WALTHER-WERKE®
FORTSCHRITT SEIT 1897

PROCON INDUSTRIAL CONNECTORS
FOR INDIVIDUAL REQUIREMENTS WITHIN NORTH AMERICA

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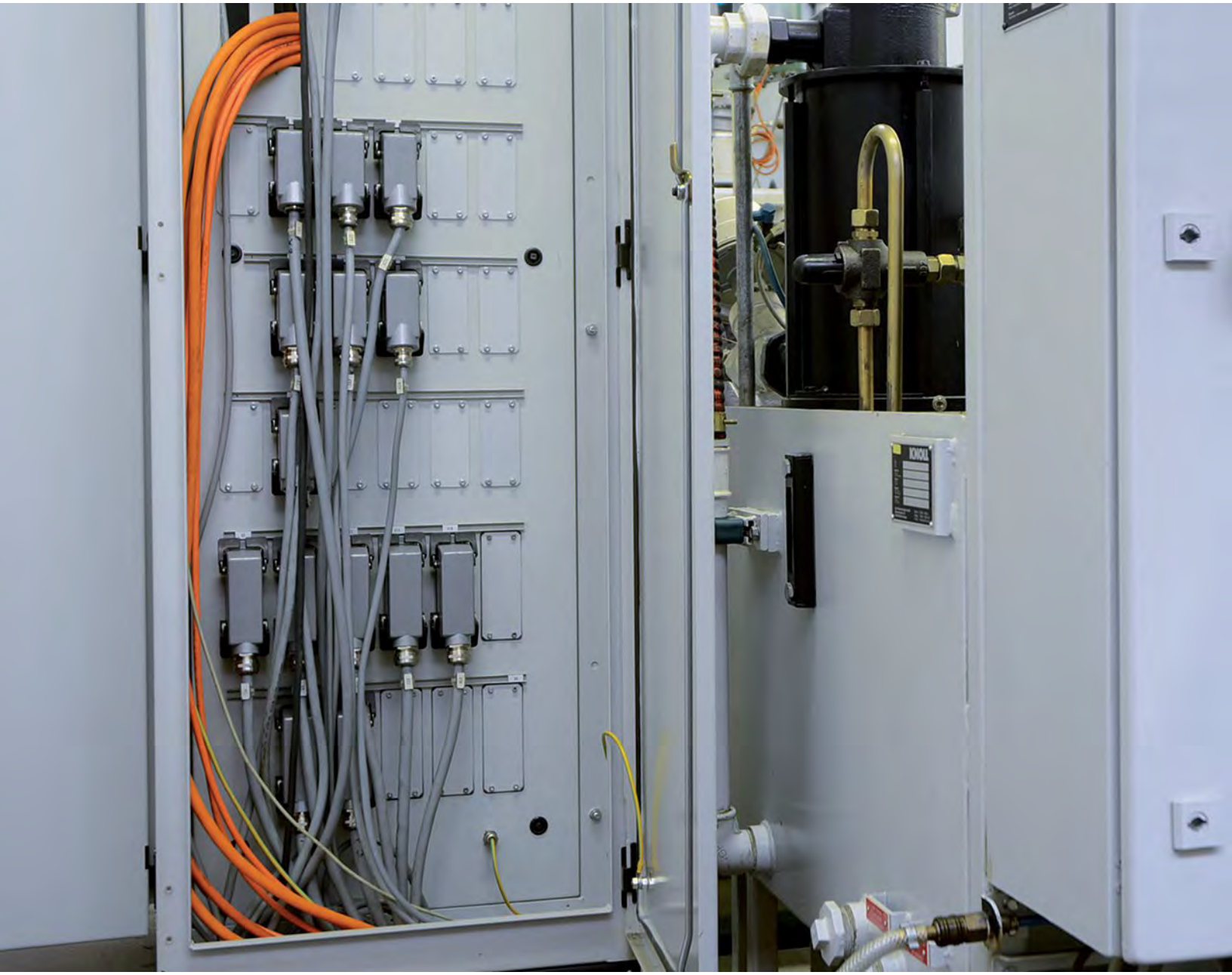
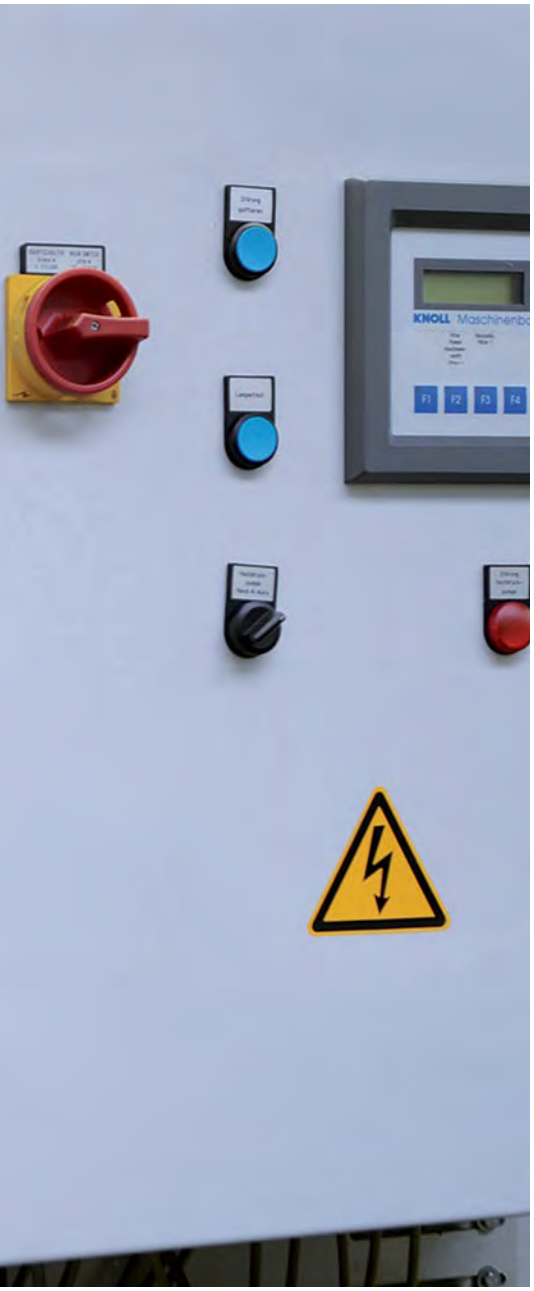
All specifications are subject to change without notice. Consult a Walther Electric Engineer for the latest specifications or speak with a member of our Customer Care Team +1 (800) 925-8437.

Updates will be posted www.walther-werke.de and/or www.waltherelectric.com

For prices, please refer to our current trade price lists.

Technical Information	4-18	1
Housings	19-31	2
Inserts	32-34	3
Contact & Coding Parts | Accessories	35-37	4
Adapters | Connectors	38-41	5
Specifications	42	6
New Product Announcement	46	7
Additional Walther Power Solutions	47	8





SIGNAL AND POWER TRANSMISSION WITH PROCON INDUSTRIAL CONNECTORS

The industrial connector range is made up of housings and inserts. Wall mount, panel and coupler hoods, as well as hoods of the A3-A32 and B6-B48 series are available in aluminum, zinc and plastic. All series can be equipped with different types of locking systems (double, single, and central locking systems).

The glass-fiber reinforced plastic inserts can accommodate from 3 to 280 contacts and be designed as crimp, screw, push-in or IDC connections. Depending on the inserts' use, special high-current, high-voltage or high-temperature inserts are available. If using modular inserts, up to 80 A or 1,000 Volt can be transferred. The system also offers the option of using coaxial, RJ45, universal or Profibus and pneumatic modules.

HOUSINGS

		A3	A10	A16	A32	B6	B10	B16	B24	B32	B48
		Available In All Locking Systems Listed Below									
Wall Mount Housing without Hinged Cover											
Wall Mount Housing with Hinged Cover											
Panel Housings without Hinged Cover											
Panel Housings with Hinged Cover											
Hoods without Locking Level											
Hoods with Locking Lever											
Coupler Hoods											
Screw-Mountable Hoods											
Bayonet-Type Hoods											
Material		Plastic		Zinc		Standard Alu		Sea Water Alu			

LOCKING SYSTEMS (Protection degree acc. to DIN EN 60 529)

DUST TIGHT IP65 LOW PRESSURE			DUST TIGHT IP68 WT - MARINE	DUST TIGHT IP67 WATERTIGHT
				
Double Locking System	Single Locking System	ONE TOUCH	Screw Locked	Bayonet Lock

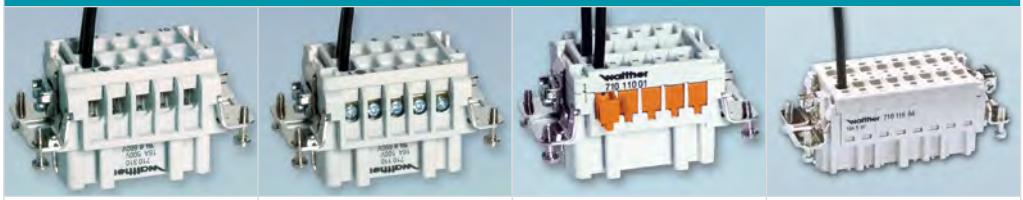
CABLE GLANDS

					
Pressure Glands, with gasket ring to be peeled, with pressure rings	**Complete Cable Glands** brass, nickel-plated	**Special Cable Glands** brass, nickel-plated	**Pressure Glands** with strain relief; brass, nickel-plated	**Blanking Plugs** brass, nickel-plated	**EMC Cable Glands** brass, nickel-plated

INSERTS

Series	3-poles up to 280-poles		Ampere	Volt AC	Number of poles	Terminal Type	Terminal Cross Section
	Sleeve	Sleeve Pin					
A			10	250/400 V	3 - 32	Screw	0.5 - 1.5
					5 - 32	Crimp	0.14 - 2.5
B			16	500 V	6 - 48	Screw Push-In Stripped	0.5 - 2.5
BB			16	500 V	10 - 92	Crimp	0.14 - 4.0
BHT			16	500 V	6 - 24	Screw	0.5 - 2.5
BA			35	690 V	6 - 12	Screw	0.5 - 6.0
BV			16	690 V	3 - 32	Screw	0.5 -2.5
D			10	250 V	7 - 128	Crimp	0.14 - 2.5
DD			10	250 V	24 - 216	Crimp	0.14 - 2.5
MO			max. 80	max. 1000v	3 - 280	Screw Crimp	0.09 - 10.0

CONNECTION TYPES



Crimp Terminal (Contact Carrier)	Screw Type Terminal*	Screwless Connection (IDC terminals)	Push-in Connection (Push wire design)
26-14 AWG (0.14-4 mm²)	20-14 AWG (0.5-2.5 mm²)	20-14 AWG (0.5-2.5 mm²)	20-14 AWG (0.5-2.5 mm²)

** Screw terminal inserts require Pozidriv PZ 0 (series A) and Pozidriv PZ 1 (series B) screwdriver bits*

714406
Panel Housing with Flap Lid

Contacts Carriers (standard)

Material	Glass-fiber reinforced polyamide
Temp Range	-40 °C up to +125 °C
Flame Class Rating	V0
Mechanical Operating Life	≥500 mating cycles

Contact Carriers (special)

Material	Highly heat-resistant polyamide
Temp Range	up to +180 °C
Flame Class Rating	V0
Mechanical Operating Life	≥500 mating cycles

Contacts

Material	Copper alloy hard silver-plated
Surface	3 µm Ag, hard gold-plated 2 µm Au placed on top of 3 µm N

THE PROCON INDUSTRIAL CONNECTORS SYSTEM

The rapid economic development in the fifties of the past century – especially in the construction of machines and industrial plants – required a so far unknown flexibility. The continuous adaptations to the "latest state of the art" required a quick changeover to modified or new devices.

It soon became obvious that only auto- mated plants could provide the necessary precision and quality. Automated processes within machines and systems required equipment which was able to permanently control the processes and update the measuring data. The wiring systems used previously were no longer able to meet these requirements.

This led to the development of rectangular heavy duty connectors. This type of construction offers the best possible use of space for different contact arrangements which determine the different series. In addition, the rectangular form is ideal for an easy and space-saving assembly in machine recesses, in profile steels and switch cabinets.

