

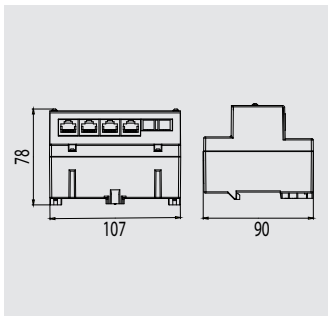


AC WLAN POF/UAE
1xUp rw 2,2 mm
226 104 050
Flush mounting WLAN-Accesspoint, with center plate and wall plate, 150 Mbit/s, 802.11 b/g/n, WEP/WPA2, operating mode as well as bridge, repeater, integrated data outlet (RJ45) 100 Mbit/s, POF network connection (2.2 mm), rated operating voltage 100-240 V~ / 50-60 Hz, 3 VA typical, pure white (similar RAL 9010), 80 x 80 x 50 mm, 115 g



POF GB/UAE 1xPPR 2,2 mm
280 105 00
DIN-rail mounting media converter, 1-way, for applications up to 1000 Mbit/s, Nominal operating voltage: 8–52 V DC, 1,9 VA typ,
light grey (similar RAL 7035),
18 x 90 x 70 mm = 1 DIN unit wide,
47 g

POF/UAE 1xPPR 2,2 mm
280 102 00
for applications up to 100 Mbit/s



SR 1TX/4POF
280 105 01
switch for DIN-rail mounting,
(1 x UAE/4 x POF),
for applications up to 100 Mbit/s ,
Nominal operating voltage: 12-60 V DC, 1A,
light grey (similar RAL 7035),
108 x 90 x 77 mm, 6 DIN units wide,
300 g

POF/UAE 4xAp 2,2mm
180 101 03
Desktop-switch 4-way
(1 x UAE/3 x POF),
For applications up to 100 MBit/s,
Operating voltage:
100–240 V~/50–60 Hz, 1,7 VA typ.,
greenblue (similar RAL 6004),
20 x 84 x 61 mm, 160 g

POF 5xAp 2,2mm
180 101 04
Desktop-switch, 5-way (5 x POF),
For applications up to 100 Mbit/s,
Operating voltage:
100–240 V~/50–60 Hz, 3,6 VA typ.,
greenblue (similar RAL 6004),
120 x 20 x 80 mm, 250 g

POF/UAE/SFP 8xAp 2,2mm
180 101 05 ●
Desktop-switch, 8-way
(1 x UAE/1 x SFP/6 x POF),
For applications up to 100 Mbit/s,
Operating voltage:
100–240 V~/50–60 Hz, 7,5 VA typ.,
greenblue (similar RAL 6004),
196 x 30 x 124 mm, 655 g

POF K 100 2,2 mm**
180 000 04 ●
POF-SI-cable, duplex, 100 m,
Fibre diameter 2.2 mm,
black (similar RAL 9005)
800 g

Keystone-modul, cable und accessory for POF

KMK-POF
180 006 00 ●
POF-Keystone-module,
for mounting adapter KMK-MA Up and UM-MA x Up and other Keystone-receptacles,
Connection: 2 x POF 2,2 mm,
36 x 14 x 20 mm, 56 g

POF VB 2,2 mm
392 000 07 ●
Connector for POF-fibres,
Connection: 2 x POF 2,2 mm,
mousegrey (similar RAL 7005),
24 x 18 x 10 mm, 3 g

POF VB 1,5 mm
392 000 06 ●
Connection: 2 x POF 1,5 mm

POF-VB 1,5/2,2 mm
392 000 08 ●
Connection: 1 x POF 2,2 mm,
1 x POF 1,5 mm

POF SW
392 000 04 ●
Cutting tool for POF-fibres
1.5/2.2 mm
red (similar RAL 3000),
44 x 31 x 8 mm, 15 g

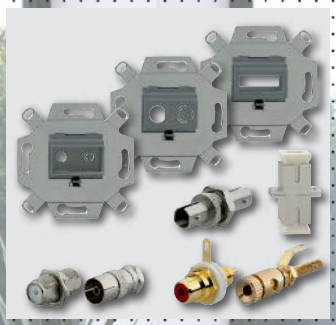
** product diversification planned

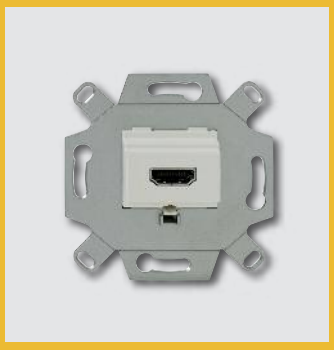
● Discount group 1 ● Discount group 2

MULTIMEDIA

Communications adapter and cable solutions

New installations in apartments are nowadays equipped with a communications infrastructure in accordance with DIN 18015-2 and RAL 678 specifying a certain level of technology. Device connections are to be integrated in the future as well – and this is not covered by simply providing a sufficient number of wall outlets. Especially for modern LCD or LED TVs, which most often are to be in-stalled directly onto the wall, a nest of patch cables, extension cords, and numerous other unsightly wiring and connection arrangements reduce the aesthetics of such high-grade solutions. Rutenbeck communication adapters help to reduce cable clutter in workrooms, offices, training and conference rooms. Ready to use plug-in solutions are also possible if there is enough space in such areas as desks or consoles.





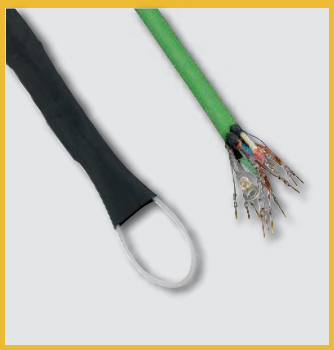
Installation solution (HDMI example)

For a trouble-free installation under consideration of the maximum bending-radiuses the use of the Kaiser "Electronics-box", Art.-No. 1068-02 or 9062-74 is recommended.

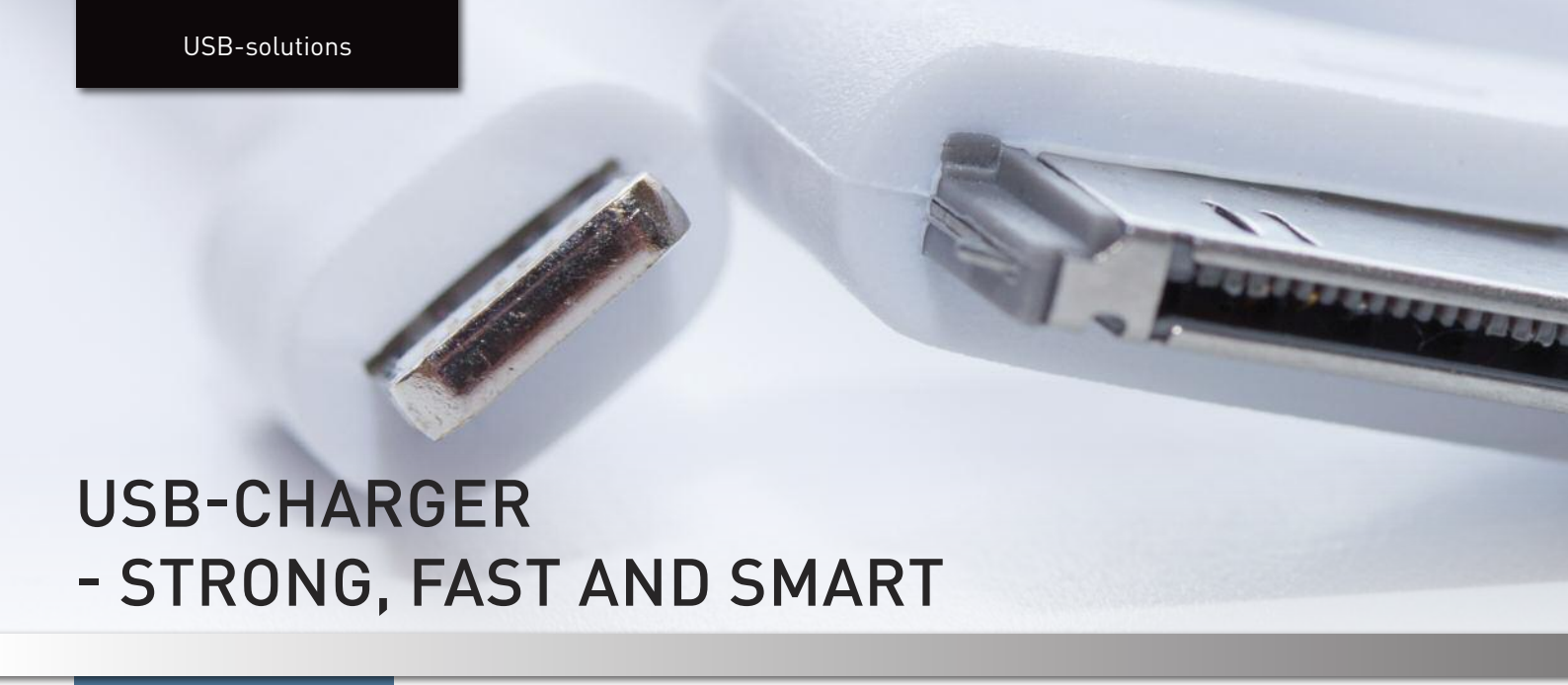
Plug&play solution (HDMI example)

The right cable for all solutions: From Rutenbeck, of course!

For reliable operation at distances of up to 20 m, Rutenbeck provides the right VGA/HDMI cable – ready to be plugged in as feeder cable or from the reel in fixed or customized lengths.



The function of all VGA/HDMI cables is guaranteed over the entire installation length.



USB-CHARGER
- STRONG, FAST AND SMART

A typical family situation – always when you need a suitable charger for your smartphone or tablet, it cannot be found or everybody in the family needs it at the same time.
Since the Rutenbeck USB-Charger is integrated in the installation, this situation cannot occur. In this case adequate power is very important to avoid unnecessary long charging time and also to be able to charge more than one device at one charger.

The Rutenbeck USB-Charger is best solution for these applications and of course, suits your switching program.

Maximum performance in flush-mounting design

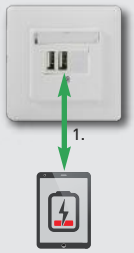
The Rutenbeck USB-Charger with a charging current of 2.5 A is currently the most powerful charger on the market.
The fast parallel charging of USB-devices is no problem. The standby power consumption is with less than 0.2 VA considerably lower compared to many other conventional plug power charger which means no extra costs for your budget.

Of course, the Rutenbeck USB-Charger matches the switching program of your choice!

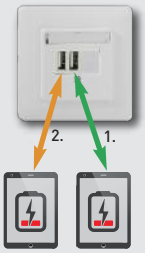
Parallel charging with management

With the most common chargers the parallel charging of USB-devices is only possible up to the maximum charging current and afterwards, they will shut off completely. Considering the increasing amount of devices that need and use more and more power, i.e. tablets, this can be a problem. Especially after a total discharge of an accumulator, the device can only be charged again with the original shipped plug power supply. However, this is no problem for the Rutenbeck USB-Charger.
The state of the accumulator will be recognized and if necessary, re-adjusted. If an additional USB-device is connected, the first connected device will be charged until enough current for the second device is available. Then, both devices will be charged parallel up to 100%. Of course, defective accumulators (short-circuit) will be recognized and the charging function will be switched off in order to avoid any subsequent damage.

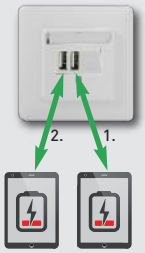
Insert 1. device
= Charging priority (any port)



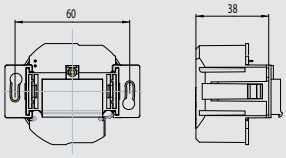
Insert 2. device
if the 1. device still needs more than 1.25 A
Initially no charging



if the 1. device needs less than 1.25 A
2. device will be charged



USB-solutions active



SV USB 2xUp rw
227 104 08
USB charging device for flush mounting, 2-way, with center plate and wall plate, for smartphones/tablets etc., with power management, overload protection and operating indication, nominal operating voltage: 100–240 V~/ 50–60 Hz, 0,2VA typical (without USB devices), charging current max. 2.5A in total, pure white (similar RAL 9010), 80 x 80 x 50 mm, 140 g

USB-HUB
- MORE THAN ONLY CHARGING

An everyday problem – with the constantly smaller dimensions of IT-equipment, the amount of available USB-interfaces decreases and are occupied instantly. In addition there is also the common "cable chaos" at desktop devices which makes the handling more difficult.

These problems can easily be solved with the Rutenbeck USB 3.0-Hub for flush mounting. Simply exchange it with a 230 V power outlet and the powerful charging of tablets with 2 A charging current will also be taken care of immediately.
The perfect solution for every workplace in the office and at home and of course, the Rutenbeck Hub 3.0 also fits your switching program of your choice.

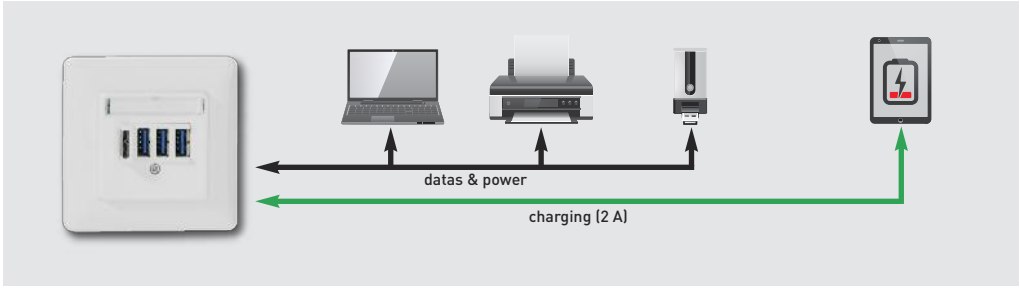
USB 3.0-"Maximum Speed"

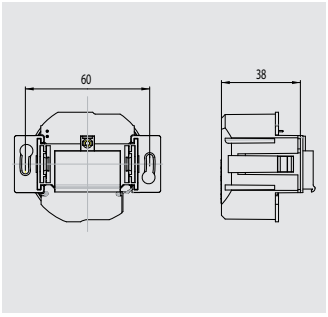
After installation and connection of the Rutenbeck-USB Hub at 230 V, the Hub will be connected with the left port (Uplink=USB-type B (micro) to the PC. With the two ports in the middle (USB 3.0, type A) installed USB-devices as printers or scanners, as well as USB-storages or hard drives can be connected to the PC.
Each port delivers up to 900 mA for the necessary power supply of the connected device. With USB 3.0 the data transmission between the devices takes place with "Highspeed" up to 4.8 Gbit/s, therefore, parallel operation of the devices at the Hub is possible without any compromises.

The USB-Charger included

The port on the right side (USB type A) serves exclusively as a charging port for your tablet. With a charging current of 2A, connected USB-devices will be charged fast and effective.
Of course, mobile phones or smart phones can be charged with up to 900 mA with the center two ports. They are connected to the PC at the same time and also allow backups, updates and so on.

If the interfaces are not being used, the USB-Hub has a very low standby power consumption (0.5 VA), a lot less than the most plug power supplies, which means no extra costs for your next electricity bill.





USB 4xUp rw
227 104 07
USB Hub for flush mounting, USB 3.0, with center plate and wall plate, 3-port hub for USB 3.0 devices, uplink to PC via USB 3.0 Micro USB, with charging function for Smartphones/ tablets etc., quick charging outlet (right USB-port), with powermanagement and overload protection, nominal operating voltage: 100–240 V~/ 50–60 Hz, 0.5VA typical (without USB devices), charging current max. 2A in total, pure white (similar RAL 9010), 80 x 80 x 50 mm, 140 g

USB-solutions active

Discount group 2

Overview Communications Adapter Copper (construction kit system)

	KM-BNC-F 170 003 00	KM-BNC-C 170 003 01	KM-BNC-IEC 170 003 02 (only in combination with 170 003 00)	KM-Cinch 170 003 04 (rw*) 170 003 05 (sw***) 170 003 06 (red) 170 003 07 (yellow)	KM-MK 3,5 mm 170 003 03 (Stereo)	KM-LS 170 003 08 (sw***) 170 003 09 (red) (Banana)
BNC-F (Antenna)	Up 170 000 01 / Up rw* 170 000 51 / Up g** 170 000 61					
BNC-C/IEC/Cinch (Antenna/Koax)		Up 170 000 03 / Up rw* 170 000 53 / Up g** 170 000 63	Up 170 000 03 / Up rw* 170 000 53 / Up g** 170 000 63	Up 170 000 03 / Up rw* 170 000 53 / Up g** 170 000 63		
Mini-Klinke 3,5mm (Headphone)					Up 170 000 02 / Up rw* 170 000 52 / Up g** 170 000 62	
LS-MA Up (Loudspeaker)						Up 170 000 04 / Up rw* 170 000 54 / Up g** 170 000 64

Overview Communications Adapter Copper (complete version)

USB 2.0

USB 3.0

	Up 0	Up 0 rw*	Up 0 g**
USB 2.0 -jack	170 105 01	170 105 51	170 105 61
USB 3.0 - jack	170 105 04	170 105 54	170 105 64

VGA

	Up 0	Up 0 rw*	Up 0 g**
VGA- jack	170 105 02	170 105 52	170 105 62
VGA-jack with pigtail	170 105 05	170 105 55	170 105 65

HDMI

	Up 0	Up 0 rw*	Up 0 g**
HDMI- jack	170 105 03	170 105 53	170 105 63

*rw = pure white
** g = grey
***sw = black

Overview Communications Adapter FOC, POF (construction kit system)

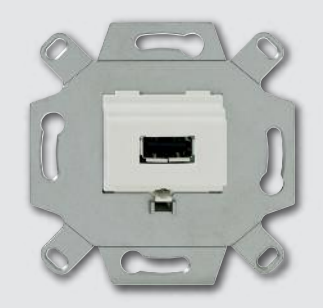
	KM-SC-M 172 003 00 KM-SC-S 172 003 03	KM-SC-M Duplex 172 003 01 KM-SC-S Duplex 172 003 04	KM-LC-M 172 003 06 KM-LC-S 172 003 07	KM-ST-M 172 003 02 KM-ST-S 172 003 05
SC/LC (LWL)	Up 172 000 01 Up rw* 172 000 51 Up g** 172 000 61		Up 172 000 01 Up rw* 172 000 51 Up g** 172 000 61	
SC-Duplex (LWL)		Up 172 000 02 Up rw* 172 000 52 Up g** 172 000 62		
ST (LWL)				Up 172 000 03 Up rw* 172 000 53 Up g** 172 000 63

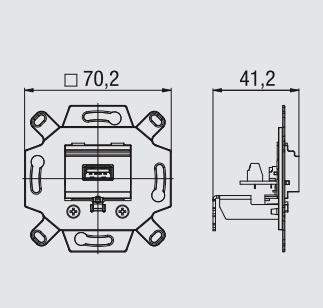
Wall plates and center plates, suitable for all Communications Adapter

Wall plate	Wall plate	AP 100 100 01	AP rw* 100 100 51
Center plate	Center plate	ZSt UM-MA 2 139 100 03	ZSt UM-MA 2 rw* 139 100 53

*rw = pure white
** g = grey

Communications adapter copper, jacks

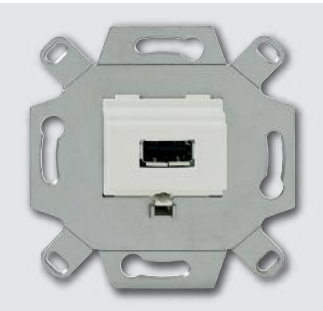


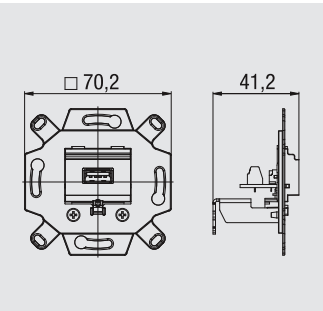


KM-USB Up 0
170 105 01
USB-jack, 1-way,
with 5 screw terminals,
for customary TAE-center plates,
can be combined with ZSt UM-MA 2
and wall plate AP,
break off mounting ring can be converted into mounting bracket,
pearl white (similar RAL 1013),
70 x 70 x 41 mm, 43 g

KM-USB Up 0 rw
170 105 51
pure white (similar RAL 9010)

KM-USB Up 0 g
170 105 61
mousegrey (similar RAL 7005)

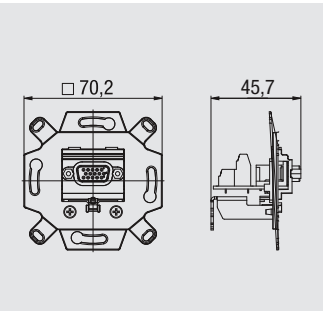




KM-USB 3.0 Up 0
170 105 04
USB 3.0 -jack, 1-way, with 5 screw terminals, for customary TAE-center plates, can be combined with ZSt UM-MA 2 and wall plate AP,
break off mounting ring can be converted into mounting bracket,
pearl white (similar RAL 1013),
70 x 70 x 41 mm, 43 g

KM-USB 3.0 Up 0 rw
170 105 54
pure white (similar RAL 9010)

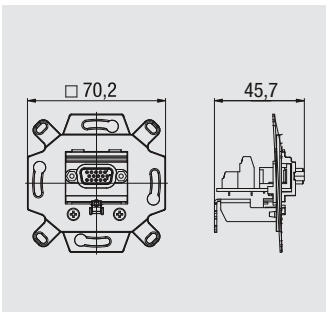
KM-USB 3.0 Up 0 g
170 105 64
mousegrey (similar RAL 7005)



KM-VGA Up 0
170 105 02
VGA-jack, 1-way, with 14 screw terminals, for customary TAE-center plates, can be combined with ZSt UM-MA 2 and wall plate AP,
break off mounting ring can be converted into mounting bracket,
pearl white (similar RAL 1013),
70 x 70 x 46 mm, 58 g

KM-VGA Up 0 rw
170 105 52
pure white (similar RAL 9010)

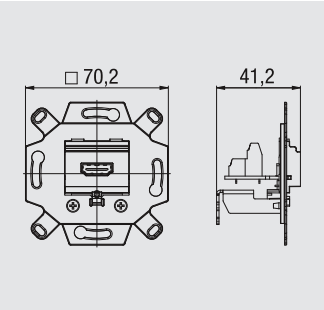
KM-VGA Up 0 g
170 105 62
mousegrey (similar RAL 7005)



KM-VGA KP Up 0
170 105 05
VGA-jack, 1-way, with pigtail (30 cm), for customary TAE-center plates, can be combined with ZSt UM-MA 2 and wall plate AP,
break off mounting ring can be converted into mounting bracket,
pearl white (similar RAL 1013),
70 x 70 x 46 mm, 58 g

KM-VGA KP Up 0 rw
170 105 55
pure white (similar RAL 9010)

KM-VGA KP Up 0 g
170 105 65
mousegrey (similar RAL 7005)

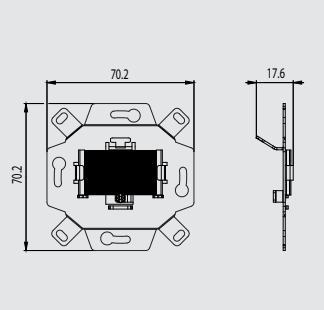


KM-HDMI Up 0
170 105 03 ●
HDMI-jack, 1-way,
with 20 screw terminals,
for customary TAE-center plates,
can be combined with ZSt UM-MA 2
and wall plate AP, break off
mounting ring can be converted
into mounting bracket,
pearl white (similar RAL 1013),
70 x 70 x 41 mm, 53 g

