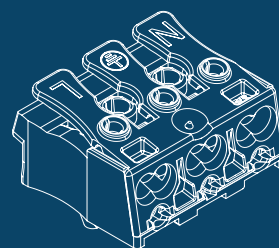
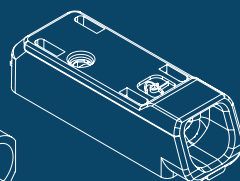
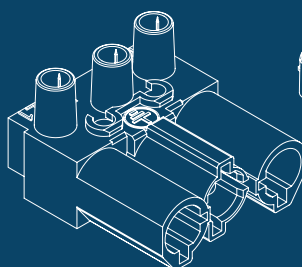


THE SAFE CONTACT WORLDWIDE

OEM

CATALOGUE



ADELS
contact



Since 1930, our guideline “The safe contact worldwide” has been a synonym both for high-quality and innovative connection technology for luminaires and electrical appliances as well as for a reliable, quick and individual customer care worldwide.

Also in the digital age, we will continue to follow our philosophy. One of the results are many product innovations with which you are well equipped for the future. The new printed catalogue you now hold in your hands is the ideal supplement to all information that is now available in digital form. It provides an outline of our broad product range of connection solutions for our target industries, highlights the most important advantages for customers and navigates with pictures and headlines to more than 2,000 articles which you can find on our homepage.

Bergisch Gladbach, March 2020

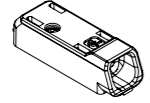
J. Hans Hochköppler

Andre Rumpff

The Company 6

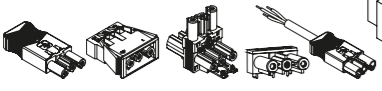
PRODUCT GROUPS

SMD Terminal Blocks
The product range for the safe connection of LED modules



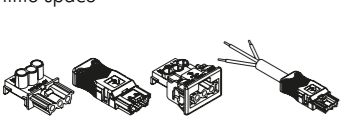
8

Building Installation Connectors AC 166®
Flexibility, safety and cost effectiveness in installation



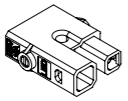
12

Building Installation Connectors AC 164
The compact system for installations with little space



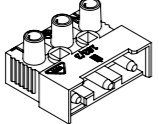
18

Connectors AC 162
The system for LED and low-voltage applications



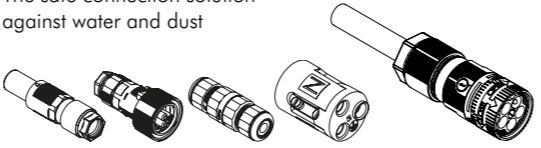
24

Connectors 160/163
The alternative connection solution for appliances, drives and luminaires



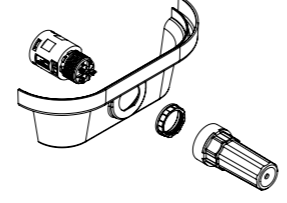
28

Circular Connectors/Terminal Blocks IP68
The safe connection solution against water and dust



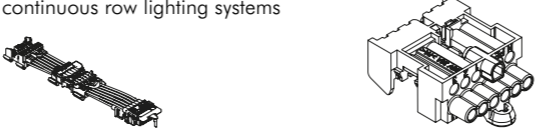
32

Lighting Connectors IP66
Simple, safe and cost effective



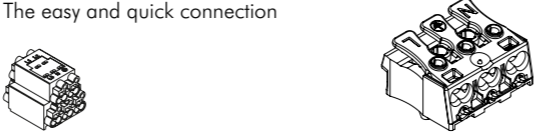
38

Continuous Row Lighting System LEDtrack
The complete system for all functions on continuous row lighting systems



44

Screwless Terminal Blocks
Push – press – play
The easy and quick connection



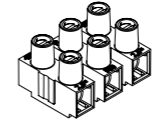
50

Screw Screwless Terminal Blocks
The “hybrid solution” in the connectors world



54

Screw Terminal Blocks
Proven connection of electrical appliances and luminaires



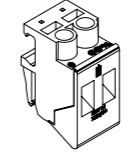
58

Fused Terminal Blocks
Protection of sensitive luminaires and appliances



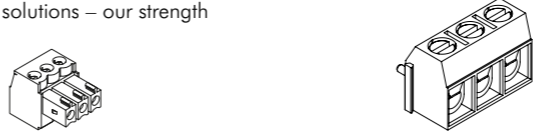
62

Transformer Connectors
Safe connection of small and control transformers



66

PCB Terminal Blocks/Connectors
Pinpoint accuracy in spacing and special solutions – our strength



70

FURTHER INFORMATION

Codings AC 166®/AC 164 74

Characteristics of the Insulating Materials 76

IP Codes 77

Relevant Standards 78

Configuration and Dimensions of Connecting Cables 79



WHY PRODUCTS MADE BY ADELS CONTACT?

Because we are the way we are! Some people call it culture or philosophy. We just call it being close to the customer.

Our particular competence is the rapid development of customised solutions of superior connection technology. Experience and expert knowledge help to find alternatives for you and to put the smartest solution into practice. Here, we are true to our guiding principle of "fit-for-purpose", considering that the most expensive product is not always the better one.

Close contact to our customers is an essential part of our success. People in the business take immediate, personal and reliable care of your questions and concerns.

0.5 Mio Finished Parts/
Day

130 Approvals

60 Countries

100 Employees

1930 Founded

100% Independent

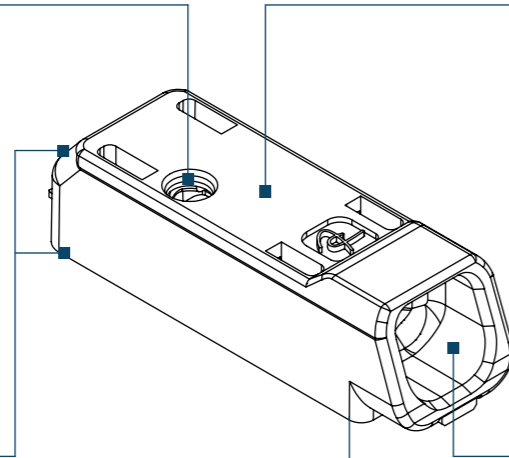
The Product Range for the Safe Connection of LED Modules

testing aperture and conductor release

pick & place area $\varnothing 3 \text{ mm}^2$

extremely reduced total height of 3.45 mm

connection of solid or flexible conductors up to 0.75 mm^2



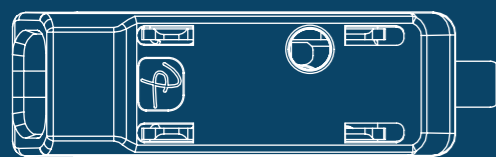
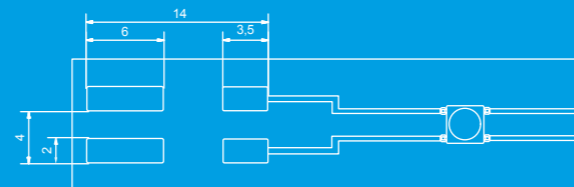
APPLICATIONS

- LED modules
- printed circuit boards
- power supply

ADVANTAGES

- minimal shadow effect due to reduced total height
- minimal discolouring due to the reflow soldering process
- safe processing on automatic luminaire assembly machines

FOOTPRINT SMDflat 345



			6 - 16 A 250 - 600 V	PPA-GF UL 94: V-0
0.2 - 2.5 mm ²				

More information online

TO THE WEBSITE

SMD TERMINAL BLOCKS WITHOUT MOULDING

SMDblank/ 1
horizontally pluggable 0.2 - 0.5 mm²
solid and flexible
vertically pluggable 0.5 mm²
solid



SMD TERMINAL BLOCKS PIN SPACING 6.0 mm

SMDflat 545/ ..
1 to 3 pole
0.5 - 2.5 mm²
solid and flexible



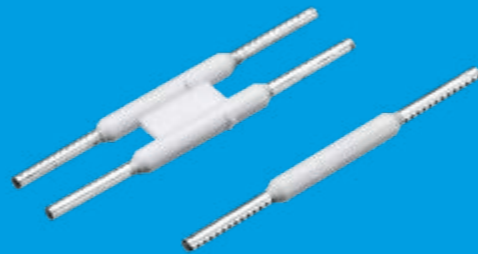
SMD TERMINAL BLOCKS PIN SPACING 4.0 mm

SMDflat 345/ ..
1 and 2 pole
0.2 - 0.75 mm²
solid and flexible



VARIANT

2 pole, bridged

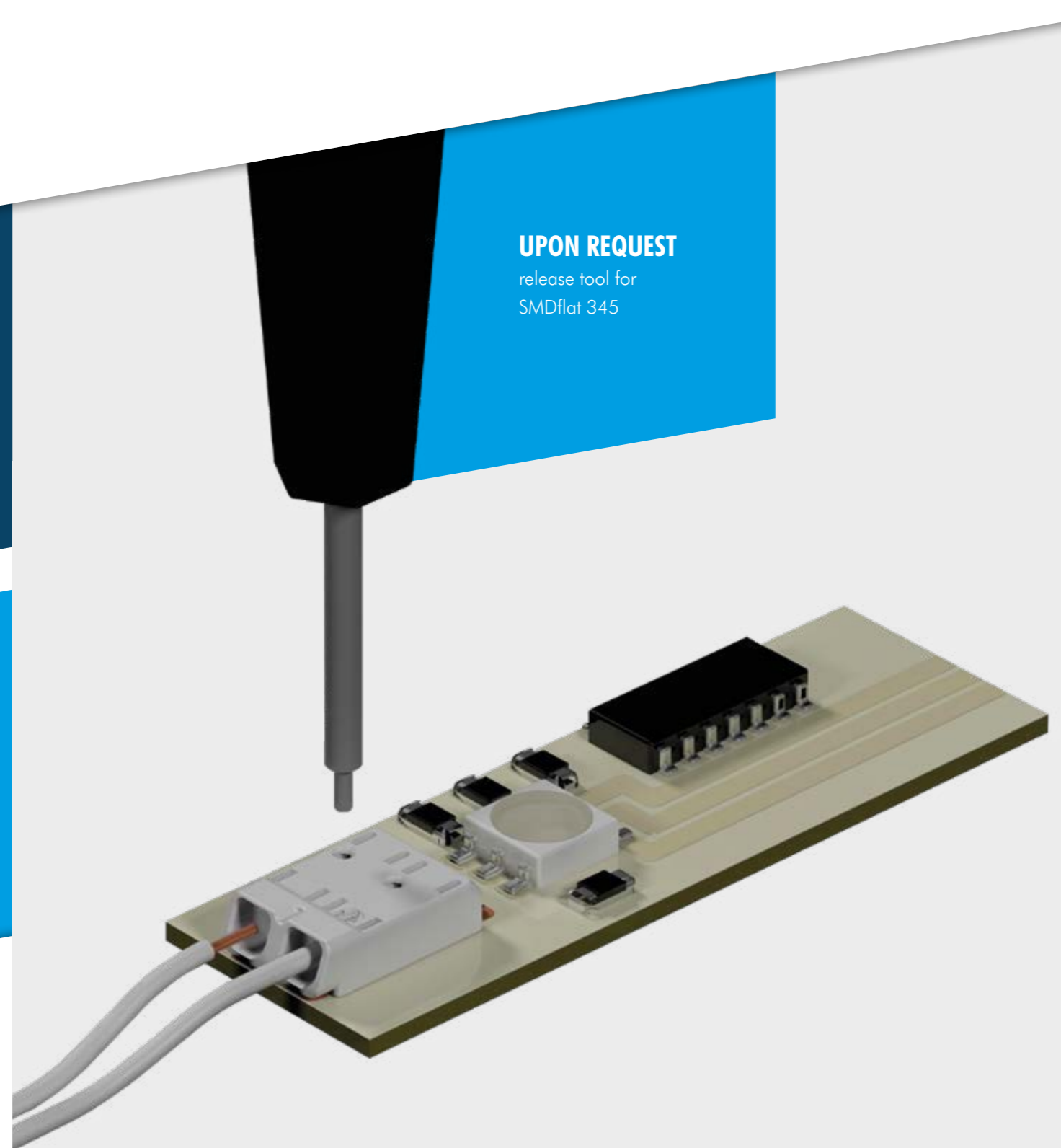


CONNECTING LINKS

SMDflat 345 KU/ ..
1 and 2 pole

UPON REQUEST

release tool for SMDflat 345



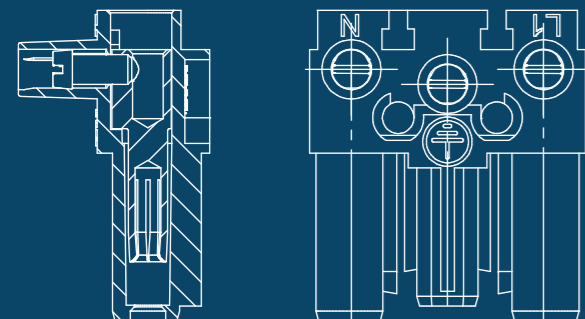
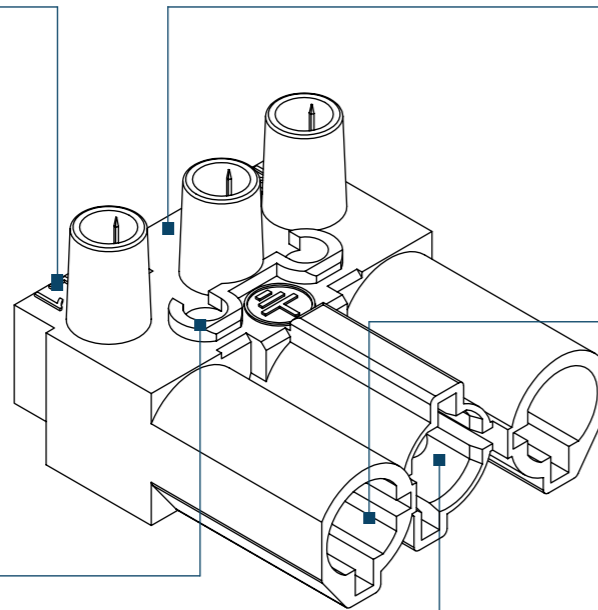
Flexibility, Safety and Cost Effectiveness in Installation

suitable strain relief with different cable outlets

screw, screwless or solder terminal

mechanical coding for different applications

fixing by screw or rivet



APPLICATIONS

- furniture
- displays
- luminaires
- booth construction
- retail lighting
- building installation