Within the PROCON industrial connector system, one housing is not only assigned to one series. Rather, the system can accommodate sleeve contact carriers or pin contact carriers of different series.

Instead of plugs and sockets, housings for socket and pin contact carriers are used. Thus, the electrical designer can always apply the potential to a sleeve contact in case of reverse voltage danger in open controllers.

The PROCON series differ regarding their rated electrical characteristics. Specifications like rated current, rated voltage, rated surge, pollution degree, contact resistance, and temperature range are determined by the design of the contact carriers.

For details please refer to the specification sheets of the individual series. Basic similarities are the termination methods, which apply to all series.

To receive a complete connector, the following individual components have to be ordered:

Hoods
Low or high design, with side or top cable entry 2 locking levers.

Pin Insert
with screw or crimp terminals *(please order contacts separately)*, insulation displacement connection or push-in terminals (spring clamps).

Socket Insert
with screw or crimp terminals *(please order contacts separately)*, insulation displacement connection or push-in terminals (spring clamps).

Housing Base
- Panel housing, with or without protective cap, made of plastic or metal, with 1 or 2 locking levers.
- Wall mount housing, low or high design, with or without protective cap, made of plastic or metal, with 1 or 2 locking levers, with 1 or 2 cable outlets
- Coupler hoods for flying connections

Accessories
Various cable glands, separately available protective caps, coding pins and guiding pins for coding

Regulations and Approvals

PROCON connectors are produced in compliance with:

- DIN VDE 0627
- DIN VDE 0110
- IEC 60 664-1
- DIN EN 61 984
- DIN EN 60 529
- DIN EN 175 301-801
- DIN/IEC 512

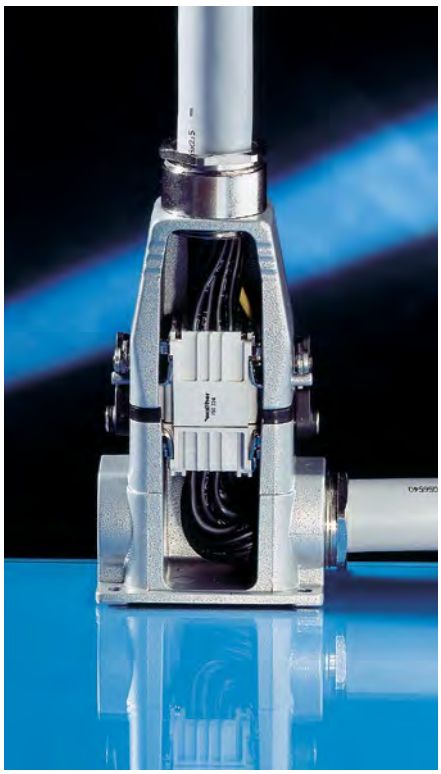
CE marking

Acc. to the European Commission, as electronic components, PROCON industrial connectors do not have to be identified with the CE mark (Guidelines on the Application of Council Directive 73/23/EEC - July 1997).

The majority of the PROCON industrial connectors listed currently have the following approvals, some of which are valid for several countries:

Advantages of PROCON Industrial Connectors

- Easy operation due to ingenious locking system
- Ergonomically designed handles
- Large wiring space - due to different housing sizes
- Clearly legible black contact numbers on the inserts
- Open, captive screws for easy mounting of contact inserts
- Housings with high-quality powder coating
- Easy and space-saving assembly in machine recesses, profile steels and switch cabinets
- Fixing dimensions indicated on the housing base
- Plant components can be mounted independently at different locations and then be assembled on-site. Then all electric connections only have to be plugged together
- Various coding options for PROCON connectors with the same number of poles and series absolutely prevent incorrect connection
- Parts of a system can be easily removed for maintenance tasks or for testing at other locations and can be quickly replaced if required
- With PROCON industrial connectors the on-site startup of plants can be precisely scheduled.
- Quality assurance acc. to DIN EN ISO 9001
- Made in Germany



APPLICATION AREAS OF PROCON INDUSTRIAL CONNECTORS

PROCON industrial connectors are used in process measuring and control technology as well as in machinery and plant engineering. The connectors are used for power supply and control in equal measure. They are also used for tasks in lighting and stage technology.

PROCON industrial connectors also serve as interfaces for PCs and diagnostic equipment to transmit operating or monitoring data during the system's operation.

e.g. switch cabinet design

Screw Mountable Hoods

This alternative does not require the installation of a panel housing. Two inexpensive mounting flanges are attached to the switch cabinet wall using two screws. Next, the insert is mounted in the flanges, the assembled hood is slipped on and fastened using two M6 screws. Protection degree IP68. Available either with top or side cable entry on the hood.

Adapter and Cover Plates

Standardization in the switch cabinet sector has also involved new developments in the sector of industrial connectors. The advantage of the plug-in system can be ensured only if the panel can be removed from the switch cabinet. Therefore, it is necessary that all connections can be easily disconnected from the panel and that the designations on the panels are clearly defined (interfaces, e.g. V 24, RS 485). For this purpose, adapter plates for subminiature connectors are used, which make it possible to mount the contact carriers into the PROCON housing.

The disconnectable outlets from the switch cabinets are carried out with panel housings. The switch cabinets have side walls with pre-punched rectangular cutouts for the panel housing B 24. If panel housings of other series are required, they can be adapted to the existing cutout by means of adapter plates. Additionally cover plates can be used, which enable a later upgrade of the switch cabinet.

Wiring Adapter, Combi Snap Element

Special contact carriers with wiring adapters are available for the panel housings. They allow direct measuring during operation, they are clear to mark and easily accessible. Together with the combi snap element, the wiring adapters can be mounted on DIN rails and are therefore suitable for use inside the switch cabinets.

Snap-on Mounting Adapters

Snap-on mounting adapters replace terminal blocks at those locations where the exits lead to peripheral sub-assemblies or components. Like terminal blocks, they can be mounted on DIN rails. A particular advantage is the swiveling contact carrier mounting plate, which allows completely unobstructed access to the terminals of the contact carriers when swiveled out, thus enabling measurements during operation.

In addition, the base of the snap-on mounting adapter offers enough space to accommodate assigned electronic units like optocouplers, protective diodes, filters, and similar functions.

The biggest advantage is a disconnectable but nevertheless safe connection of pin and socket insert.

PROCON Housings

Permanently installed housings

- Wall mount housings with one or two cable entries
- Panel housings with one opening in the bottom for installation in the switch cabinet

Independent housings

- Hoods
- Coupler hoods

The user can choose from a large number of different housing heights. On the one hand, in order to provide a sufficiently large connection space for large conductor cross-sections, and on the other hand, so that the heat loss that occurs is dissipated via the larger surface area of the connection space.

Double width PROCON housing (series A 32, B 32 and B 48) for universal applications allow the accommodation of two contact inserts/carriers - e.g. two series BA 6 inserts or one series DD 72 insert - together in one housing. This allows for example the simultaneous transmission of 6 x 35 A power and 72 x signal or control impulses.

Locking systems

Within the different series, PROCON housings are also available with various locking systems. Therefore, the user can choose the suitable locking systems for his requirements.

These locking systems are available:

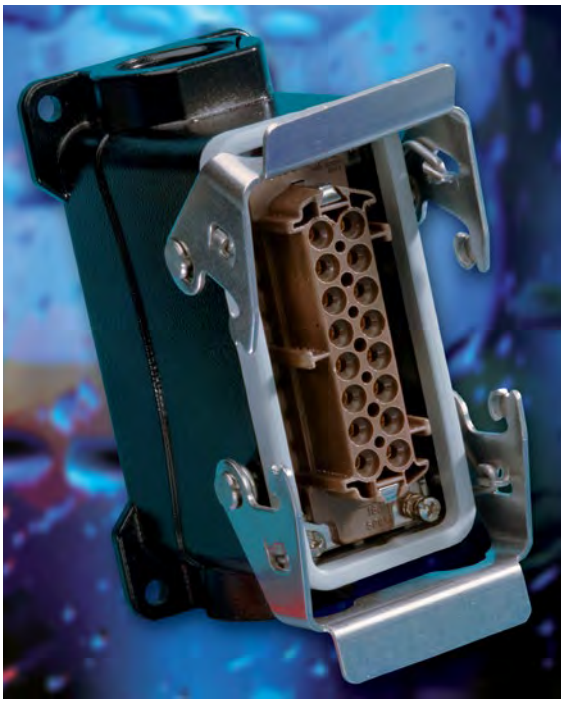
- Double locking system, IP 65
- Single locking system, IP 65
- Screw locking system, IP 68
- Bayonet locking system, IP 67

The levers of the double and single locking system can be attached at the housing bases. Housing bases with double locking system can only be covered with loose protective covers.

On housing bases with single locking lever, the protective cover (plastic or aluminum) can be fixed with hinges and it can be closed tightly with a single locking lever if the connection is separated.

The screw lock (two M 6 screws) is fastened with a screwdriver. Since tools are required, this makes it difficult for unauthorized persons to open the device. Here, protective covers are available, both for the switch cabinet and the hoods.

On housing tops, also double locking levers can be attached. These can be snapped onto the latch pins of the housing bases. Furthermore, protective covers can be fixed with hinges on the housing bases. These covers, however, are not lockable.

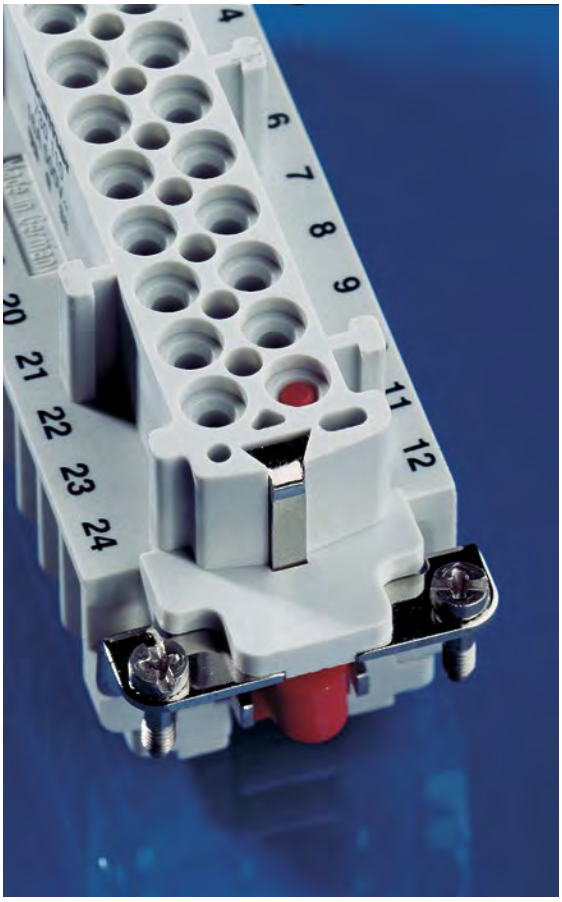


Series B HT

Series B HT inserts are made of special temperature resistant plastic material, suitable for temperatures up to max. 180 °C incl. self-heating.

The housings of series B HT can also accommodate inserts of other series. This solution is suitable when there is no heat problem, but the application site requires a special aluminum alloy due to severe environmental conditions.

The housings of the B HT series are made of a seawater-resistant special die-cast aluminum alloy; the gaskets are made of Viton and are temperature-resistant up to 200 °C. Locking levers are made of stainless steel.



Series BV

The housings of the BV series are no standard housings. The ribs on the two end walls of the housings have to be removed so that the inserts of series BV (which are provided with a lateral build-in blocking) can be installed. In addition, there are isolating strips at the inner sides of the long housing walls.

Due to the lateral build-in blocking, the male and female inserts can not be installed in standard housings.

The female inserts are provided with two insertion blockings which prevents plugging with series B inserts.

Termination methods

Screw Type Terminal with Wire Protection

Prevents the slipping out and cutting off of wires in a flexible cable.

Screw Type Terminal without Wire Protection

Used in installations with prewired cables with pin cable lugs or crimp type pin terminals.

The screw terminal is quick and easy to operate and therefore the most widely used. The quality of the connection, however, depends very much on the thoroughness of the user. In addition, strong vibrations can also influence the quality of the screw connection.