KM-HDMI Up 0 rw
170 105 53 ●
pure white (similar RAL 9010)

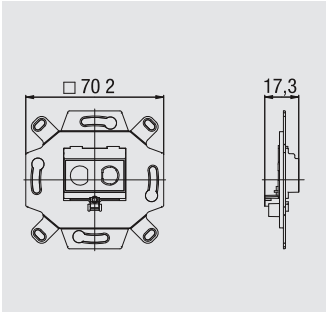
KM-HDMI Up 0 g
170 105 63 ●
mousegrey (similar RAL 7005)

Communications adapter copper, jacks



KD Up 0
193 105 10 ●
Universal cable feedthrough
for flush mounting,
cut out size of the cable feed
through 32.5 x 17.5 mm, for
customary TAE-center plates,
break off mounting ring can be
converted into mounting bracket,
with strain relief on the backside
70 x 70 x 17 mm, 46 g

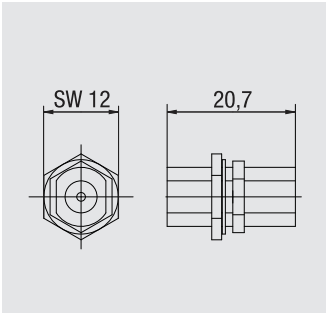
Communications adapter copper, mounting adapter



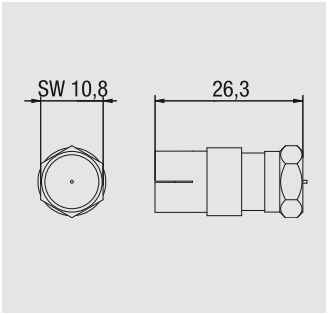
BNC-F-MA Up
170 000 01
Mounting adapter (flush mounting) for BNC-F, 2-way, for customary TAE-center plates, can be combined with ZSt UM-MA 2 and wall plate AP, break off mounting ring can be converted into mounting bracket, pearl white (similar RAL 1013), 70 x 70 x 17 mm, 25 g

BNC-F-MA Up rw
170 000 51
pure white (similar RAL 9010)

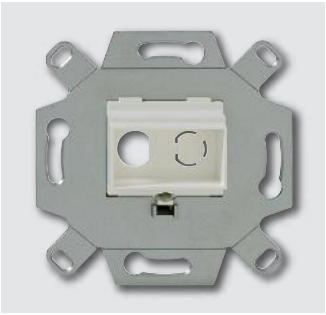
BNC-F-MA Up g
170 000 61
mousegrey (similar RAL 7005)

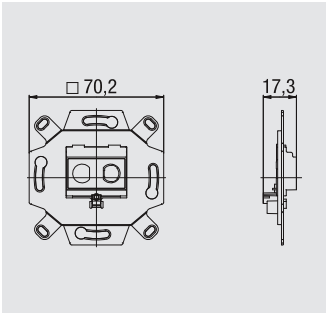


KM-BNC-F
170 003 00
BNC-F-jack, 12 mm, for mounting adapter BNC-F-MA Up, screw connection, 12 x 12 x 21 mm, 5 g



KM-BNC-IEC
170 003 02
BNC-IEC-jack, screw connection, only in combination with 170 003 00, 11 x 11 x 26 mm, 8 g

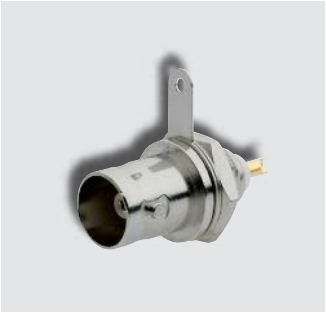


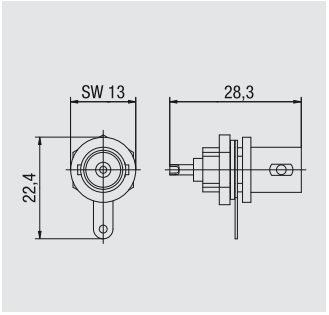


BNC-C/IEC/Cinch-MA Up
170 000 03
Mounting adapter (flush mounting) for BNC-C/IEC/Chinch-connections, 2-way, for customary TAE-center plates, can be combined with ZSt UM-MA 2 and wall plate AP, break off mounting ring can be converted into mounting bracket, pearl white (similar RAL 1013), 70 x 70 x 17 mm, 25 g

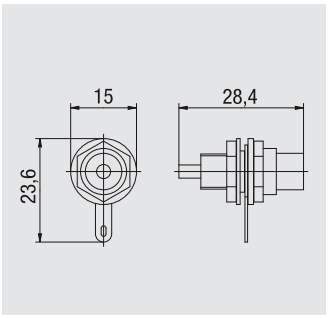
BNC-C/IEC/Cinch-MA Up rw
170 000 53
pure white (similar RAL 9010)

BNC-C/IEC/Cinch-MA Up g
170 000 63
mousegrey (similar RAL 7005)





KM-BNC-C
170 003 01
BNC-C-connector, for mounting adapter BNC-C/IEC/Cinch-MA Up, soldering tag, 22 x 13 x 28 mm, 6 g

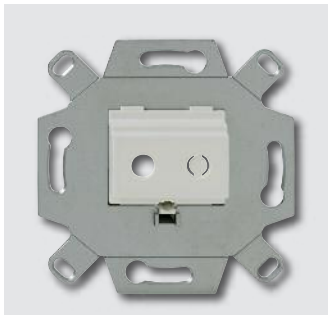


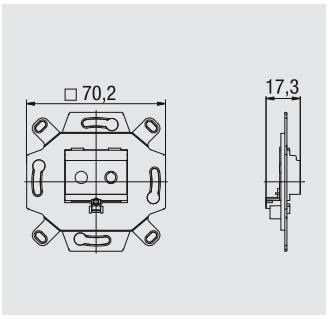
KM-Cinch rw
170 003 04 ●
Cinch-jack, for mounting adapter BNC-C/IEC/Cinch-MA Up, soldering tag, white, 15 x 24 x 28 mm, 8 g

KM-Cinch sw
170 003 05 ●
black (similar RAL 9005))

KM-Cinch rot
170 003 06 ●
red (similar RAL 3000)

KM-Cinch yellow
170 003 07 ●
yellow (similar RAL 1021)

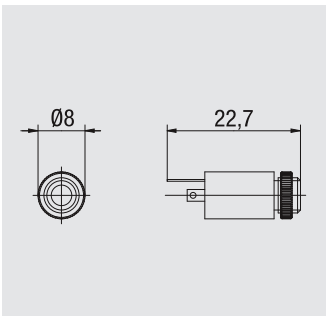




MK-MA Up
170 000 02 ●
Mounting adapter (flush mounting) for 3.5 mm mini-connections, 2-way, for customary TAE-center plates, can be combined with ZSt UM-MA 2 and wall plate AP, break off mounting ring can be converted into mounting bracket, pearl white (similar RAL 1013), 70 x 70 x 17 mm, 25 g

MK-MA Up rw
170 000 52 ●
pure white (similar RAL 9010)

MK-MA Up g
170 000 62 ●
mousegrey (similar RAL 7005)



KM-MK 3,5 mm
170 003 03 ●
Mini-jack, 3.5 mm, for mounting adapter MK-MA Up, soldering tag, 8 x 8 x 23 mm, 3 g

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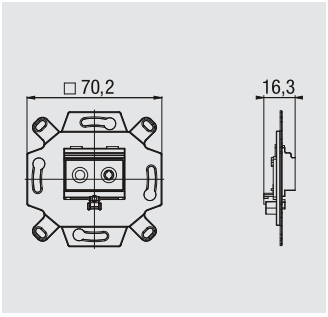
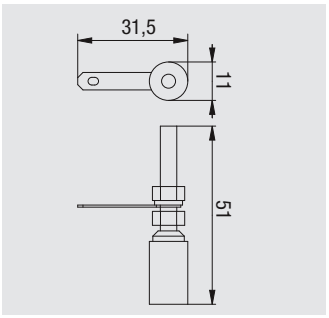


LS-MA Up
170 000 04 ●
Mounting adapter (flush mounting) for KM-LS-connections, 2-way, for customary TAE-center plates, can be combined with ZSt UM-MA 2 and wall plate AP, break off mounting ring can be converted into mounting bracket, pearl white (similar RAL 1013), 70 x 70 x 17 mm, 25 g

LS-MA Up rw
170 000 54 ●
pure white (similar RAL 9010)

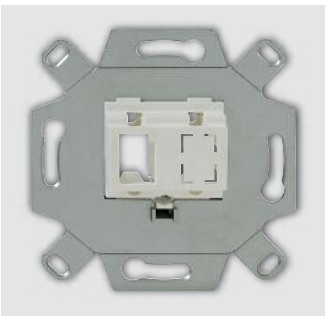
LS-MA Up g
170 000 64 ●
mousegrey (similar RAL 7005)

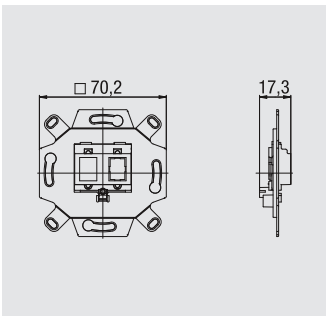
Communications adapter copper, connectors, fibre optics couplings



KM-LS sw
170 003 08
LS-jack, for mounting adapter LS-MA Up, cable lug/soldering tag (ground),
black (similar RAL 9005),
11 x 32 x 51 mm, 17 g

KM-LS rot
170 003 09
red (similar RAL 3000)

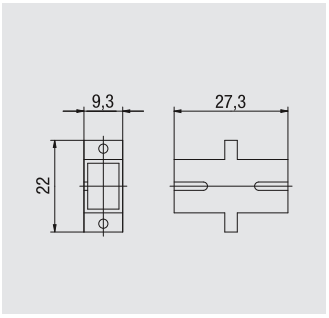




SC/LC-MA Up
172 000 01
Mounting adapter (flush mounting) for SC-connections, 2-way, for customary TAE-center plates, can be combined with ZSt UM-MA 2 and wall plate AP, break off mounting ring can be converted into mounting bracket,
pearl white (similar RAL 1013),
70 x 70 x 17 mm, 26 g

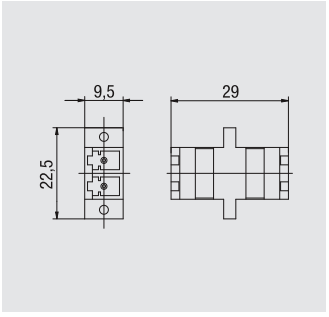
SC/LC-MA Up rw
172 000 51
pure white (similar RAL 9010)

SC/LC-MA Up g
172 000 61
mousegrey (similar RAL 7005)



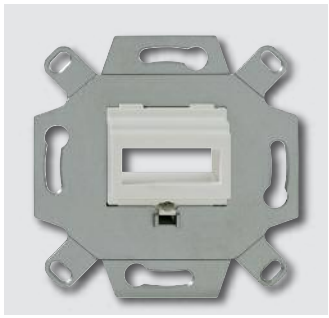
KM-SC-M
172 003 00
SC-coupling, multimode, for mounting adapter SC/LC-MA Up, screw connection,
9 x 22 x 27 mm, 10 g

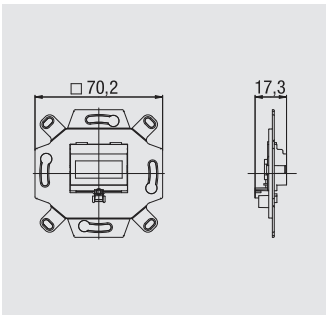
KM-SC-S
172 003 03
SC-coupling, singlemode, screw connection,
9 x 22 x 27 mm, 10 g



KM-LC-M
172 003 06
LC-coupling, multimode, for mounting adapter SC/LC-MA Up, screw connection,
10 x 23 x 29 mm, 8 g

KM-LC-S
172 003 07
LC-coupling, singlemode



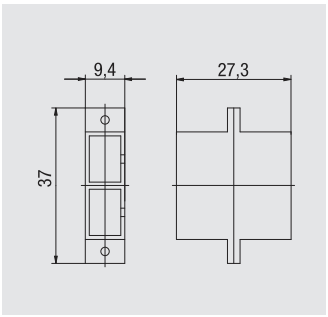


SC Duplex-MA Up
172 000 02 ●
Mounting adapter (flush mounting) for SC-Duplex-connections, 1-way, for customary TAE-center plates, can be combined with ZSt UM-MA 2 and wall plate AP,
break off mounting ring can be converted into mounting bracket,
pearl white (similar RAL 1013),
70 x 70 x 17 mm, 26 g

SC Duplex-MA Up rw
172 000 52 ●
pure white (similar RAL 9010)

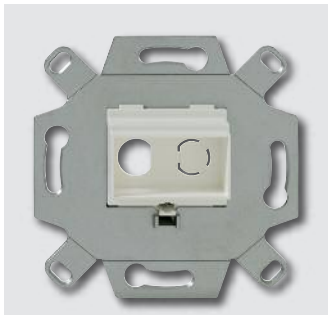
SC Duplex-MA Up g
172 000 62 ●
mousegrey (similar RAL 7005)

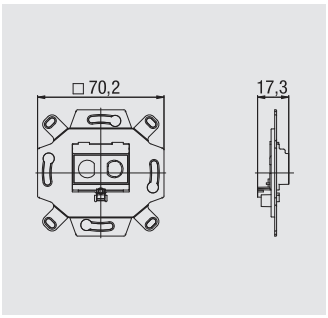
Communications adapter, fibre optics couplings



KM-SC-M Duplex
172 003 01 ●
SC-Duplex-coupling, multimode, for mounting adapter SC Duplex-MA Up,
screw connection,
9 x 37 x 27 mm, 19 g

KM-SC-S Duplex
172 003 04 ●
SC-Duplex-coupling, singlemode, screw connection

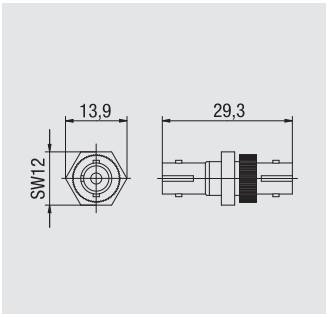




ST-MA Up
172 000 03 ●
Mounting adapter (flush mounting) for ST-connections, 2-way, for customary TAE-center plates, can be combined with ZSt UM-MA 2 and wall plate AP, break off mounting ring can be converted into mounting bracket,
pearl white (similar RAL 1013),
70 x 70 x 17 mm, 26 g

ST-MA Up rw
172 000 53 ●
pure white (similar RAL 9010)

ST-MA Up g
172 000 63 ●
mousegrey (similar RAL 7005)



KM-ST-M
172 003 02 ●
ST-coupling, multimode,
for mounting adapter ST-MA Up,
single-hole assembly,
14 x 12 x 29 mm, 8 g

KM-ST-S
172 003 05 ●
ST-coupling, singlemode

Overview communications adapter FOC, POF (construction kit system)

Cat.6 coupling
139 003 60

Cat.6 Angular coupling
139 003 70

KMK-MA Up rw*
170 000 55

KMK-MA Up sw*
170 000 65

Mounting adapter, 1/2-way, without keystones

UMflex-ApG rw*
139 115 01

Surface mounting housing, 3-way, without keystones, cable entry only from top
page 18

PP-UM A-6 Ap
239 101 06

Surface mounting-patch panel, without keystones
page 20

PP-UM A-12 Ap
239 101 16

Surface mounting-patch panel, without keystones
page 20

MM Ap
239 101 18

Multimedia patch panel, without keystones,
page 21

PP-UM A-24/1
239 000 00

Patch panel, 24 Ports, 19″/1 U, for direct mounting, without keystones
page 20

CP-UM A-12 Ap
239 101 12

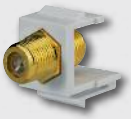
Surface mounting housing, 12-way, without keystones
page 20

KMK-HDMI
170 106 53 (rw*)
170 106 63 (sw**)

KMK-HDMI KP
170 106 52 (rw*)
170 106 62 (sw**)

KMK-USB
170 106 51 (rw*)
170 106 61 (sw**)

KMK-USB 3.0
170 106 50 (rw*)
170 106 60 (sw**)



KMK-BNC-F
170 006 00 (rw*)
170 006 60 (sw**)

KMK-BNC-C
170 006 01 (rw*)
170 006 61 (sw**)

KMK-Cinch
170 006 04 (rw* rw*)
170 006 05 (sw** rw*)
170 006 06 (red rw*)
170 006 07 (yellow rw*)
170 006 64 (rw* sw**)
170 006 65 (sw** sw**)
170 006 66 (red sw**)
170 006 67 (yellow sw**)

KMK-LS
170 006 08 (sw** rw*)
170 006 09 (red rw*)
170 006 68 (sw** sw**)
170 006 69 (red sw**)

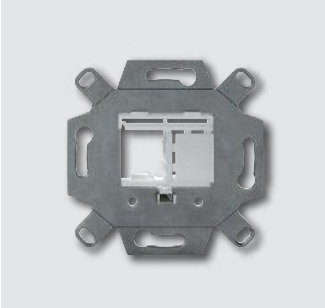
KMK-ST-M
172 006 02 (rw*)
172 006 62 (sw**)

KMK-ST-S
172 006 05 (rw*)
172 006 65 (sw**)

KMK-LC-M
172 006 06 (rw*)
172 006 66 (sw**)

KMK-LC-S
172 006 07 (rw*)
172 006 67 (sw**)

* pure white, **black



KMK-MA Up rw
170 000 55 ●
Mounting adapter (flush mounting)
for Keystone-modules KMK, 2-way,
for customary TAE-center plates,
can be combined with ZSt UM-MA 2
and wall plate AP,
break off mounting ring can be
converted into mounting bracket,
pure white (similar RAL 9010)
70 x 70 x 17 mm, 26 g

KMK-MA Up sw
170 000 65 ●
black (similar RAL 9005)

Communications adapter, Keystone design, mounting adapter

KMK-HDMI rw
170 106 53 ●
HDMI-Keystone (jack/jack)
for mounting adapter KMK-MA Up
and other Keystone-receptacles,
pure white (similar RAL 9010)

KMK-HDMI sw
170 106 63 ●
black (similar RAL 9005)

Communications adapter, Keystone design, Keystones

KMK-HDMI KP rw
170 106 52 ●
HDMI-Keystone (jack/jack)
for mounting adapter KMK-MA Up,
with pigtails (30 cm)
and other Keystone-receptacles,
pure white (similar RAL 9010)

KMK-HDMI KP sw
170 106 62 ●
black (similar RAL 9005)

KMK-USB rw
170 106 51 ●
USB-Keystone, USB 2.0
USB-A (jack/jack)
for mounting adapter KMK-MA Up
and other Keystone-receptacles,
pure white (similar RAL 9010)

KMK-USB sw
170 106 61 ●
black (similar RAL 9005)

KMK-USB 3.0 rw
170 106 50 ●
USB-Keystone, USB 3.0
USB-A (jack/jack)
for mounting adapter KMK-MA Up
and other Keystone-receptacles,
pure white (similar RAL 9010)

KMK-USB 3.0 sw
170 106 60 ●
black (similar RAL 9005)

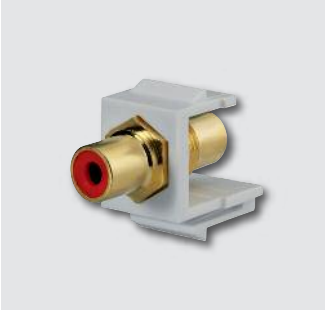
**Communications adapter,
Keystone design,
Keystones**

KMK-BNC-F rw
170 006 00
BNC-F-Keystone, screw connection (socket/socket), for mounting adapter KMK-MA Up and other Keystone-receptacles, pure white (similar RAL 9010)

KMK-BNC-F sw
170 006 60
black (similar RAL 9005)

KMK-BNC-C rw
170 006 01
BNC-C-Keystone, (socket/socket), for mounting adapter KMK-MA Up and other Keystone-receptacles, pure white (similar RAL 9010)

KMK-BNC-C sw
170 006 61
black (similar RAL 9005)



KMK-Cinch rw rw
170 006 04
Cinch-Keystone, white, (jack/jack) for mounting adapter KMK-MA Up and other Keystone-receptacles, pure white (similar RAL 9010)

KMK-Cinch sw rw
170 006 05
Cinch-Keystone, black, pure white (similar RAL 9010)

KMK-Cinch rot rw
170 006 06
Cinch-Keystone, red, pure white (similar RAL 9010)

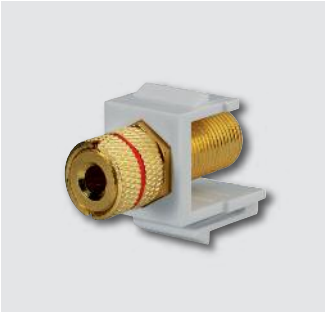
KMK-Cinch gelb rw
170 006 07
Cinch-Keystone, yellow, pure white (similar RAL 9010)

KMK-Cinch rw sw
170 006 64
Cinch-Keystone, white, black (similar RAL 9005)

KMK-Cinch sw sw
170 006 65
Cinch-Keystone, black, black (similar RAL 9005)

KMK-Cinch rot sw
170 006 66
Cinch-Keystone, red, black (similar RAL 9005)

KMK-Cinch gelb sw
170 006 67
Cinch-Keystone, yellow, black (similar RAL 9005)



KMK-LS sw rw
170 006 08
LS-Keystone, black, (jack/jack) for mounting adapter KMK-MA Up and other Keystone-receptacles, pure white (similar RAL 9010)

KMK-LS rot rw
170 006 09
LS-Keystone, red, pure white (similar RAL 9010)

KMK-LS sw sw
170 006 68
LS-Keystone, black, black (similar RAL 9005)

KMK-LS rot sw
170 006 69
LS-Keystone, red, black (similar RAL 9005)

KMK-ST-M rw
172 006 02
ST-coupling, Keystone, multimode, for mounting adapter KMK-MA Up and other Keystone-receptacles, pure white (similar RAL 9010)

KMK-ST-M sw
172 006 62
black (similar RAL 9005)

KMK-ST-S rw
172 006 05
ST-coupling, Keystone, singlemode, for mounting adapter KMK-MA Up and other Keystone-receptacles, pure white (similar RAL 9010)

KMK-ST-S sw
172 006 65
black (similar RAL 9005)

KMK-LC-M rw
172 006 06
LC-coupling, Keystone,
multimode,
for mounting adapter KMK-MA Up
and other Keystone-receptacles,
pure white (similar RAL 9010)

KMK-LC-M sw
172 006 66
black (similar RAL 9005)

KMK-LC-S rw
172 006 07
LC-coupling, Keystone,
singlemode,
for mounting adapter KMK-MA Up
and other Keystone-receptacles,
pure white (similar RAL 9010)

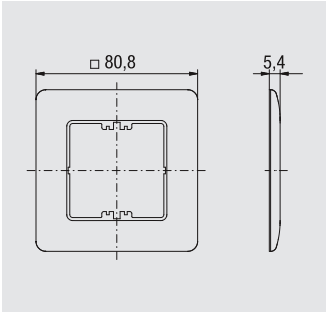
KMK-LC-S sw
172 006 67
black (similar RAL 9005)

Communications adapter, Keystone design, Keystones

KMK-POF
180 006 00
POF-coupling, Keystone,
for mounting adapter KMK-MA Up
and other Keystone-receptacles,
connection: 2x POF 2.2 mm,
black (similar RAL 9005),
36 x 14 x 20 mm, 56 g

KMK-BK rw
170 100 52
Blind cover,
for mounting adapter KMK-MA Up
and other Keystone-receptacles,
pure white (similar RAL 9010)

KMK-BK sw
170 100 62
black (similar RAL 9005)

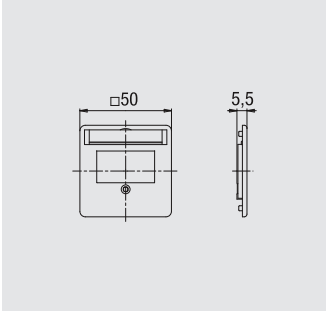


AP
100 100 01
Wall plate, for mounting
adapter UM-MA 2 Up,
UM-MA 3 Up and for
communications adapter,
pearl white (similar RAL 1013),
80 x 80 x 5 mm, 12 g

AP rw
100 100 51
pure white (similar RAL 9010)

Wall plates, center plates and accessory for the communications adapter

Wall plates and
center plates made of ABS,
available in pearl white
(similar RAL 1013) and
pure white (similar RAL 9010)



ZSt UM-MA 2
139 100 03
Center plate,
for 2 modular outlets RJ 45,
with labelling strip,
for UM-MA 2 Up,
pearl white (similar RAL 1013),
50 x 50 x 6 mm, 6 g

ZSt UM-MA 2 rw
139 100 53
pure white (similar RAL 9010)

HDMI

Through the optimized HDMI cables specifically designed for installation in professional applications, high bandwidths can be transmitted over long distances. All communication signals (data, clock, audio, etc.) are transmitted in this case, as well as the copy protection HDCP.