ADVANTAGES

- error-free installation according to EN 61535
- "plug & play" without dismantling, stripping, manual connecting or extensive re-working
- 30 % lower costs, 70 % less time
- modular system for luminaires, appliances and socket outlets, pre-assembled cables and distributors

100 % PROTECTION AGAINST INCORRECT PLUGGING

- = no plugging when rotated by 180 °
- = no one pole plugging
- = no plugging of different numbers of poles
- = no plugging when shifted aside



			20 A 250 V
PA 6/6 UL 94: V-2	T 70 °C EN 61535	0.5 - 2.5 mm ²	IP20 IP40

PRODUCT RANGE

Cables and Distributors AC 166®

More information online

TO THE WEBSITE

FLAT PLUGS AND SOCKETS WITH STRAIN RELIEF

AC 166 GSTF/ .. and
AC 166 GBUF/ ..

3 to 5 pole
cables 0.5 - 2.5 mm²

CONNECTING CABLES WITH PLUG

AC 166 ALCGS/ ..

3 to 5 pole
cables 1.5 mm² and 2.5 mm² in
PVC (H05VV-F) and halogen-free
(H05Z1Z1-F)
fire protection class Eca

CONNECTING CABLES WITH SOCKET

AC 166 ALCGB/ ..

3 to 5 pole
cables 1.5 mm² and 2.5 mm² in
PVC (H05VV-F) and halogen-free
(H05Z1Z1-F)
fire protection class Eca

EXTENSION CABLES

AC 166 VLCCG/ ..

3 to 5 pole
cables 1.5 mm² and 2.5 mm² in
PVC (H05VV-F) and halogen-free
(H05Z1Z1-F)
fire protection class Eca

MAINS CABLES

AC 166 NLCGB/3

3 pole
cables 1.5 mm² in PVC (H05VV-F)

BUILDING INSTALLATION CONNECTORS AC 166®

DISTRIBUTING BLOCKS

AC 166 GVH .. / ..

3 pole
1 input, 3 to 5 output terminals
with and without mounting adapter



DESIGNS AND VARIANTS

- apart from the colour-coded plugs and sockets, all products are available in black and white.
- pre-assembled strain reliefs, latches
- locking pins, protection caps
- printing
- special design for 4.0 mm² cables
- panel mount plugs/sockets for plastic mouldings (3 pole)
- fastening clips for distributing blocks
- building installation connectors AC 166® Classic
- cables with customised stripping/ dismantling lengths
- fire protection classes Dca, Cca and B2ca

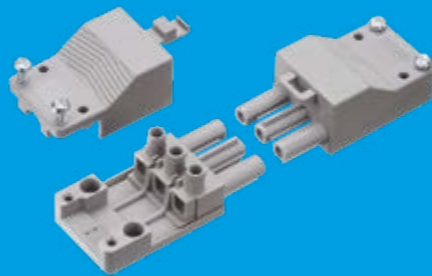


More information online

TO THE WEBSITE

PLUGS AND SOCKETS PROTECTION CLASS II

AC 166 GST/ 3 SK II and
AC 166 GBU/ 3 SK II
with strain relief



HIGH PLUGS AND SOCKETS

AC 166 GST/ .. and
AC 166 GBU/ ..
3, 4 and 6 pole
cables 0.5 - 2.5 mm²



PANEL MOUNT PLUGS AND SOCKETS

AC 166 GEST/ .. and
AC 166 GEBU/ ..
3 to 5 pole
cables 0.5 - 2.5 mm²
2 terminals per pole
for housings 0.5 - 1.2 mm



SOLDER PLUGS AND SOCKETS

AC 166 GSTLH/ .. and AC 166 GBULH/ ..
with horizontal solder terminals

AC 166 GSTLV/ .. and AC 166 GBULV/ ..
with vertical solder terminals



PANEL MOUNT PLUGS AND SOCKETS

166 EBU/ 8 and AC 166 EST/ 8
8 pole
cables 0.5 - 2.5 mm²
2 terminals per pole
for housings 0.5 - 1.0 mm



STRAIN RELIEFS

AC 166-1/ .. ZEL
3, 4 and 6 pole
different cable outlets



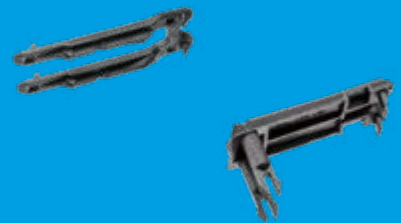
PANEL MOUNT CONNECTING LINKS

AC 166 GKU/ 3
3 pole



LATCHES

AC 166 VSE
for panel mount plugs and
sockets



AC 166 VSL
for solder plugs and sockets

The Compact Building Installation Connectors for Installations with Little Space

outlet for various cable types and diameters

countersunk head machine screws

compulsory locking with hook and eye

compact dimensions

various mechanical codings

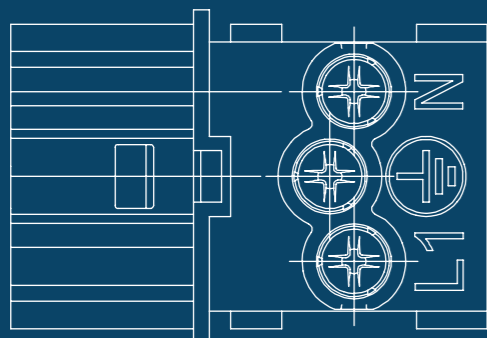
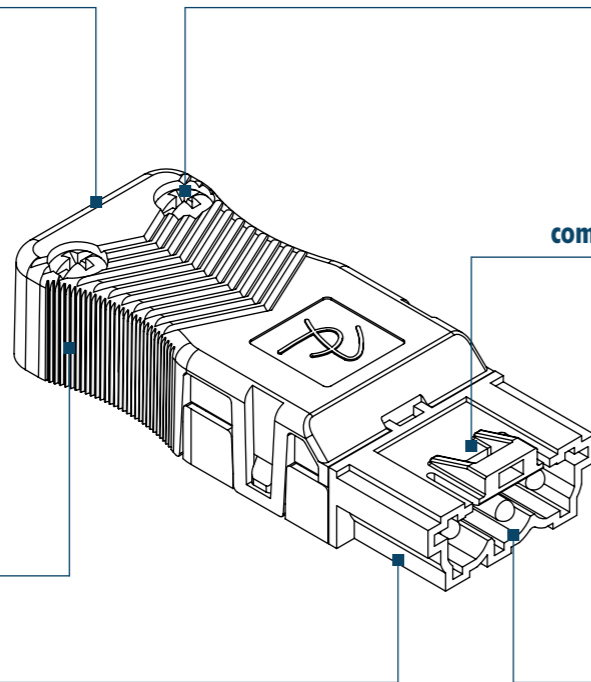
2 to 5 pole

APPLICATIONS

- retail lighting
- object lighting
- interior lighting
- advertising lighting
- switch cabinet lighting
- displays
- booth construction

ADVANTAGES

- little brother of the successful AC 166® series – about half the size
- ideal for applications with limited space such as for small luminaires and appliances
- “plug & play” allows error-free and extremely fast connection according to EN 61535
- modular system for flexible use



		16 A 250/400 V	PA UL 94: V-2	T 70 °C EN 61535
1.0 - 1.5 mm ²	IP20 IP40			

Building Installation Connectors AC 164

More information online

TO THE WEBSITE

FLAT PLUGS AND SOCKETS WITH STRAIN RELIEF

AC 164 STF/ .. and AC 164 BUF/ ..

2 to 5 pole
cables 0.5 - 1.5 mm²
variable cable outlets

CONNECTING CABLES WITH PLUG

AC 164 ALSS/ ..

2 to 5 pole
cables 1.5 mm² in PVC (H05VV-F)
and halogen-free (H05Z1Z1-F)
fire protection class Eca

CONNECTING CABLES WITH SOCKET

AC 164 ALSB/ ..

2 to 5 pole
cables 1.5 mm² in PVC (H05VV-F)
and halogen-free (H05Z1Z1-F)
fire protection class Eca

CONNECTING CABLES

AC 164 VLS/ ..

2 to 5 pole
cables 1.5 mm² in PVC (H05VV-F)
and halogen-free (H05Z1Z1-F)
fire protection class Eca

HIGH PLUGS AND SOCKETS

AC 164 ST/ .. and AC 164 BU/ ..

2 to 5 pole
cables 0.5 - 1.5 mm²

PANEL MOUNT PLUGS AND SOCKETS

AC 164 EST/ .. and AC 164 EBU/ ..

2 to 5 pole
cables 0.5 - 1.5 mm²
wall thickness 0.5 - 1.2 mm

DESIGNS AND VARIANTS

- apart from the colour-coded plugs and sockets, all products are available in black and white
- printings
- cables with customised stripping/ dismantling lengths
- fire protection classes Dca, Cca and B2ca

DISTRIBUTORS (UNDER DEVELOPMENT)

AC 164 VT/ ..

2 to 5 pole
1 input , 2 output terminals

DISTRIBUTORS (UNDER DEVELOPMENT)

AC 164 VT .. / ..

2 to 5 pole
1 input, 3 to 5 output terminals

FASTENING CLIPS

AC 164 BC / ..

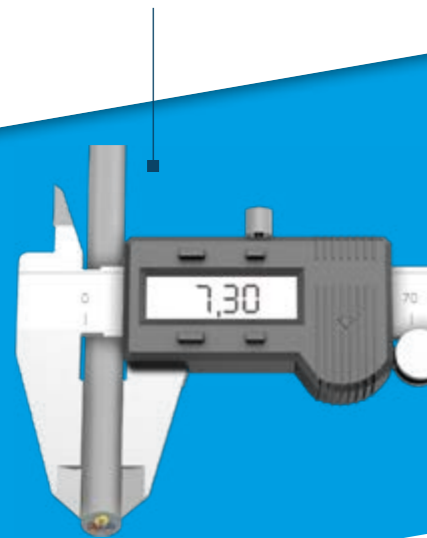
for high plugs and sockets

AC 164 ST/ .. and AC 164 BU/ ..