Top: Crimp Terminal
Bottom: Crimping tools (see Accessories on page 37)

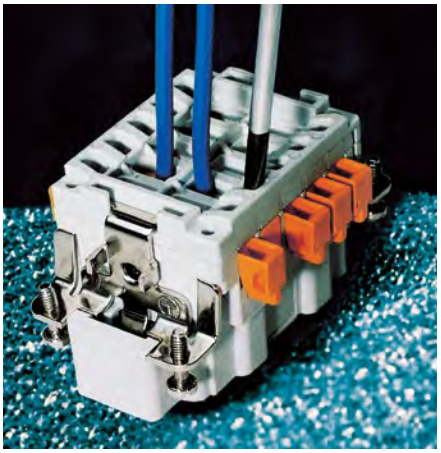
Crimp Terminal

At present, the most perfect way to establish electrical connections is with crimp technique.

Conductors and contacts are exactly coordinated to each other; the crimping tool can be adjusted exactly to the conductor cross section. This ensures that the electrical connection is always uniform and, in case of doubt, reproducible and independent of the user.

The crimp is gas-tight, preventing oxygen from entering at the current transfer point; this prevents any corrosion and ensures a constantly low contact resistance.

Crimp connections can be made manually, semi-automatically or fully automatically. There are crimp contacts without stop spring (the stop spring is mounted into the contact carrier), and crimp contacts with stop spring (the stop spring is mounted on the contact).



IDC Terminals

When using inserts with IDC* terminals, the cable – which has not been stripped – is simply inserted into the opened contact sleeve. Now, the slider with build-in blade is pushed shut (using a screwdriver) - done.

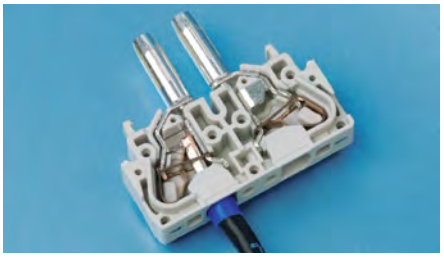
Coding

In addition to the known coding systems there is a simple and inexpensive plug-in coding part available. Depending on the size of the pin or sleeve insert, you can use two, four or eight coding pins.

The advantages at a glance

- no stripping of wires
- no wire end ferrules
- no screws
- Saves up to 60% connection time
- Testing point inside the slide
- No splitting of wires when using flexible conductors
- Compatible with screw and crimp contact inside inserts of series B

** IDC = Insulation displacement connection*



Push-in Terminal

Inserts with push-in terminals have a square wire entry (not rectangular); thus, the wire can be inserted either way.

Flexible wires with wire end ferrule or rigid wires can be plugged directly into the push-in contact inserts, without any tools.

Coding

As in the case of inserts with insulation displacement technology, coding is also carried out by means of simple and inexpensive plug-in coding.

The advantages at a glance

- square wire entry
- 2 mm testing point
- reduced time & effort when connecting wires
- easy, quick and inexpensive coding
- screws made of stainless steel (V2A)

General Information

When selecting connectors, it is not only current or voltage ratings that need to be considered, but also functionality and number of contacts. Consideration of the place of application and the prevailing installation conditions there is also of great importance. This means that depending on the installation conditions according to the standardization, there can be different voltage and current indications for one connector.

Technical Terms

Clearance

Shortest distance in the air between two conducting parts (see DIN VDE 0110-1, section 1.3.2). The clearances are predetermined by the rated surge.

Creepage Distance

Shortest distance along the surface of an insulating material between two conducting parts (see DIN VDE 0110-1, section 1.3.3). The creepage distances depend on the rated voltage, the pollution degree and the properties of the insulating material. See diagram below.

Rated Voltage

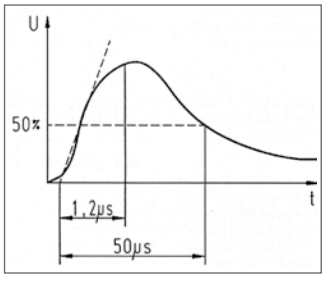
Fixed voltage value to which working value and power value are referenced. A connector may have more than one value of the rated voltage or one range of the rated voltage.

Rated Surge

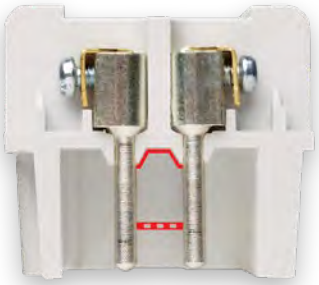
The rated surge is determined by means of the surge category and the rated voltage of the network. It directly determines the value of the tests for surge withstand capacity of the connector (voltage in wave form in 1.2/50 µs acc. to IEC 60 060-1). See diagram below.

Rated Current

Fixed current (preferably at an ambient temperature of 40°C) which a connector can permanently carry (without interruption) and which flows simultaneously through all its contacts which are connected to the largest possible conductors specified, whereas the upper limiting temperature is not being exceeded. The dependence of the rated current on the ambient temperature is shown in the respective derating diagrams.



Rated Surge



Creepage Distance

Transient Surges

Short-period surges with a duration of some milliseconds or less, oscillating or non oscillating, normally highly damped (see DIN VDE 0110 1, section 1.3.7.2). The surge can be caused by a failure, a switching operation, a lightning discharge, or it can be an intentionally generated surge which is necessary for the functioning of a device, respectively component.

Test Voltages

DIN EN 61984, excerpt from table 8

Impulse withstand voltage kV (1.2/50 µs)	Power frequency withstand voltage kV (50/60 Hz)
0.5	0.37
0.8	0.50
1.5	0.84
2.5	1.39
4	2.21
6	3.31
8	4.26
12	6.6

Power Frequency Withstand Voltage

Is a surge as alternating voltage (50/60 Hz). When testing the voltage sustaining capability, it is applied for one minute. The test values in context with the rated surge are shown in the excerpt of table 8, DIN EN 61 984.

CTI Value

(Comparative Tracking Index)

This value informs about the conductivity of insulating materials and affects the default value of creepage distances. The CTI value has an influence on the creepage distance. The higher the value, the shorter the creepage distance can turn out. By means of the CTI value, plastics can be divided into insulation material groups.

Allocation of insulation material groups:

I	600 < CTI
II	400 < CTI <600
IIIa	175 < CTI <400
IIIb	100 < CTI <175

Protection Degree acc. to IEC 60 529

The protection degree describes the leak tightness of housings, e.g. for electrical facilities. It ranges from IP 00 up to IP 68. The standard protection degree of WALTHER industrial connectors is IP 65.

Derating Diagram acc. to DIN EN 60 512

The diagrams show the maximum current-carrying capacity of components. The display format is a curve, showing the current in dependence on the ambient temperature. The current capacity is limited by the thermal properties of both contacts and insulating parts, having an upper limiting temperature which should not be exceeded.

Pollution Degree

The rating of equipment depends on the ambient conditions. Possibly occurring pollutions affect their potential conductivity, combined with humidity they affect the insulating capacity of their surfaces. Over the creepage distance, the pollution degree has an influence on the component construction. For open, unprotected insulations, the pollution degree is defined by means of the ambient conditions.

By default, all PROCON industrial connectors are designed for pollution degree 3.

Pollution Degree 1: For clean, dry, air-conditioned areas (e.g., computing machinery and measuring devices).

Pollution Degree 2: For residential or commercial rooms where condensation may cause temporary conductivity (e.g., clean workshops, salesrooms, and laboratories).

Pollution Degree 3: For industrial, commercial, and agricultural premises (e.g., unheated storerooms and assembly machines).

Pollution Degree 4: For outdoor locations (e.g., devices on wagon roofs of locomotives or tramways).

Excerpt of DIN VDE 0110-1 resp. IEC 60 664-1, section 2.5.1

Pollution Degree 1: No pollution or only dry, non-conducting pollution is occurring. The pollution has no influence.

Pollution Degree 2: Only non-conducting pollution is occurring. Occasionally, however, temporary conductivity caused by condensation has to be expected.

Pollution Degree 3: Conductive pollution or dry, non-conducting pollution is occurring, which becomes conductive because condensation has to be expected.

Pollution Degree 4: The pollution leads to permanent conductivity caused by conductive dust, rain or snow.

Surge Category

The surge category depends on the power supply voltage and the mounting place of a device. It describes the maximum surge withstand capability of the device during a failure in the power supply system, e.g. in case of a lightning strike.

Via the clearance, the surge category has an influence on the component dimensioning. According to standardization, there are 4 surge categories.

Devices for industrial use, e.g. WALTHER Industrial Connectors, fall in surge category III.

Excerpt from DIN VDE 0110-1 resp. IEC 60 664-1, section 2.2.2.1.1

Surge Category I: Devices which are meant for connection to the fixed installation of a building. Outside the device, measures have been taken to limit the transient surges to the respective value, either inside the fixed installation or between the fixed installation and the device.

Surge Category II: Devices which are meant for connection to the fixed electrical installation of a building; e.g. household appliances, portable tools and similar consumers.

Surge Category III: Devices which are part of the fixed installation and devices for which a higher degree of availability is expected. Examples: Distribution boards, power switches, distributions (IEV 826-06-01, including cables, busbars, distribution boxes, switches, sockets) in the fixed installation and devices for industrial use as well as stationary motors which are permanently connected to the fixed installation.

Surge Category IV: Equipment intended for use at or near the feeders into the electrical installation of buildings, viewed from the main distribution board in the direction towards the power supply, e.g. electricity meters, overcurrent circuit breakers and ripple control devices.

Rated voltage of the power supply system (≤ Rated insulation voltage of the equipment)					Preferred values for the rated surge in kV (1,2/50µs)			
					Surge Category			
					I	II	III	IV
Voltage phase-earth, deduced from the rated voltages of the alternating voltage (effective value) or DC voltage	Effective Value of Voltage:				Special Protected Levels	Levels for Electrical Devices (household devices and others)	Levels for Distribution Circuits Others	Levels on the Input of the Systems
	DC 	Alt 	Alt/DC	Alt/DC 				
100	66/115	66	60	-	0,5	0,8	1,5	2,5
150	120/208; 127/220	115; 120; 127	110; 120	220-110; 240-120	0,8	1,5	2,5	4
300	220/380; 230/400;240/415; 260/440; 277/480	220; 230; 240; 260; 277	220	440-220	1,5	2,5	4	6
600	347/600; 380/660; 400/690; 415/720; 480/830	347; 380; 400; 415; 440; 480; 500; 577; 600	480	960-480	2,5	4	6	8
1000	-	660; 690; 720; 830; 1000	1000	-	4	6	8	12

Rated surge (DIN EN 61 984, table 5)

Technical Information

Current-carrying Capacity (Derating Curve)

The checking of the current-carrying capacity of electrical-mechanical components is prescribed in the DIN IEC 512 T3. Each contact of the component must be able to withstand the specified current for five hours with the specified conductor cross section and a conductor length of at least 500 mm, without hereby exceeding the specified temperature rise compared with the ambient temperature. The materials used determine the upper limiting temperature. Due to variations of both components and material properties, a parabolic base curve is obtained which must be multiplied with a correction factor of 0.8. The connected conductor cross section determines the maximum permissible current.

The curves shown in the catalog are already corrected curves. With these curves you can find out the permissible current which may flow simultaneously through each of the contacts. In practice, however, rarely all of the contacts are loaded equally. This makes it possible to allow higher currents to flow even in isolated cases when less than 20 % of the total is loaded.

Contact Resistance

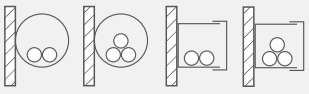
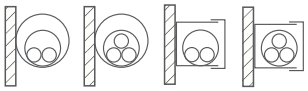
When connectors are used under maximum rating conditions, the influence of the contact resistance is relatively low. Even extremely corroded silver-plated pin and sleeve contacts rarely cause any contact problems. However, small currents under extreme environmental conditions react differently, e.g. in electroplating works, tunnels, or when cellulose is being processed. The silver oxide layer on the surface of the contacts forms an electrical resistance with capacitive, inductive and ohmic components and distorts the signal curves in such a way that the downstream receiver can no longer detect the signals this results in considerable interference that is very difficult to locate. In such cases, gold-plated contacts are recommended.

With currents < 4 mA and voltages - 5V, the use of gold-plated contacts is highly recommended.