Technical characteristics

Article-description	flame-retardant (FR)	flammability rate (V0)	Cable diameter	Connector types	HDMI Standard	HDMI High Speed	3D-capable	4k-capable
AK HDMI		x	12,0mm	connector/connector	x	up to 5 m	x	x
EK HDMI	x		10,0mm	connector/direct connection		x	x	x
K HDMI	x		10,0mm	connector/connector		x	x	x
K HDMI-CC	x		10,0mm	direct connection/direct connection		x	x	x
K HDMI 1m	x		10,0mm	additional length for K HDMI		x	x	x
AK ES HDMI		x	12,0mm	connector/round connector	x		x	x
AKE HDMI		x	7,5mm	connector/connector		x	x	x

Rutenbeck HDMI-cables are available as male/male or as a feeder cable. The feeder cables are already equipped with a male jack. At the other end of the cable, there is a pulling aid, with which the cable can be pulled, for example, into cable ducts.

The maximum resolution in relation to the length can be retrieved from the planning matrix on page 85.

Rutenbeck multimedia solutions: Always right...

High-quality equipment in the field of audio and video with increasing demands require a high signal quality. Wrong cables or unsuitable connection and adapter solutions, however, can lead to significant performance losses and limit the listening and viewing pleasure, or even make viewing or listening completely impossible.

The use of matched and coordinated components is recommended. Multimedia cables and solutions offered by Rutenbeck enable extremely long connection paths when the supplying device (source) and the terminal device are linked directly without the need for additional amplification, signal conversion and without additional energy consumption. Connect – and you are done.

Since passive solutions do not require any power supplies, these solutions are energy savers in the truest sense of the word and therefore "green" solutions.

VGA

Rutenbeck VGA-cables are available as male/female, male/male, or as a feeder cable. The feeder cables are already equipped with a male jack. At the other end of the cable, there is a pulling aid, with which the cable can be pulled, for example, into cable ducts.

The shrink-fitted cable loop is removed next. Then the crimped finished single wires can be immediately placed on male or female jacks. Special tools are not needed. Both versions, finished cables as well as feeder solutions, are available in standard lengths of 5–20 m, in any intermediate/special lengths upon request.

In this case, order the prepackaged length (1 m) and corresponding required additional lengths (prepackaged length + X x additional length = total length). Crimp sets for male/female jacks and the required crimper can be ordered as well.

The maximum resolution in relation to the length can be retrieved from the planning matrix on page 88.

Technical characteristics

Article-description	halogen-free (OH)	flame-retardant (FR)	flammability rate (V0)	Cable diameter	Connector types	VGA-solution
VK VGA		x		8,0 mm	connector/connector (incl. Gender Changer)	QXGA
EK VGA	x		x	7,3 mm	connector/crimp connection	WUXGA
K VGA-S	x		x	7,3 mm	connector/connector	WUXGA
K VGA-B	x		x	7,3 mm	connector/jack	WUXGA
K VGA-CC	x		x	7,3 mm	crimp connection/crimp connection	WUXGA
K VGA	x		x	7,3 mm	additional length for K VGA/S/B/CC	WUXGA
AK ES VGA		x		8,0 mm	connector/round connector	QXGA

QXGA = 2048 x 1536 dpi, WUXGA = 1920 x 1200 dpi

Accessories

Matching male/female jacks are available for the feeder cables with prefinished crimped wires.

Cable matrix HDMI

Resol.	H	V	Refresh	MHz	5 m	10 m	15 m	20 m
SVGA	800	600	60	41	D1	D1	D1	D1
	800	600	75	51	D1	D1	D1	D1
	800	600	85	58	D1	D1	D1	D1
XGA	1024	768	60	67	D1	D1	D1	D1
	1024	768	75	84	D1	D1	D1	D1
	1024	768	85	95	D1	D1	D1	D1
WXGA	1366	768	60	89	D1	D1	D1	D1
	1366	768	75	112	D1	D1	D1	D1
	1366	768	85	127	D1	D1	D1	D1
SXGA	1280	1024	60	112	D1	D1	D1	D1
	1280	1024	75	140	D1	D1	D1	D1
	1280	1024	85	158	D1	D1	D1	D1
WSXGA	1600	1024	60	140	D1	D1	D1	D1
UXGA	1600	1280	60	164	D1	D1	D1	D1
WUXGA	1920	1280	60	165	D1	D1	D1	D1
WQXGA	2560	1600	60	330	D2	D2	D2	D2

Index: D1 = single cable **D2** = 2 parallel cables

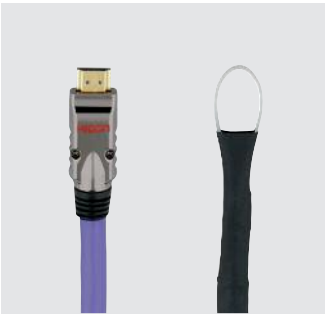
Installation solutions
HDMI connection cable
HDMI feeder cable

AK HDMI 5 m
218 000 050
HDMI connection cable,
ready to connect,
black,
5 m (male/male),
12,0 mm Ø, 420 g

AK HDMI 10 m
218 000 100
10 m (male/male),
12,0 mm Ø, 1500 g

AK HDMI 15 m
218 000 150
15 m (male/male),
12,0 mm Ø, 2280 g

AK HDMI 20 m
218 000 200
20 m (male/male),
12,0 mm Ø, 3040 g



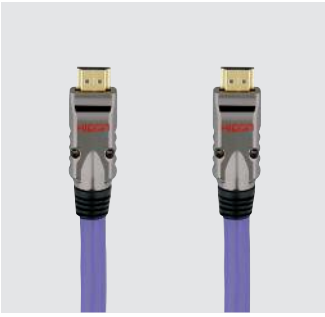
EK HDMI 5 m
218 300 05
HDMI feeder cable,
ready to connect,
magenta,
5 m (male/crimp termination),
10,0 mm Ø, 1440 g

EK HDMI 10 m
218 300 10
10 m (male/crimp termination),
10,0 mm Ø, 2100 g

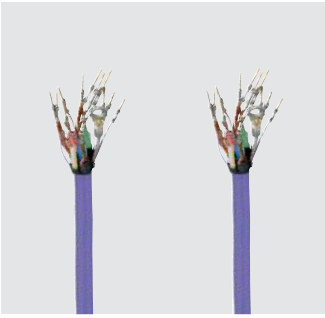
EK HDMI 15 m
218 300 15
15 m (male/crimp termination),
10,0 mm Ø, 2800 g

EK HDMI 20 m
218 300 20
20 m (male/crimp termination),
10,0 mm Ø, 3500 g

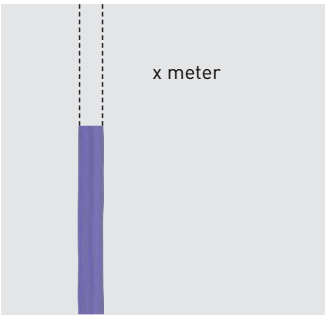
Installation solutions
HDMI cable
HDMI cable, customized



K HDMI
218 200 01
HDMI connection cable,
ready to connect,
magenta,
1 m (male/male),
10,0 mm Ø



K HDMI-CC
218 500 01
HDMI connection cable,
ready to connect,
magenta,
1 m (crimp termination/
crimp termination),
10,0 mm Ø



K HDMI 1 m
218 200 02
HDMI additional lengths, 1 m,
to K HDMI and K HDMI-CC,
magenta,
10,0 mm Ø, 1440 g,*

K HDMI 100 m
218 200 00
HDMI cable, 100 m, on bulk rolls,
magenta,
10,0 mm Ø, 144.000 g,*

*max. transmission length see HDMI-cable matrix on page 85

AK ES HDMI 4,7 m
218 400 05
HDMI-terminal devices- connection cable, flexible feeder cable, 4.7 m, with plug and round connector (ø 17 mm), black, 12,0 mm Ø, 480 g

AK ES HDMI 9,7 m
218 400 10
9.7m, with plug and round connector, black, 12,0 mm Ø, 950 g

AK ES HDMI 14,7 m
218 400 15
14.7 m, with plug and round connector, black, 12,0 mm Ø, 1490 g

AK ES HDMI 19,7 m
218 400 20
19.7 m, with plug and round connector, black, 12,0 mm Ø, 3000 g

Terminal devices – connection cable HDMI feeder cable

EKM HDMI-S 0,3 m
176 102 05
HDMI-Adapter cable for HDMI-feeder cable AK ES HDMI, 0.3 m, with plug and round connector (Ø 17 mm), black, 12 mm Ø , 85 g

EKM HDMI-B 0,3 m
176 102 06
0.3 m, with plug and round connector (Ø 17 mm), black, 12 mm Ø , 50 g

EZH
176 102 07
Pulling aid for HDMI/VGA-Feeder cable AK ES, 17 mm Ø , 25 g

Accessory for HDMI feeder cable

AKE HDMI 2 m
218 100 02
HDMI – terminal devices connection cable, 2 m (male/male), black, 7,5 mm Ø , 130 g

AKE HDMI 3 m
218 100 03
3 m (male/male), black, 7,5 mm Ø , 180 g

AKE HDMI 5 m
218 100 05
5 m (male/male), black, 7,5 mm Ø , 300 g

Terminal devices – connection cable HDMI connection cable

Cable matrix VGA

Resol.	H	V	Refr.	MHz	5 m	10 m	15 m	20 m
VGA	640	480	60	26	1	1	1	1
	640	480	75	33	1	1	1	1
	640	480	85	37	1	1	1	1
SVGA	800	600	60	41	1	1	1	1
	800	600	75	51	1	1	1	1
	800	600	85	58	1	1	1	1
XGA	1024	768	60	67	1	1	1	1
	1024	768	75	84	1	1	1	1
	1024	768	85	95	1	1	1	1
WXGA	1366	768	60	89	1	1	1	1
	1366	768	75	112	1	1	1	1
	1366	768	85	127	1	1	1	1
SXGA	1280	1024	60	112	1	1	1	1
	1280	1024	75	140	1	1	1	1
	1280	1024	85	158	1	1	1	1
WSXGA	1600	1024	60	140	1	1	1	1
	1600	1024	75	174	1	1	1	1
	1600	1024	85	198	1	1	1	1
UXGA	1600	1280	60	164	1	1	1	1
	1600	1280	75	204	1	1	1	1
	1600	1280	85	232	1	1	1	1
WUXGA	1920	1280	60	196	1	1	1	1
	1920	1280	75	245	1	1	1	
	1920	1280	85	278	1	1		

Index: 1 = AK VGA, VK VGA, EK VGA

VK VGA 5 m
217 100 050
VGA patch cable,
ready to connect,
blue,
5 m (male/male),
delivery with gender changer
8 mm Ø, 471 g

VK VGA 10 m
217 100 100
10 m (male/male),
8 mm Ø, 771 g

VK VGA 15 m
217 100 150
15 m (male/male),
8 mm Ø, 1211 g

VK VGA 20 m
217 100 200
20 m (male/male),
8 mm Ø, 1551 g

Installation solution
VGA connection cable
VGA feeder cable

EK VGA 5 m
217 300 05
VGA feeder cable,
ready to connect, green,
5 m (male/crimp termination),
7,3 mm Ø, 917 g

EK VGA 10 m
217 300 10
10 m (male/crimp termination),
7,3 mm Ø, 1292 g

EK VGA 15 m
217 300 15
15 m (male/crimp termination),
7,3 mm Ø, 1667 g

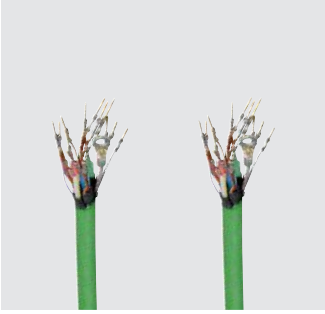
EK VGA 20 m
217 300 20
20 m (male/crimp termination),
7,3 mm Ø, 2042 g

K VGA-S
217 200 01
VGA-connection cable,
1 m (male/male),
7,3 mm Ø

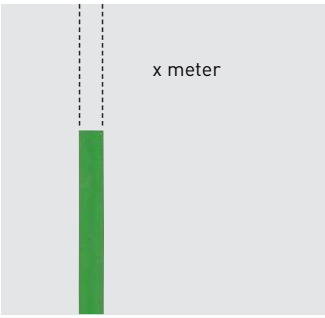
Communications adapter
VGA cable, customized

K VGA-B
217 200 02
VGA connection cable,
ready to connect, free of halogen,
flame-retarded, green,
1 m (male/female),
7,3 mm Ø

VGA cable, customized



K VGA-CC
217 500 01
VGA-connection cable,
ready to connect, green,
1 m (crimp termination/crimp termination),
7,3 mm Ø



K VGA 1 m
217 200 03
VGA additional lengths, 1 m, to K VGA-S, K VGA-B und K VGA-CC,
green,
7,3 mm Ø, 800 g,*

K VGA 100 m
217 200 00
VGA cable, 100 m, on bulk rolls,
green,
7,3 mm Ø, 80.000 g,*

* max. transmission length see VGA cable matrix on page 88

Accessories for VGA cable

VGA-S C
176 102 01
VGA plug,
for crimp termination,
in connection with EK-VGA

VGA-B C
176 102 02
VGA socket,
fur crimp termination,
in connection with EK-VGA

CZ
392 000 09
Crimping tool, for assembling
VGA-S C/VGA-B C to K-VGA
100 m (bulk rolls),
1200 g

AK ES VGA 4,7 m
217 600 05
VGA-terminal devices-connection cable, flexible feeder cable, 4.7 m, with plug and round connector (ø 17 mm), blue, 8 mm Ø , 410 g

AK ES VGA 9,7 m
217 600 10
9,7 m, with plug and round connector, blue, 8 mm Ø , 780 g

AK ES VGA 14,7 m
217 600 15
14,7 m, with plug and round connector, blue, 8 mm Ø , 895 g

AK ES VGA 19,7 m
217 600 20
19,7 m, with plug and round connector, blue, 8 mm Ø , 1200 g

Terminal devices – connection cable VGA feeder cable

EKM VGA-S 0,3 m
176 102 03
VGA-Adapter cable for VGA-feeder cable AK ES VGA, 0.3 m, with plug and round connector (ø 17 mm), blue, 8 mm Ø , 70 g

EKM VGA-B 0,3 m
176 102 04
0.3 m, with jack and round connector, blue, 8 mm Ø , 70 g

EZH
176 102 07
Pulling aid for HDMI/VGA-feeder cable AK ES, 17 mm Ø , 25 g

Accessories for VGA feeder cable

TELEMATIC

Saving Energy with Green IT

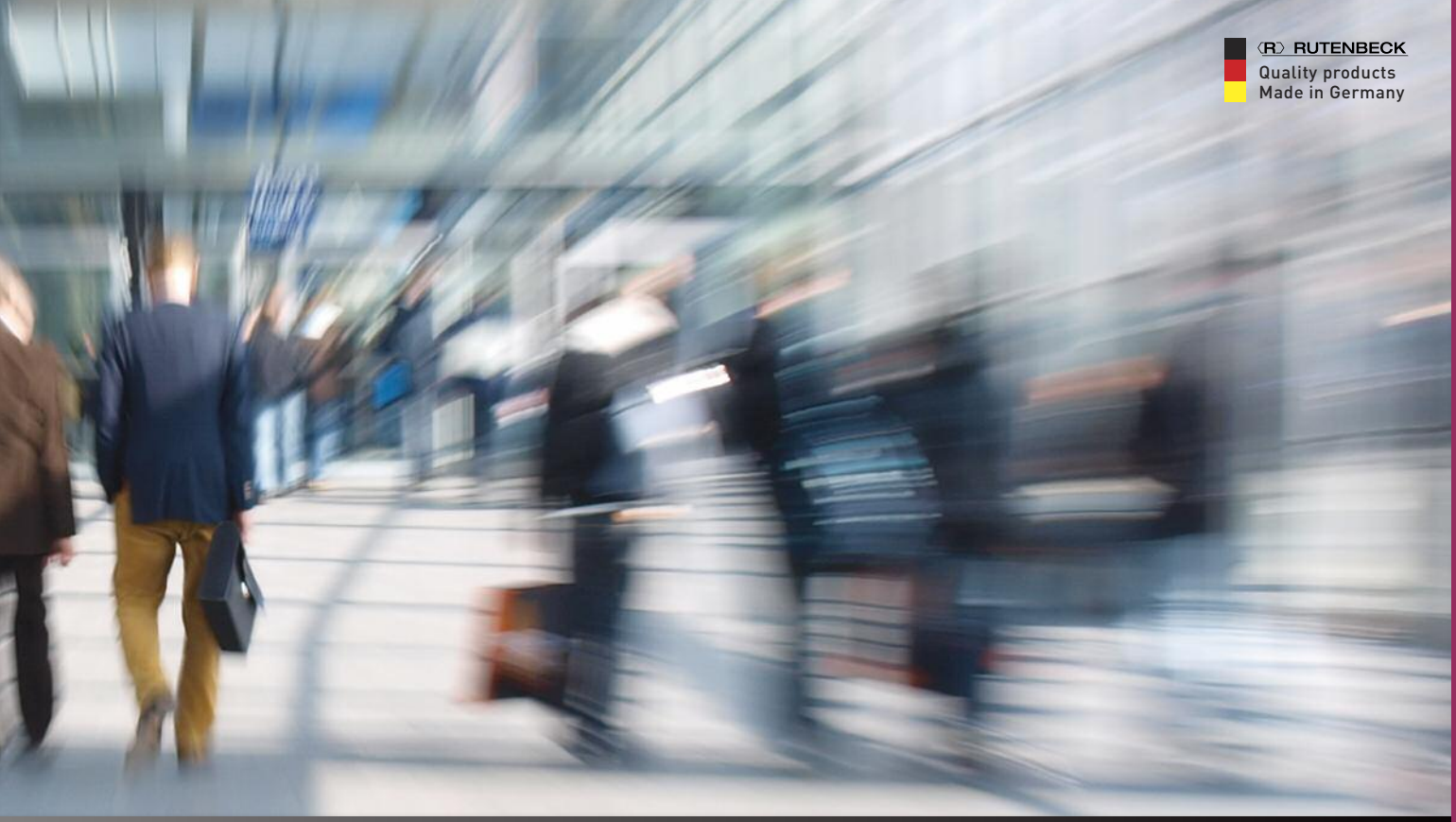
Due to today's climate changes and the constantly increasing energy costs, it is becoming more and more important to save energy. The remote switching and alarm dialling devices from Rutenbeck allow you to control your devices as needed and therefore, enables you to save energy and money.

Monitor machines, production facilities as well as your vacation home!

Control the heating of your vacation home, which needs another setting due to the change of weather or perhaps the lights of the signs in your display window! All simply via SMS or IP-based via the internet.

Do not depend on your neighbor or janitor – get directly informed via SMS in case of a malfunction or burglary in your vacation home! This way you are able to react immediately and switch on the required devices needed for these cases.

IP-based switching devices do not only enable remote switching, they also offer a time switch function for a presence simulation. Modifications of the settings are always available for up to 4 devices with a web browser from any place in the world with internet access.



Lnk
Act
RUTENBECK
1
2
3
4
TCR IP 4

Remote switching and alarm dialing devices (analog/GSM)

Article description	TCR GSM/GPS*
Housing	REG
Measurements in mm	144x90x65
Weight in g	325
Protection class	IP20
Power supply	integrated
UPS connectable	yes, accu integrated
Speech output	–
Access protection via 4 digit PIN	•
Telephone line monitoring	•
R&TTE-conform	•
Programming of the device	Telephone call, SMS, PC
Integrated push-button for local switching of the switching output	•
Screw terminals for the connection of external push-buttons	•
Connection of temperature sensor possible	2
Temperature range	-25 to +50 °C
Connection to GSM (SIM card needed)	•
Alarm dialling function	
Alarm inputs (conventional)	2
Alarm phone numbers	4x4
Alarmtransfer via SMS	•
Remote switching function	
Remote switching per SMS	•
Remote switching per CLIP	•
Switching outputs (conventional)	2
Switching possibility at device	•
Potential free relay outputs	2
Operation instructions	on CD
Short guide	293 635
Article-No.	**700 802 600**

* phased out 2017

Overview IP-switching devices

Article description	TC IP 1	TCR IP 4
Housing	Plug-plug adapter	REG
Measurements in mm	66 x 136 x 76	72 x 90 x 65
Weight in g	170	298
Color	pure white (similar RAL 9010)	light grey (similar RAL 7035)
Protection class	IP20	IP20
Power supply	100-240 V AC/50-60 Hz	100-240 V AC/50-60 Hz (Klemmen)
Power consumption	1 – 1,6 W	1 - 3,5 W
Connection to LAN (RJ45)	10 Mbit/s	10 Mbit/s
Integrated push-button for local switching of the switching output	•	•
Screw terminals for the connection of external push-buttons	–	•
LED on/off	•	•
LED link/activity	•	•
Connection of temperature sensor possible	•	•
Temperature range	-25 to +55 °C	-25 to +55 °C
Programming and operation of the device	Browser	Browser
Access protection through passwords	for admin and user	for admin and user
Manual allocation of IP address or DHCP	•	•
Time switch	•	•
Operation as time switch	•	•
Time switches per switching output	4 switching on or switching off times	5 switching on or switching off times
Automatic time synchronization via internet	•	•
Power reserve (after disconnection from 230 V power supply)	4 days	4 days
Time accuracy	≤ 1,7 s/ day	≤ 1,7 s/ day
Remote switching function	•	•
Switching outputs	1	4
Switching power	16 A/230 V	10 A/230 V
Switching possibility at device	•	•
Switching possibility via browser/internet	•	•
Potential free relay outputs	–	•
Operation instructions	293 636	293 656
Article-No.	700 902 610	700 802 610

REG = DIN-rail-mounting housing

Telecontrol-device TCR GSM/GPS

Alarming, remote switching and temperature surveillance with SMS.

The TCR GSM/GPS is an alarming and remote switching device for the mobile network in a surface mounting housing. For operation an activated SIM-card of any service provider is needed. The TCR GSM/GPS has two switching outputs, two alarm inputs and two analog inputs for the connection of temperature sensors. In changing of state at the inputs, the TCR GSM/GPS automatically sends short messages (SMS) via mobile network to up to four phone numbers.

The programming of the device can be done
- with a telephone call,
- with SMS,
- via the USB-interface of a PC or
- from a distance from a PC with GSM-modem.