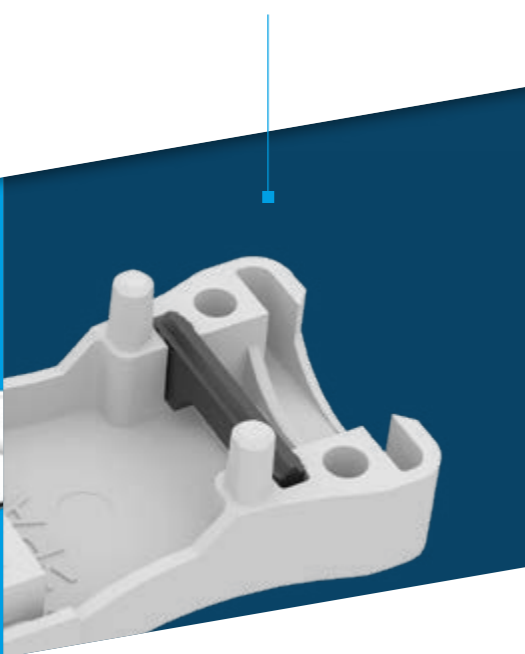
2 to 5 pole

AC 164 – The Correct Positioning of the Strain Relief Bridges shown on a 3 Pole Connector

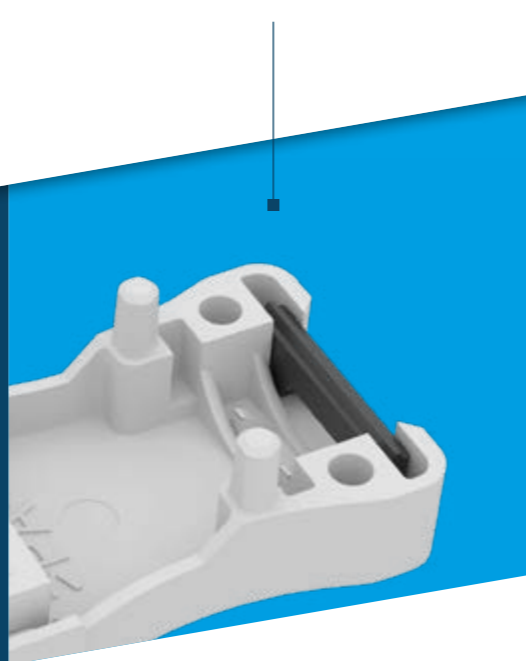
DETERMINING THE CABLE DIAMETER



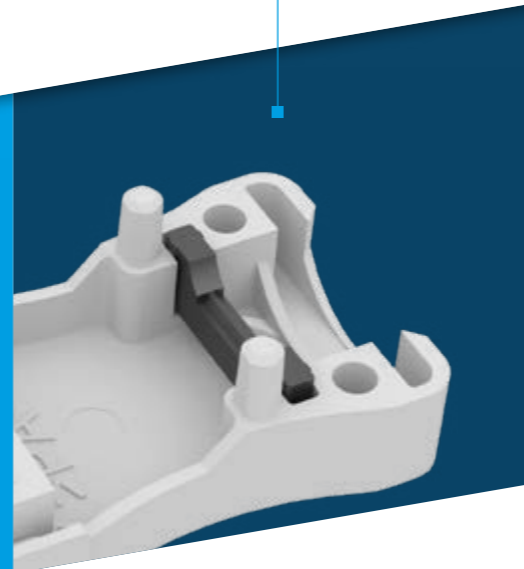
Ø 5.5 - 5.7 mm
ZEL insert on pos. 2



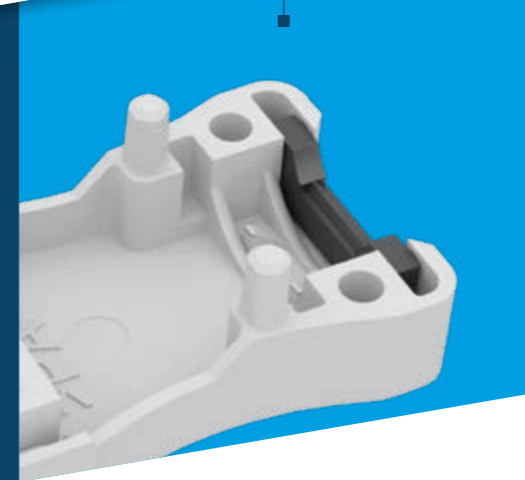
Ø 5.8 - 6.5 mm
ZEL insert on pos. 1



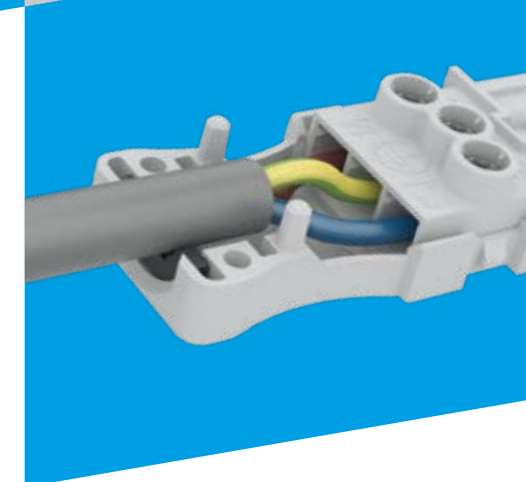
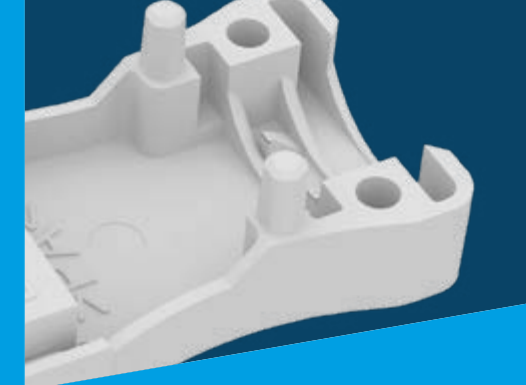
Ø 6.6 - 6.9 mm
ZEL insert turned on pos. 2



Ø 7.0 - 7.7 mm
ZEL insert turned on pos. 1



Ø 7.8 - 9.0 mm
no ZEL insert



NOTE

For positioning please follow the installation instructions included in the packaging.

ADVANTAGES

- one solution for different cable diameters
- versatile applications
- easy ordering and optimised stockkeeping

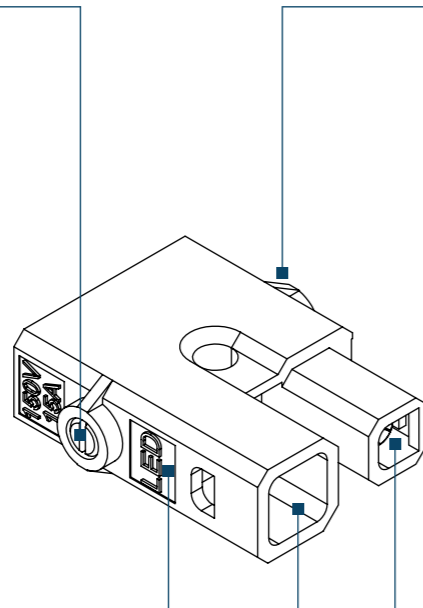


Step-by-step installation available under www.adels-contact.de/link/PlaylistTutorials

The System for LED and Low-Voltage Applications

screw terminals for self assembly

compact dimensions



for LED and low-voltage applications

plugs and sockets in one item

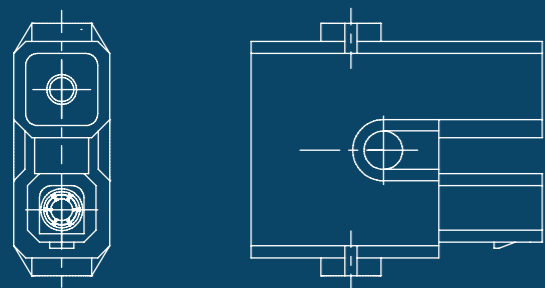
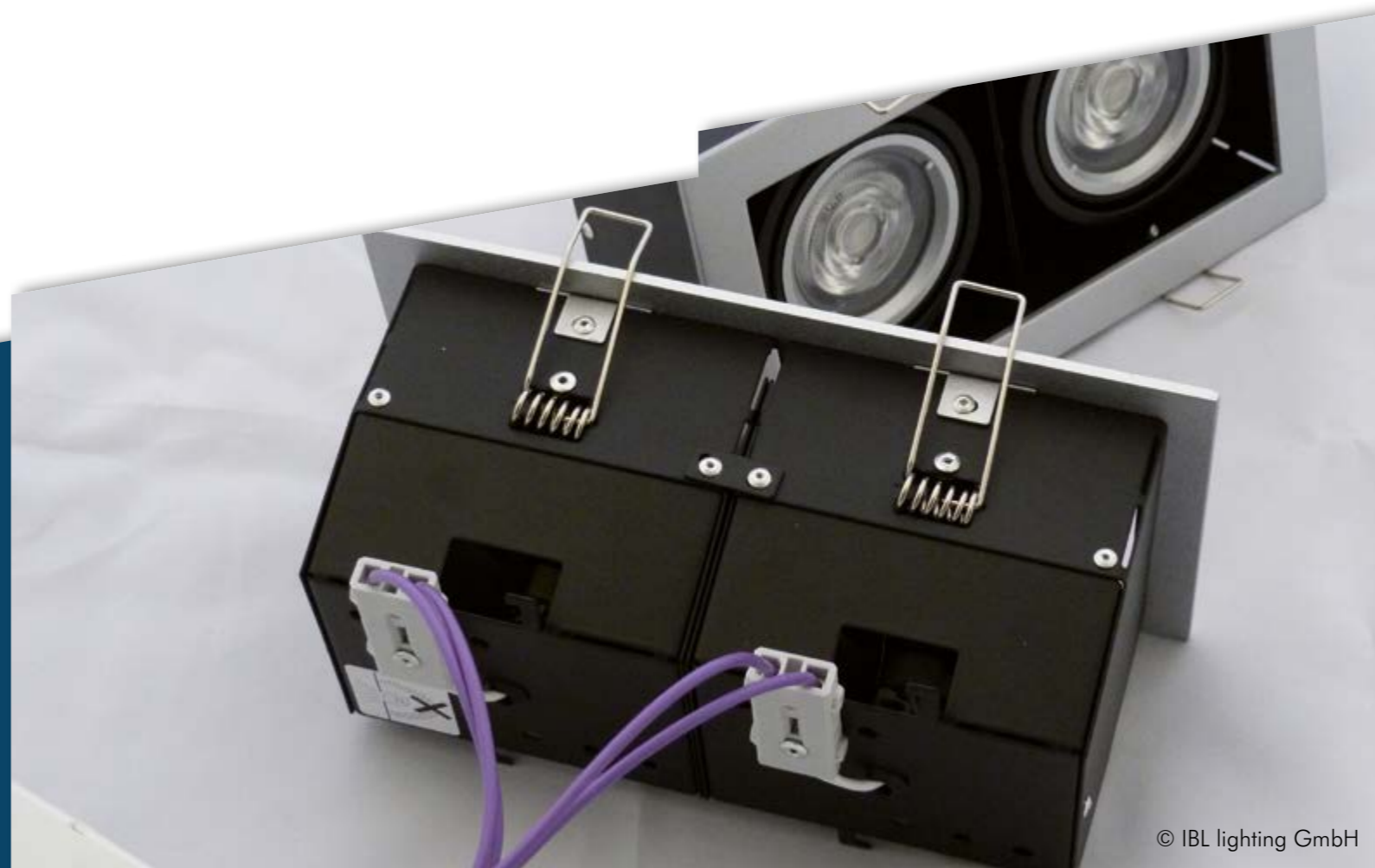
APPLICATIONS

- furniture
- displays
- advertising lighting
- booth construction
- retail lighting

- electrical installation up to 48 V
- connection of LED spots

ADVANTAGES

- full product range with connecting/extension cables and distributors
- robust and safe plug-in connections for LED and low voltage



	16 - 25 A 48 - 150 V	PA 6/6 UL 94: V-2	T 70 °C EN 60598	0.5 - 2.5 mm ²
IP20				

More information online

TO THE WEBSITE

LED CONNECTORS

AC 162 STS/ 2 LED

2 pole connectors
as plugs and sockets



LED CONNECTING CABLES

AC 162 ALS LED

2 pole
types I and II (polarity)



LED EXTENSION CABLES

AC 162 VLS LED

2 pole



LED DISTRIBUTORS

AC 162 VT/ 3-1 LED

2 pole

1 input, 3 output terminals



LOW VOLTAGE CONNECTORS

AC 162 STS/ 2

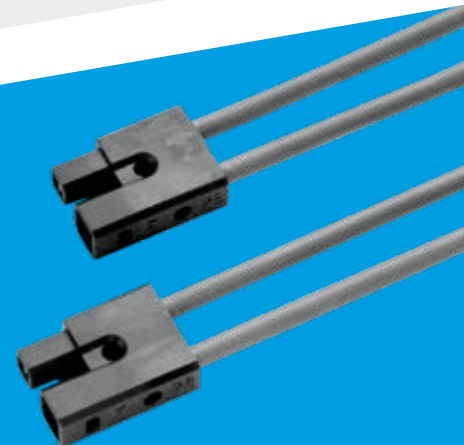
2 pole connectors
as plugs and sockets



LOW VOLTAGE CONNECTING CABLES

AC 162 ALC

2 pole



LOW VOLTAGE EXTENSION CABLES

AC 162 VLC

2 pole



LOW VOLTAGE COMPACT DISTRIBUTORS

AC 162 KV 6

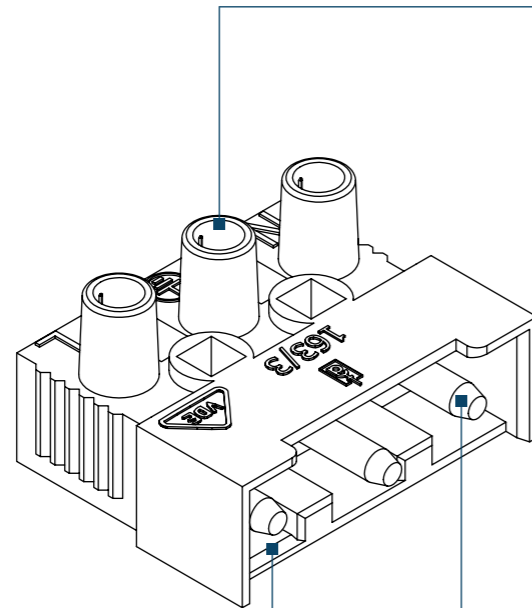
2 pole

1 input, 5 output terminals



The Alternative Connection Solution for Appliances, Drives and Luminaires

screw terminals with and without wire protector



shrouded plugs and sockets against mismatching

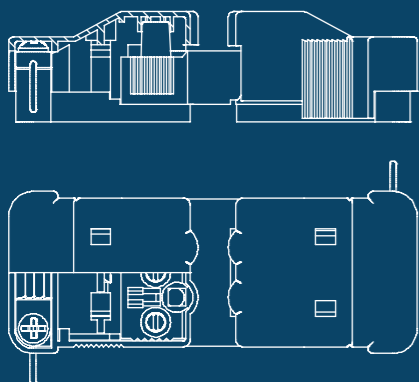
2, 3 and 5 pole

APPLICATIONS

- roller shutters
- inside luminaire connection
- connecting base for wall lighting
- home appliances