Short Circuit Strength and High Starting Currents

Series	Short Circuit Current (A)					
	Overload Duration (s)					
	1	0.25	0.5	1	2.5	5
D, DD	380	220	170	120	75	55
A3, 4	800	480	320	230	140	95
A, B, BV	1100	710	590	360	230	165
BA	3100	1700	1200	800	540	360

Current-Carrying Capacity of Copper Conductors (in A)

Cross Section (mm^2)		Installation Type									
		0.25	0.34	0.5	0.75	1	1.5	2.5	4	6	10
	B 1 Conductors in protective conduits and installation channels	-	-	-	7.6	10.4	13.5	18.3	25.0	32.0	44.0
	B 2 Cables and lines in protective conduits or installation channels	-	-	-	-	9.6	12.0	16.5	23.0	29.0	40.0
	C Cables and lines on walls	4.0	5.0	7.1	9.1	11.7	15.2	21.0	28.0	36.0	50.0
	E Cables and lines on cable trays	4.0	5.0	7.1	9.1	11.5	16.1	22.0	30.0	37.0	52.0

Special Regulation for Connectors

If certain preconditions are considered, the standard for connectors offers the possibility to apply a lower pollution degree than that of the entire installation; i.e. that in an environment with pollution degree 3, connectors with the electrical data acc. to pollution degree 2 may be used. Basis here of is DIN EN 61 984, section 6.19.2.2.

Excerpt from DIN EN 61 984, section 6.19.2.2

In case of a connector with minimum protection degree IP54 acc. to IEC 60 529, the isolating parts inside the encapsulation may be rated for a lower pollution degree.

This applies also for connectors whose encapsulation is ensured by the connector housing and which are only separated for test/ maintenance purposes.

These conditions are fulfilled by:

- a connector with a minimum protection degree of IP54 (IEC 60 529)
- a connector built into the housing, and this connector is disconnected only as described in the standard for testing and maintenance purposes
- a connector built into the housing, and this connector is protected by a protective cover with at least IP54 in the disconnected state
- a connector with at least IP54 built inside a switch cabinet.

A separated connector being exposed to industrial atmosphere for an undefined period of time does not belong to these conditions. Please note that pollution can also adversely affect the connector from inside a system.

Selecting Pollution Degree 2 for Connectors

Application examples:

- Connectors on a motor drive,in which case the connector is only disconnected to replace a defective motor, however otherwise a pollution degree 3 would be required for the system.
- Connectors on a modular designed machine, which are only disconnected for transport purposes and are used for faster assembly and safe commissioning. During transport, the connectors must be shielded against pollution by applying protective covers or using adequate packaging in order to safeguard the system.
- Connectors within a switch cabinet with IP54. In this case an IP54 housing for the connector is not required.

Specifications of Electrical Data

The specifications of electrical data for connectors are made according to DIN EN 61 984. Example of an identification for use in a network that is not grounded or a grounded delta network:

Please reference:
https://www.din.de/en/about-standards/din-standards

Rated current ..... **16 A**
Rated voltage ..... **500 V**
Rated surge ..... **6 kV**
Pollution degree **3**

Example of an identification for the exclusive use in a grounded network (see page 15, table 5 of DIN EN 61 984):

Rated current **10**
Rated voltage conductor - earth **A230**
Rated voltage conductor - conductor ..... **400 V**
Rated surge ..... **4 kV**
Pollution degree **3**

Changeover from PG to M

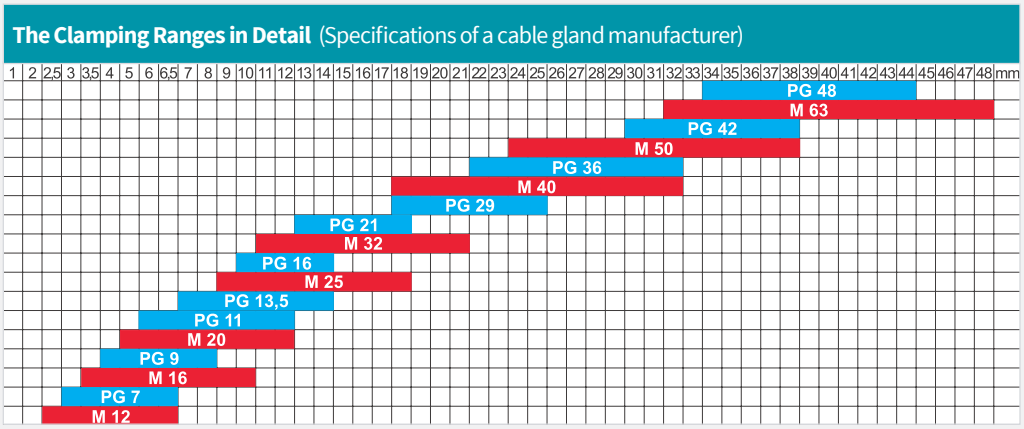
Basis for the changeover of our housings from the PG to the metric system is the international metric standard. **DIN EN 50 262: The PG range is replaced by the metric range.**

The outside diameters of the threads do now correspond to the system measures of the mentioned standard – this means a considerable simplification: Now the cable gland designation concretely indicates the outside diameter in mm.

For example, M 20 stands for 20 mm outside diameter of the thread.

Housings with metric threads can be identified by the Ⓜ on the surface.

The following cross reference table from PG to M threads is a result of the given housing dimensions.

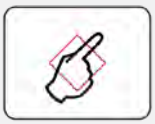
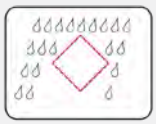
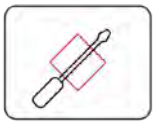
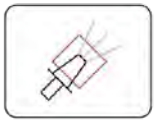
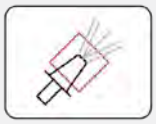
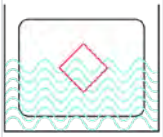
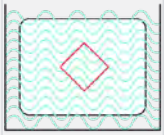


Cross reference table

PG	M
PG 11	
PG 13.5	M 20
PG 16	
PG 21	M 25
PG 29	M 32
PG 36	M 40
PG 42	M 50

As a result of the cross reference, the maximum are becoming smaller due to the use of the metric threads.

IP Protection Degrees

Code Letters International Protection	First Index Figure protection against solid foreign bodies				Second Index Figure Protection against water			
	Index Figure	Degree of Protection			Index Figure	Degree of Protection		
IP	0	No protection	-	No protection against accidental contact, no protection against Foreign bodies	0	No protection against water	-	No protection against water
	1	Protection against large foreign bodies		Protection against contact with a large area by hand and against foreign bodies Ø > 12 mm	1	Drip proof		Protection against vertical water drips
	2	Protection against medium sized foreign bodies		Protection against contact with fingers and against foreign bodies Ø > 12 mm	2	Drip proof		Protection against diagonally falling water drops (at any angle, up to 15° to the vertical
	3	Protection against small foreign bodies		Protection against tools, wires, or similar objects with Ø > 2.5 mm and against foreign bodies Ø > 12 mm	3	Spray proof		Protection against spray water from any angle, up to 60° to the vertical
	4	Protection against grain-shaped foreign bodies		As indicated in index figure 3, but with Ø > 1 mm	4	Splash proof		Protected against splashed water from all directions
	5	Protection against deposits of dust		Protection against contact, protection against interior dust deposits	5	Hose proof		Protection against water jets (nozzle) from all directions
	6	Protection against ingress of dust		Total protection against contact, protection against penetration of dust	6	Protection against powerful water jets		Protection against powerful water jets from all directions
					7	Protection against immersion		Protected against the ingress of water when temporarily immersed
					8	Protection against submersion		Protected against water pressure when continuously submersed

CABLE GLANDS

DUST TIGHT IP65 LOW PRESSURE


717637


719629


717648


71067320


717659


717655

Cable Size	Material	Pressure Gland w/ Gasket Ring w/ Pressure Rings	Complete Cable Gland w/ Gasket Ring w/ Pressure Rings	Special Cable Assembly	Pressure Gland w/ Strain Relief	Blanking Plug w/ O-Ring	EMC Cable Gland
M20	Plastic	717636	717642	-	-	717658	-
M20	Nickel Plated Brass	717637	719629	717648	71067320	717659	717653
M25		717638	719630	717649	71067625	717660	717654
M32		717639	719631	717650	71067732	717661	717655
M40		717640	719632	717651	71067840	717662	717656
M50		717641	719633	717652	71067950	717663	717657

WIRE-THROUGH HOUSINGS

DUST TIGHT IP54 SPLASH PROOF


750629


714116

Wire-through Housings		Panel Housings	
Series B 16	Series B 24	Series B 16	Series B 24
3 cable entry	4 cable entry		
750628*	750629*	714116	714124

** Please order grommets separately. Use blanking plugs to close cable entires.*


Pressure Gland Group

Wire-through Housings Specifications

Wire-through housing	Polycarbonate, UL 94 V-O
Grommets	Thermoplastic caoutchouc, UL listed
Temperature Range	-40 to +125 °C
Protection Degree	IP54 in locked condition if correct type of grommets is used
Cable Diameter	3 - 16 (mm)

DOUBLE-LOCKING SYSTEM

DUST TIGHT IP65 LOW PRESSURE


P757072MS


P751242MS


P712210


P758042


710759

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Wall Mount Housings			Hoods				
						For Housing w/o Flap Lid				
						Cable Entry		Protective Cap		
			w/o Flap Lid	w/ Flap Lid	Ht. in (mm)	Top Entry	Side Entry	w/Locking Levers, Retaining Cord & Gasket	Ht. in (mm)
A32 D50	3/4"	1 x M25	T701032MS	T701232MS	3.21 (81.5)	T708232	T708032	DCS232A-1*	2.83 (72)
		2 x M25	T701132MS	T701332MS		T70823200	T70803200		
	1"	1 x M32	T701832MS	T707232MS		T708332	T708132		
		2 x M32	T701132MS	T707332MS		T70833200	T70813200		
B10 BB18 DD42	1/2"	1 X M20	P711010MS	P711210MS	2.09 (53)	P712210	P712010	710759*	2.20 (56)
		2 X M20	P711110MS	P711310MS		P71221000	-		
	3/4"	1 x M25	-	-		P712310	P712110		
		2 x M25	-	-		-	-		
	1"	1 x M32	-	-		-	-		
		2 x M32	-	-		-	-		
	1/2"	1 X M20	-	-	2.91 (74)	-	-	710759AL†	2.83 (72)
		2 X M20	-	-		-	-		
	3/4"	1 x M25	P751042MS	P751242MS		P758242	P758042		
		2 x M25	P751142MS	P751342MS		-	-		
	1"	1 x M32	P757042MS	P757242MS		P758342	P758142		
		2 x M32	P757142MS	P757342MS		-	-		
B16 BA6 BB32 D40 DD72	3/4"	1 x M25	P711016MS	P711216MS	2.68 (68)	P718216	P718016	710760*	2.56 (65)
		2 x M25	P711116MS	P711316MS		P71821600	-		
	1"	1 x M32	-	-		P718316	P718116		
		2 x M32	-	-		-	-		
	1-1/4"/ 1-1/2"	1 x M40	-	-		-	-		
		2 x M40	-	-		-	-		
	3/4"	1 x M25	-	P751272MS	3.31 (84)	-	-	710760AL†	2.99 (76)
		2 x M25	-	P751372MS		-	-		
	1"	1 x M32	P757072MS	P757272MS		P728340	P728140		
		2 x M32	P757172MS	P757372MS		P72834000	-		
	1-1/4"/ 1-1/2"	1 x M40	P75707240MS	-		P72834040	P72814040		
		2 x M40	P75717240MS	-		-	-		
B24 BB46 D64 DD108	3/4"	1 x M25	P711024MS	P711224MS	2.68 (68)	P712224	P712024	710761*	2.56 (65)
		2 x M25	P711124MS	P711324MS		P71222400	-		
	1"	1 x M32	-	-		P712324	P712124		
		2 x M32	-	-		-	-		
	1-1/4"/ 1-1/2"	1 x M40	-	-		-	-		
		2 x M40	-	-		-	-		
	3/4"	1 x M25	-	P751208MS	3.31 (84)	-	-	710761AL†	2.99 (76)
		2 x M25	-	P751308MS		-	-		
	1"	1 x M32	P757008MS	P757208MS		P718324	P718124		
		2 x M32	P757108MS	P757308MS		P71832400	-		
	1-1/4"/ 1-1/2"	1 x M40	P75700840MS	-		P71832440	P71812440		
		2 x M40	P75710840MS	-		-	-		
B32 BA12 BB64 D80 DD144 MO16	3/4"	1 x M 25	-	-	2.83 (72)	T718232	T718032	710913*	3.15 (80)
		2 x M 25	-	-		-	-		
	1"	1 x M 32	T711032MS	T711232MS		T718332	T718132		
		2 x M 32	T711132MS	T711332MS		T71833200	T71813200		
	1-1/4"/ 1-1/2"	1 x M 40	T71103240MS	T71123240MS		T750663	T750670		
		2 x M 40	T71113240MS	T71133240MS		-	-		
	1-1/2"/ 2"	1 x M 50	-	-		T750671	-		
		2 x M 50	-	-		-	-		

** Plastic*
† Aluminum

DOUBLE-LOCKING SYSTEM (cont.)