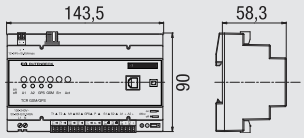
Temperature sensors can be connected at two analog inputs. The temperature can be requested with a SMS. An alarm SMS can be initiated at certain temperature levels.

The switching states of the outputs and the settings are saved at a power failure and will be restored, when the power returns. The power supply is monitored, so when switching on power and at power failure, a SMS will be sent to up to four phone numbers. The accumulator buffering allows the sending and reception of SMS for a longer period of time.

The TCR GSM/GPS will be shipped with accumulator, GSM antenna, USB-cable and a CD, which contains detailed operating instructions and the PC-program for easy programming.

TCR GSM/GPS:
Housing made of PC

Protection class IP20
according to EN 60 529



TCR GSM/GPS*
700 802 600
with external FME-Magnetic foot antenna (3 m),
light grey (similar RAL 7035),
144 x 90 x 65 mm = 8 TE, 325 g

Performance features

- 2 alarm inputs, activated with potential-free contacts, activation time and make-/break operation can be set
- each alarm input sends in case of alarm a SMS to up to four phone numbers
- 2 analog inputs for the connection of temperature sensors (optional)
- alarming with SMS at exceeding/falling below temperature level (optional)
- inquiry of temperature with SMS at connected temperature sensors -25 to +50 °C, (optional)
- 2 switching outputs (potential free contact 48 V/2 Amps)
- timer function (up to 24 hours) for the switching outputs
- display of the switching state of the connected devices with LEDs
- switching by use of externally connected push-buttons or built-in push-buttons
- easy configuration with a simple telephone call
- programming with SMS, via the USB-interface of a PC or from a distance from a PC with GSM-modem
- PC program for the configuration included
- possibility to reset to factory settings with SMS or push-buttons
- alarming and remote switching with SMS
- checking of the function standby by sending SMS in routine intervals (ALIVE-function)
- evaluation of the CLIP-function for switching of switching output 1
- surveillance of power supply
- buffering of all switching states and settings at power failure
- SMS at powering up and at power failure
- accumulator buffering allows the sending and the reception of SMS for a longer term
- display of credit with SMS at prepaid-cards
- integrated power supply of the TCR GSM/GPS, nominal voltage 230 V AC, 50–60 Hz

GPS (optional, for boats and mobile homes)

- GPS-receiver connectable and can be activated/de-activated
- GPS-tracking, time interval for sending of coordinates can be set
- surveillance of the GPS position, alarming with SMS at alteration

* phased out 2017

Functional description

The controlling takes place with a telephone call, SMS or with push-buttons at the device.

For easy applications the device can be configured with a telephone call. The device can also be configured with SMS, via the USB-interface of a PC or from a distance from a PC with GSM-modem.

By configuration with a telephone call, the phone number of the caller will be saved as phone number 1 for all functions, viz. a SMS will be sent to phone number 1, when alarm input 1 or 2 is activated. A SMS is also sent to phone number 1 when switching-on or switching-off the power supply.

After the configuration with a telephone call, the switching output 1 can be activated with a free of charge telephone call (CLIP-function). Here the phone number of the caller is recognized by the TCR GSM/GPS and the switching output 1 is activated without the incoming call being accepted (the call is free of charge). The duration of the switching-impulses can be set at both outputs. The impulse time can be set between 1 second and 24 hours.

The switching outputs are equipped with relays, at which devices with low-voltages up to 48 V can be connected. The switching of the outputs can be done with SMS or with push-buttons and will be indicated at two LEDs. The outputs can be on for a programmable time (impulse operation).

The states of all input and outputs can be recalled per SMS at any time.

With prepaid cards the TCR GSM/GPS will send a notification per SMS if a programmable minimum credit level has been reached

At the PS2-receptacle an external GPS-receiver (optional) can be activated by push-button at the device for the surveillance of position. The position data can be recalled with SMS. A change of position will be sent from TCR GSM/GPS with SMS. The time span between the short messages is programmable.

Temperature sensor
700 802 201 ●
Resolution 1 °C,
B-value 3435 K ± 1%,
10 kΩ at 25 °C,
black (similar RAL 9005),
600 mm, 6 g

GPS receiver NL-303P*
700 902 601 ●
Perfectly suitable for the determination of positions in connection with the TC GSM/GPS, SIRF Star III/ Low Power Chipset, magnetic and non-slip bottom, waterproof housing, LED-indicator for GPS status
Ø 53 x 19 mm,
Cable length 1650 mm, 71 g

FME-Extension*
700 902 603 ●
Consisting of extension cable and a FME-coupling, the set is needed in order to extend the cable of the external FME-magnetic foot antenna, cable length 4000 mm, 158 g

Remote switching device TC IP 1

The TC IP 1 allows the switching of electrical devices (network printer, DSL-modem, IP-CAM and so on) via the TCP/IP-network.

The device is located in a plug-plug adapter housing. To put into operation the TC IP 1 simply has to be connected to a power outlet and the respective network. The device to be switched will plugged into the provided power outlet of the TC IP 1.

The TC IP 1 can be switched from all computers of the same network with their web browser by IP-address 192.168.0.2.

A local operation is possible with a push-button on the device. The actual switching state of the output is indicated by a LED at the push-button for switching.

The TC IP 1 has an integrated time switching function. Up to 4 switching on and 4 switching off times can be selected.

With a web browser it is possible to display the actual temperature at connected temperature sensor as well as the settings of the network characteristics and the time switch.

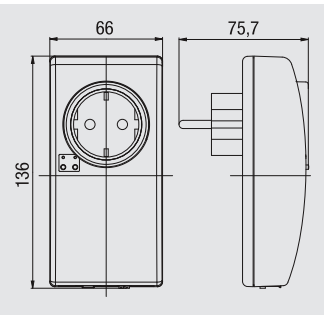
The TC IP 1 can also be operated from the Internet if there is a fixed IP-address or a DNS-server for the translation of the dynamic IP in a host name provided.

The TC IP 1 can also be operated from a mobile phone, if this supports JavaScript. More informations on www.rutenbeck.com.

The TC IP 1 will be delivered with a detailed operating instructions.

TC IP 1:
Housing made of ABS V0 (flame-retardant)

Protection class IP20 according to EN 60529



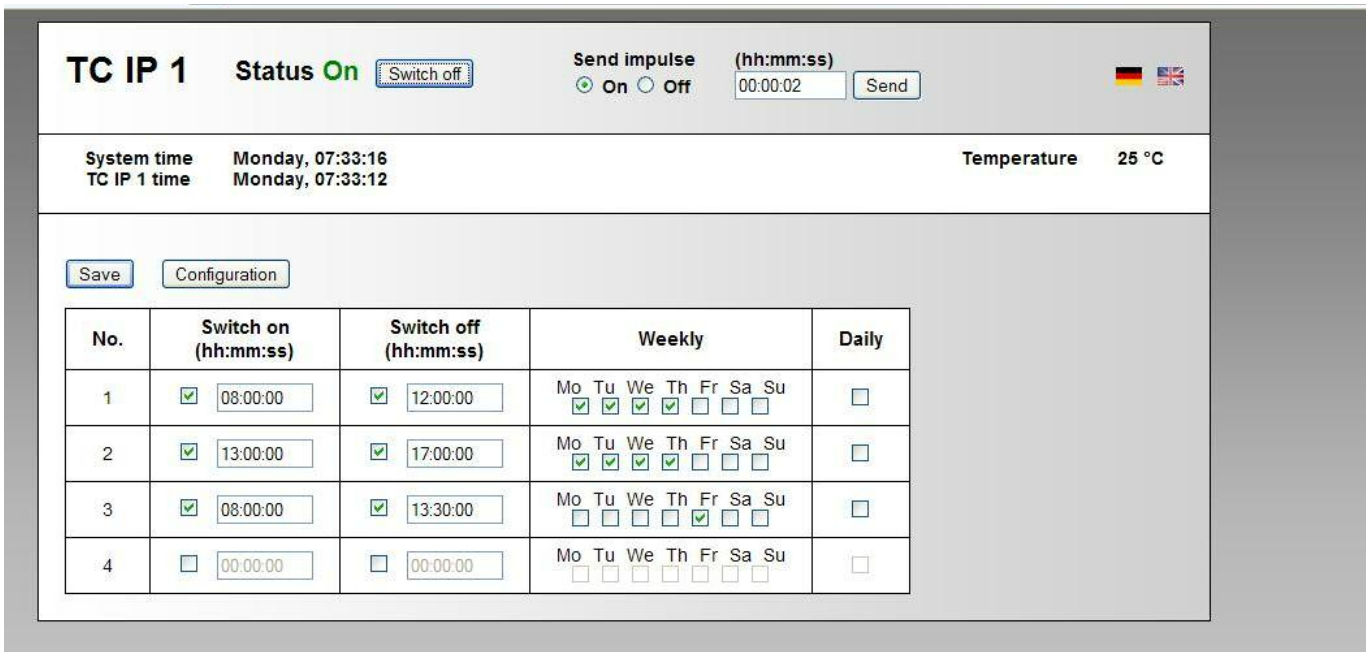
TC IP 1
700 902 610 ●
pure white (similar RAL 9010),
66 x 136 x 76 mm, 170 g

Temperature sensor
700 802 201 ●
Resolution 1 °C,
B-value 3435 K ± 1%,
10 kΩ at 25 °C,
black (similar RAL 9005),
600 mm, 6 g

Performance features

- integrated power supply
- 1 switching output 16 Amps/230 V
- indication of the switching state of the switching output
- local operation of the switching output
- network connection RJ45
- link-/activity indication for the network connection
- analog input for the connection of a temperature sensor (optional)
- temperature surveillance with web browser, analysis range -25–55 °C, resolution 1 °C
- easy configuration with web browser
- can be resetted to factory settings
- buffering of all settings and time at a power failure
- automatic time synchronization via internet
- operation as time switch
- power consumption about 1 W
- cross-platform operation with web browser
- manual allocation of a fixed IP-address or dynamic IP-address via DHCP
- access protection through optional passwords
- controlling via UDP

● Discount group 2



Application example

First the TC IP 1 will be connected with a patch cord to the local network. After this the temperature sensor (optional) will be connected at the spring terminals.

After the connection to a power outlet the TC IP 1 can be reached with a browser. After entering the address http://192.168.0.2 the main menu of the TC IP 1 opens (see picture above).

With the button „Configuration" in the main menu you will access the system settings of TC IP 1. Here you can enter and modify IP-address and passwords.

The TC IP 1 has an integrated time switching function. Up to 4 switching on and 4 switching off times can be selected. At any one time one switching on time is combined in a group with a switching off time. The days of a week can be allocated to each group.

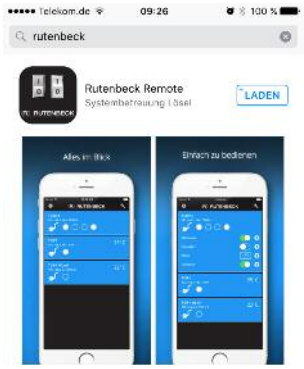
In the above example a laser printer of a company is connected at the TC IP 1. The printer will be switched on from Monday to Friday at 8 o'clock in the morning and switched off a 12 o'clock. After the lunch break the printer will be switched on again at 13 o'clock and switched off at 17 o'clock.
On Fridays the printer will be turned on at 8 o'clock in the morning and switched off at 13:30 o'clock.
On weekends is the printer not in use. If the printer is needed outside the programmed times, the user is able to switch the printer on at any time either with the built-in pushbutton or from the website.

The output can be switched in impulse mode if needed. It will be distinguished between two kinds of impulses. The on-impulse switches on the output for the selected time and the off-impulse switches off the output for the selected time. If the output is already switched on while sending an on-impulse, it will be switched off after passing the impulse time. The actual switching state of the output will be indicated on the website with status „On" or „Off".

Rutenbeck REMOTE

Iphone/IPad APP now available free of charge in the APP-store.

With the APP you are able to remote control your IP devices comfortably direct from your smartphone or tablet!
And of course, the App is free of charge! For now only available for Apple-devices.



Remote switching device TCR IP 4

The TCR IP 4 allows the switching of electrical devices via the TCP/IP-network. The device is located in a housing for mounting on a DIN-rail.

The TCR IP 4 can be switched from all computers of the same network with their web browser by IP-address 192.168.0.3.

A local operation is possible with the built-in or external connected push-buttons. The actual switching state of an output is indicated by a LED located at the push-button for switching.

The TCR IP 4 has an integrated time switching function. For each switching output, up to 4 switching on and 4 switching off times can be selected.

With a web browser it is possible to display the actual temperature at connected temperature sensor as well as the settings of the network characteristics and the time switch.

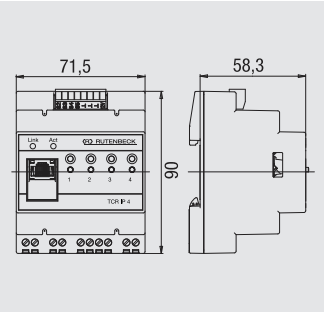
The TCR IP 4 can also be operated from the Internet if there is a fixed IP-address or a DNS-server for the translation of the dynamic IP in a host name provided.

The TCR IP 4 can also be operated from a mobile phone, if this supports JavaScript. More informations on www.rutenbeck.com.

The TCR IP 4 will be delivered with a detailed operating instructions.

TCR IP 4:
Housing made of PC

Protection class IP20
according to EN 60529



TCR IP 4
700 802 610
DIN-rail mounting housing
4 DIN units wide,
light grey (similar RAL 7035),
72 x 90 x 65 mm, 298 g

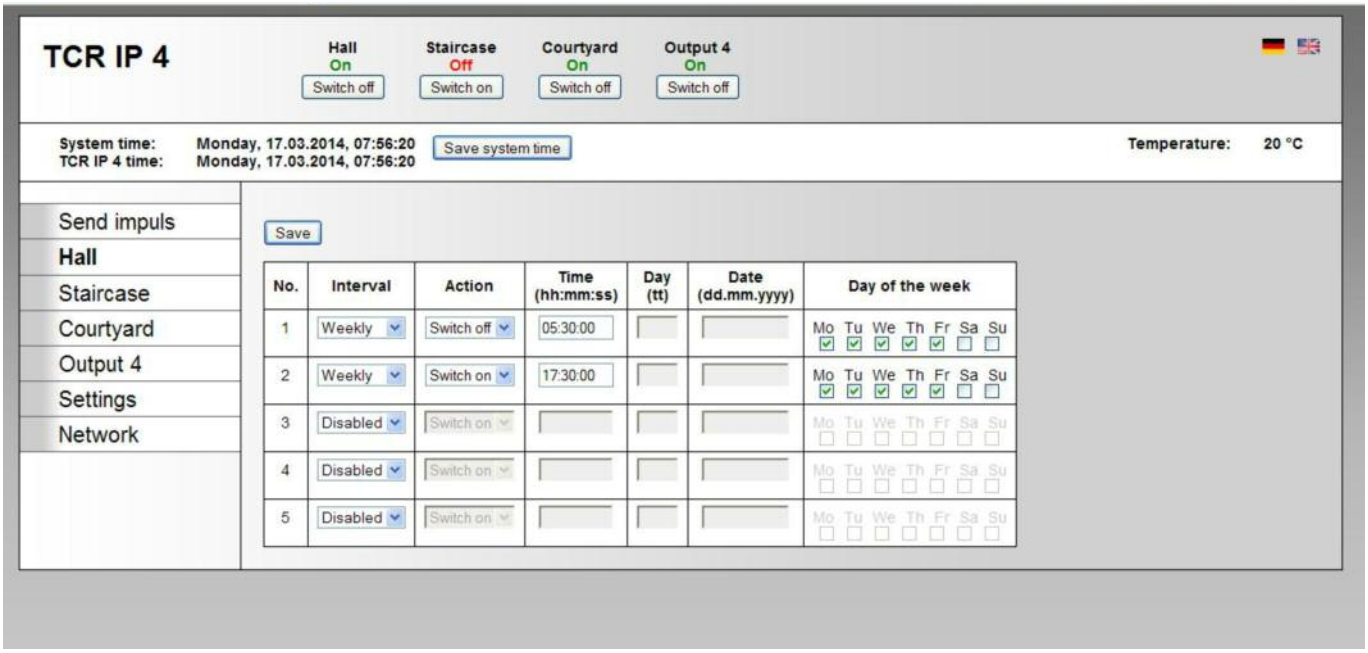
Green IT

Temperature sensor
700 802 201
Resolution 1 °C,
B-value 3435 K ± 1%,
10 kΩ at 25 °C,
black (similar RAL 9005),
600 mm, 6 g

Performance features

- integrated power supply
- 4 switching outputs, potentialfree contact max. 10 Amps/ 230 V
- indication of the switching
- state of the switching outputs
- network connection RJ45
- link-/activity indication for the network connection
- analog input for the connection of a temperature sensor (optional)
- temperature surveillance with web browser, analysis range -25–55 °C, resolution 1 °C
- easy configuration with web browser
- can be resetted to factory settings
- buffering of all settings and time at a power failure
- automatic time synchronisation via Internet
- operation as time switch with 4 switching outputs
- power consumption about 1 W
- cross-platform operation with web browser
- manual allocation of a fixed IP-address or dynamic IP-address via DHCP
- access protection through optional passwords
- controlling via UDP

Discount group 2



Application example

First the TCR IP 4 will be connected with a patch cord to the local network. After this the temperature sensor (optional) will be connected at the screw terminals.

After the connection to 230V-power supply the TCR IP 4 can be reached with a browser.
After entering the address http://192.168.0.3 the main menu of the TCR IP 4 opens (see picture above).

With the button „network configuration" in the main menu you will access the system settings of TCR IP 4. Here you can enter and modify IP-address and passwords.

The TCR IP 4 has an integrated time switching function. For each switching output, up to 4 switching on and 4 switching off times can be selected. At any on time one switching on time is combined in a group with a switching off time. The days of a week can be allocated to each group.

In the above example the lighting of a company is controlled from a TCR IP 4. The lighting of the hall is connected to the switching output 1 of the TCR IP 4 and will be switched on from Monday to Friday at 5:30 o'clock in the morning and switched off at 17 o'clock. The lighting of the hall is not switched on Saturdays and Sundays, since it will not be worked in the hall on the weekends. Furthermore a temperature sensor is installed in the hall. The temperature in the hall can be checked from the website.

At switching output 2 is the lighting of the staircase of the company connected. The staircase lighting will be switched on from Monday to Friday at 5 o'clock in the morning and switched off at 9 o'clock. On the weekends is the staircase lighting switched off.

The lighting of the courtyard is connected to the switching output 3 of the TCR IP 4. The lighting of the courtyard will be switched on from Monday to Friday at 5 o'clock in the morning and switched off at 9 o'clock. In the evening the courtyard lighting will be switched on again at 17 o'clock and switched off at 23:30 o'clock.

The user is also able to switch on the lighting outside the programmed times directly at the push-buttons or through the website. The output can be switched in impulse mode if needed. The on-impulse switches the output on for the selected time. This allows to switch on the lighting for a certain time (i. e. 1 hour). After the hour the lighting is automatically switched off.
The actual switching state of the outputs will be indicated on the website with status „On" or „Off".

Rutenbeck REMOTE

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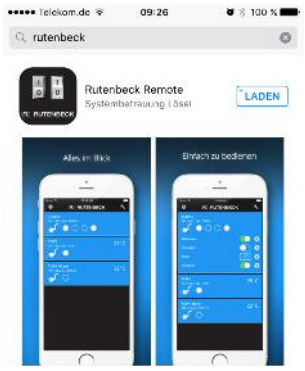
And of course, the App is free of charge! For now only available for Apple-devices.

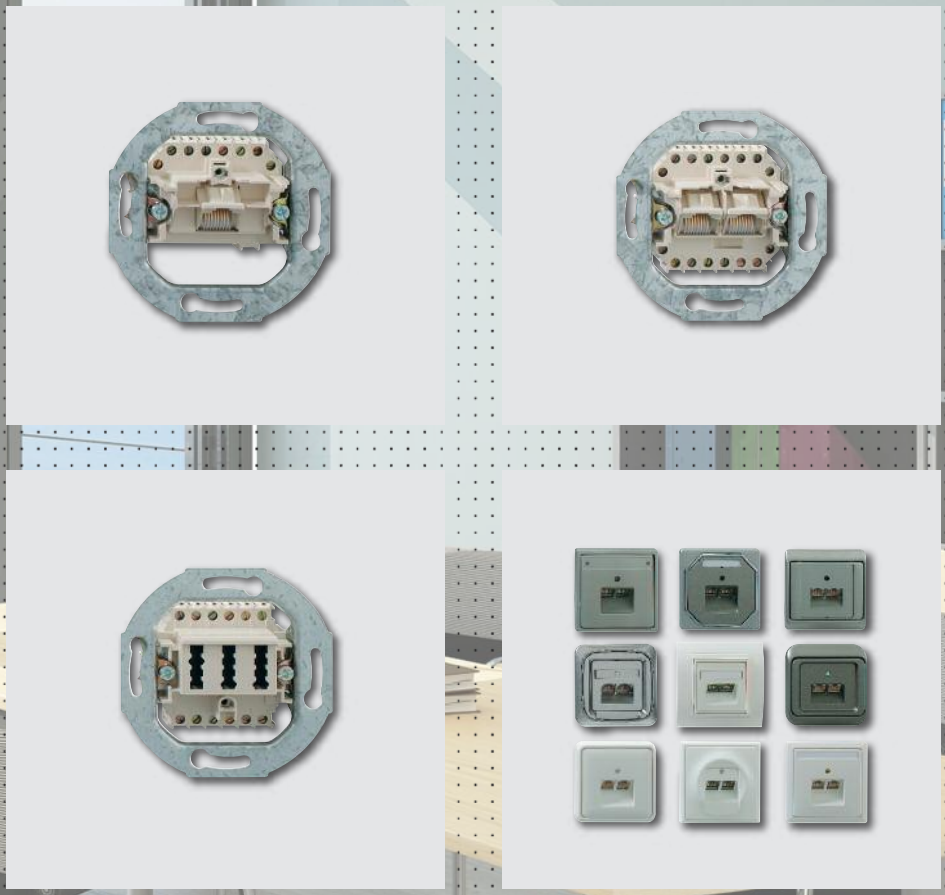


TELEPHONE TECHNOLOGY

RJ45-jacks from Rutenbeck
It will be differentiated between UAE- and IAE/UAE-jacks. IAE/UAE-jacks from Rutenbeck can be used for ISDN and are suitable for the universal use with RJ12- and RJ45-plugs without any additional parts. A flat-levelled design without obstructive center or wall plates is ideal for the installation inwindow ducts and walls. The UAE-connector block can be – independent of the communication system – used universally.

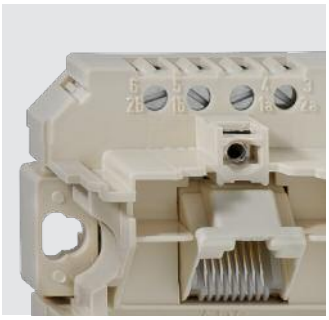
TAE-jacks from Rutenbeck
TAE-jacks from Rutenbeck are mainly used as a connecting device in analog telephone installation. Stabile metal mounting rings and gold-plated contacts provide for efficient function and operation at construction sites.

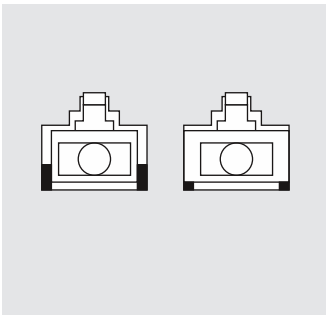
Compatible with the design center plates of the manufacturer of electrical installation material
The RJ45- and TAE jacks from Rutenbeck are compatible with the design center plates of the manufacturer of electrical installation material.