ADVANTAGES

- economic solution for plugs and sockets
16 A/400 V
- 2, 3 and 5 pole shrouded plugs and sockets
with strain relief
- 2 to 12 pole connectors
- application-specific insulating materials



		16 A 250/400 V	PA 6, PA 6/6 UL 94: V-2
T 70 °C EN 61984	0.5 - 4.0 mm ²	IP20 IP40	

More information online

TO THE WEBSITE

SHROUDED PLUGS AND SOCKETS

163 ST/ .. and 160 BU/ ..s
2, 3 and 5 pole
cables 0.5 - 2.5 mm²

PLUGS AND SOCKETS

160 ST/ .. and 160 BU/ ..
2 to 12 pole
cables 0.5 - 2.5 mm²

STRAIN RELIEFS FOR SHROUDED PLUGS AND SOCKETS

163/ .. ZEL and 163/ .. ABK
2 and 5 pole
cable outlet Ø 6.0 - 9.8 mm

DESIGNS

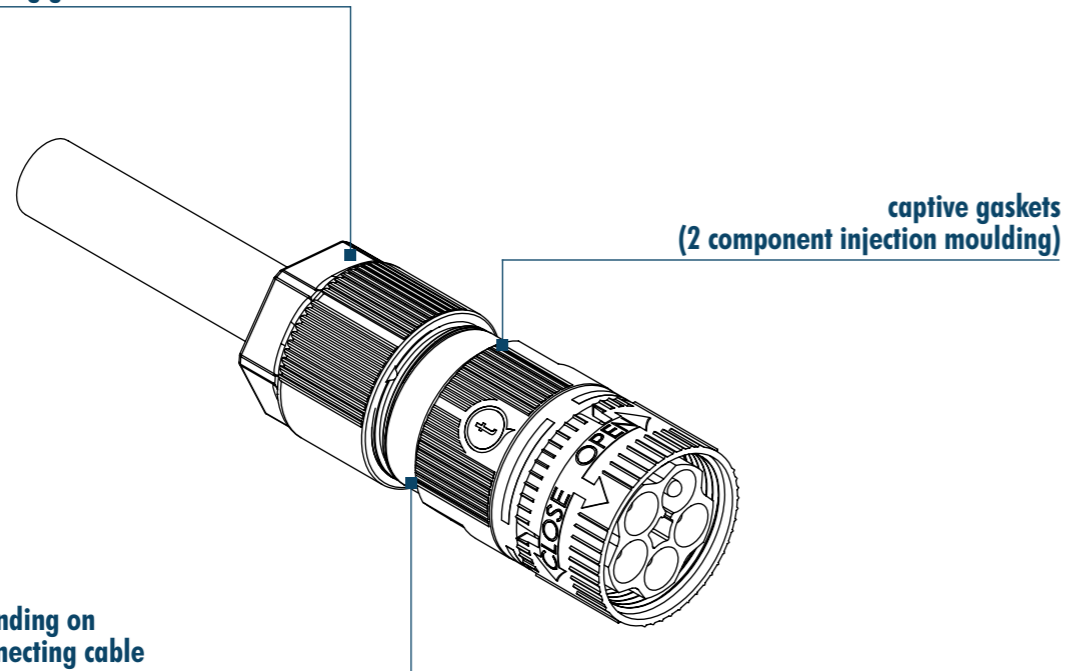
- screw terminals with and without wire protector (DS)
- application-specific insulating materials
- printing
- special screws

CIRCULAR CONNECTORS/TERMINAL BLOCKS IP68

The Safe Connection Solution against Water and Dust

CIRCULAR CONNECTORS/ TERMINAL BLOCKS IP68

safe IP68 connection by fitting gaskets



APPLICATIONS

- tunnel lighting
- green house lighting
- street lighting
- industrial lighting
- garden and park illumination

ADVANTAGES

- safe connection without the use of cast resin, gel or heat shrink tube
- plugs and sockets for "plug & play" (no cutting to length, stripping, connecting)
- connectors as cost-effective alternative for one-time connection of luminaires

three ranges of sizes depending on installation space and connecting cable



Available in Germany, Austria & Switzerland.

	17.5 A 450 V	PA 6/6, TPE UL 94: V-2	T 85 °C
0.25 - 4.0 mm ²	IP68		

Circular Connectors IP68

More information online

TO THE WEBSITE

VARIANTS AND ACCESSORIES

- connecting and extension cables
- assembly tool
- protective caps
- various sealing variants (gaskets)
- panel mount connections by screws, crimp contacts or spring terminals
- further distributor types (H and T)

additional versions

- with IP69K (upon request)
- as longitudinally watertight version



CIRCULAR PLUGS AND SOCKETS Ø 14 mm

cable connection
AC 167 RST/ .. and
AC 167 RBU/ ..
2 and 3 pole
cables 0.25 - 1.0 mm²



panel mount connection
M11/M16
AC 167 REST/ ..
2 and 3 pole
cables 0.25 - 1.0 mm²

distributors Ø 14 mm
AC 167 RVH/ 4-2
2 and 3 pole
1 input, 3 output terminals



distributors Ø 23 mm
AC 169 RVH/ ..
2 to 4 pole
1 input, 3 output terminals

CIRCULAR PLUGS AND SOCKETS Ø 23 mm

cable connection
AC 169 RST/ .. and
AC 169 RBU/ ..
2 to 5 pole
cables 0.75 - 1.5 mm²



panel mount connection
M20/M25
AC 169 REST/ .. and
AC 169 REBU/ ..
2 to 5 pole
cables 0.75 - 1.5 mm²

CIRCULAR PLUGS AND SOCKETS Ø 36.5 mm

cable connection
AC 170 RST/ .. and
AC 170 RBU/ ..
2, 3, 5 and 6 pole
cables 0.75 - 4.0 mm²



panel mount connection
TR28
AC 170 REST/ .. and
AC 170 REBU
2, 3, 5 and 6 pole
cables 0.75 - 4.0 mm²

PRODUCT RANGE

Circular Terminal Blocks IP68

More information online

TO THE WEBSITE



CIRCULAR TERMINAL BLOCKS Ø 23 mm

cable connection
AC 179 SK/ ..
2 to 4 pole
cables 0.75 - 1.5 mm²



panel mount connection
M20/M25
AC 179 SKE/ ..
2 to 4 pole
cables 0.75 - 1.5 mm²

CIRCULAR CONNECTORS/TERMINAL BLOCKS IP68

CIRCULAR TERMINAL BLOCKS Ø 32 mm

AC 180 SK/ ..
2 to 6 pole



Y-HOUSING D24/29

AC 180 SKG-Y ..



I-HOUSING D24/29

AC 180 SKG-I ..



T-HOUSING D24/29

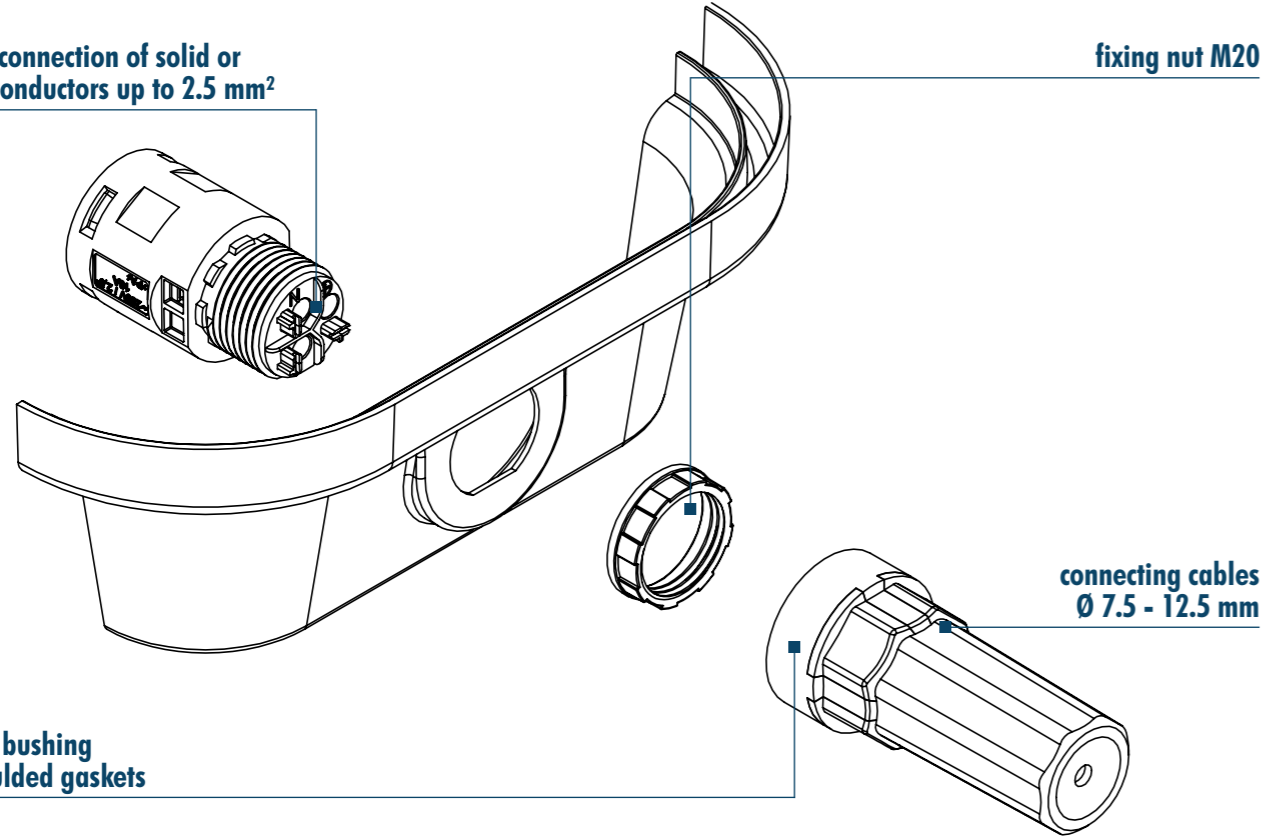
AC 180 SKG-T ..



Available in Germany, Austria & Switzerland.

Easy, Safe and Cost-Effective

external connection of solid or flexible conductors up to 2.5 mm²



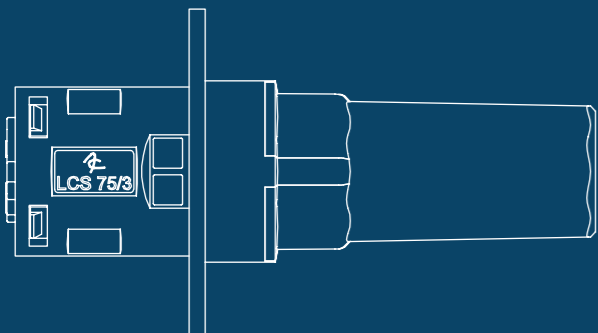
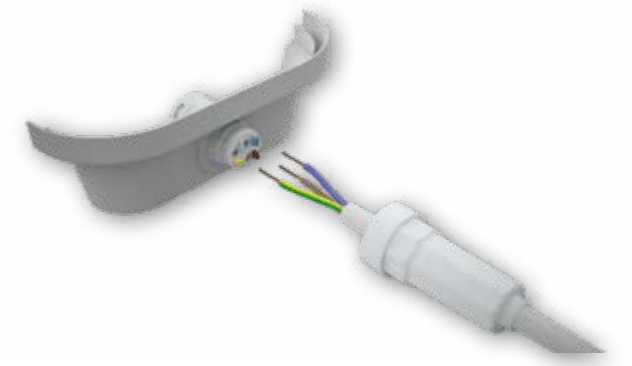
2K cable bushing with moulded gaskets



APPLICATIONS

- moisture-proof luminaires
- industrial lighting
- parking garages
- warehouses

ADVANTAGES

- extremely quick connection of moisture-proof and industrial luminaires
- no need to open the luminaire
- cost-effective by using fewer components