DUST TIGHT IP65 LOW PRESSURE


P713210


P753042


710756


P753772


DCL232A-1


714116


714216

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Hoods				Coupler Hoods			Panel Housings		
			For Housing w/ Flap Lid									
			Cable Entry		Protective Cap	Ht. in (mm)	Top Entry	Protective Cap	Ht. in (mm)	w/o Flap Lid	w/ Flap Lid	Ht. in (mm)
			Top Entry	Side Entry	w/ Retaining Cord & Gasket			w/ Retaining Cord				
A32 D50	3/4"	1 x M25	T703232	T703032	DCS232A-1*	2.99 (76)	T703632	DCL232A-1*	3.07 (78)	PB132A	PB232A	1.10 (28)
		2 x M25	T70323200	T70303200			T70363200					
	1"	1 x M32	T703332	T703132			T703732					
		2 x M32	T70333200	-			T70373200					
B10 BB18 DD42	1/2"	1 X M20	P713210	P713010	710756* 710756AL†	2.20 (56)	P713610	DCL210B-1* 710624AL†	2.42 (61.5) 3.05 (77.5)	PB110	PB210	1.10 (28)
		2 X M20	P71321000	-			P71361000					
	3/4"	1 x M25	-	-			P713710					
		2 x M25	-	-			P71371000					
	1"	1 x M32	-	-			-					
		2 x M32	-	-			-					
	1/2"	1 X M20	-	-		2.83 (72)	-					
		2 X M20	-	-			-					
	3/4"	1 x M25	P753242	P753042			P 753642					
		2 x M25	P75324200	-			P75364200					
	1"	1 x M32	P753342	P753142			P753742					
		2 x M32	P75334200	-			P75374200					
B16 BA6 BB32 D40 DD72	3/4"	1 x M20	P713216	P713016	710757* 710757AL†	2.56 (65)	P713616	DCL216B-1* 710626AL†	2.78 (70.5) 3.21 (81.5)	714116	714216	1.10 (28)
		2 x M20	P71321600	-			P713 61600					
	1"	1 x M32	-	-			P713716					
		2 x M32	-	-			P71371600					
	1-1/4"/ 1-1/2"	1 x M40	-	-			-					
		2 x M40	-	-			-					
	3/4"	1 x M25	P723240	P723040		2.99 (76)	-					
		2 x M25	P72324000	-			-					
	1"	1 x M32	P723340	P723140			P753772					
		2 x M32	P72334000	-			P75377200					
	1-1/4"/ 1-1/2"	1 x M40	-	-			P75377240					
		2 x M40	-	-			-					
B24 BB46 D64 DD108	3/4"	1 x M25	-	-	710758* 710758AL†	2.56 (65)	P753608	DCL224B-1* 710628AL†	2.78 (70.5) 3.21 (81.5)	714124	714224	1.10 (28)
		2 x M25	-	-			P75360800					
	1"	1 x M32	-	-			P753708					
		2 x M32	-	-			P75370800					
	1-1/4"/ 1-1/2"	1 x M40	-	-			-					
		2 x M40	-	-			-					
	3/4"	1 x M25	P713224	P713024		2.99 (76)	P713724					
		2 x M25	P71322400	-			P713724 00					
	1"	1 x M32	P713324	P713124			P71372440					
		2 x M32	P71332400	-			-					
	1-1/4"/ 1-1/2"	1 x M40	-	-			-					
		2 x M40	-	-			-					
B32 BA12 BB64 D80 DD144 MO16	3/4"	1 x M25	T713232	T713032	710911*	3.15 (80)	T713632	710911*	3.23 (82)	714132	714232	1.10 (30)
		2 x M25	T71323200	T71303200			T71363200					
	1"	1 x M32	T713332	T713132			T713732					
		2 x M32	T71333200	T71313200			T71373200					
	1-1/4"/ 1-1/2"	1 x M40	-	-			T750664					
		2 x M40	-	-			-					
	1-1/2"/ 2"	1 x M 50	-	-			T750669					
		2 x M 50	-	-			-					

** Plastic*
† Aluminum

BHT series is designed for marine & shipbuilding.

DOUBLE-LOCKING SYSTEM
BHT Series

DUST TIGHT IP65 LOW PRESSURE


P741110MS


P742210


P742010


P743610


744116

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Wall Mount Housings		Hoods			Coupler Hoods		Panel Housings	
			w/o Flap Lid	Ht. in (mm)	Cable Entry: Top Entry	Cable Entry: Side Entry	Ht. in (mm)	Top Entry	Ht. in (mm)	w/o Flap Lid	Ht. in (mm)
BHT10	1/2"	1 x M20	P741010MS	2.09 (53)	P742210	P742010	2.2 (56)	P743610	2.42 (61.5)	744110	1.1 (28)
		2 x M20	P741110MS		-	-		-			
BHT16	3/4"	1 x M25	P741016MS	2.68 (68)	P748216	P748016	2.56 (65)	P743616	3.21 (81.5)	744116	1.1 (28)
		2 x M25	P741116MS		-	-		-			
	1"	1 x M32	-		-	-		P743716			
		2 x M32	-		-	-		-			
BHT24	3/4"	1 x M25	P741024MS	2.68 (68)	P748224	P748024	2.99 (76)	P743624	3.21 (81.5)	744124	1.1 (28)
		2 x M25	P741124MS		-	-		-			
	1"	1 x M32	-		P748324	P748124		P743724			
		2 x M32	-		-	-		-			

DOUBLE-LOCKING SYSTEM
BV Series

DUST TIGHT IP65 LOW PRESSURE


P731010MS


P731210MS


P732003


P732203


710759

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Wall Mount Housings			Hoods			
						For Housing w/o Flap Lid			
						Cable Entry		Protective Cap	
			w/o Flap Lid	w/ Flap Lid	Ht. in (mm)	Top Entry	Side Entry	w/Locking Levers, Retaining Cord & Gasket	Ht. in (mm)
BV3	1/2"	1 X M20	P731003MS	P731203MS	2.09 (53)	P732203	P732003	710759	2.2 (56)
		2 X M20	P731103MS	P731303MS		-	-		
BV6	3/4"	1 x M25	P731006MS	P731206MS	2.68 (68)	P732206	P732006	710760	2.56 (65)
		2 x M25	P731106MS	P731306MS		-	-		
BV10 BV16	3/4"	1 X M25	P731010MS	P731210MS	2.28 (58)	P732210	P732010	710761	2.56 (65)
		2 X M25	P731110MS	P731310MS		-	-		
	1"	1 x M32				-	P732110		
		2 x M32				-	-		

DOUBLE-LOCKING SYSTEM
BV Series (cont.)

DUST TIGHT IP65 LOW PRESSURE


P733006


P733206


710756


P733606


DCL216B-1


714106


714206

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Hoods				Coupler Hoods			Panel Housings		
			For Housing w/ Flap Lid									
			Cable Entry		Protective Cap	Ht. in (mm)	Top Entry	Protective Cap	Ht. in (mm)	w/o Flap Lid	w/ Flap Lid	Ht. in (mm)
			Top Entry	Side Entry	w/ Retaining Cord & Gasket			w/ Retaining Cord				
BV3	1/2"	1 X M20	P733203	P733003	710756	2.2 (56)	P733603	DCL210B-1	2.42 (61.5)	734103	734203	1.1 (28)
		2 X M20	-	-			-					
BV6	3/4"	1 x M25	P733006	P733206	710757	2.56 (65)	P733606	DCL216B-1	2.42 (61.5)	734106	734206	1.1 (28)
		2 x M25	-	-			-					
BV10 BV16	3/4"	1 X M25	P733010	P733210	710758	2.56 (65)	P733610	DCL224B-1	2.42 (61.5)	734110	734210	1.1 (28)
		2 X M25	-	-			-					
	1"	1 x M32	P733110	P733310			P733710					
		2 x M32	-	-			-					

Walther Part Number System Color-Coded Applications

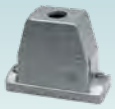
717106OV — **Gray**: Standard

717106OVEM — **Silver**: EMC (Electromagnetic Compatibility)

717106OVSP — **Black**: Hard Environmental Requirements

SCREW TERMINAL CONNECTION

DUST TIGHT IP68 WT - MARINE


717216OV


717616OV


717698


717001FS


717702

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Hoods				Mounting Flange	
			Cable Entry		Protective Cap	Ht. in (mm)	Flange Set	Protective Cap
			Top Entry	Side Entry	w/ Retaining Cord		w/ Flanges, Screws, & Lock Washers	w/ Retaining Cord; Screw Locked
B6 BB10 DD24 MOB6	1/2"	1 x M 20	717106OV	717506OV	717698*	3.94 (100)	717001FS	717702*
	3/4"	1 x M 25	717206OV	717606OV				
B10 BB18 DD42 MOB10	1/2"	1 x M 20	717110OV	717510OV	717699*	3.94 (100)	717001FS	717703*
	3/4"	1 x M 25	717210OV	717610OV				
B16 BA6 BB32 D40 DD72 MOB16	3/4"	1 x M 25	717216OV	717616OV	717700*	3.94 (100)	717001FS	717704*
	1"	1 x M 32	717316OV	717716OV				
B24 BB46 D64 DD108 MOB24	1"	1 x M 32	717324OV	717724OV	717701*	3.94 (100)	717001FS	717705*
	1-1/4"/ 1-1/2"	1 x M 40	717424OV	717824OV				

** Plastic*

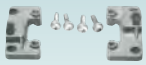
BAYONET LOCKING SYSTEM

DUST TIGHT IP67 WATERTIGHT


727316OV


727716OV


717698


727001FS


727624

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Hoods				Mounting Flange	
			Cable Entry		Protective Cap	Ht. in (mm)	Flange Set	Protective Cap
			Top Entry	Side Entry	w/ Retaining Cord		w/ Flanges, Screws, & Lock Washers	w/ Retaining Cord; Bayonet Lock
B6 BB10 DD24 MOB6	1/2"	1 x M 20	727106OV	727506OV	717698*	3.94 (100)	727001FS	727624*
	3/4"	1 x M 25	727206OV	727606OV				
B10 BB18 DD42 MOB10	1/2"	1 x M 20	727110OV	727510OV	717699*	3.94 (100)	727001FS	727625*
	3/4"	1 x M 25	727210OV	727610OV				
B16 BA6 BB32 D40 DD72 MOB16	3/4"	1 x M 25	727216OV	727616OV	717700*	3.94 (100)	727001FS	727626*
	1"	1 x M 32	727316OV	727716OV				
B24 BB46 D64 DD108 MOB24	1"	1 x M 32	727324OV	727724OV	717701*	3.94 (100)	727001FS	727627*
	1-1/4"/ 1-1/2"	1 x M 40	727424OV	727824OV				

** Plastic*

Field Installation

SERIES A 3 CONNECTORS WITH INSULATION DISPLACEMENT CONNECTION

Hoods			Coupler hoods		
w/ socket insert	w/ pin insert	Height w/ single locking level in (mm)	w/ socket insert	w/ pin insert	Height w/ single locking level in (mm)
700 724	700 725	2.60 (66)	700 726	700 727	2.48 (63)