ISDN-jacks for analog or ISDN-applications
IAE/UAE

The design provides at least four contacts and four screw terminals. Any other 4-way connection can be realised with contacts 3, 4, 5 and 6.

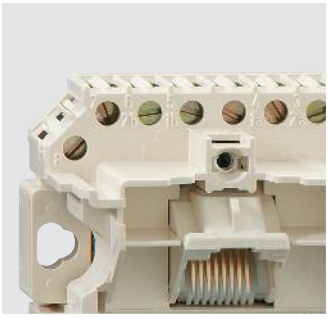


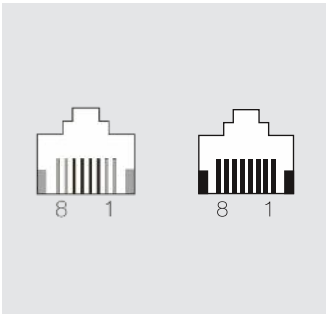


The main part of this system is an outlet for 8-way plugs with lateral reducing elements which work automatically and guarantee an exact position of the smaller 6-way RJ11-/RJ12-plugs in the outlet.

Universal-jacks
UAE

The design provides eight contacts and eight screw terminals. The connection of the contacts can be chosen freely.





The designs have 1 or 2 plug openings, and the outlets are equipped with 8 contacts, at least 4 can be wired.

Sockets, covers, center plates and wall plates made of ABS-material, pearl white (similar RAL 1013), pure white (similar RAL 9010), Contact carrier housing made of PBT-material.

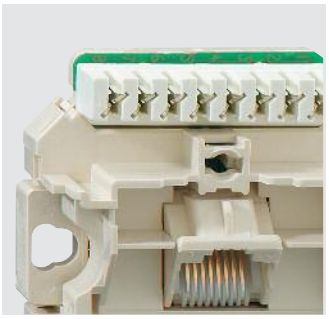
Mounting rings made of sheet steel, galvanized.

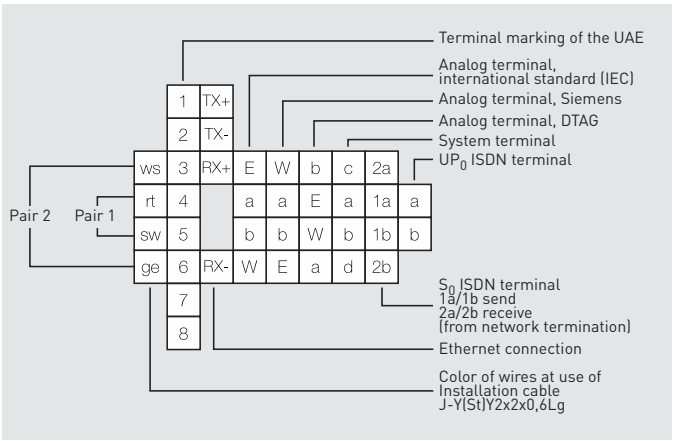
The contacts of the outlets feature a squared cross section and are hard gold plated in the contact area.

The commonly used 6- and 8-way plugs can be alternatively be used in the outlets without any additional installation effort.

Protection class IP20 according to DIN EN 60529

The connection of the cable wires takes place at the screw terminals or at LSA-terminals.





ISDN

In addition to the marking 3 to 6, all ISDN screw terminals also have the ISDN marking printed on.

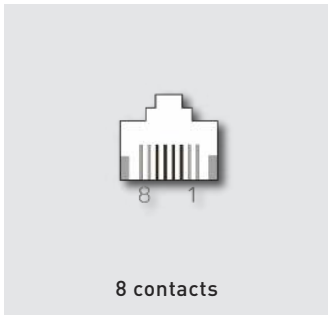
Category 3

The IAE/UAE-system is suitable for data transmission rates up to 16 MHz, which are also required for Cat.3-jacks.

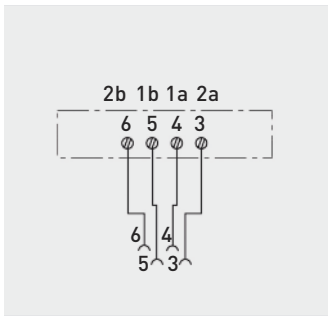
Mechanical characteristics

Connector/outlet	
Design	DIN EN 60603-7:2010-05
Connection technique	Screw terminals for wires up to 1mm Ø, 2 wires at each contact alternatively LSA-Plus-terminals for wires 0.4–0.63 mm Ø, AWG 26–22, outer diameter 0.7–1.6 mm, 1 wire at each terminal, max. number of connections > 50 x
Outlet universal use	for 6-way and 8-way plugs
Material spring contact outlet	CuSn
Surface spring contact outlet	1,5 µm Ni/1,3 µm Au
Life (insertions and withdrawals) outlet	> 2500 cycles
Material housing	PBT, POM, ABS
Electrical characteristics	
Voltage	125 V DC
Operating current	1 Amp at 50 °C
Voltage withstand	1000 V, 50 Hz, 1 min.
Isolation resistance	> 500 MΩ
Contact resistance	< 20 mΩ
Transmission characteristics	
TIA/EIA-568-B.2-2001	Category 3

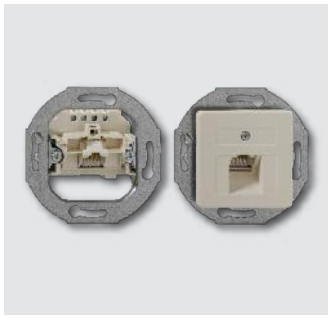
ISDN single-jacks
IAE/UAE 8 (4)

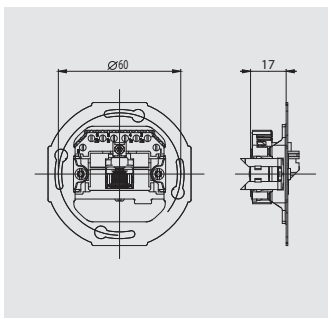


IAE/UAE 8 (4) Ap
130 101 05 ●
4-way, 4 screw terminals,
pearl white (similar RAL 1013),
65 x 80 x 26 mm, 30 g



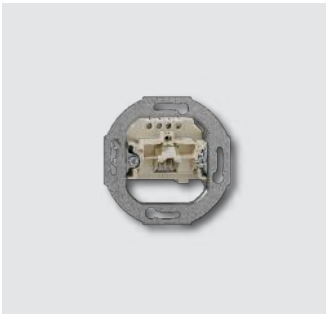
IAE/UAE 8 (4) Up
130 102 09 ●
4-way, 4 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 31 mm, 58 g

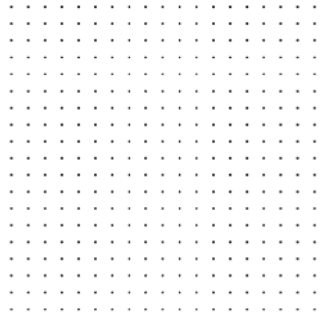




IAE/UAE 8 (4) Up 50
130 103 05 ●
4-way, 4 screw terminals,
with center plate,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 31 mm, 47 g

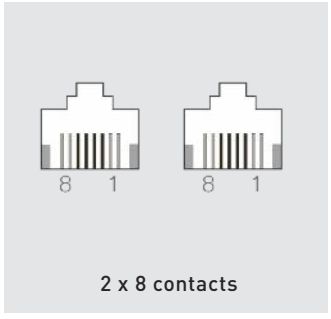
IAE/UAE 8 (4) Up 50 rw
130 103 36 ●
pearl white (similar RAL 9010)



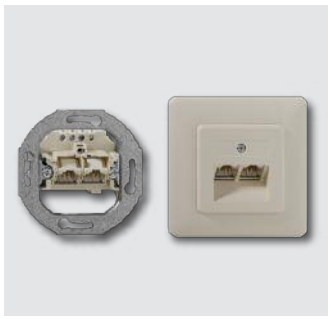


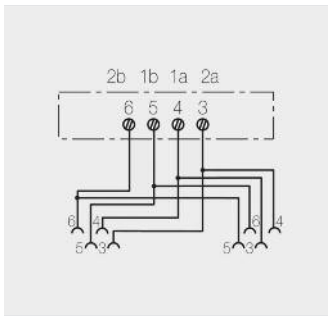
IAE/UAE 8 (4) Up 0
130 104 04 ●
4-way, 4 screw terminals,
with spreading claws,
70 x 70 x 29 mm, 42 g

ISDN-double jacks
for one connection
IAE/UAE 2x8 (4)



IAE/UAE 2x8 (4) Ap
130 101 07 ●
2 x 4-way, 4 screw terminals,
pearl white (similar RAL 1013),
65 x 80 x 26 mm, 37 g

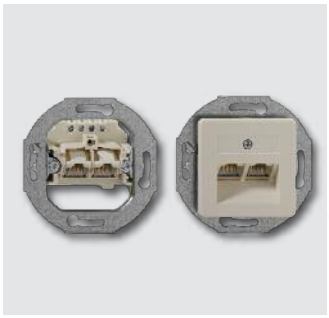


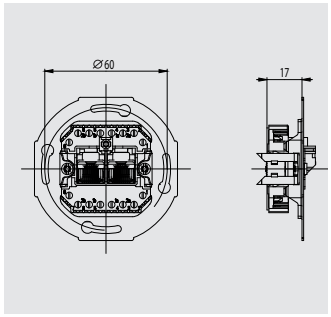


IAE/UAE 2x8 (4) Up
130 102 11 ●
2 x 4-way, 4 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 31 mm, 59 g

● Discount group 1

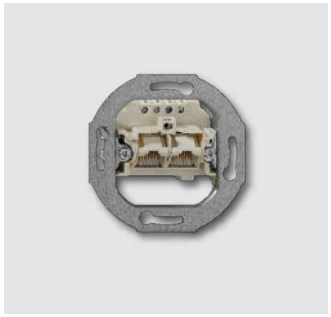
ISDN double-jacks for one connection IAE/UAE 2x8 (4)





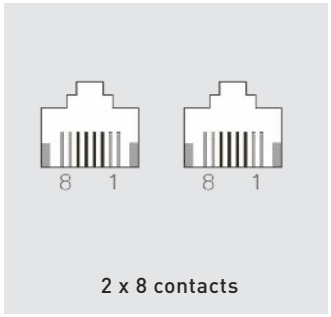
IAE/UAE 2x8 (4) Up 50
130 103 07
2 x 4-way, 4 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 31 mm, 47 g

IAE/UAE 2x8 (4) Up 50 rw
130 103 39
pearl white (similar RAL 9010)



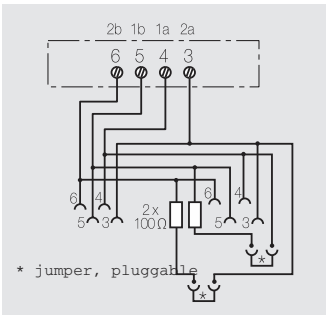
IAE/UAE 2x8 (4) Up 0
130 104 11
2 x 4-way, 4 screw terminals,
with spreading claws,
70 x 70 x 29 mm, 44 g

ISDN double-jacks for one connection with switchable resistors IAE/UAE 2x8 (4) TRS



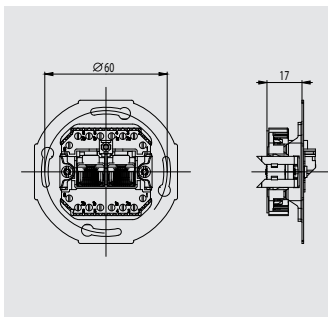
IAE/UAE 2x8 (4) TRS Ap
130 101 40
2 x 4-way, 4 screw terminals,
pearl white (similar RAL 1013),
65 x 80 x 26 mm, 39 g

IAE/UAE 2x8 (4) TRS Ap rw
130 111 40
pearl white (similar RAL 9010)



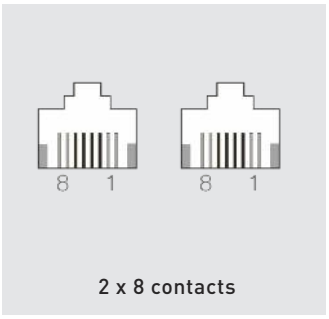
IAE/UAE 2x8 (4) TRS Up
130 102 40
2 x 4-way, 4 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 31 mm, 61 g

IAE/UAE 2x8 (4) TRS Up rw
130 112 40
pearl white (similar RAL 9010)

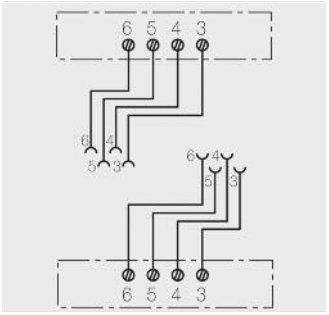


IAE/UAE 2x8 (4) TRS Up 0
130 104 40
2 x 4-way, 4 screw terminals,
with spreading claws,
70 x 70 x 29 mm, 45 g

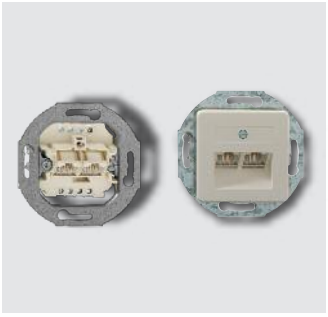
ISDN double-jacks
for two connections
IAE/UAE 8/8 (4/4)

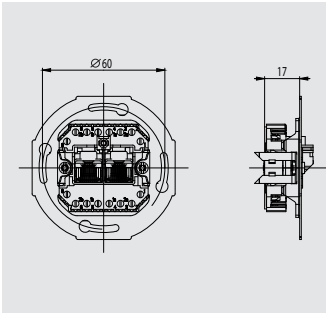


IAE/UAE 8/8 (4/4) Ap
130 101 09
2 x 4-way, 2x4 screw terminals,
pearl white (similar RAL 1013),
65 x 80 x 26 mm, 41 g



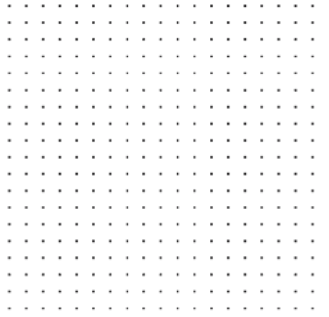
IAE/UAE 8/8 (4/4) Up
130 102 13
2 x 4-way, 2x4 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 31 mm, 63 g





IAE/UAE 8/8 (4/4) Up 50
130 103 09
2 x 4-way, 2x4 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 31 mm, 51 g

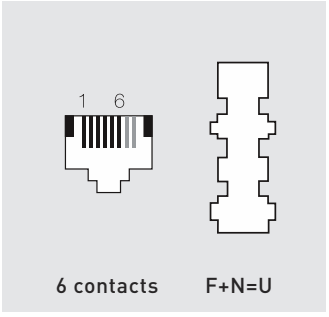
IAE/UAE 8/8 (4/4) Up 50 rw
130 103 40
pearl white (similar RAL 9010)



IAE/UAE 8/8 (4/4) Up 0
130 104 16
2 x 4-way, 2x4 screw terminals,
with spreading claws,
70 x 70 x 29 mm, 47 g

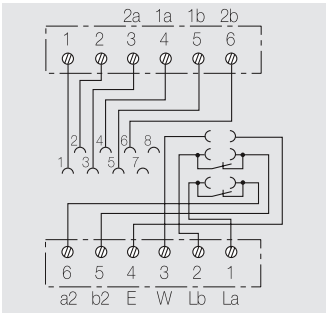
ISDN double-jacks
for two connections
IAE/UAE 8 (6)-TAE 6 F+N

This "Combi Jack" is compatible with the TAE-design center plate of the manufacturer of electrical installation material.



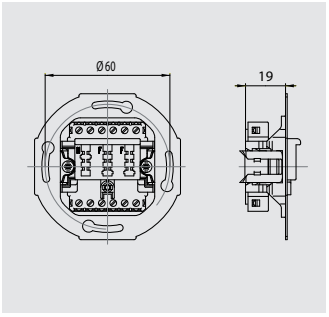
IAE/UAE 8 (6)-TAE 6 F+N Ap
133 101 01
2 x 6-way,
2 x 6 screw terminals,
pearl white (similar RAL 1013),
65 x 80 x 26 mm, 45 g

IAE/UAE 8 (6)-TAE 6 F+N Ap rw
133 111 01
pure white (similar RAL 9010)



IAE/UAE 8 (6)-TAE 6 F+N Up
133 102 01
2 x 6-way, 2 x 6 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 31 mm, 67 g

IAE/UAE 8 (6)-TAE 6 F+N Up rw
133 112 01
pure white (similar RAL 9010)



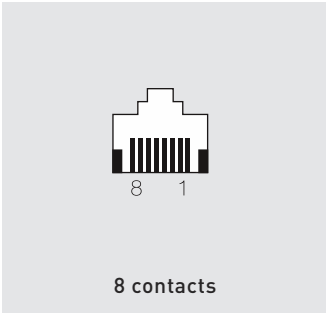
IAE/UAE 8 (6)-TAE 6 F+N Up 50
133 103 01
2 x 6-way, 2 x 6 screw terminals,
with center plate,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 31 mm, 55 g

IAE/UAE 8 (6)-TAE 6 F+N Up 50 rw
133 113 01
pure white (similar RAL 9010)

IAE/UAE 8 (6)-TAE 6 F+N Up 0
133 104 01
2 x 6-way, 2 x 6 screw terminals,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 29 mm, 51 g

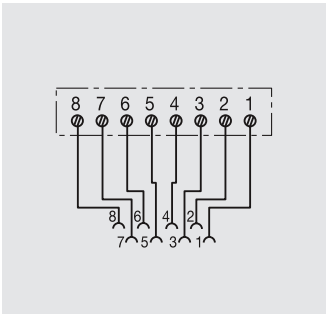
IAE/UAE 8 (6)-TAE 6 F+N Up 0 rw
133 114 01
pure white (similar RAL 9010)

UAE single-jacks
UAE 8 (8)



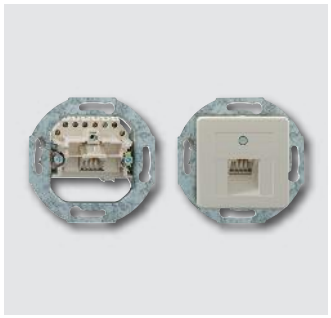
UAE 8 (8) Ap
130 101 06
8-way, 8 screw terminals,
pearl white (similar RAL 1013),
65 x 80 x 26 mm, 39 g

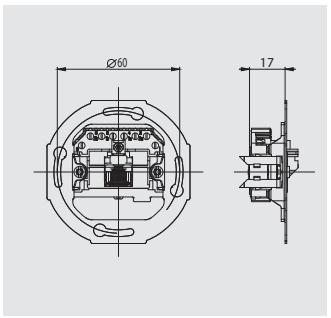
UAE 8 (8) Ap rw
130 101 29
pure white (similar RAL 9010)



UAE 8 (8) Up
130 102 10
8-way, 8 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 31 mm, 59 g

UAE 8 (8) Up rw
130 102 45
pure white (similar RAL 9010)

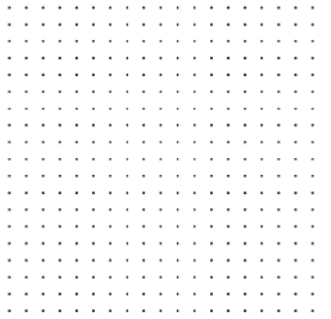




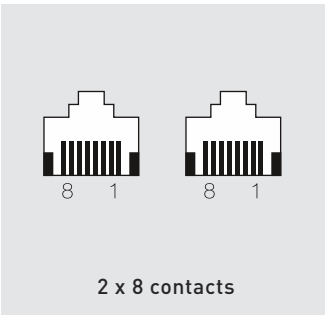
UAE 8 (8) Up 50
130 103 06
8-way, 8 screw terminals,
with center plate,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 31 mm, 49 g

UAE 8 (8) Up 50 rw
130 103 38
pure white (similar RAL 9010)

UAE single-jacks
UAE 8 (8)



UAE 8 (8) Up 0
130 104 07
8-way, 8 screw terminals,
with spreading claws,
70 x 70 x 29 mm, 44 g

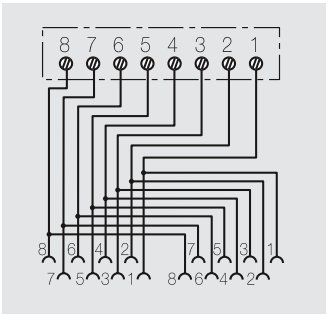


2 x 8 contacts

UAE 2x8 (8) Ap
130 101 08
2 x 8-way, 8 screw terminals,
pearl white (similar RAL 1013),
65 x 80 x 26 mm, 38 g

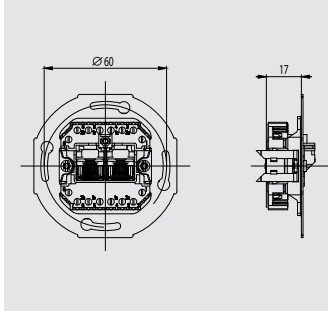
UAE 2x8 (8) Ap rw
130 101 30
pure white (similar RAL 9010)

UAE double-jacks
for one connection
UAE 2x8 (8)



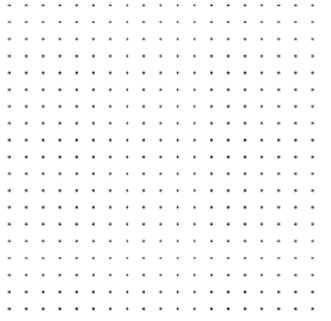
UAE 2x8 (8) Up
130 102 12
2 x 8-way, 8 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 31 mm, 61 g

UAE 2x8 (8) Up rw
130 102 46
pure white (similar RAL 9010)



UAE 2x8 (8) Up 50
130 103 08
2 x 8-way, 8 screw terminals,
with center plate,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 31 mm, 50 g

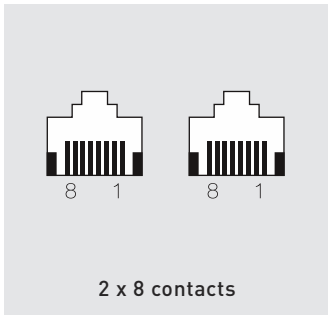
UAE 2x8 (8) Up 50 rw
130 103 37
pure white (similar RAL 9010)



UAE 2x8 (8) Up 0
130 104 21
2 x 8-way, 8 screw terminals,
with spreading claws,
70 x 70 x 29 mm, 45 g

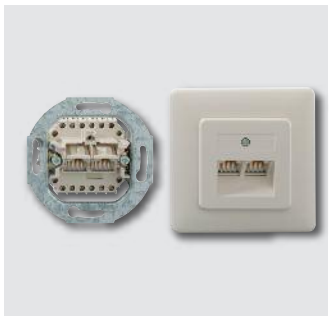
Discount group 1

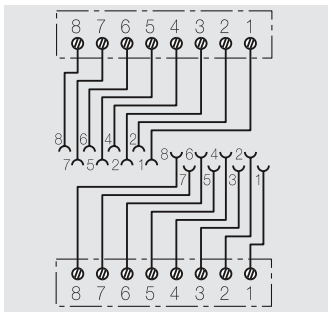
UAE double-jacks for two connections UAE 8/8 (8/8)



UAE 8/8 (8/8) Ap
130 101 10
2 x 8-way, 2 x 8 screw terminals,
pearl white (similar RAL 1013),
65 x 80 x 26 mm, 44 g