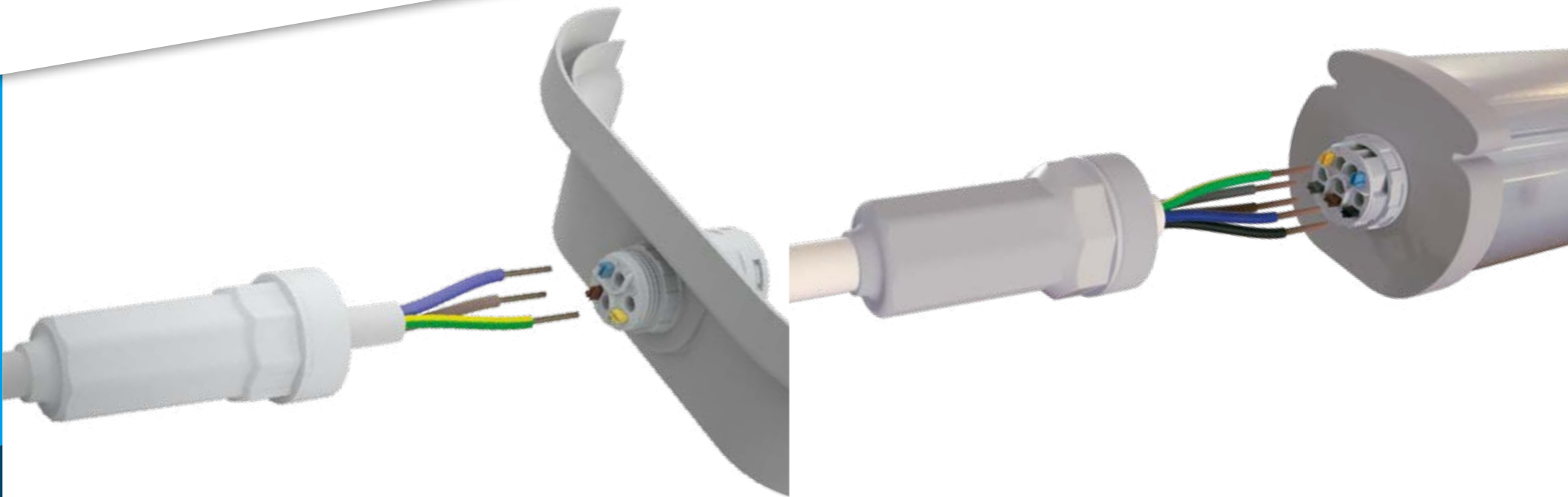
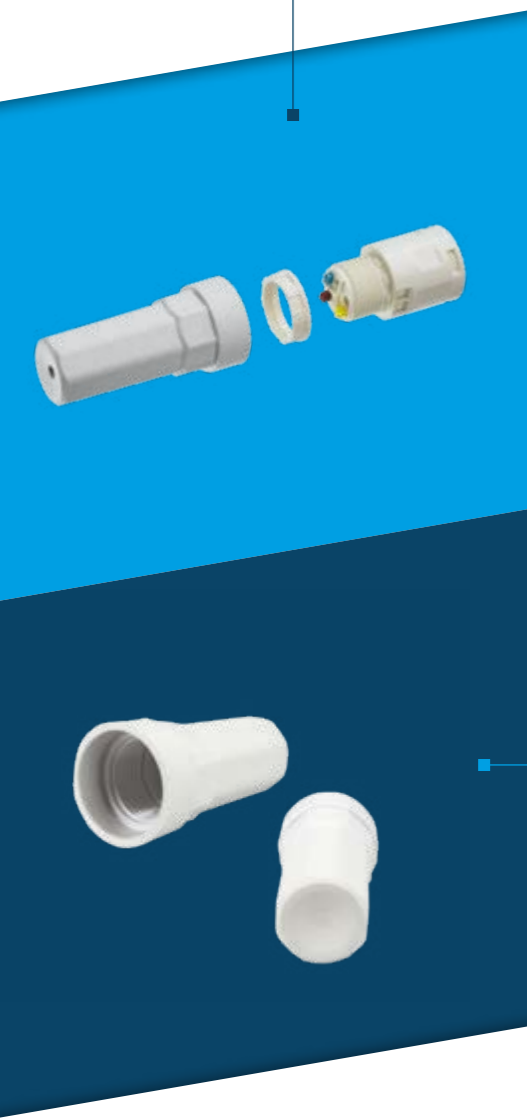
 05	 KEMA	16 A 400 V	PA 6, TPE UL 94: V-2
T 85 °C EN 60598	0.5 - 2.5 mm ²	IP66	

LIGHTING CONNECTORS IP66

LCS 75/ ..
2 and 3 pole
for diameter M20

LIGHTING CONNECTORS IP66

LCS 75
5 pole
for diameter M25



ABK 75/ 3
cover to complete
through-wiring

UPON REQUEST
assembly tool for OEM

LCS 75 – Intelligent Connection Solution for IP66 Moisture-Proof Luminaires

**NO NEED TO OPEN
THE LUMINAIRE**

DISMANTLING AND CUTTING

69 mm (PE)
60 mm (L+N)
STRIPPING
17 mm

SOLID CONDUCTORS
easy pushing in

FLEXIBLE CONDUCTORS
release key for easy handling

CLOSING THE BUSHING
maximum torque: 0.7 Nm

GROMMET
IP66

ADVANTAGES

- the LCS 75 reduces time needed for electrical installation to a minimum
- IP66: high protection – ideally suited for moisture-proof and industrial luminaires



Step-by-step installation available under
www.adels-contact.de/link/PlaylistTutorials

The Complete System for All Functions on Continuous Row Lighting Systems

APPLICATIONS

- production halls/warehouses
- industrial lighting
- super market illumination

plug-in contact by pivoting

extremely reduced total height

tap to the luminaire
by catch pin or floating

connection of
solid conductors 0.5 mm²

conductor = plug contact
1.5/2.5 mm² solid

max. 11 poles

PE contact made
automatically

ADVANTAGES

- 11 poles on a minimum space (23.5 mm x 39.5 mm)
- further connection clips upon request
- useable with aluminium profiles



	16 A/2 A 400V	PA 6/6 UL 94: V-2	ST/BU 1.5 - 2.5 mm ²	TAP 0.5 mm ²
IP20 IP40				

More information online

TO THE WEBSITE

SOCKETS

LEDtrack BU/ ..
5/7/9/11 pole



CABLE HOLDER

LEDtrack POD/11 ..
11 pole



PLUGS

LEDtrack ST/11
11 pole
with PE contact
1.5 - 2.5 mm² solid



TAP TO THE LUMINAIRE

LEDtrack TAP/11 ..
3/5/7/9 pole
fix: with catch pin
fly: for floating installation
0.5 mm² solid



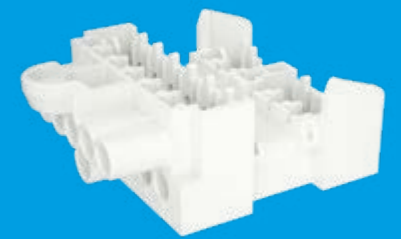
STRAIN RELIEFS

LEDtrack ZEL



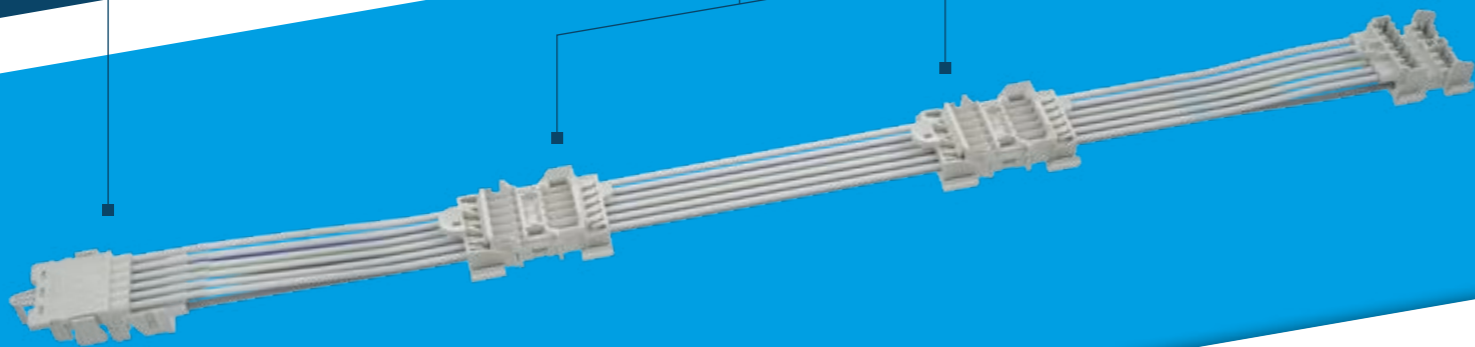
END COVERS

LEDtrack ABK



THROUGH-WIRING

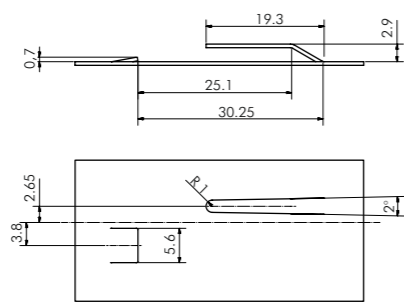
LEDtrack REEL/ .. consisting of
LEDtrack ST/11 plugs
LEDtrack BU/ .. sockets
LEDtrack POD/11 cable holders
single conductors 1.5 or 2.5 mm²
5/7/9/11 pole



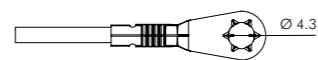
EARTHING MOUNTING RAIL PLUGS



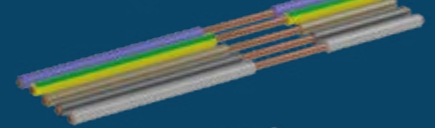
SHEET METAL PROFILES



ALUMINIUM PROFILES



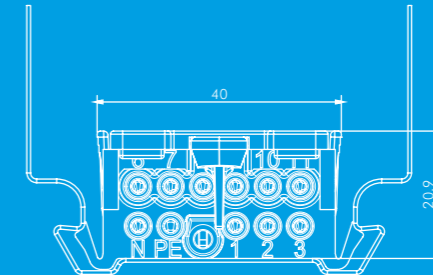
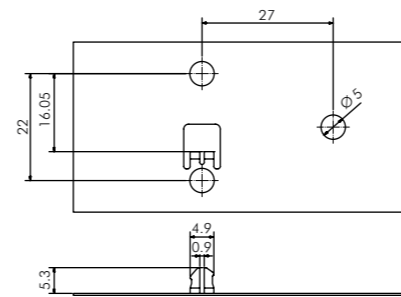
ASSEMBLY CABLE HOLDER



EARTHING LUMINAIRE INSERT



SHEET METAL PROFILES

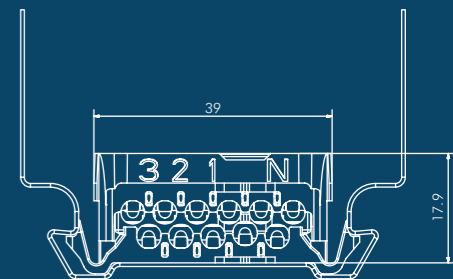
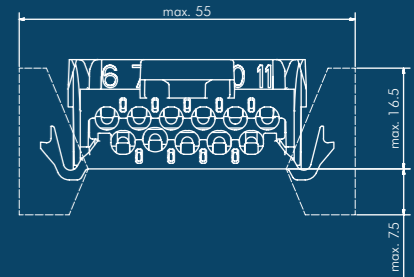


PLUGS/SOCKETS

connection clips
standard profile

MAX. SPACE WING CONTOUR

upon customer request



CABLE HOLDERS

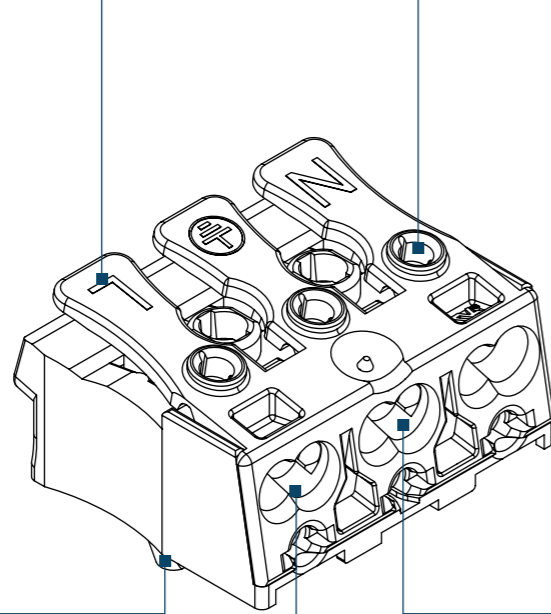
connection clips
standard profile

SCREWLESS TERMINAL BLOCKS

Push — Press — Play The Easy and Quick Connection

external release by release key

internal release by tool



fixing by catch pin,
screw or rivet

wide insertion openings

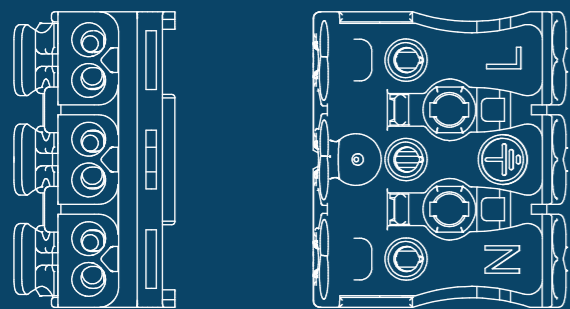
conductor terminals in upper position

APPLICATIONS

- interior lighting
- advertising lighting
- retail lighting
- industrial lighting
- object lighting
- switch cabinet heaters
- switch cabinet fans

ADVANTAGES

- quick, easy and safe assembly
- suitable for assembly by luminaire robots
- approved for elevated ambient temperatures by the use of polyamide (PA 6/6)
- further application-specified insulating materials: PA 6/6 GW (glow-wire) and PA 6/6 V-0