SERIES A HOUSINGS

DUST TIGHT IP65 LOW PRESSURE


T701516MS


T701716MS


DCL103A-1


T702810MS


T702610MS


DCS110A-1

Housings for Inserts of Series		HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Wall Mount Housings				Hoods			
								For Housing w/o Flap Lid			
						Protective Caps		Cable Entry		Protective Cap	
				w/o Flap Lid	w/ Flap Lid	w/ Retaining Cord, No Gasket	Ht. in (mm)	Top Entry	Side Entry	w/Locking Levers w/Retaining Cord w/Gasket	Ht. in (mm)
A3 A4 A5 D7 D8	Gray Plastic Housing	1/2"	1 x M20	NABB403AP	-	DCL103A-1 (pin insert)	1.59 (40.5)	-	T700624MS	-	1.89 (48)
								T700625MS	-		2.24 (57)
	Black Plastic Housing	1/2"	1 x M20	T700671	-	700631MD (socket insert)	1.59 (40.5)	-	T700675MS	-	1.89 (48)
								T700676MS	-		2.24 (57)
	Zinc Diecast Housing	1/2"	1 x M20	T701003 (Closed Bottom) T701403 (Open Bottom)	-	-	1.59 (40.5)	-	T702603MS	-	1.89 (48)
								T702803MS	-		2.24 (57)
A10 D15		1/2"	1 x M20	T701410MS	T701610MS	-	2.05 (52)	T702810MS	T702610MS	DCS110A-1*	2.09 (53)
			2 x M20	T701510MS	T701710MS			-	-		
		3/4"	1 x M25	-	-	-	-	T708810	T708610		2.60 (66)
				-	-		-	T708910	T708710		
A16 D25		1/2"	1 x M20	T701416MS	T701616MS	-	2.24 (57)	T702816MS	T702616MS	DCS116A-1*	2.28 (58)
			2 x M20	T701516MS	T701716MS			-	-		
			1 x M20	-	-	-	-	T708816	T708616		2.83 (72)
		3/4"	1 x M 25	-	-	-	-	T708916	T708716		

** Plastic*

Assembly

Now you can also benefit from the convenience of IDC connection within a classic square connector a 4-pole (3+PE) industrial connector of series A. Plug and socket versions in hoods and couplet hoods of plastic are available.

Thanks to insulation displacement connection it takes only a few seconds now to connect the 4-pole round conductor: Only the sleeve nut has to be slid onto the conductor – since splicing ring, seal and strain relief are included in the sleeve nut

Slide the sleeve nut of the IDC terminal onto the stripped conductor.

Lead the cores into the marked core entries and cut off the projecting core ends flush, i.e. so that there is no overhang.

Screw sleeve nut onto connector and connection is ready. To undo the connection just unscrew the sleeve nut.

SERIES A HOUSINGS - IP65 (cont.)

DUST TIGHT IP65 LOW PRESSURE


T703810MS


700631


PB310A


PB410A


700631

Housings for Inserts of Series		HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Coupler Hoods			Panel Housing			
				Top Entry	Protective Caps w/ Retaining Cord, No Gasket	Ht. in (mm)	w/o Flap Lid	w/ Flap Lid	Protective Caps w/ Retaining Cord, No Gasket	Ht. in (mm)
A3 A4 A5 D7 D8	Gray Plastic Housing	1/2"	1 x M 20	T700623MS	DCL103A-1 (pin insert)	2.38 (60.5)	PB303AP	-	DCL103A-1 (pin insert)	0.94 (24)
							PB503AP	-	700631MD (socket insert)	1.00 (25.5)
	Black Plastic Housing	-	-	T700674MS	700631MD (socket insert)	-	PB303APB	-	-	0.94 (24)
							PB503APB	-		1.10 (28)
	Zinc Diecast Housing	-	-	T703803MS	-	-	-	PB403A (Zinc lid)	-	0.94 (24)
								704403OD (Alu. lid)		
A10 D15		1/2"	1 x M 20	T703810MS	DCL110A-1*	2.05 (52)	PB310A	PB410A	-	1.02 (26)
A16 D25		1/2"	1 x M 20	T703816MS	DCL116A-1*	2.24 (57)	PB316A	PB416A	-	1.02 (26)

** Plastic*

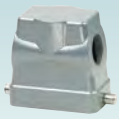
SINGLE-LOCKING WALL MOUNT HOUSINGS

DUST TIGHT IP65 LOW PRESSURE


P751442MS


P751624MS


P712806


P758642


710762

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Wall Mount Housing			Hoods			
						For Housing w/o Flap Lid			
						Cable Entry		Protective Cap	
			w/o Flap Lid	w/ Flap Lid	Ht. in (mm)	Top Entry	Side Entry	w/Locking Levers w/Retaining Cord w/Gasket	Ht. in (mm)
B6 BB10 DD4 MOB6	1/2"	1xM20	NABB406	NABB606	2.09 (53)	P712806	P712606	710762* 710762AL†	2.20 (56)
		2xM20	NABB506	NABB706		P71280600	-		
	3/4"	1xM25	P751424MS	P751624MS	2.91 (74)	-	P758624		2.83 (72)
		2xM25	P751524MS	P751724MS		P758824	-		
	1"	1xM32	P757424MS	P757624MS		-	P758724		
		2xM32	P757524MS	P757724MS		P758924	-		
B10 BB18 DD42 MOB10	1/2"	1xM20	NABB410	NABB610	2.09 (53)	P712810	P712610	710763* 710763AL†	2.20 (56)
		2xM20	NABB510	NABB710		P71281000	-		
	3/4"	1xM25	P751442MS	P751642MS	2.91 (74)	P758842	P758642		2.83 (72)
		2xM25	P751542MS	P751742MS		-	-		
	1"	1xM32	P757442MS	P757642MS		P758942	P758742		
		2xM32	P757542MS	P757742MS		-	-		
B16 BA6 BB32 D40 DD72 MOB16	3/4"	1xM25	NABB416	NABB616	2.70 (68)	P718816	P718616	710764* 710764AL†	2.56 (65)
		2xM25	NABB516	NABB716		P71881600	-		
	1"	1xM32	-	-		P718916	P718716		
		2xM32	-	-		P71891600	-		
	1"	1xM32	P757472MS	P757672MS	3.31 (84)	P728940	P728740		2.95 (75)
		2xM32	P757572MS	P757772MS		P72894000	-		
	1-1/4"/ 1-1/2"	1xM40	P75747240MS	P75767240MS		P72894040	P72874040		
		2xM40	P75757240M	P75777240MS		-	-		
B24 BB46 D64 DD108 MOB24	3/4"	1xM25	NABB424	NABB624	2.70 (68)	P712824	P712624	710765* 710765AL†	2.56 (65)
		2xM25	NABB524	NABB724		P71282400	-		
	1"	1xM32	-	-		P712924	P712724		
		2xM32	-	-		P71292400	-		
	1"	1xM32	P757408MS	P751608MS	3.31 (84)	P718924	P718724		2.95 (75)
		2xM32	P757508MS	P751708MS		P71892400	-		
	1-1/4"/ 1-1/2"	1xM40	P75740840MS	P75760840MS		P71892440	P71872440		
		2xM40	P75750840MS	P75770840MS		-	-		
B48 BB92 BV20 BV26 BV32 D128 DD216 MOB24	1"	1xM32	T711448MS	T711648MS	3.94 (100)	T712848	T712648	-	3.78 (96)
		2xM32	T711548MS	T711748MS		T71284800	T71264800		
	1-1/4"/ 1-1/2"	1xM40	T71144840MS	T71164840MS		T712948	P712748		
		2xM40	T71154840MS	T71174840MS		-	-		
	1-1/2" / 2"	1xM50	-	-		T720712	T710653		

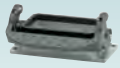
** Plastic*
† Aluminum

SINGLE-LOCKING WALL MOUNT HOUSINGS

DUST TIGHT IP65 LOW PRESSURE


P753842


710636


PB310


PB410

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Coupler Hoods			Panel Housings		
			Top Entry	Protective Cap w/ Retaining Cord, No Gasket	Ht. in (mm)	w/o Flap Lid	w/ Flap Lid	Ht. in (mm)
B6 BB10 DD4 MOB6	1/2"	1xM20	P713806	DCL106B-1* 710630AL†	2.42 (61.5)	PB306	PB406	1.10 (28)
		2xM20	-					
	3/4"	1xM25	P753824		3.05 (77.5)			
		2xM25	P75382400					
	1"	1xM32	P753924					
		2xM32	-					
B10 BB18 DD42 MOB10	1/2"	1xM20	P713810	710632* 710632AL†	2.42 (61.5)	PB310	PB410	1.10 (28)
		2xM20	P71381000					
	3/4"	1xM25	P753842		3.05 (77.5)			
		2xM25	P75384200					
	1"	1xM32	P753942					
		2xM32	-					
B16 BA6 BB32 D40 DD72 MOB16	3/4"	1xM25	P713816	DCL116B-1* 710634AL†	2.78 (70.5)	PB316	PB416	1.10 (28)
		2xM25	P71381600					
	1"	1xM32	P713916					
		2xM32	P71391600					
	1"	1xM32	P753972		3.21 (81.5)			
		2xM32	P75397200					
	1-1/4"/ 1-1/2"	1xM40	P75397240					
		2xM40	-					
B24 BB46 D64 DD108 MOB24	3/4"	1xM25	P753808	710636* 710636AL†	2.78 (70.5)	PB324	PB424	1.10 (28)
		2xM25	P75380800					
	1"	1xM32	P753908					
		2xM32	P75390800					
	1"	1xM32	P713924		3.21 (81.5)			
		2xM32	P71392400					
	1-1/4"/ 1-1/2"	1xM40	P71392440					
		2xM40	-					
B48 BB92 BV20 BV26 BV32 D128 DD216 MOB24	1"	1xM32	-	-	-	PB348	PB448	1.61 (41)
		2xM32	-					
	1-1/4"/ 1-1/2"	1xM40	-					
		2xM40	-					
	1-1/2" / 2"	1xM50	-					

** Plastic*
† Aluminum

SINGLE-LOCKING WALL MOUNT HOUSINGS
BHT Series

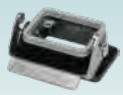
DUST TIGHT IP65 LOW PRESSURE


P741506MS


P742806


P742606


P743806


744306

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Wall Mount Housing w/o Flap Lid	Wall Mount Housing Ht. in (mm)	Hoods For Housing w/o Flap Lid Cable Entry Top Entry	Hoods For Housing w/o Flap Lid Cable Entry Side Entry	Hoods Ht. in (mm)	Coupler Hoods Top Entry	Coupler Hoods Ht. in (mm)	Panel Housings w/o Flap Lid	Panel Housings Ht. in (mm)
BHT6	1/2"	1 x M20	P741406MS	1.57 (40)	P742806	P742606	2.20 (56)	P743806	2.43 (61.5)	744306	1.10 (28)
		2 x M20	P741506MS		-	-		-			

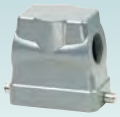
SINGLE-LOCKING WALL MOUNT HOUSINGS
BV Series

DUST TIGHT IP65 LOW PRESSURE


P731406MS


P731606MS


P732803


P732603

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Wall Mount Housing w/o Flap Lid	Wall Mount Housing w/ Flap Lid	Wall Mount Housing Ht. in (mm)	Hoods For Housing w/o Flap Lid Cable Entry Top Entry	Hoods For Housing w/o Flap Lid Cable Entry Side Entry	Hoods Ht. in (mm)
BV3	1/2"	1 x M20	P731403MS	P731603MS	2.09 (53)	P732803	P732603	2.20 (56)
		2 x M20	P731503MS	P731703MS		-	-	
BV6	3/4"	1 x M25	P731406MS	P731606MS	2.68 (68)	P732806	P732606	2.56 (65)
		2 x M25	P731506MS	P731706MS		-	-	
BV10 BV16	3/4"	1 x M25	P731410MS	P731610MS	2.68 (68)	-	-	2.56 (65)
		2 x M25	P731510MS	P731710MS		P732810	P732610	
	1"	1 x M32	-	-		-	-	
		2 x M32	-	-		-	-	
BV20 BV26 BV32	1"	1 x M32	T711448MS	T711648MS	3.94 (100)	T712848	T712648	3.78 (96)
		2 x M32	T711548MS	T711748MS		-	-	
	1-1/4"/ 1-1/2"	1 x M40	-	-		T712948	T712748	

PB424

PB406

PB424

B series panel housings with flap lid (see page 29)

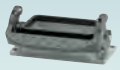
SERIES B HOUSINGS - IP65

BV Series (cont.)