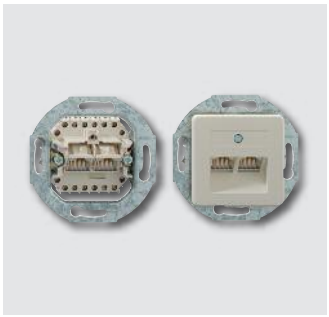
UAE 8/8 (8/8) Ap rw
130 101 31
pure white (similar RAL 9010)

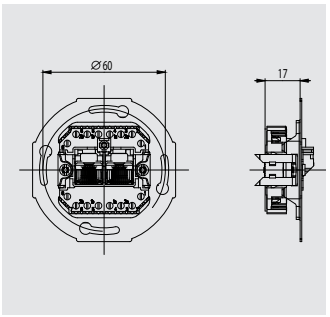




UAE 8/8 (8/8) Up
130 102 14
2 x 8-way, 2 x 8 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 31 mm, 66 g

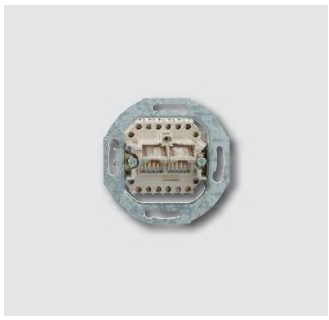
UAE 8/8 (8/8) Up rw
130 102 47
pure white (similar RAL 9010)





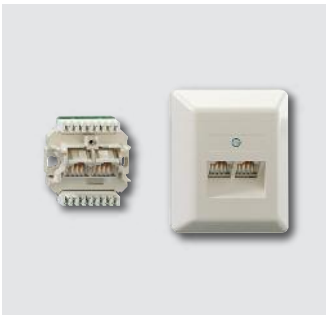
UAE 8/8 (8/8) Up 50
130 103 10
2 x 8-way, 2 x 8 screw terminals,
with center plate,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 31 mm, 47 g

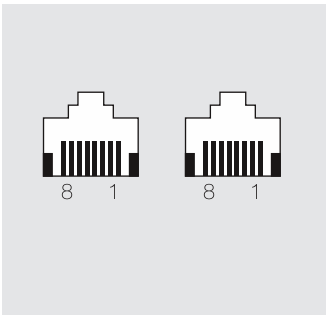
UAE 8/8 (8/8) Up 50 rw
130 103 41
pure white (similar RAL 9010)



UAE 8/8 (8/8) Up 0
130 104 22
2 x 8-way, 2 x 8 screw terminals,
with spreading claws,
70 x 70 x 29 mm, 40 g

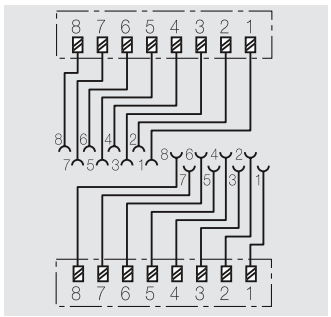
UAE double-jacks for two connections UAE 8/8 (8/8) LSA





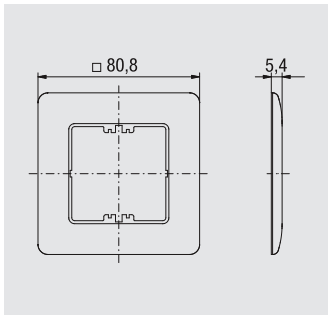
UAE 8/8 (8/8) LSA Ap
130 101 12
2 x 8-way, 2 x 8 LSA-contacts,
pearl white (similar RAL 1013),
65 x 80 x 26 mm, 45 g

UAE 8/8 (8/8) LSA Ap rw
130 111 12
pure white (similar RAL 9010)



UAE 8/8 (8/8) LSA Up
130 102 16
2 x 8-way, 2 x 8 LSA-contacts, with plastic mounting brackets,, center plate and wall plate, with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 30 mm, 53 g

UAE 8/8 (8/8) LSA Up rw
130 112 16
pure white (similar RAL 9010)

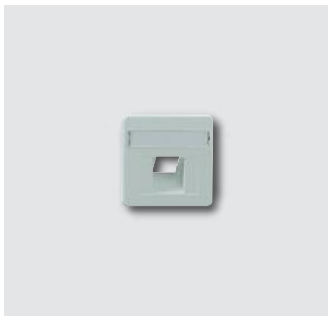


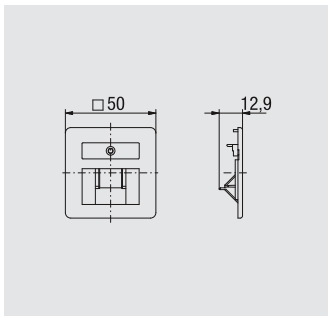
AP
100 100 01
wall plate,
pearl white (similar RAL 1013),
80 x 80 x 5 mm, 12 g

AP rw
100 100 51
pure white (similar RAL 9010)

Wall plates and center plates for IAE/UAE-jacks and UAE-jacks AP, ZSt

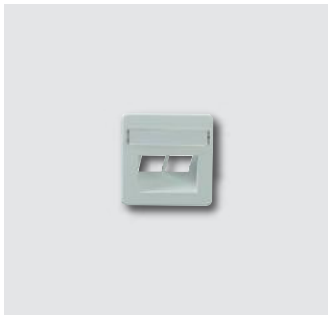
Wall plates and center plates made of ABS-plastic, available in pearl white (similar RAL 1013) and pure white (similar RAL 9010).

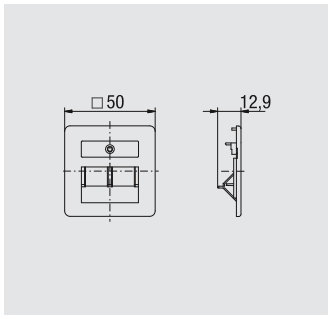




ZSt UAE-Cat. 8
135 100 02
Center plate with 1 outlet
with a designation strip,
pearl white (similar RAL 1013),
50 x 50 x 13 mm, 6 g

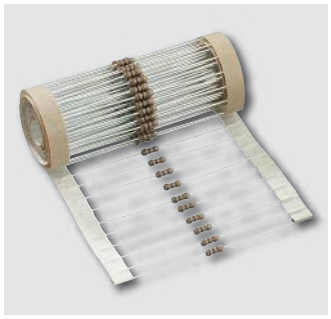
ZSt-Cat. 8 rw
135 100 52
pure white (similar RAL 9010)





ZSt UAE-Cat. 8/8
135 100 03
Center plate with 2 outlets
with a designation strip,
pearl white (similar RAL 1013),
50 x 50 x 13 mm, 6 g

ZSt UAE-Cat. 8/8 rw
135 100 53
pure white (similar RAL 9010)



ISDN-Termination resistor
681 072
Termination resistor, 100 Ω
termination resistor for use
in ISDN-jacks
100 Ω ± 5%, 0,33 W

Accessory for IAE/UAE-jacks and UAE-jacks

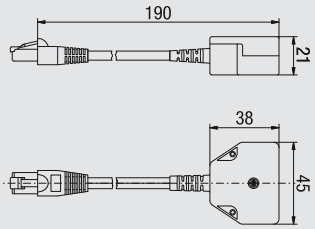
AW 2
392 000 00
Connection tool for LSA- and
LSA-Plus-terminals,
with pressure sensor
and cutting blade,
38 x 177 x 21 mm, 80 g

Discount group 1

Shielded adapter for cable sharing T-ADAP

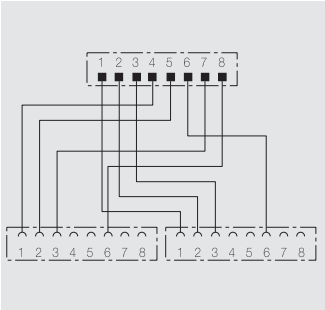
By use of cable sharing adapters, two services (4-wires) can be executed simultaneously at existing 8 wire cables. A data transmission rate of 100 Mbit/s can be used parallel to an ISDN terminal by using an adapter at the beginning and at the end of a 8-wire-link. Alternatively, two ISDN terminals can be connected parallel at a data jack, without modification of the wiring.

Alltogether, there are 4 practical adapters for the most common applications available.

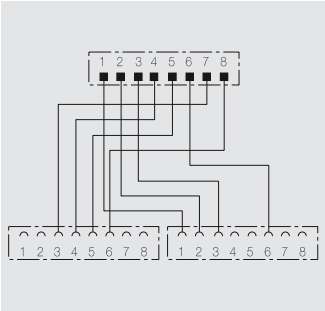


Performance features

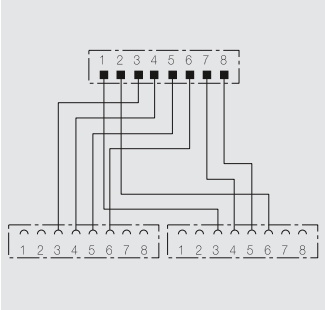
- 2 applications with a 8-wire cable
- easy back-/retrofitting of a link
- all adapters continuously shielded
- transmission characteristics according to Cat.5e/Class D
- mounting possibility with screws



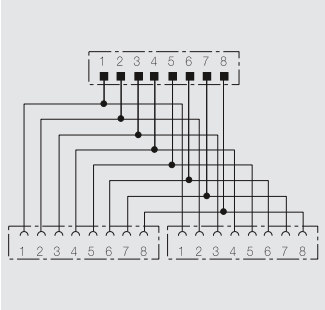
T-ADAP Ethernet/Ethernet
135 106 03 ●
for cablesharing,
Cat.5e, shielded,
2 x 10/100 Mbit/s,
45 x 21 x 38 mm, 50 g



T-ADAP Ethernet/ISDN
135 106 04 ●
for cablesharing,
Cat.5e, shielded,
1 x 10/100 Mbit/s, 1 x ISDN,
45 x 21 x 38 mm, 50 g



T-ADAP ISDN/ISDN
135 106 05 ●
for cablesharing,
shielded, 2 x ISDN,
45 x 21 x 38 mm, 50 g



T-ADAP 2 x 8
135 106 06 ●
for cablesharing,
shielded, outlets 1:1 parallel,
45 x 21 x 38 mm, 50 g

● Discount group 1

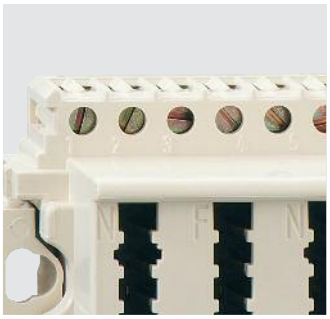
TAE-jacks
Sockets, covers, center plates and wall plates made of ABS-material, pearl white (similar RAL 1013), pure white (similar RAL 9013)

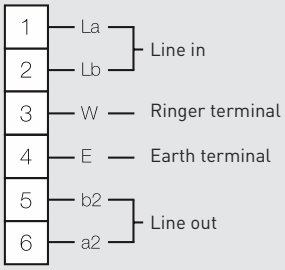
Contact carrier made of ABS-material.
black (similar RAL 9005).

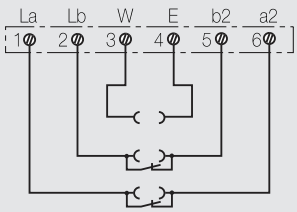
Contacts made of German silver, respectively, brass, tin-plated.

Metall mounting rings and mounting brackets, tinned.

Protection class IP 20 according to DIN EN 60529



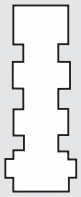




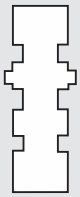
F, N oder F+N

The codings on jacks and plugs guarantee a faultless connection.

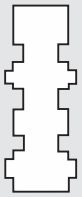
- **Coding F** for telephones or telefax with telephone
- **Coding N** for ancillary equipment like telefax, answering machine, charge meter, modem or dialling device
- **Coding N+F** universal use



F



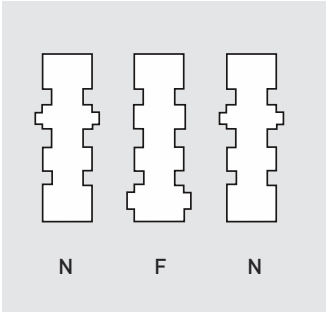
N



F+N=U

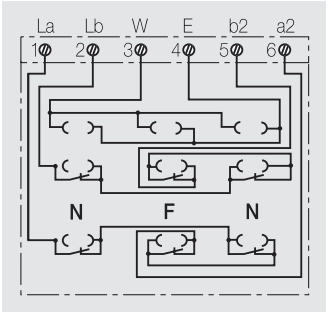
Mechanical characteristics	
Connector/outlet	
Built	according to DIN 41715:1991-05
Connection technique	screw terminals for wire 1 mm Ø, 2 wires at each contact
Outlet suitable	for 6-way plugs according to DIN 41715-3:1991-05
Material spring contact outlet	CuNi 18 Zn 20
Surface spring contact switching area	Ni 2 µm + AuAgCu
Life (insertions and withdrawals) outlet	> 10000 cycles
Material housing	PBT, ABS
Electrical characteristics	
Voltage	125 V DC/AC
Operating current	max. 10 VA
Voltage withstand	1000 V, 50 Hz, 1 Min.
Isolation resistance	≥ 200 MΩ
Contact resistance	≤ 20/30 mΩ

TAE-triple jacks
for one connection
TAE 3x6 NFN



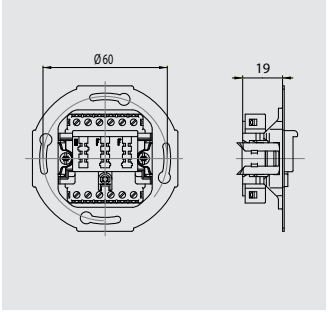
TAE 3x6 NFN Ap
102 101 03 ●
3 x 6-way, 6 screw terminals,
pearl white (similar RAL 1013),
65 x 80 x 27 mm, 41 g

TAE 3x6 NFN Ap rw
102 101 09 ●
pure white (similar RAL 9010)



TAE 3x6 NFN Up
102 102 03 ●
3 x 6-way, 6 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 31 mm, 67 g

TAE 3x6 NFN Up rw
102 102 04 ●
pure white (similar RAL 9010)



TAE 3x6 NFN Up 50
102 103 03 ●
3 x 6-way, 6 screw terminals,
with center plate,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 31 mm, 52 g

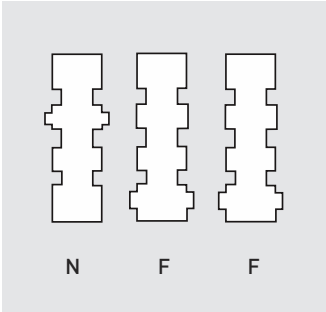
TAE 3x6 NFN Up 50 rw
102 103 05 ●
pure white (similar RAL 9010)

TAE 3x6 NFN Up 0
102 105 03 ●
3 x 6-way, 6 screw terminals,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 29 mm, 49 g

TAE 3x6 NFN Up 0 rw
102 105 17 ●
pure white (similar RAL 9010)

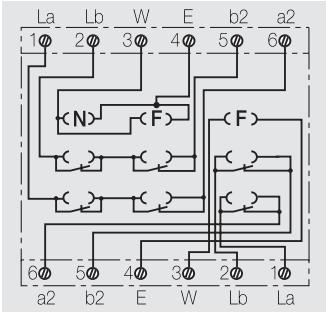
● Discount group 1

TAE-triple jacks
for two connections
TAE 2x6/6 NFF



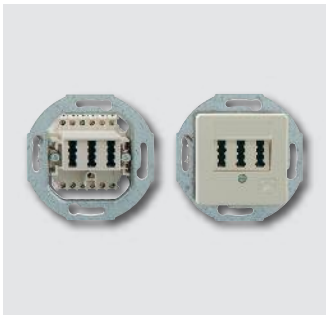
TAE 2x6/6 NFF Ap
103 101 10
3 x 6-way, 2 x 6 screw terminals,
pearl white (similar RAL 1013),
65 x 80 x 27 mm, 45 g

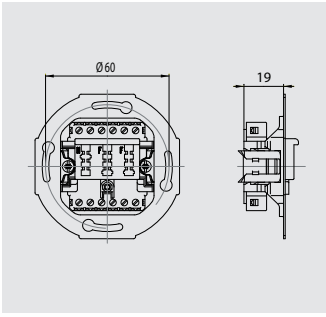
TAE 2x6/6 NFF Ap rw
103 101 14
pure white (similar RAL 9010)



TAE 2x6/6 NFF Up
103 102 10
3 x 6-way, 2 x 6 screw terminals,
with center plate and wall plate,
with spreading claws,
pearl white (similar RAL 1013),
80 x 80 x 31 mm, 68 g

TAE 2x6/6 NFF Up rw
103 102 22
pure white (similar RAL 9010)



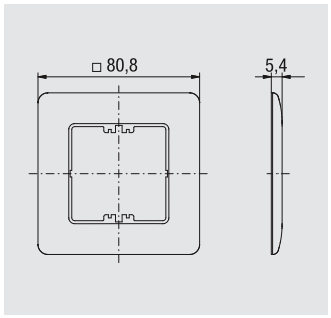


TAE 2x6/6 NFF Up 50
103 103 10
3 x 6-way, 2 x 6 screw terminals,
with center plate,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 31 mm, 56 g

TAE 2x6/6 NFF Up 50 rw
103 103 13
pure white (similar RAL 9010)

TAE 2x6/6 NFF Up 0
103 105 10
3 x 6-way, 2 x 6 screw terminals,
with spreading claws,
pearl white (similar RAL 1013),
70 x 70 x 29 mm, 53 g

TAE 2x6/6 NFF Up 0 rw
103 105 18
pure white (similar RAL 9010)

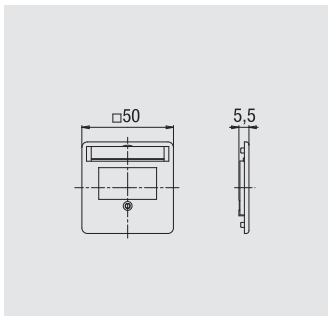


AP
100 100 01 ●
Wall plate,
pearl white (similar RAL 1013),
80 x 80 x 5 mm, 12 g

AP rw
100 100 51 ●
pure white (similar RAL 9010)

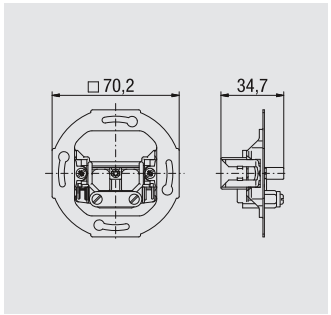
Wall plates and center plates for TAE-jacks AP, ZSt

Wall plates and center plates made of ABS, available in pearl white (similar RAL 1013) and pure white (similar RAL 9010).



ZSt UM-MA 2
139 100 03 ●
Center plate, for 2 outlets RJ45,
with labeling strip,
for UM-MA 2 Up,
pearl white (similar RAL 1013),
50 x 50 x 6 mm, 6 g

ZSt UM-MA 2 rw
139 100 53 ●
pure white (similar RAL 9010))

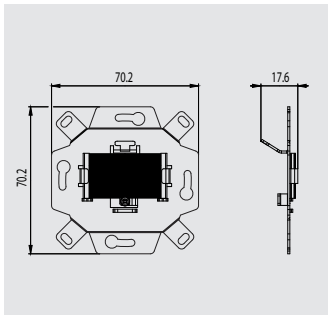


KA 9 Up 0
193 105 01 ●
with spreading claws,
70 x 70 x 35 mm, 40 g

Cable outlet KA

Sockets made of ABS-material, black (similar RAL 9005)

Protection class IP 20 according to DIN EN 60529

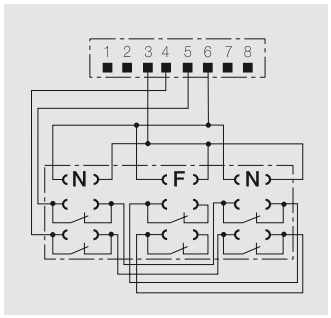


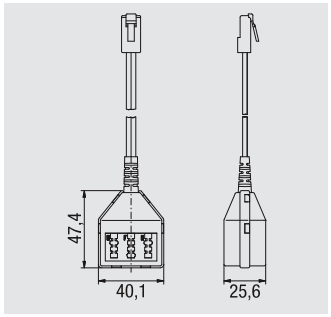
KD Up 0
193 105 10 ●
Universal cable feedthrough
for flush mounting,
cut out size of the cable feed through 32.5 x 17.5 mm, for customary TAE-center plates,
break off mounting ring can be converted into mounting bracket,
with strain relief on the backside
70 x 70 x 17 mm, 46 g

Cable feedthrough KD

● Discount group 1

**Telephone-adapter
for analog telephones
in generic networks**



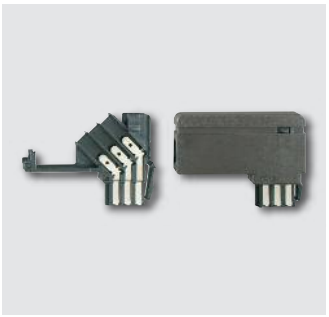


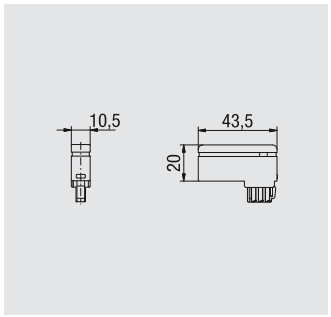
ADAP UAE/TAE 3x6 NFN
154 006 02
Adaptercord RJ 45/UAE, 0.15 m,
for analog telephone in generic networks or for use with a line 21®-UAE (8/8),
black,
40 x 47 x 26 mm, 23 g

**Telecommunications-connector-plug
free pin assignment
for telephones (F) and
for ancillary equipment (N)**

Plug made of PBT-material, coding F black, coding N grey, plug cap made of ABS-material, grey.

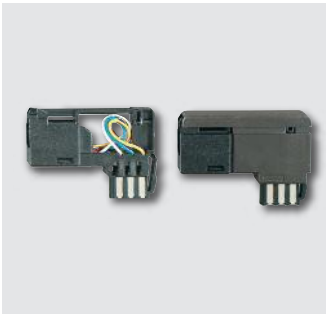
Contacts German silver, respectively, phosphor bronze, hard gold-plated.