24 A 450 V	PA 6/6 UL 94: V-2	T 110 °C EN 60598	0.5 - 2.5 mm ²	

PRODUCT RANGE

Screwless Terminal Blocks

More information online

TO THE WEBSITE

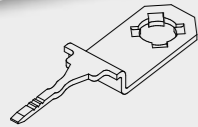
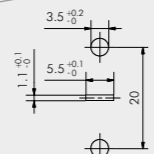
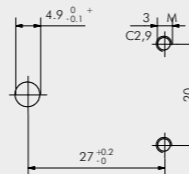
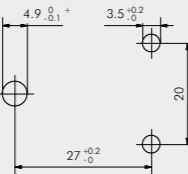
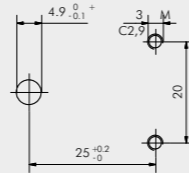
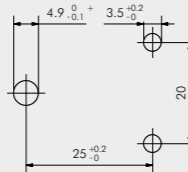
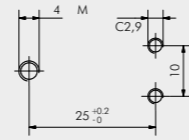
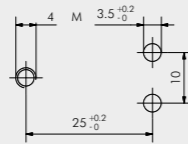
LUMINAIRE CONNECTORS

LK 980-01 RZ/ ..
with catch pins
2 to 5 pole

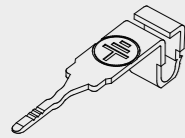


LUMINAIRE CONNECTORS

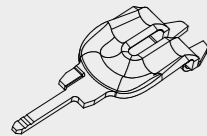
LK 980-01/ ..
for fixing by screw or rivet
2 to 5 pole



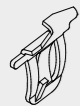
screw contact SK



contact bow ST



contact bow STW



contact claw SU

HOLE PATTERN CATCH PIN FIXING

HOLE PATTERN FIXING BY SCREW

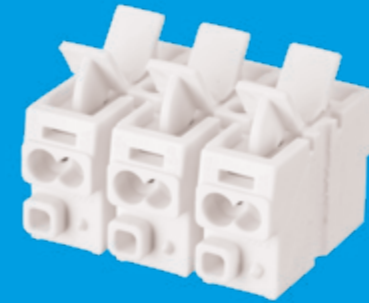
SCREWLESS TERMINAL BLOCKS

TERMINAL BLOCKS

935 5 pole
937 7 pole

TERMINAL BLOCKS

930-02/ ..
with 2 release keys
1 to 12 poles



VARIANTS

- application-specific insulating materials PA
- special printing

TERMINAL BLOCKS

930-00/ ..
without release keys
1 to 12 poles

STRAIN RELIEFS

ZEL 900
for connectors LK 980

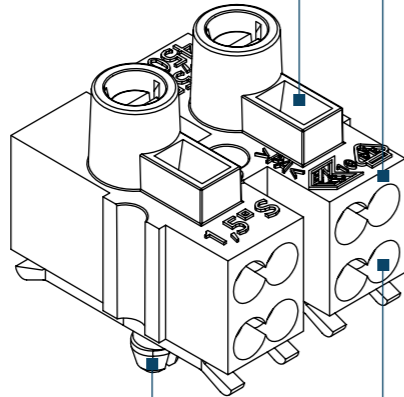
SCREW SCREWLESS TERMINAL BLOCKS

The "Hybrid Solution" in the Connectors World

SCREW SCREWLESS TERMINAL BLOCKS

testing aperture

1 to 12 pole



fixing by catch pin, rivet or screw

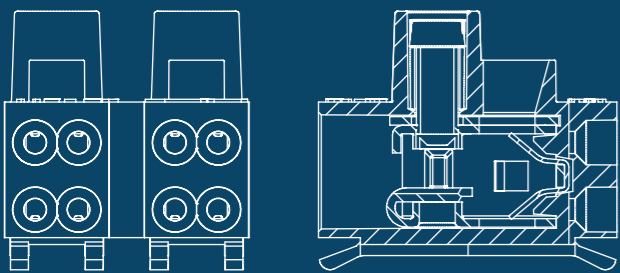
two or four terminals per pole

APPLICATIONS

- luminaires
- home appliances
- ballasts
- installation connection boxes
- mirror cabinets

ADVANTAGES

- easy, internal connection by plug-in contact
- external connection by screw
- interlockable system with fused terminal blocks



17.5 A 450 V	PA 6/6 UL 94: V-2	T 85 °C EN 60598	push-in 0.5 - 1.5 mm ²	screw 0.5 - 4.0 mm ²

More information online

TO THE WEBSITE

TERMINAL BLOCKS

900-07/ ..

900-07 RZ/ .. with catch pins



TERMINAL BLOCKS

900 ED



TERMINAL BLOCKS

900 Q/ ..

900 Q RZ/ .. with catch pins



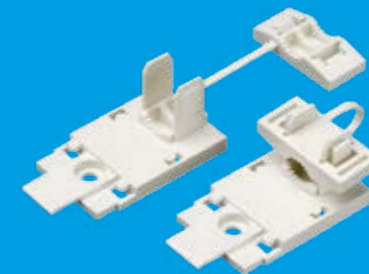
TERMINAL BLOCKS

900 EQ



VARIANTS

- pre-assembled PE contact
- printing



STRAIN RELIEFS

900 EQ ZEL

for 900 ED and EQ



INTERLOCKABLE TERMINAL BLOCKS

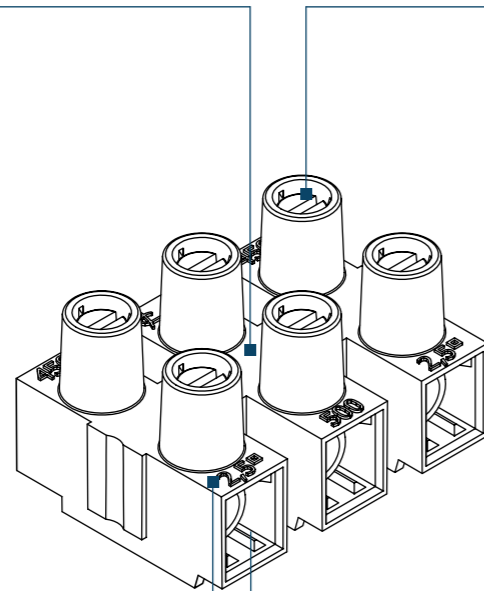
900 Q/ 1A

to interlock fused connectors

Proven Connection of Electrical Appliances and Luminaires

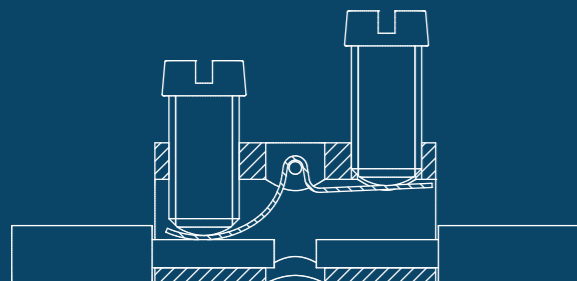
fixing by screw, rivet or catch pin

1 to 12 pole

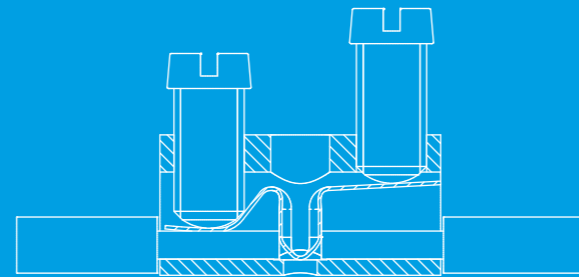


nominal cross section from 2.5 to 16 mm²

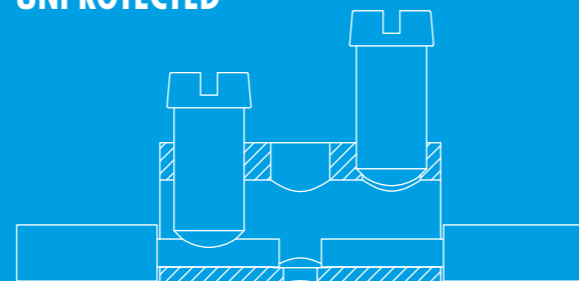
WIRE PROTECTOR (DS)
FOR FLEXIBLE CONDUCTORS



CENTER STOP (MDS)



UNPROTECTED



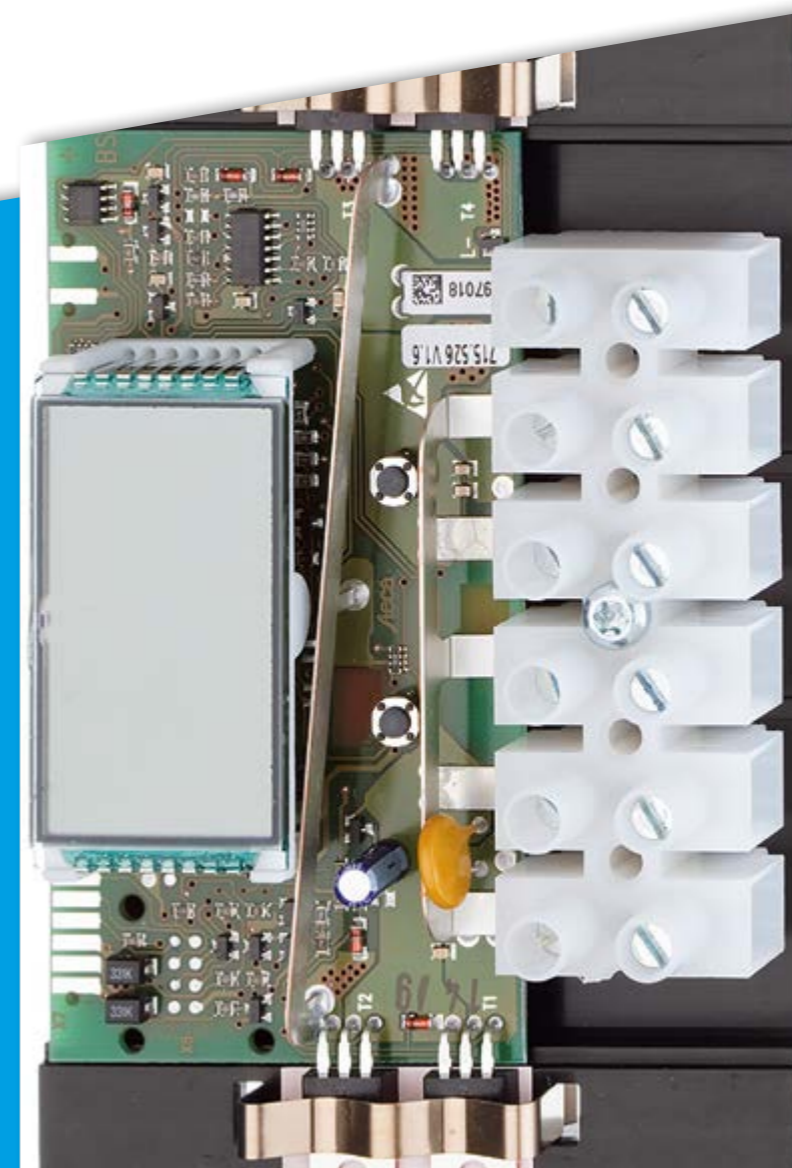
APPLICATIONS

- retail lighting
- street lighting protection class II
- industrial lighting
- object lighting with high ambient temperatures
- interior lighting
- advertising lighting
- switch cabinet lighting

- small home appliances
- large appliances, white goods
- fans
- heating and air conditioning devices
- pumps
- vending machines
- electric tools

ADVANTAGES

- robust connection and easy handling
- connection of conductors from 0.5 - 16 mm²
- application-specific insulating materials:
 - PA 6, PA 6/6, PA 6/6 HT (high temperature), PA 6/6 GW (glow-wire),
- porcelain C 111, steatite C 220
- special versions for protection class II (SK II) and with raised base (8 mm distance when connected to mains)



		16 - 40 A 150 - 750 V	2.5 - 16 mm ²	IP20
PA UL 94: V-2	T 85 °C EN 60998			
Porcelain Steatite	T 350 °C EN 60998			

PRODUCT RANGE

Screw Terminal Blocks

More information online

TO THE WEBSITE

TERMINAL BLOCKS

230/ ..	2.5 mm ² small
500/ ..	2.5 mm ²
1000/ ..	6.0 mm ²
1500/ ..	10.0 mm ²
2000/ ..	16.0 mm ²



TERMINAL BLOCKS RAISED BASE

230 K/ ..	2.5 mm ² small
500 K/ ..	2.5 mm ²
1000 K/ ..	6.0 mm ²
2000 K/ ..	16.0 mm ²



TERMINAL BLOCKS CATCH PIN FIXING

500 RZ/ ..	2.5 mm ²
500 LRZ/ ..	2.5 mm ² elongated catch pins



TERMINAL BLOCKS PROTECTION CLASS II

500 SK II/ ..	2.5 mm ²
500 SKT II/ ..	2.5 mm ² with bushes



STEATITE TERMINAL BLOCKS

131/2	6.0 mm ²
-------	---------------------



SCREW TERMINAL BLOCKS

PORCELAIN TERMINAL BLOCKS

157/ ..	2.5 mm ²
153/2	2.5 mm ²
PM/ ..	6.0 mm ²



VARIANTS

- application-specific insulating materials PA
- printing
- special screws
- partly fitted



MARKING LABELS

230 BZ/ ..	for terminal blocks 230/ ..
500 BZ/ ..	for terminal blocks 500/ ..
1000 BZ/ ..	for terminal blocks 1000/ ..

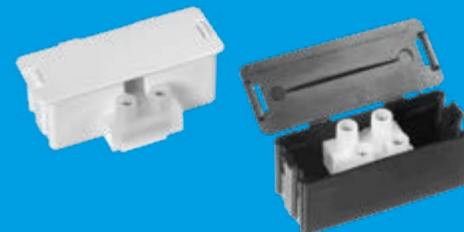
STRAIN RELIEFS

ZEL 110 for all connector types



CONNECTING BOX

LCB 50/ .. for connectors 500/ ..