DUST TIGHT IP65 LOW PRESSURE

P733806

DCL110B-1



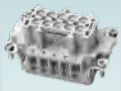
734310

734410

Housings for Inserts of Series	HUB size equivalent (North America)	Cable Entry Thread Type: Metric	Coupler Hoods			Panel Housings		
			Top Entry	Protective Cap w/ Retaining Cord, No Gasket	Ht. in (mm)	w/o Flap Lid	w/ Flap Lid	Ht. in (mm)
BV3	1/2"	1 x M20	P733803	DCL110B-1*	2.42 (62)	734303	734403	1.10 (28)
		2 x M20	-					
BV6	3/4"	1 x M25	P733806	DCL110B-1*	2.80 (71)	734306	734406	1.10 (28)
		2 x M25	-					
BV10 BV16	3/4"	1 x M25	P733810	DCL124B-1*	2.80 (71)	734310	734410	1.10 (28)
		2 x M25	-					
	1"	1 x M32	P733910					
		2 x M32	-					
BV20 BV26 BV32	1"	1 x M32	-	-	n/a	PB348	PB448	1.61 (41)
		2 x M32	-					
	1-1/4"/ 1-1/2"	1 x M40	-					

** Plastic*

INSERTS

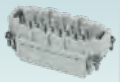

FS110


MS210


71013201

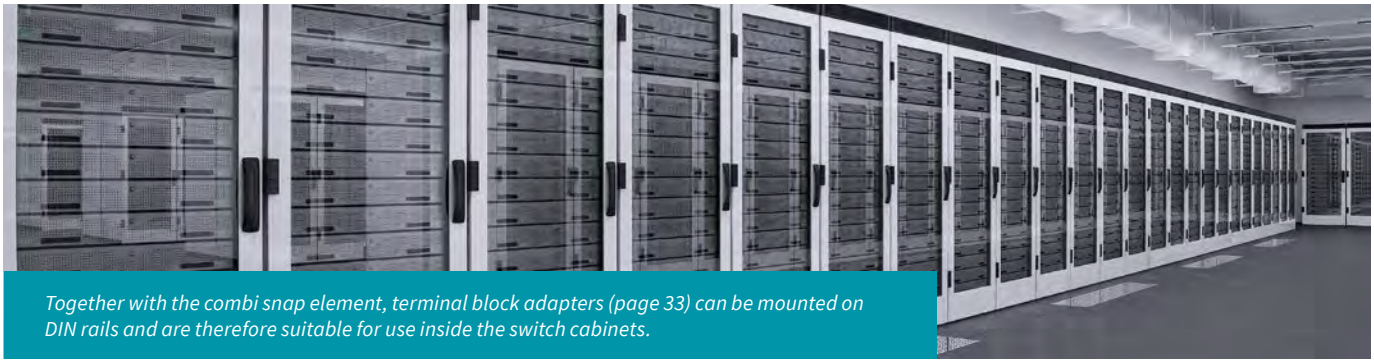

71023201


71011004


71021604

Series	No. of Poles	Pole Config. (G=Earth Ground)	Screw Terminal		IDC Terminal		Push-In Terminal		Cross Section	Voltage Rating (int'l)	Amp Rating
			For info about different termination methods, see pg. 33 For coding, see pg. 36								
			Sockets	Pins	Sockets	Pins	Sockets	Pins			
A3	3	1-3+G	FS103A*	MS103A*	-	-	-	-	20-16 AWG (0.5-1.5 mm²)	600 VAC (230/400)	10A
A4	4	1-4+G	FS104A*	MS204A*	-	-	-	-			
A5	5	1-5+G	-	-	-	-	-	-	n/a	n/a	n/a
A10	10	1-10+G	FS110A	MS210A	-	-	-	-	20-14 AWG (0.5-2.5 mm²)	600 VAC (250)	16A
A16	16	1-16+G	FS116A	MS216A	-	-	-	-			
A32	32	1-16+G 17-32+G	FS116A FS132A	MS216A MS232A	-	-	-	-			
B6	6	6-6+G	FS106	MS206	71010601	71020601	71010604	71020604	20-14 AWG (0.5-2.5 mm²)	500 VAC (600)	16A
			710769*	710773*	-	-	-	-	20-12 AWG (4 mm²)		
B10	10	1-10+G	FS110	MS210	71011001	71021001	71011004	71021004	20-14 AWG (0.5-2.5 mm²)		
			710770*	710774*	-	-	-	-	20-12 AWG (4 mm²)		
B16	16	1-16+G	FS116	MS216	71011601	71021601	71011604	71021604	20-14 AWG (0.5-2.5 mm²)		
			710771*	710775*	-	-	-	-	20-12 AWG (4 mm²)		
B24	24	1-24+G	FS124	MS224	71012401	71012401	71012404	71012404	20-14 AWG (0.5-2.5 mm²)		
			710772*	710776*	-	-	-	-	20-12 AWG (4 mm²)		
B32	32	17-32+G	FS132	MS232	71013201	71023201	71013204	71023204	20-14 AWG (0.5-2.5 mm²)		
			710859*	710860*	-	-	-	-	20-12 AWG (4 mm²)		
B48	48	25-48+G	FS148	MS248	71014801	71024801	71014804	71024804	20-14 AWG (0.5-2.5 mm²)		
			710861*	710862*	-	-	-	-	20-12 AWG (4 mm²)		

** Without wire protection*



Together with the combi snap element, terminal block adapters (page 33) can be mounted on DIN rails and are therefore suitable for use inside the switch cabinets.

INSERTS (cont.)


710106HT


710206HT

Series	No. of Poles	Pole Config. (G=Earth Ground)	Screw Terminal		Cross Section	Voltage Rating (int'l)	Amp Rating
			For info about different termination methods, see pg. 33 For coding, see pg. 36				
			Sockets	Pins			
BHT6	6	6-6+G	710106HT	710206HT	0.5-2.5 mm² (20-14 AWG)	n/a (500)	16A
BHT10	10	1-10+G	710110HT	710210HT			
BHT16	16	1-16+G	710116HT	710216HT			
BHT24	24	1-24+G	710124HT	710224HT			
BA6	6	1-6+G	FS106C	MS206C	20-10 AWG (6 mm²)	600 VAC (400 / 690)	35A
BA12	12	7-12+G	FS106C FS112C	MS206C MS212C			
BV3	3	1-5+G	FS103V	MS203V	0.5-2.5 mm² (20-14 AWG)	n/a (690)	16A
BV6	6	6-8+G	FS106V	MS206V			
BV10	10	1-12+G	FS110V	MS210V			
BV16	16	1-18+G	FS116V	MS216V			
BV20	20	1-10+PE 1-10+PE	730110 730110	730210 730210			
BV26	26	1-10+PE 1-16+PE	730110 730116	730210 730216			
BV32	32	1-16+PE 1-16+PE	730116 730116	730216 730216			

NOTE: BV series inserts include two shortened switching contacts.

TERMINAL BLOCK ADAPTERS

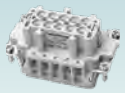

FS110WAR


MS210WAR


710807

Series	No. of Poles	Pole Config. (G=Earth Ground)	Ground Position	Terminal Block Adapter		Combi Snap Element	Cross Section	Voltage Rating (int'l)	Amp Rating
				For coding, see pg. 36					
				Sockets	Pins				
B6	6	6-6+G	Right	FS106WAR	MS206WAR	710807	20-14 AWG (2.5 mm²)	500 VAC (600)	16A
			Left	FS106WAL	MS206WAL				
B10	10	1-10+G	Right	FS110WAR	MS210WAR				
			Left	FS110WAL	MS210WAL				
B16	16	1-16+G	Right	FS116WAR	MS216WAR				
			Left	FS116WAL	MS216WAL				
B24	24	1-24+G	Right	FS124WAR	MS224WAR				
			Left	FS124WAL	MS224WAL				

CRIMP CONTACT CARRIERS


710310


710410

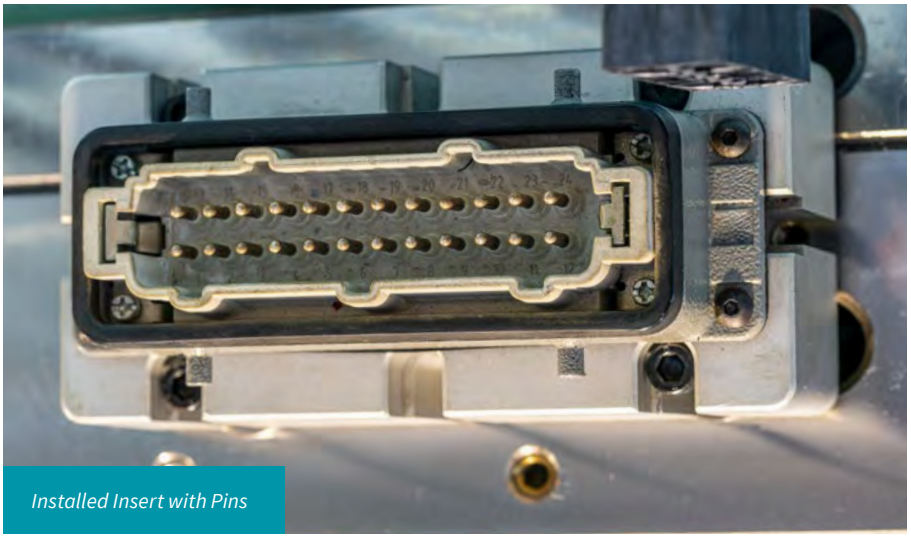
Series	No. of Poles	Pole Config. (G=Earth Ground)	Crimp Contact Carriers For contacts, see pg. 35 For coding, see pg. 36		Cross Section	Voltage Rating (int'l)	Amp Rating
			Sockets	Pins			
A5	5	1-5+G	FS105A	MS105A	26-14 AWG (0.14-2.5 mm²)	600 VAC (230/400)	16A
A10	10	1-10+G	FC310A	MC410A	26-14 AWG (0.14-2.5 mm²)	600 VAC (250)	
A16	16	1-16+G	FC316A	MC416A			
A32	32	1-16+G 17-32+G	FC316A FC332A	MC416A MC432A			
BB10	10	1-10+G	FC311	MC411	20-12 AWG (0.5-4 mm²)	600 VAC (500)	16A
BB18	18	1-18+G	FC318	MC418			
BB32	32	1-32+G	FC333	MC433			
BB46	46	1-46+G	FC346	MC446			
BB64	64	1-32+PE 33-64+PE	FC333 FC364	MC433 MC464			
BB92	92	1-46+PE 47-92+PE	FC346 FC392	MC446 MC492			
BV3	3	1-3+G	FC303V	MC403V	26-12 AWG (0.14-4 mm²)	n/a (690)	16A
BV6	6	1-6+G	FC306V	MC406V			
BV10 BV16	10	1-10+G	FC310V	MC410V			
BV20 BV26 BV32	10	1-10+G 1-10+G	FC310V FC310V	MC410V MC410V			
D7	7	1-7+G	FC307D	MC407D	26-14 AWG (0.14-2.5 mm²)	300 VAC (250)	10A
D8	8	1-8	FC308D	MC408D	26-14 AWG (0.14-2.5 mm²)	50 VAC (42)	
D15	15	1-15+G	FC315D	MC415D	26-14 AWG (0.14-2.5 mm²)	300 VAC (250)	
D25	25	1-25+G	FC325D	MC425D			
D40	40	1-40+G	FC340D	MC440D			
D64	64	1-64+G	FC364D	MC464D			
DD24	24	1-24+G	FC124DD	MC224DD	0.14 - 2.5 mm² (26 - 14) AWG	600 VAC (250)	10A
DD42	42	1-42+G	FC142DD	MC242DD			
DD72	72	1-72+G	FC172DD	MC272DD			
DD108	108	1-108+G	FC108DD	MC208DD			
DD144	144	1-144+G	FC144DD	MC244DD			
DD216	216	109-216+G	FC116DD	MC216DD			

NOTE: BV series inserts 18-14 AWG require two shortened switch pins per housing (see pg. 35).