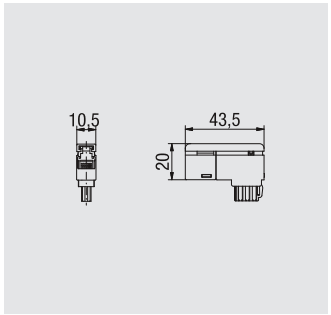




TS F
700 101 241
for telephones,
44 x 30 x 11 mm, 9 g

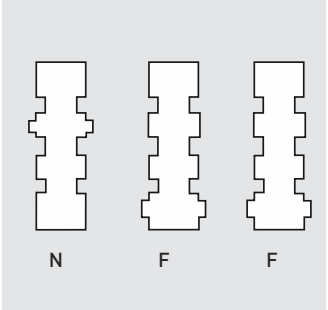
TS N
700 101 251
for ancillary equipment





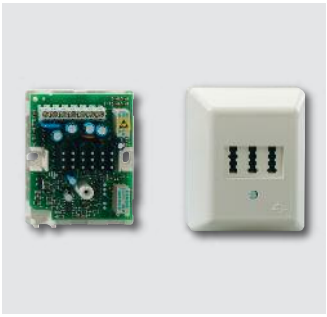
TS US F
700 101 243
for telephones with RJ11-/RJ12-plug system ,
44 x 30 x 11 mm, 18 g

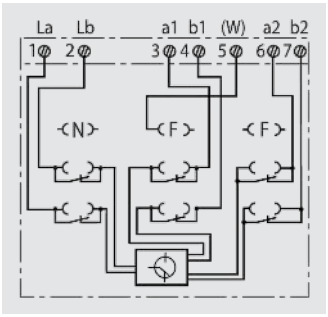
TS US N
700 101 253
for ancillary equipment with RJ11-/RJ12-plug system



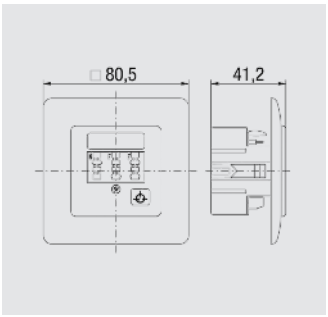
Coding F
for telephones or telefax with telephone

Coding N
for ancillary equipment like telefax, answering machine, charge meter, modem or dialling device





AMS 1/2 NFF Ap
161 101 19 ●
with integrated TAE-opening for max. 2 telephones and 1 ancillary equipment, coding NFF,
pearl white (similar RAL 1013),
65 x 80 x 28 mm, 82 g



AMS 1/2 NFF Up
160 101 19 ●
with integrated TAE-opening for max. 2 telephones and 1 ancillary equipment,
coding NFF,
with centre plate and wall plate,
pearl white (similar RAL 1013),
80 x 80 x 41 mm, 99 g

Automatic multiple switch AMS

For the connection of two telephones and one ancillary equipment at one subscriber or extension line. For pulse or DTMF-dialling.

Signalling takes place at all devices. The call will be established where the handset is picked up first. Easy call transfer by picking up the handset and going on-hook. Two wire technique, power feeding from the public switched telephone network (PSTN).

Four ringing circuits are allowed if, connected to the subscriber line. With integrated opening for telephone 1.

Sockets, covers, centre plates and wall plates made of ABS-material, pearl white (similar RAL 1013),

Baseplate, cover and flush mounting-pot made of ABS-material, pearl white (similar RAL 1013).

Terminal strip made of PA-material.

Protection class IP20 according to DIN EN 60529

● Discount group 1

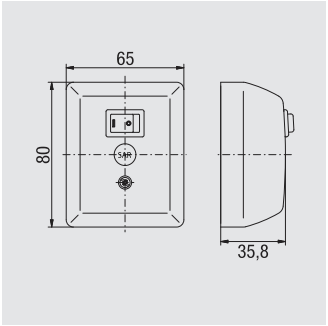
High-current switching on relay SAR

For call signalling to devices with independent power supply, e.g. 230 V horn or rotary beacon. The connection will be made with screw terminals, 2 pole. The screw terminals for the high-current equipment are touch protected. The switch S brings the relay into the operating mode.

Sockets and covers made of ABS-material, pearl white (similar RAL 1013).

According to VDE 0800.

Protection class IP20 according to DIN EN 60529



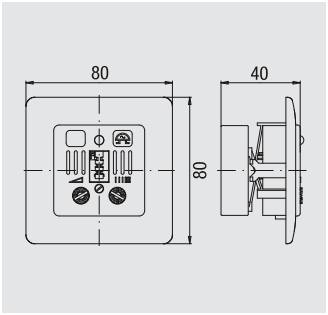
SAR Ap
500 101 02
for the connection at the telephone line, Switching load 8A at 230V/50 Hz (at real load), Control voltage: 30-60V/ 23-55 Hz
pearl white (similar RAL 1013),
65 x 80 x 36 mm, 77 g

Additional ringer WK 955

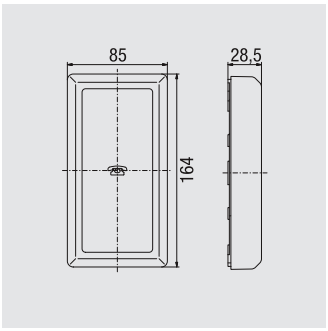
The additional ringer enables the signalling of the incoming calls in separate rooms. The built-in TAE-outlet can be covered. The signalling takes place acoustically by a piezo-sound transformer and optically by a LED. Volume and signalling frequency are adjustable.

Protection class IP20 according to DIN EN 60529

WK 955 Ap
162 101 01
Operating voltage: 30-60V/ 23-55 Hz
Volume: >92 dB(A) measured in special room,
Signalling frequency: 800-1333 Hz
pearl white (similar RAL 1013),
65 x 80 x 30 mm, 77 g



WK 955 Up
162 102 01
Operating voltage: 30-60V/ 23-55 Hz
Volume: >92 dB(A) measured in special room,
Signalling frequency: 800-1333 Hz
pearl white (similar RAL 1013),
80 x 80 x 40 mm, 101 g



VVD 85 Ap
245 101 02 ●
for 10 pairs, 2 earth wires,
pearl white (similar RAL 1013),
85 x 164 x 29 mm, 168 g

Distribution boxes with LSA-Plus-terminals VVD

Sockets and covers made of ABS-material,

pearl white (similar RAL 1013). Connection elements made of PBT-material, grey.

LSA-Plus-terminals made of brass, silver plated.

LSA-Plus-terminal can hold solid conductors 0.4 mm to 0.8* mm Ø.

Protection Class IP30 according to DIN EN 60529

* After connection with conductors ≥ 0,65 mm Ø a faultless connection of smaller conductors is not ensured.

AW 2
392 000 00 ●
Connection tool for LSA- and LSA-Plus-terminals, with pressure sensor and cutting blade,
38 x 177 x 21 mm, 80 g

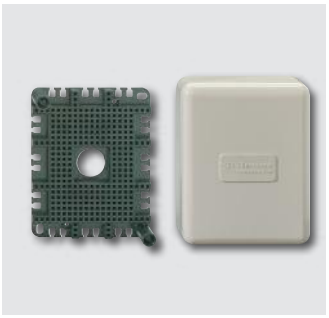
Accessory for VVD

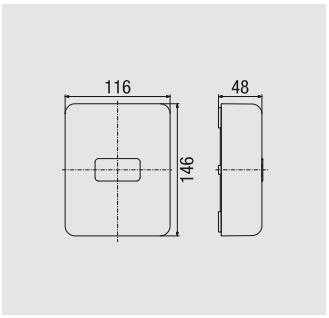
● Rabattgruppe 1

Universal housings
UG

Housings made of ABS-material, base plate,
black (similar RAL 9005), cover pearl white (similar RAL 1013) or light grey (similar RAL 7035).

Protection Class IP30
according to DIN EN 60529



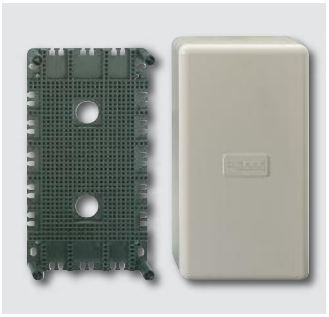


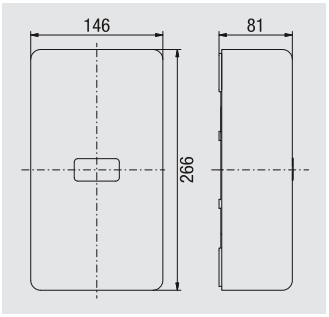
UG 2 w
240 001 01

cover,
pearl white (similar RAL 1013),
116 x 146 x 48 mm, 209 g,
Available inner height: 30,5 mm

Maximum capacity

3 x AsLe A 10 LSA	= 30 pairs
or	
2 x AsLe A 10 S/S	= 20 pairs





UG 3 w
220 001 01

cover,
pearl white (similar RAL 1013),
146 x 266 x 81 mm, 540 g,
Available inner height: 66,5 mm

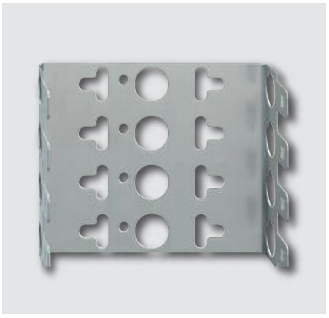
Maximum capacity

10 x VE 10 LSA*	= 100 pairs
or	
8 x AsLe A 10 LSA	= 80 pairs
or	
3 x AsLe B 20 LSA	= 60 pairs
or	
2 x AsLe B 20 S/S	= 40 pairs
or	
2 x AsLe B 20 S/L	= 40 pairs

* in connection with mounting bars MB 10

Accessory
for UG

Mounting bar made of stainless steel, rust-proof

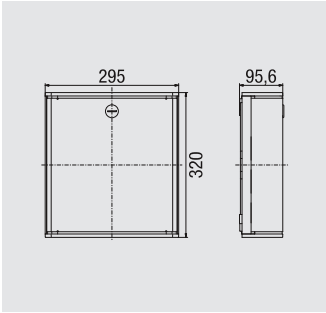


MB 4
221 004
mounting bar for LSA-connection elements, 10 pairs,
grid dimension 22.5 mm,
for 4 modules,
Installation height: 22 mm,
104,5 x 87,5 x 42 mm, 98 g

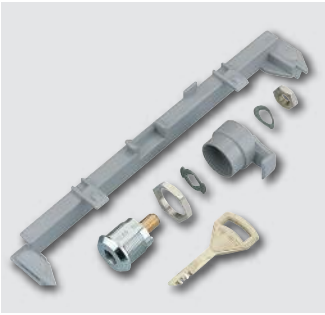
MB 5
221 007
for 5 modules,
104,5 x 110 x 42 mm, 123 g

MB 10
221 006
for 10 modules,
104,5 x 222,5 x 42 mm, 246 g

KVK
270 103 10 ●
Compact distribution box, 1 EKL 5, with catch[1], with labeling card and installation material, light grey (similar RAL 7035), 295 x 320 x 96 mm, 2065 g



KVK MB
270 103 13 ●
Compact distribution box, with flat fastening bar, with catch[1], with labeling card and installation material, light grey (similar RAL 7035), 295 x 320 x 96 mm, 2065 g



KVK Sch
690 317 ●
Lock set for the KVK and KVK MB, locking cylinder and locking bar, installation of lock set prevents unauthorised opening, 165 x 23 x 202 mm, 109 g

Compact distribution box KVK

The optimized dimensions of the KVK offer a maximum capacity to hold modern terminal strips. The KVK consists of base plate, removable head pieces and cover with catch. Grid on the rails and blocks for self-tapping screws. Maximum capacity up to 200 pairs.

Base plate and head pieces made of ABS flame retardent according to UL 94 V0, platinum grey (similar RAL 7036).

Cover made of sheet-steel, plastic coated, light grey (similar RAL 7035).

Protection Class IP30 according to DIN EN 60529

Maximum capacity

4 x AsLe B 20 S/S (S/L) = 80 pairs
or
6 x AsLe B 20 LSA = 120 pairs
or
16 x VE 10 LSA* = 160 pairs
or
20 x VE 10 LSA** = 200 pairs

* on 4 x MB 4
** on 2 x MB 10

[1] Instead of built-in catch (delivery state) the lock set 690 317 can also be installed afterwards.

● Discount group 1

Distribution boxes
for private networks VKP 85
Surface mounting
VKP 85 Ap

Base plates and covers made of sheet-steel, plastic-coated, pebble grey (similar RAL 7032).

Plastic corners, mounting rails and wiring guide rings made of ABS-material, black (similar RAL 9005).

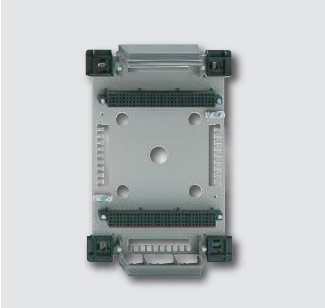
Cable entry holes and catch made of ABS-material, grey.

Earth clamps made of sheet-steel, nickel-plated. Each earth clamp EKL 4 consists of two screw terminals for earth conductors up to 2.5 mm^2.

Instead of built-in catch (delivery state) a rotating bar lock 260 101 02 can also be installed afterwards.

VKP 85 Ap are to a major part in accordance with DIN 47615.

Protection class IP30 accordnig to DIN EN 60529



VKP 85/2 Ap
270 101 01 ●
with 2 mounting rails 170 mm, 2 EKL 4 and 4 wiring guide rings, with catch, light grey (similar RAL 7035), 220 x 330 x 76 mm, 1919 g

Arrangement e.g.:

up to 3 terminal strips 260 000 / 001 = 60 pairs
up to 5 terminal strips 260 00 40 = 100 pairs

VKP 85/4 Ap
270 101 10 ●
with 2 mounting rails 270 mm, 2 EKL 4 and 8 wiring guide rings, with catch, light grey (similar RAL 7035), 320 x 330 x 76 mm, 2660 g

Arrangement e.g.:

up to 5 terminal strips 260 000 / 001 = 100 pairs
up to 8 terminal strips 260 00 40 = 160 pairs

VKP 85/8 Ap
270 101 20 ●
with 4 mounting rails 270 mm, 4 EKL 4 and 12 wiring guide rings, with catch, light grey (similar RAL 7035), 320 x 530 x 76 mm, 4120 g

Arrangement e.g.:

up to 10 terminal strips 260 000 / 001 = 200 pairs
up to 16 terminal strips 260 00 40 = 320 pairs

VKP 85/12 Ap
270 101 30 ●
with 4 mounting rails 170 mm and 270 mm, 4 EKL 4 and 16 wiring guide rings, with catch, light grey (similar RAL 7035), 520 x 530 x 76 mm, 6420 g

Arrangement e.g.:

up to 16 terminal strips 260 000 / 001 = 320 pairs
up to 26 terminal strips 260 00 40 = 520 pairs

Accessory
for VKP

VK 85 Sch
260 101 02 ●
rotating bar lock, for mounting in distribution boxes VKP 85, 80 x 22 x 130 mm, 69 g

Special types upon request.

AsLe A 10 LSA
260 00 60 ●
Terminal strip with LSA-terminals,
10 pairs,
96 mm fixing gap,
light grey (similar RAL 7035),
30 x 122 x 24 mm, 46 g

AsLe B 20 LSA
260 00 40 ●
20 pairs,
170 mm fixing gap,
light grey (similar RAL 7035),
30 x 180 x 27 mm, 89 g

BST A LSA
291 37 00 ●
Labeling strip for
LSA-terminal strips with
96 mm fixing gap,
18 x 165 x 13 mm, 9 g

Test cord AsLe LSA
290 32 20 ●
Test cord with test-plug for AsLe
LSA, 2 ways with 2 sleeves,
200 mm fixing gap, 12 g

AW 2
392 000 00 ●
Connection tool for LSA-
and LSA-Plus-terminals,
with pressure sensor and
cutting blade,
38 x 177 x 21 mm, 80 g

Terminal strips according to DIN 47608 with solder free connection technique
LSA
AsLe

Isolation bodies of the LSA-terminal strips made of PBT-material. Contacts made of brass, silver-plated.

LSA-terminals of the AsLe are designed for one solid conductors of 0.4–0.8 mm Ø or for two solid conductors of the same diameter from 0.4–0.8 mm Ø. Outer diameter of the isolation 0.7–1.6 mm.

LSA-terminals for earthing wires are designed for solid conductors with 0.4–0.8 mm Ø. After connection with conductors ≤0.65 mm, a faultless connection of smaller conductors is not ensured.

Earthing terminals accept solid conductors up to 2.5 mm^2.

● Discount group 1

Connection elements with solder free connection technic LSA for insertion on mounting bar
LSA
VE

Isolation bodies of the VE 10 made of PBT-material, grey. Contacts made of brass, silver-plated.

Mounting bars made of stainless steel.

LSA-terminals of the VE 10 are designed for one solid conductors of 0.4–0.8 mm Ø or for two solid conductors of the same diameter from 0.4–0.65 mm Ø. Outer diameter of the isolation 0.7–1.6 mm.

LSA-terminals for earthing wires are designed for solid conductors with 0.4–0.8 mm Ø. After connection with conductors ⩾ 0.65 mm, a faultless connection of smaller conductors is not ensured.

VE 10 LSA
260 02 70
Connection element with LSA-terminals, 10 pairs, installation height: 31 mm, grey,
22 x 124 x 42 mm, 53 g

MB 4
221 004
Mounting bar for LSA-connection elements, 10 pairs, grid dimension 22.5 mm, for 4 modules, installation height: 22 mm,
104,5 x 87,5 x 42 mm, 98 g

MB 5
221 007
for 5 modules,
104,5 x 110 x 42 mm, 123 g

MB 10
221 006
for 10 modules,
104,5 x 222,5 x 42 mm, 246 g

BST VE 10 LSA
291 56 10
Folding labeling strip for VE 10 LSA,
for tab width 9 mm,
14 x 108 mm, 8 g

TrS LSA
294 400 00
Disconnection plug for 1 pair, black (similar RAL 9005),
9 x 28 x 7 mm, 1 g

AsLe A 10 S/S
260 033
10 pairs,
screw terminals on both sides,
96 mm fixing gap,
with a designation strip,
45 x 106 x 23 mm, 100 g

Accessory for distribution boxes
Terminal strips according to DIN 47614
AsLe

Isolation bodies of the AsLe made of ABS-material, grey.

Contacts made of brass, nickel-plated.

AsLe B 20 S/S
260 000
20 pairs,
screw terminals on both sides,
170 mm fixing gap,
45 x 179 x 23 mm, 183 g

AsLe B 20 S/L
260 001
Screw terminals on one side and solder tags on the other,
with a designation strip,
45 x 179 x 23 mm, 125 g

DIN-rail adapter
221 012
DIN-rail adapter for mounting terminal strips, mounting bars, telephone jacks or PP Ap on DIN rail,
with screw M5,
14 x 50 x 7 mm, 5 g

AKL 801 XS
401 000 12

AKL 802 S
401 000 14

AKL 803 M
401 000 16

AKL 804 L
401 000 18

AKL 805 XL
401 000 20

Anchoring clamps for self supporting tele-communication aerial cables
AKL

Housings of clamps made of sheet steel, hot galvanized.

Clamping jaws and positioning clips made of fibreglass reinforced PA-material, black (similar RAL 9005).

AKL 801 XS VA
404 000 12
Housing made of stainless-steel 1.4301

AKL 802 S VA
404 000 14
Housing made of stainless-steel 1.4301

Type	Clamping range mm Ø	Tensile strength max. kN	Dimensions mm	Weight g	Hook-Ø mm
AKL 801 XS (VA)	5,5 bis 10,5	2,5	174 x 45 x 32	162	20
AKL 802 S (VA)	8,5 bis 13,5	3,5	236 x 61 x 39	295	26
AKL 803 M	12,5 bis 17,5	4,5	276 x 70 x 47	522	28
AKL 804 L	16,5 bis 24,0	7,5	437 x 102 x 53	1385	36
AKL 805 XL	22,5 bis 30,0	11	499 x 122 x 60	2200	50

Discount group 1

LOCKING SYSTEMS

FMT
EIN UNTERNEHMEN DER RUTENBECK-GRUPPE

FMT-Locking system solutions are already an important part of many installations in security sensitive environments.

In addition to many standard applications with a broad spectrum of passive solutions, specific customer- or OEM solutions are no problem.

High quality and robustness characterise all FMT - locking system solutions.

FMT, an enterprise of the Rutenbeck-group manufactures only in Germany and therefore, all products and solution are “Made in Germany”

All products can be found in detail at www.rutenbeck.com

As replacement or as supplement to the passive mechanical locking systems "proLock" represents a flexible and electronic way of access control.

ProLock controls electric door openers or motor locks.
Of course, other electrical devices can also be controlled if authorization is provided.

The worldwide available iButton serves as a key. Each iButton has a globally unique identifier, is waterproof and extremely robust and can not be copied mechanically. The perfect key, even in extreme surroundings.

Besides the standalone solutions for flush mounting, IP-based customer-specific solutions from our system partner attento systems are available.

The electronic protection fittings for profile half-cylinder and the key safes, which can also be operated with the iButton complete the product range.

Locking systems
Passive solutions
Security container,
tube safes, rim locks

Always secure

Whether used outside as a key depot or inside as a small safe for valuables like money or jewellery - security containers from FMT are the right choice for all applications.

Ideal for service providers

The keys or keycards stored in the security container enable uncomplicated access to buildings for service providers or utility companies. Employees are able to open the tube safes at their operation area with the company key. The complex administration and safe keeping of customer's keys or keycards is no longer necessary.

Fits always

The security containers are available in varying lengths and diameters for flush and surface wall mounting. Special locks with disc tumblers are either delivered directly with the containers or are available as accessory. Due to its special locking technology, the locks are insensitive against humidity, frost or pollution and offer additional protection against drilling.

Stainless steel - indestructible

High-quality solid stainless steel provides security against corrosion and guarantees for long term usage.

Flush in the walls

FMT-security containers were specifically constructed for flush-mounting in the masonry. The flush mounting in a concealed location offers ideal protection against break-in attempts. Additional measures at the locks support the protection even more. Furthermore, covers give an overall high-class appearance.

Installation

The security containers are to be mounted in the wall slanting slightly towards the front. Weatherproof locations should be preferred for outdoor areas. When installing with a core drill, the container is inserted in the hole with 2-component adhesive or quick-dry cement, making sure it is flush to the facade.

Product advantages:

- solid stainless steel construction for common profile half cylinder or integrated lock
- covers to optimise the installation
- independent, very safe profile half cylinder with drilling protection
- insensitive against frost, dirt and humidity
- special custom made solutions possible

Security container with integrated lock

Security container with profile half cylinder

Security container covers

Profile half cylinder

Locking systems
Active solutions,
proLock, proLock Secure,
proLock Tutor, proLock Arx

The Key

proLock uses the worldwide available iButton as a key. Besides the worldwide unique identifier, the as proKey designated systemkeys are additionally coded on the proLock system. Therefore, unauthorized access or copying are practically impossible. The keys are very robust (waterproof, chemicalresistant, crushresistant and much, much more)

proLock

proLock is a standalone solution and being used when the security requirements requested are set not too high. The proLock will be provided with 230V and will directly control an electric door opener or motor lock for inside doors. The easy programming takes place with the "proKey Master". For the configuration and management of the system, the software proTego under www.rutenbeck.de is available free of charge. Up to 255 different proKey can be programmed at one proLock. Since the TAE center plate is available from all well known switch manufacturer, the proLock can be integrated in almost all design switch programmes.

proLock Secure

For applications with high security requirements, the contactand evaluation units are installed at separate locations. This will guarantee, that manipulations at the contact unit can not lead to access to the switching contacts of the evaluation unit and the door will still be protected. Performance features and programming are identical with proLock. The contact unit is also available for outside use (IP44).

proLock IP / proLock Secure IP

A central server manages the keyand access administration for the IP-based solutions. The software is available for Windows operating systems (Windows 7.0 /Windows Server 2012, or newer)

proLock Tutor / Arx

The advantages of the proLock system can also be used in combination with the magnetically locked protection fittings and key safes. If a special key is being used, even the key safe proKey Arx is independent of a local power supply.