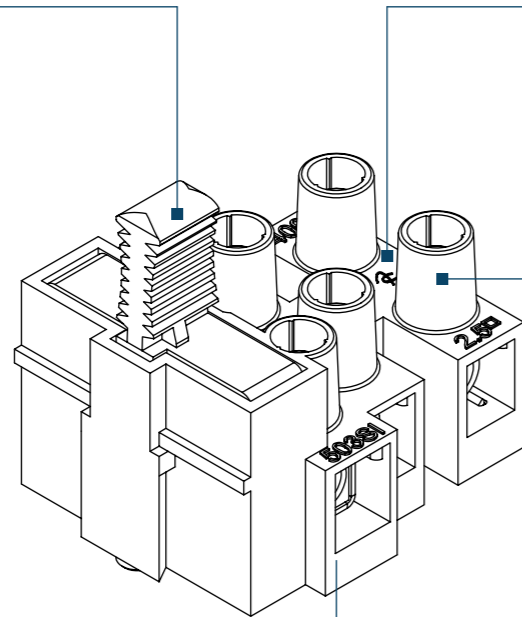


Protection of Sensitive Luminaires and Appliances

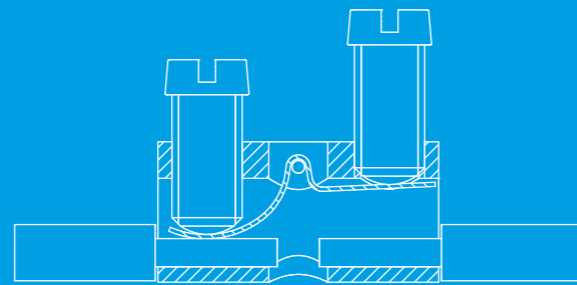
fuse holder

fixing by screw or rivet

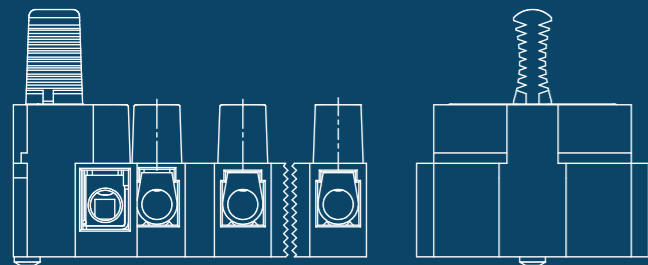
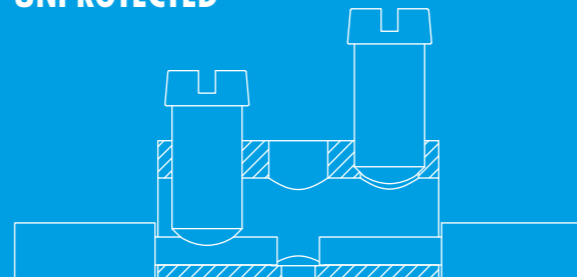
1 to 5 pole



WIRE PROTECTOR (DS) FOR FLEXIBLE CONDUCTORS



UNPROTECTED



APPLICATIONS

- valuable luminaires
- fully-automatic coffee machines
- control systems for storage water heaters



ADVANTAGES

- protection via live conductors
- for 3 dimensions of standard glass fuses
- connection of conductors from 0.5 to 10.0 mm²
- special versions for PE contact to the base plate



			16 - 41 A 400 - 500 V
PA 6/6, PA 6/6 GW UL 94: V-2	T 85 °C EN 60598	0.5 - 4.0 mm ²	

More information online

TO THE WEBSITE

SCREW TERMINAL BLOCKS

503 Si/ .. 2.5 mm²

1003 Si/ .. 4 mm²

1 to 5 pole

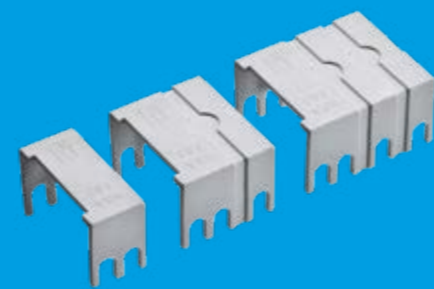


SCREW SCREWLESS TERMINAL BLOCKS

900 Si/ 1

1 pole

interlockable



COVERS

ABK 503/ ..

for terminal blocks 503 Si

VARIANTS

- further insulating materials PA
- pre-assembled fuses
- raised bases allowing longer creepage distances
- printing
- center stop (MDS)



Safe Connection of Small and Control Transformers

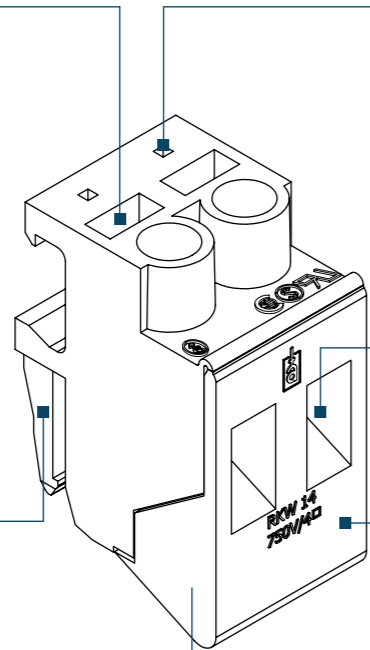
testing aperture

holes for marking labels

nominal cross section
4.0 mm² and 16 mm²

snap-on to the winding frame

1 and 2 pole,
partly interlockable



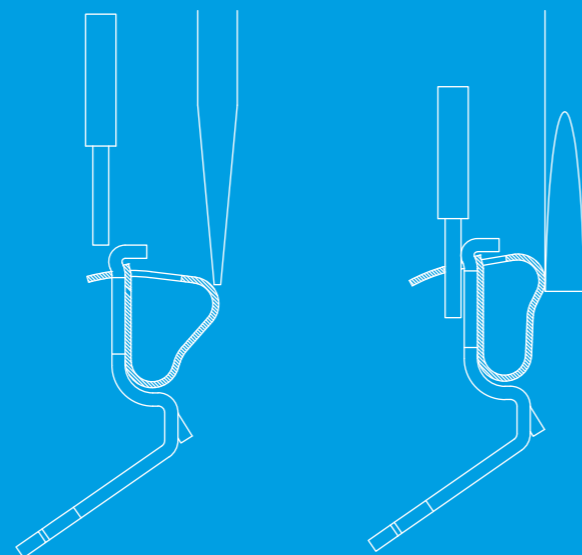
APPLICATIONS

- transformers
- mains filter
- testing equipment

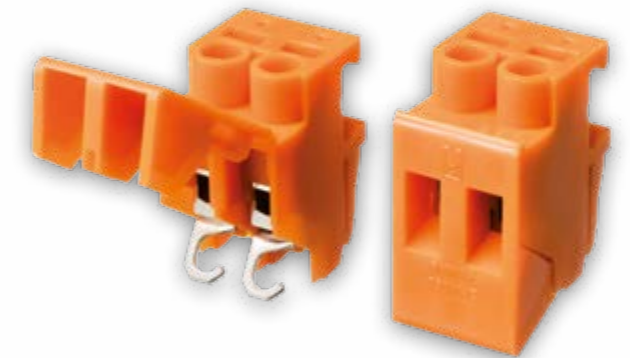
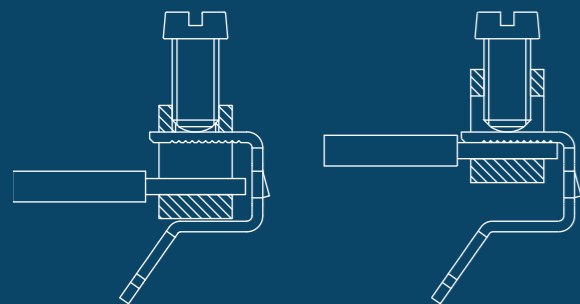
ADVANTAGES

- external connection optionally with or without screws
- reliable fit on the winding frame
- connection of conductors from 0.5 to 16.0 mm²
- connection provided for blade receptacles

SPRING CAGE (SCREWLESS)



LIFT TERMINALS



			32 - 76 A 600 - 750 V	PA 6/6 UL 94: V-2
T 85 °C EN 61558	0.5 - 16 mm ²			

PRODUCT RANGE

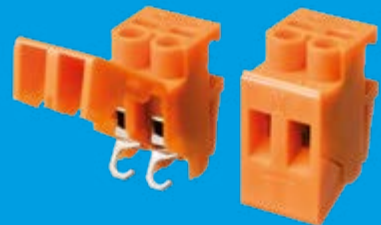
Transformer Connectors

More information online [TO THE WEBSITE](#)

WITH LIFT TERMINALS

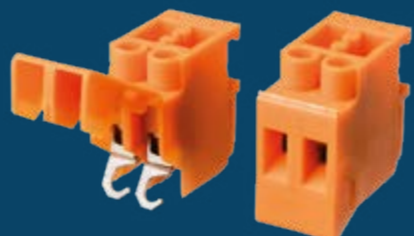
CONNECTORS 4.0 mm²

RKW 14 mini O/ ..
small design
1 and 2 pole



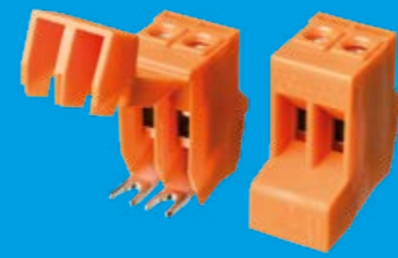
CONNECTORS 4.0 mm²

RKW 14 FO/ ..
with tabs
1 and 2 pole



CONNECTORS 16.0 mm²

RKW 110/ 2
2 pole



FUSED CONNECTORS

RKW 14 Si O- ..
1 pole



CONNECTORS 4.0 mm²

TC 2523/ ..
1 and 3 pole
interlockable



FUSED CONNECTORS

TC 2523 Si- ..
1 pole
interlockable



MARKING LABELS

BZ 14 ..



FEED-THROUGH CONNECTORS

4.0 mm²

DK 4 O
1 pole
interlockable

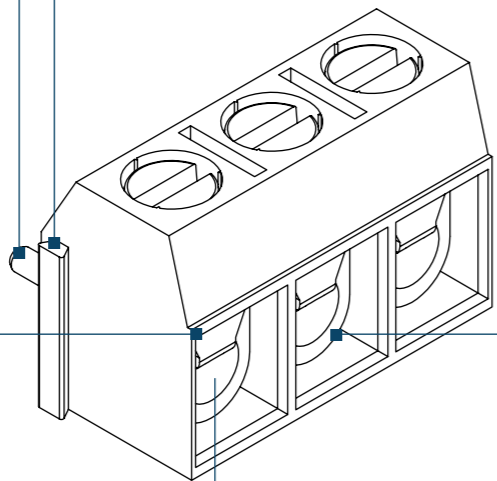
Pinpoint Accuracy in Spacing and Special Solutions – our Strength

horizontal or vertical solder pins

dovetail for interlocking

nominal cross section 1.0 to 2.5 mm²

2 to 24 pole



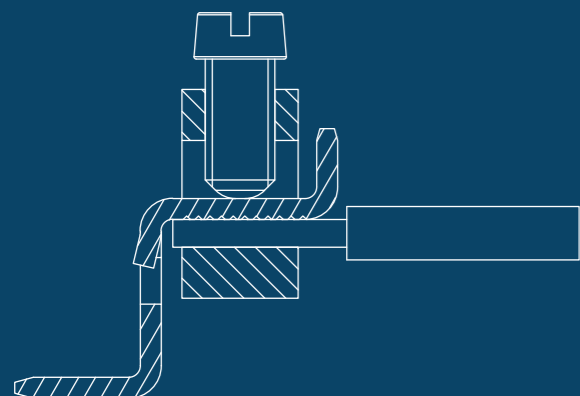
APPLICATIONS

- printed circuit boards
- LED drivers
- automation technology
- measurement and control technology

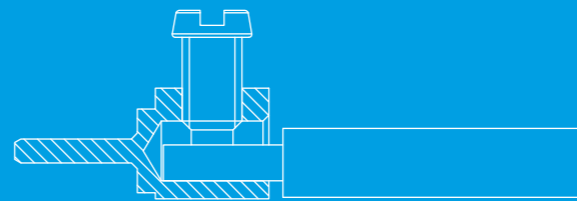
ADVANTAGES

- pinpoint accuracy in spacing and long life by PBT material
- numerous variants
- connection of conductors from 1.0 to 4.0 mm²
- safe and PCB-friendly connection by lift terminals

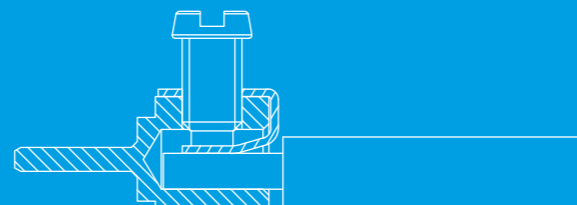
LIFT TERMINALS



UNPROTECTED



WIRE PROTECTOR (DS)



			13.5 - 24 A 130 - 250 V
PBT UL 94: V-0	T 60 °C EN 61984	0.5 - 2.5 mm ²	

More information online

TO THE WEBSITE

PBT TERMINAL BLOCKS

horizontal connection

GSK 720 H/ ..

pin spacing 3,5/7.0

GSK 820 H/ ..