Product advantages:

- application specific solutions
- complete solution (proLock)
- separate contact/evaluation unit (proLock Secure)
- 255 keys programmable (proKey)
- easy programming via proKey Master
- configuration- and server-software free of charge
- power supply 230V
- potential-free change-over contact: 1A/24V
- design compatible with design programs of well-known switch manuafacturer (TAE center plate)
- fits in commercial flush-mount installation boxes

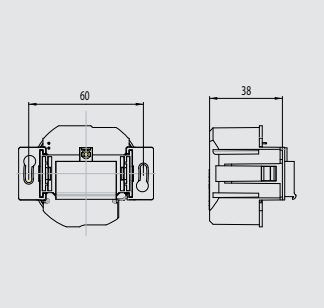
Special solution:
- proLock Tutor as protection fittings for profile halfcylinder
- proLock Arx as key safe, independant of power

proLock / proLock Secure

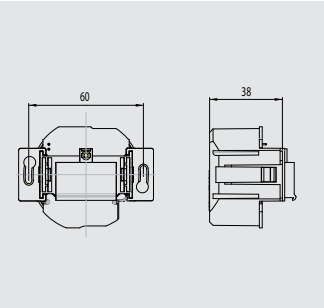
proLock Tutor

proLock Arx

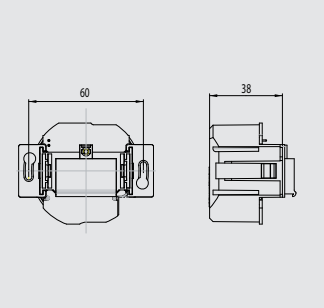
RUTENBECK
Quality products
Made in Germany



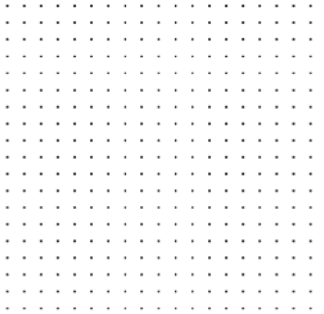
proLock Up rw
660 112 03
proLock contact unit and evaluation unit, complete, for flush mounting, for customary TAE-center plates, 255 proKey programmable via proKey Master, nominal operating voltage: 100-240V / 50-60Hz, 3VA typical, switching capacity 24V/1A (changeover contact, potentialfree),
pure white (similar RAL 9010)
80 x 80 x 50 mm, 100 g



proLock Secure KS Up rw
660 112 04
proLock contact unit, for flush mounting, only in connection with proLock Secure AE or proLock IP Secure AE, for customary TAE-center plates
pure white (similar RAL 9010)
80 x 80 x 50 mm, 100 g



proLock Secure AE Up rw
660 112 05
proLock evaluation unit, for flush mounting, for customary TAE-center plates, 255 proKey programmable via proKeyMaster, nominal operating voltage: 100-240V / 5060Hz, 3VA typical, switching capacity 24V/1A (changeover contact, potentialfree), only in connection with proLock Secure KS,
pure white (similar RAL 9010)
80 x 80 x 50 mm, 100 g

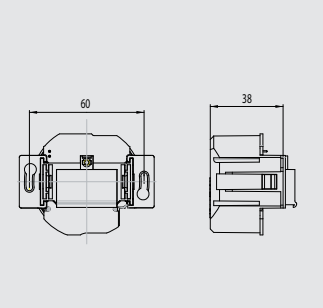


proLock Secure KS Ap
660 112 06
proLock contact unit,
for surface mounting, IP44, only in connection with proLock Secure AE or proLock IP Secure AE,
aluminium, brushed
80 x 80 x 6 mm, 116 g

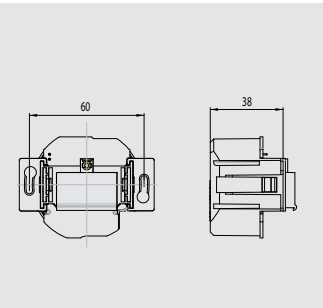
proLock
proLock Secure

Discount group 2

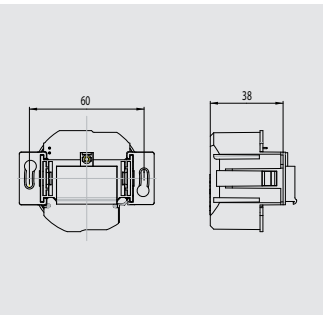
proLock IP
proLock IP Secure



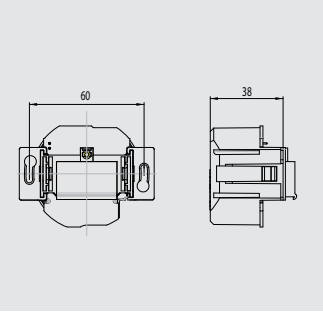
proLock IP Up rw*
660 114 10
proLock contact unit and evaluation unit, complete, for flush mounting, for customary TAE-center plates, 255 proKey programmable via proKey Master, nominal operating voltage: 100-240V / 50-60Hz, 3VA typical, switching capacity 24V/1A (changeover contact, potentialfree), pure white (similar RAL 9010) 80 x 80 x 50 mm, 100 g



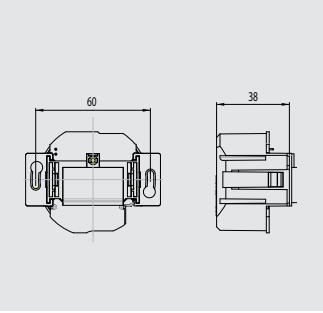
proLock IP POF Up rw 2,2 mm*
660 118 10
proLock IP contact unit and evaluation unit, complete, for flush mounting, for customary TAE-center plates, POF-network connection (2,2mm), nominal operating voltage: 100-240V / 50-60Hz, 3VA typical, switching capacity 24V/1A (changeover contact, potentialfree), pure white (similar RAL 9010) 80 x 80 x 50 mm, 100 g



proLock IP Secure AE Up rw*
660 114 11
proLock IP evaluation unit, complete, for flush mounting, for customary TAE-center plates, network connection with screw terminals, nominal operating voltage: 100-240V / 50-60Hz, 3VA typical, switching capacity 24V/1A (changeover contact, potentialfree), pure white (similar RAL 9010) 80 x 80 x 50 mm, 100 g



proLock IP Secure POF Up rw 2,2 mm*
660 118 11
proLock IP evaluation unit, complete, for flush mounting, for customary TAE-center plates, POF-network connection (2,2mm), nominal operating voltage: 100-240V / 50-60Hz, 3VA typical, switching capacity 24V/1A (changeover contact, potential-free), pure white (similar RAL 9010) 80 x 80 x 50 mm, 100 g



proLock Secure KS Up rw
660 112 04
proLock contact unit, for flush mounting, only in connection with proLock Secure AE or proLock IP Secure AE, for flush mounting, for customary TAE-center plates, pure white (similar RAL 9010) 80 x 80 x 50 mm, 100 g

*serverbased- PC with Windows 7 or newer, respectively Windows 2012 server or newer

proKey Master
660 003 10
Masterkey (iButton) with system-coding, for the transmission of programming for up to 255 proKey in proLock, proLock Secure and proLock Tutor SB (each proLock AE/Tutor x necessary)
red (similar RAL 4004)
53 x 20 x 14 mm, 7 g

proKey
660 003 20
Userkey (iButton) with system-coding, as authorisation key for proLock, proLock IP, proLock Secure, proLock IP Secure and proLock Tutor SB (max. 255 keys programmable), black (similar RAL 9005)
53 x 20 x 14 mm, 7 g

proLock PC LG
660 003 30
PC-programming device for proKey and proKey Master, USB-connection cable, can only be used with the programming software proTego*
40 x 20 x 50 mm, 80 g

proLock V24 USB
660 003 60
Programming cable for proLock Up rw, proLock Secure AE Up rw and proLock Arx, USB/V24-connection cable
80 x 20 x 12 mm, 30 g

*Download under www.rutenbeck.com (free of charge)

Discount group 2

proLock Arx
accessory

proLock Arx**
660 200 20
proLock key safe, for surface mounting, vandalproof, without power supply, via system key proKey Arx,
stainless steel
170 x 60 x 30 mm, 1500 g

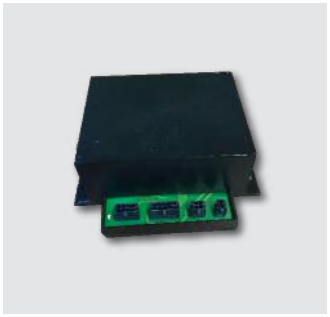
proLock Arx MP
660 200 30
Mounting plate, for the attachment of the proLock Arx on a levelled wall
stainless steel
78 x 184 x 12 mm, 630 g

proKey Arx**
660 003 40
Userkey (iButton), authorisation key and power supply for proLock Arx, power supply with battery (max. 255 keys programmable),
stainless steel
40 mm Ø, 40 g

proLock Arx PC LG**
660 003 50
PC-Programming device for proKey Arx, USB-connection cable, can only be used with the programming software proTego*
40 x 20 x 50 mm, 80 g

** product diversification planned

proLock Tutor SB
660 200 10
magnetically locked protective fitting for conventional profile half-cylinder, for surface mounting, (bolting from behind (M10)), vandal-proof, only in connection with proLock Secure AE or proLock AE Ap and external 12V DC (1A) power supply,
stainless steel
180 x 90 x 35 mm, 1500 g

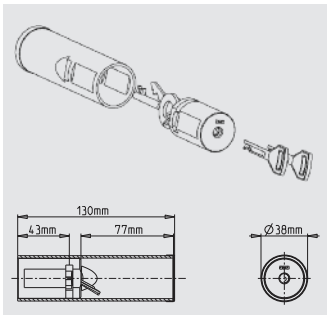


proLock Tutor AE Ap
660 116 06
proLock evaluation unit, for surface mounting, 255 proKey programmable via proKey Master, nominal operating voltage: 12V / 10 mA standby current / 800 mA during opening, switching capacity 24V/1A (changeover contact, potentialfree) emergency charging with proLock Tutor NLG, only in connection with proLock Tutor SB,
black (similar RAL 9005)
131 x 44 x 114 mm, 210 g

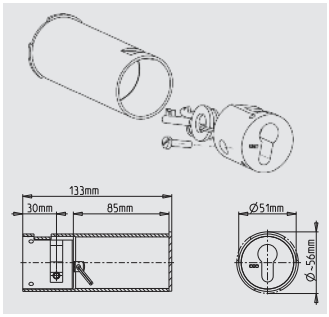
proLock Tutor NLG
660 200 40
Emergency charging device for proLock Tutor SB, for up to 10 emergency unlockings, charging via Micro-USB-connection,
black (similar RAL 9005)
85 x 50 x 25 mm, 80 g

proLock Tutor SB
accessory

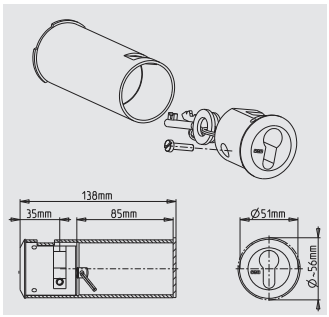
Tube safes:
Security container, accessory,
Wall mounting (flush and surface)



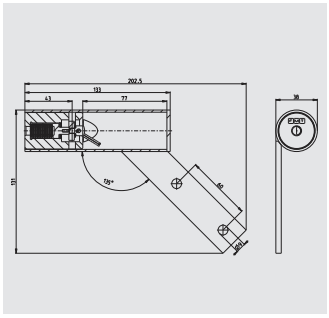
ST 38 Up
603 50 41
Security container
for flush mounting,
length 130 mm,
with 2 keys
stainless steel,
38 mm Ø , 560 g



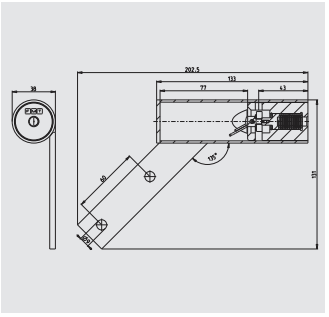
ST 56 PHZ Up
603 28 86
Security container
for flush mounting,
length 133 mm,
straight closure,
for PHZ 10/30, stainless steel,
56 mm Ø , 860 g



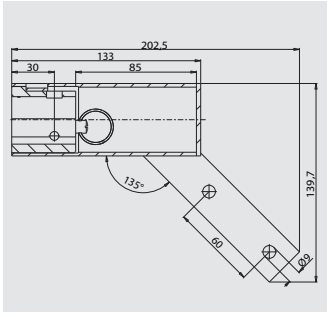
ST 56 W PHZ Up
603 98 94
Security container
for flush mounting,
length 138 mm,
curved closure,
for PHZ 10/30, stainless steel,
56 mm Ø , 900 g



STL 38 Ap
606 27 25
Security container
for surface mounting left,
length 130 mm,
with 2 keys,
stainless steel,
38 mm Ø , 560 g

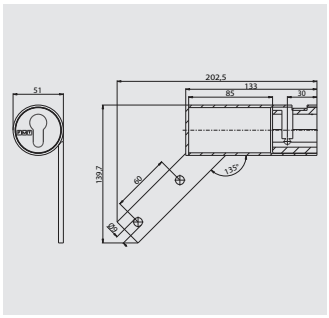


STR 38 Ap
606 27 24
Security container
for surface mounting right,
length 130 mm,
with 2 keys,
stainless steel,
38 mm Ø , 560 g



STL 56 PHZ Ap
606 27 23
Security container
for surface mounting left,
length 130 mm,
for PHZ 10/30, stainless steel,
56 mm Ø , 860 g

Tube safes:
Security container, accessory,
Wall mounting (flush and surface)



STR 56 PHZ Ap
606 27 22 ●
Security container
for surface mounting right,
length 130 mm,
for PHZ 10/30, stainless steel,
56 mm Ø , 860 g

BST 38
606 61 32 ●
security container cover,
for security container ST 38,
stainless steel,
38 mm Ø , 20 g

BSTS 38
606 69 33 ●
security container cover,
for security container ST 38,
with dust cover,
stainless steel,
38 mm Ø , 40 g

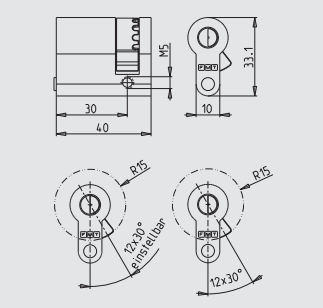
BST 56
606 61 40 ●
security container cover,
for security container ST 56,
stainless steel,
56 mm Ø , 21 g

BSTS 56
606 69 40 ●
security container cover,
for security container ST 56,
with dust cover,
stainless steel,
56 mm Ø , 40 g

Key ring
604 03 62 ●
for fastening of keys in security
containers ST 38 and ST 56,
with mounting accessory,
11 g

● Discount group 1

Tube safes:
Security container, accessory



PHZ 10/30
606 86 21
Profile half cylinder,
10/30 mm,
12-way adjustable locking nose,
with 2 keys,
145 g

Schlüssel (key)*
602 34 71
Customer specific spare- and extra keys for key- and card safes,
16 g

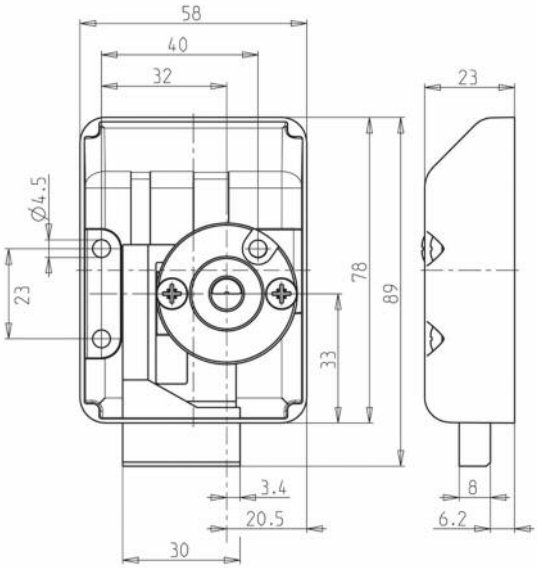
* Contact the customer service from Rutenbeck for customer specific lockings

Rim lock

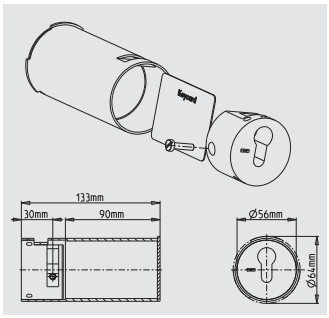
Secure, in the cabinet

The advantage of the special locks with disc-type tumbler is that they can not only be used for the security container but can also be used as rim locks as well.
These locks are also called cased locks and are used i.e. p.o.-boxes and safety deposit boxes.
The installation takes place in the protected area, behind the door.

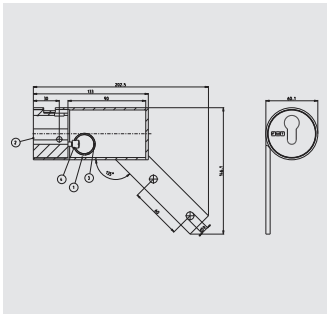
Fachschloss (rim lock)
606 49 12
with 2 keys,
89 x 58 x 23 mm, 250 g



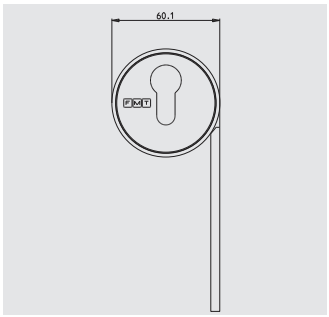
Tube safes:
Card safe, accessory,
Wall mounting (flush and surface)



KT 64 PHZ Up
606 54 93 ●
Card safe,
for flush-mounting,
length 130 mm
for PHZ 10/30, stainless steel,
64 mm Ø, 1200 g

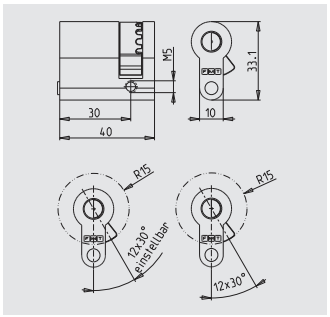


KTL 64 PHZ Ap
606 27 21 ●
Card safe,
for surface mounting left,
length 130 mm, for PHZ 10/30,
stainless steel,
64 mm Ø, 1200 g



KTR 64 PHZ Ap
606 27 20 ●
Card safe,
for surface mounting right,
length 130 mm, for PHZ 10/30,
stainless steel,
64 mm Ø, 1200 g

BKT 64
606 61 41 ●
Cover
for card safe KT 64,
stainless steel,
64 mm Ø, 20 g



PHZ 10/30
606 86 21 ●
Profile half cylinder,
10/30 mm,
12-way adjustable locking nose
with 2 keys,
145 g

Schlüssel (key)*
602 34 71 ●
Customer specific spare- and
extra keys for key- and card safes,
16 g

* Contact the customer service from Rutenbeck for customer specific lockings.

● Discount group 1

Locking systems
Passive solutions
Flexible Cable Protection

Safe cabling

The flexible cable protection from FMT is the right choice, if electrical cables in doors and windows are needed for security locks or signal contacts for alarm systems.

Always the right choice

There are various designs available as concealed cable transitions for doors and windows made of wood, plastic or metal.

A special premium version with a resilient sleeve is available for wooden doors. The spiral spring with the cable inside is also fed through the sleeve to guarantee a perfect return to the initial position.

Vandal-proof installation

The flexible cable protection from FMT protects cables and wiring up to 10 mm Ø in doors and up to 5 mm Ø in windows to prevent damages while opening and closing. With the spiral spring the cables are able to move freely.

Stainless steel - indestructible

All flexible cable protection solutions from FMT are made of high-quality stainless steel.

Installation

The flexible cable protection can be flush mounted at any height on the hinge-side surface of doors or windows. To improve the guidance characteristics of the flexible cable protection, the spring should be pre-tensed during installation by twisting it left or right. The distance between the centers of the holes for the ducts in doors, windows and frames can be up to 70 mm.

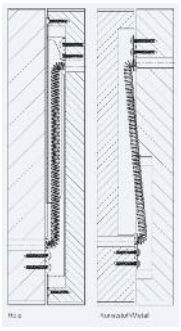
An installation frame (squared forend) will be delivered for the installation in wooden windows and doors. The necessary fastening material is included in the delivery.

The installation frames are not needed for installation in the hollow section of doors made of metal or plastic.

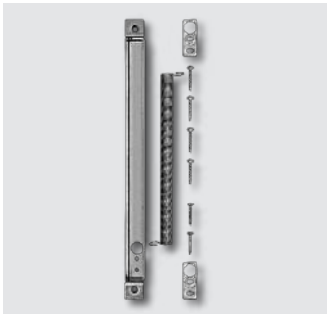
Product advantages:

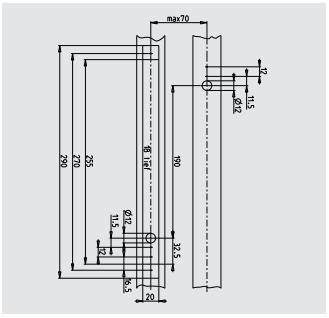
- optimised versions for wooden doors, wooden windows and metal-/plastic windows
- vandal-proof wiring
- for cables up to 10 Ø mm in doors
- for cables up to 5 Ø mm in windows
- robust and long lasting stainless steel construction
- delivery with all necessary accessories

Installation types

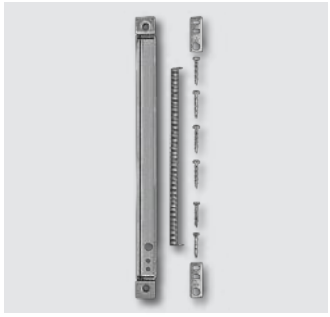


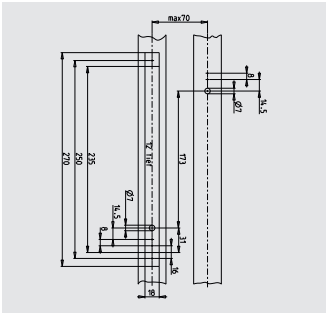
Flexible Cable Protection made of stainless steel



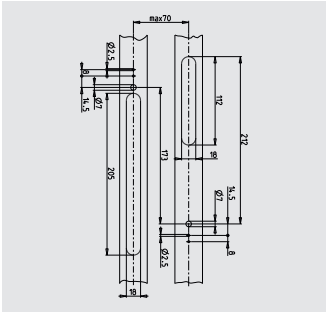


Flexible Cable Protection HT
601 04 16 ●
Flexible Cable Protection
for wooden doors,
with squared forend,
stainless steel,
290 x 20 x 18 mm, 200 g





Flexible Cable Protection HF
602 48 01 ●
Flexible Cable Protection
for wooden windows,
with squared forend,
stainless steel,
270 x 18 x 12 mm, 120 g



Flexible Cable Protection MKF
602 48 17 ●
Flexible Cable Protection
for metal- and plastic windows,
stainless steel,
205 x 18 mm, 60 g

● Discount group 1

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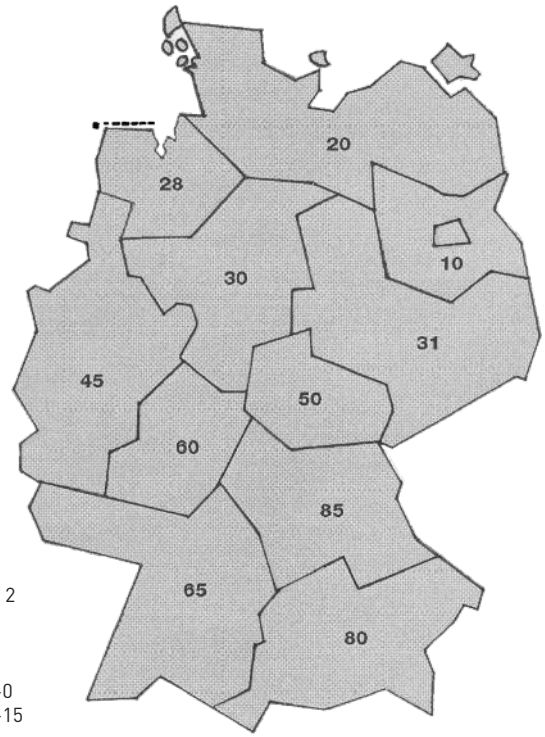

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