GSK 830 H/ ..

GSK 840 H/ ..

pin spacing 5.0/10.0



PBT TERMINAL BLOCKS

GSK 845/ ..

pin spacing 5.0/10.0

conductors connected at 45°



PBT TERMINAL BLOCKS

GSK 852/ ..

pin spacing 5.0/10.0

2 terminals per pole



PBT CONNECTORS FEMALE HEADERS

GSK 760/.. pin spacing 3.5/7.0

GSK 860/.. pin spacing 5.0/10.0

GSK 864/.. pin spacing 5.08/10.16

GSK 865/.. pin spacing 5.08/10.16



VARIANTS

- further colours
- bridged poles
- irregular spacings
- different solder pin lengths

PBT TERMINAL BLOCKS

vertical connection

GSK 720 V/ ..

pin spacing 3.5/7.0

GSK 820 V/ ..

GSK 830 V/ ..

GSK 840 V/ ..

pin spacing 5.0/10.0



PA CONNECTORS

GSK 805/ ..

pin spacing 10.0

connection by clamping piece or tab



PA CONNECTORS

GSK 801/ ..

pin spacing 10.0



VERTICAL HEADERS

GST 760 V/..

GST 860 V/..

GST 864 V/..

GST 865 V/..



HORIZONTAL HEADERS

GST 760 H/..

GST 860 H/..

GST 864 H/..

GST 865 H/..



More information online

TO THE WEBSITE

TECHNICAL INFORMATION
Codings AC 166®

	Coding No.	3 POLE		4 POLE		5 POLE	
		Colour	Application	Colour	Application	Colour	Application
HIGH PLUGS AND SOCKETS	1	black/white/ coral red	mains	black/white	mains		
	2	pebble grey/ brilliant red	mains				
	4	brown	control				
	5	pastel blue	DALI				
	7	dark grey	SK II				
PANEL MOUNT PLUGS AND SOCKETS	1	black/white/ coral red	mains	black/white	mains	black/white	mains
	2	pebble grey/ brilliant red	mains			pastel blue	DALI
	3	light red	ignition cable				
	4	brown	control				
	5	pastel blue	DALI				
	6	green	mains				
	7	dark grey	SK II				
SOLDER PLUGS AND SOCKETS	1	black/white/ coral red	mains	black/white	mains		
	2	pebble grey/ brilliant red	mains				
	5	pastel blue	DALI				
CABLES/FLAT PLUGS AND SOCKETS	1	black/white/ coral red	mains	black/white	mains	black/white	mains
	2	pebble grey/ brilliant red	mains			pastel blue	DALI
	3	light red	ignition cable				
	4	brown	control				
	5	pastel blue	DALI				
	6	green	mains				
	7	dark grey	SK II				
DISTRIBUTORS	1	black/white	mains	black/white	mains	black/white	mains
	2					pastel blue	DALI

TECHNICAL INFORMATION
Codings AC 164

	Coding No.	2 POLE		3 AND 4 POLE		5 POLE	
		Colour	Application	Colour	Application	Colour	Application
HIGH PLUGS AND SOCKETS	1	black/white	mains	black/white	mains	black/white	mains
	2	pastel blue	DALI			pastel blue	DALI
PANEL MOUNT PLUGS AND SOCKETS	1	black/white	mains	black/white	mains	black/white	mains
	2	pastel blue	DALI			pastel blue	DALI
CABLES/FLAT PLUGS AND SOCKETS	1	black/white	mains	black/white	mains	black/white	mains
	2	pastel blue	DALI			pastel blue	DALI
DISTRIBUTORS	1	black/white	mains	black/white	mains	black/white	
	2	pastel blue	DALI			pastel blue	DALI

Characteristics of the Insulating Materials

Application	Particular Properties
POLYAMIDES	
PA 6 PA 6.6 PA 6.6-HT	connectors and connecting systems of the standard line e. g. AC 164 and AC 166® connectors and connecting systems for use in periodically high ambient temperatures e. g. 500 HT
	high insulation, shatter-proof, asbestos and halogen-free, corrosion-proof, resistant against weather, ozone, UV radiation, solvents, oil, fat
PA6-GW	terminal blocks and connectors for use in household appliances and similar purposes to EN 60 335-1 e. g. 503 Si
	high fire resistance GWIT 775°C/ 0.8-1.3 fibre-glass-free, halogen-free
OTHERS	
PPA-GF Polyphthalamide	SMD terminal blocks e. g. SMDflat 345
	resistant against high soldering temperatures (reflow soldering)
PBT Polybutylene	PCB terminal blocks, PCB connectors e. g. GSK 840
	dimensionally stable, true to spacing
PC Polycarbonate	Strain reliefs ZEL 110 and ZEL 900
	high dimensional accuracy, high weathering resistance, resistant against high-energy rays (UV)
PORCELAIN/ STEATITE	connectors for use in periodically extremely high ambient temperatures e. g. 131 or 157
	high temperature resistant, even when touched, resistant to age and UV radiation
TPE Thermoplastic Elastomer	gaskets against the ingress of dust and moisture e. g. AC 169 and LCS 75
	high protection against dust and moisture
PS Polystyrene	marking labels e. g. 500 BZ
	extremely fine contours, can be produced with flat surfaces and straight edges.

IP Codes

PROTECTION CODE	Against the Intrusion of Dust First Digit IP_x	Against the Intrusion of Water Second Digit IP_x_
0	unprotected	unprotected
1	protected against solid objects dia 50.0 mm and more	protected against dripping water
2	protected against solid objects dia 12.5 mm and more	protected against dripping water when the enclosure is tilted up to 15°
3	protected against solid objects dia 2.5 mm and more	protected against spraying water
4	protected against solid objects dia 1.0 mm and more	protected against splashing water
5	protected against dust	protected against water jets
6	dust tight	protected against powerful water jets
7	-	protected against harmful effect when being temporarily immersed in water
8	-	protected against harmful effect when being permanently immersed in water
9K	-	protected against close-range high pressure, high temperature spray downs

TECHNICAL INFORMATION

Regulations Applicable for the Use of Our Products

POWER INSTALLATIONS IN GENERAL		VDE 0100/..	erection of power installations with nominal voltages up to 1000 V
		VDE 0110/..	insulation co-ordination for equipment within low-voltage systems
	EN 50274	VDE 0660/..	protection against electric shock
	EN 60529	VDE 0470/..	degrees of protection provided by enclosures (IP Code)
	EN 60695/..	VDE 0471/..	fire hazard testing
CONNECTORS IN GENERAL	EN 60998/..	VDE 0613/..	connecting devices for low voltage circuits
	EN 60999/..	VDE 0609/..	requirements for clamping units for electrical copper conductors
	EN 60947-7-4	VDE 0611-7-4	Low-voltage switchgear and controlgear – Part 7-4: Ancillary equipment – PCB terminal blocks for copper conductors
PLUG AND SOCKET CONNECTORS IN GENERAL	EN 60320/..	VDE 0625/..	appliance couples for household and similar purpose
	EN 61535	VDE 0606-200	Installation couplers intended for permanent connection in fixed installations
	EN 61984	VDE 0627	connectors - safety regulations and testing
UTILITY DEVICES	EN 60335/..	VDE 0700/..	safety of household and similar electrical appliances
	EN 60598/..	VDE 0711	luminaires – requirements and testing
	EN 60921/..	VDE 0712/..	specification for accessories to hot- and cold cathode fluorescent lamps - ballasts
	EN 61558/..	VDE 0570/..	safety of transformers, power supply units and the like
TOLERANCES	DIN 7168		general tolerances for linear and angular dimensions and geometrical tolerances (not to be used for new designs)
	DIN ISO 2768 part 1		general tolerances; tolerances for linear and angular dimensions without individual tolerance indications
	DIN ISO 2768 part 2		general tolerances; geometrical tolerances for features without individual tolerances indications
	DIN 16742		Plastics moulded parts - Tolerances and acceptance conditions
	DIN 40680 part 1		ceramic components for electrical purposes; admissible tolerances
	DIN 40680 part 2		ceramic components for electrical purposes; form tolerances

RELEVANT GLOW WIRE TESTS

to EN 60335-1:

Standard for household and similar electrical appliances

- further glow wire tests for mouldings that are positioned 3 mm next to current carrying parts
- test carried out on a component
 - › to EN 60695-2-11 “GWT 750 °C”
 - › temperature of glow wire 750 °C
 - › contact time of glow wire 30 seconds
 - › flame extinguishes within 2 seconds max.
- (alternatively) test carried out on a test board
 - › EN 60695-2-13 “GWIT 775 °C”
 - › temperature of glow wire 775 °C
 - › contact time of glow wire 30 seconds
 - › flame extinguishes within 5 seconds max.

to EN 60998-1:

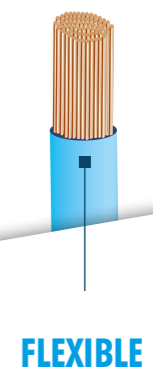
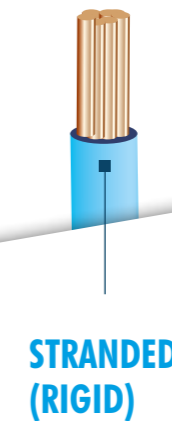
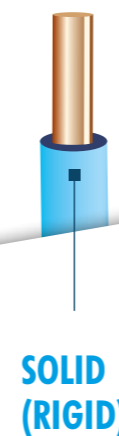
Connecting devices for low voltage circuit

- test on mouldings that keep current-carrying parts in their position
- obligatory tests in order to obtain a VDE certificate for connecting devices
- test carried out on a component
 - › temperature of glow wire 850 °C
 - › contact time of glow wire: 5 seconds
 - › flame extinguishes 30 seconds after removal of the glow wire

TECHNICAL INFORMATION

Configuration and Dimensions of Connecting Cables: Extract from DIN VDE 0295

Nominal Cross Section mm ²	SOLID		STRANDED		FLEXIBLE		American Wire Gauge (AWG) to EN 60204 Part 1						
	Ø max.	No. of Wires	Ø max.	No. of Wires	Ø max.	No. of Wires	AWG	solid			flexible		
								Ø mm	circ mils	mm ²	Ø mm	circ mils	mm ²
0.5	0.9	1	1.1	7	1.1	16	20	0.81	1.022	0.52	0.97	1.111	0.56
0.75	1.0	1	1.2	7	1.3	24	18	1.02	1.520	0.82	1.15	1.600	0.82
1.0	1.2	1	1.4	7	1.5	32	(17)	1.15	2.050	1.04			
-	-	-	-	-	-	-	16	1.29	2.580	1.31	1.50	2.580	1.32
1.5	1.5	1	1.7	7	1.8	30	(15)	1.45	3.260	1.65			
-	-	-	-	-	-	-	14	1.63	4.110	2.03	1.85	4.100	2.09
2.5	1.9	1	2.2	7	2.6	50	(13)	1.83	5.180	2.63			
-	-	-	-	-	-	-	12	2.05	6.530	3.31	2.41	6.500	3.32
4.0	2.4	1	2.7	7	3.2	56	(11)	2.30	8.230	4.17			
-	-	-	-	-	-	-	10	2.59	10.380	5.25	2.95	10.530	5.37
6.0	2.9	1	3.3	7	3.9	84	(9)	2.91	13.100	6.63			
-	-	-	-	-	-	-	8	3.26	16.510	8.37	3.73	16.625	8.48
10.0	3.7	1	4.2	7	5.1	80	(7)	3.67	20.800	10.58	4.15	20.820	10.55
-	-	-	-	-	-	-	6	4.12	26.240	13.30	4.67	26.250	13.39
16.0	4.6	1	5.3	7	6.3	126	(5)	4.62	33.100	16.77	5.24	33.100	16.77
-	-	-	-	-	-	-	4	5.19	41.740	21.15	5.95	41.650	21.24
25.0	-	-	6.6	7	7.8	196	(3)	5.83	52.600	26.67	6.61	52.630	26.67
35.0	-	-	7.9	7	9.2	276	2	6.54	66.360	33.62	7.42	66.150	33.74



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