Contact Parts

PROCON contact inserts are available with socket and pin contacts for screw and crimp connection technologies. Whereas screw contacts are already integrated into the contact inserts, crimp contacts can be individually selected as required. Screw contacts feature a wire protection plate. This wire protection saves the time-consuming assembly of wire end sleeves. All screw contact parts are also equipped with open, undetachable screws, avoiding the need for unscrewing.

Crimp contacts are turned from solid brass. They differ in terms of their connection cross-section and are mounted using special tools in crimp contact carriers.



Installed Insert with Pins

CONTACTS FOR CRIMP CONTACT CARRIERS

710508 & 710518

710916 & 710918

710504FE & 710514FE

710504CU & 710514CU

Contacts for Inserts of Series	Terminal Cross Section	Silver-Plated (Ag)			Gold-Plated (Au)		Thermal Iron (Fe)		Thermal Isotan® (CuNi)	
							Surface gold-plated		Surface not coated	
		Sleeve	Pin	Switch Pins	Sleeve	Pin	Sleeve	Pin	Sleeve	Pin
A B BB BV MO	26-22 AWG (0.14-0.37 mm²)	FP2200	MP2200	-	710916	710918	-	-	-	-
	20 AWG (0.5 mm²)	FP2000	MP2000	-	710842	710847	710504FE	710514FE	710504CU	710514CU
	18 AWG (0.75 mm²)	710509	710519	-	710917	710919	710500FE	710510FE	710500CU	710510CU
	18 AWG (1.0 mm²)	FP1800	MP1800	710515	710843	710848	-	-	-	-
	16 AWG (1.5 mm²)	FP1600	MP1600	710515	710844	710849	710501FE	710511FE	710501CU	710511CU
	14 AWG (2.5 mm²)	FP1400	MP1400	710515	710845	710850	-	-	-	-
	12 AWG (4.0 mm²)	FP1200	MP1200	-	710846	710851	-	-	-	-
D	26-22 AWG (0.14-0.37 mm²)	FP22SD	MP22SD	-	720686	720691	-	-	-	-
	20 AWG (0.5 mm²)	FP20SD	MP20SD	-	720687	720692	-	-	-	-
	19-18 AWG (0.75-1 mm²)	FP18SD	MP18SD	-	720688	720693	-	-	-	-
	16 AWG (1.5 mm²)	FP16SD	MP16SD	-	720689	720694	-	-	-	-
	14 AWG (2.5 mm²)	FP14SD	MP14SD	-	720690	720695	-	-	-	-

NOTE: BV series inserts 18-14 AWG require two shortened switch pins per housing

Coding Pins

For screw terminal inserts and crimp contact carriers, coding pins are used instead of fastening screws. Coding is accomplished by inserting a dummy contact sleeve into a selected contact cavity of the socket insert. It's important to ensure that the corresponding pin insert is not equipped in that position, meaning the pin contact opposite the coding pin should remain unused. This method of using a coding pin helps prevent the confusion of similar connectors.

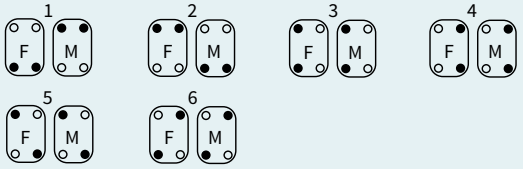
Screw Terminal Coding Pin
710600

Crimp Contact Carrier Coding Pin
700734

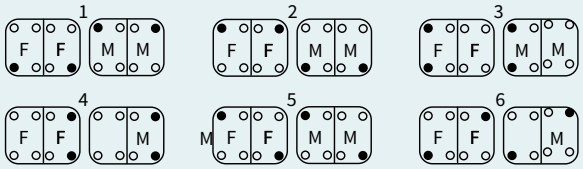
Coding Examples

F = Female insert M=Male insert ● Coding pin ○ Fixing screws

For housings with one contact insert:



For housings with two contact inserts:



Coding Parts (IDC & Push-In Terminal)

For IDC and push-in terminal inserts of the B series, there is an affordable and simple plug-in coding part available in addition to the coding pins. This unique coding part easily attaches by pushing it into the encoding grooves on the outside of the insert.

710607
Used with IDC & Push-In

Series	IDC	Push-In
A3	n/a	-
B6	2	2
B10	2	2
B16	2	4
B24	2	4
B32	2	8
B48	2	8
BA12	n/a	-

Guiding Pins & Sleeves

Guiding pins and sleeves work for screw terminal inserts and crimp contact carriers, and largely prevent the connector from being inserted / withdrawn at an angle. Include position acc. to EN DIN 175301-801 in lengthwise direction ± 5°. This value is adhered to with the elements.

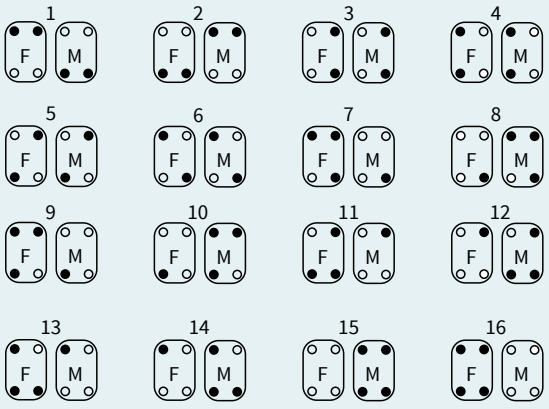
Sleeve
710602

Guiding Pin
710601

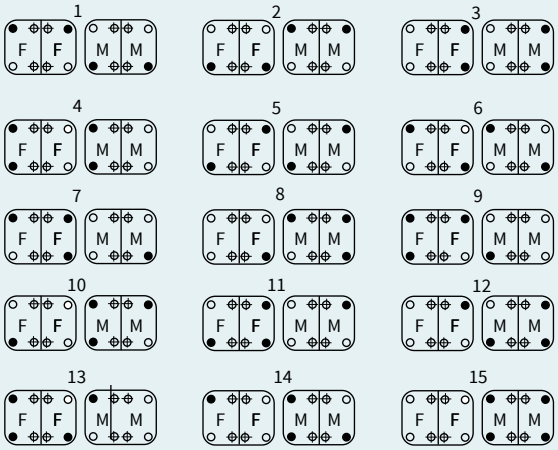
Coding Examples

F = Female insert M = Male insert ● Guiding pin ○ Guiding sleeve ⊕ Fixing screws

For housings with one contact insert / MO retaining frame

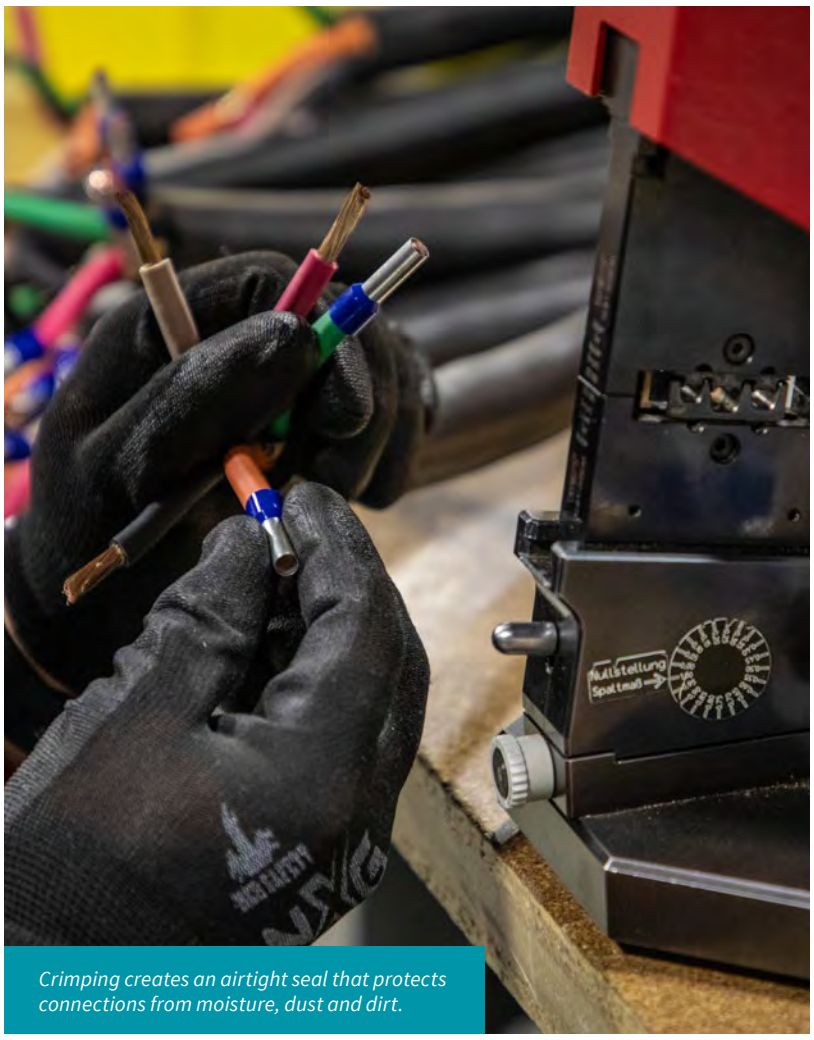


For housings with two contact insert / MO retaining frames:



CRIMPING ACCESSORIES

Product Image	Product Number	Type	Description	QTY	Weight (g)	Rentals
	720610	Crimping Tool	For turned contacts 1.5 - 10 mm^2 4 indent crimping tool	1	663	Rental Available
	710611	Crimping Tool	For conductor cross sections of 0.14 - 4.0 mm^2- only for turned contacts	1	510	Rental Available
			Replacement crimping dies (710873)		57	
	710613	Insertion Tool	-	1	17	-



Crimping creates an airtight seal that protects connections from moisture, dust and dirt.

Pneumatic crimping machines deliver consistent force to create reliable and secure crimps every time.

PG NPT ADAPTERS

Nickel-plated brass hexagonal transition piece O-ring mounted

DUST TIGHT IP65 LOW PRESSURE

PG11-38

Size		Adapter
External Thread	Internal Thread	
PG11	3/8" NPT	PG11-38
	1/2" NPT	PG11-50
PG13.5	1/2" NPT	PG135-50
PG16	1/2" NPT	PG16-50
PG21	3/4" NPT	PG21-75
PG29	1" NPT	PG29-100
	1 1/4" NPT	PG29-125
PG36	1 1/4" NPT	PG36-125
	1 1/2" NPT	PG36-150
PG42	2" NPT	PG42-200
PG48	1 1/2" NPT	PG48-150

METRIC NPT ADAPTERS

Size		Adapter
External Thread	Internal Thread	
M20	3/8" NPT	M20-38
	1/2" NPT	M20-50
M25	3/4" NPT	M25-75
M32	1" NPT	M32-100
	1 1/4" NPT	M32-125
M40	1 1/4" NPT	M40-125
	1 1/2" NPT	M40-125112
M50	1 1/4" NPT	M50-125
	2" NPT	M50-200
M63	1 1/2" NPT	M63-150

PG ADAPTERS

Nickel-plated brass gland body

DUST TIGHT IP65 LOW PRESSURE

PG11-M16

Size		Adapter
External Thread	Internal Thread	
PG11	M16	PG11-M16
PG16	M20	PG16-M20
	M25	PG16-M25
PG21	M25	PG21-M25
	M32	PG21-M32
PG29	M40	PG29-M40

METRIC ADAPTERS

Size		Adapter
External Thread	Internal Thread	
M16	PG11	M16-PG11
M20	PG16	M20-PG16
M25	PG21	M25-PG21
M32	PG29	M32-PG29

Full PROCON Assembly

Liquid-Tight Dome Connectors

NON-METALLIC LIQUID-TIGHT STRAIN RELIEF DOME CONNECTORS

Features and Benefits:

- Exceed NEMA 6 liquid-tight specifications.
- Are suitable for use underwater to 300 feet.
- Are rated at IP68.
- Working temperature range of -30°C to +80°C.
- Withstand water pressure up to 70 psig.
- All connectors meet or exceed UL, CSA and VDE specifications.
- Resistant to salt water, weak acids, weak alkalis, alcohol, esters, ketones, gasoline, mineral oil, animal and vegetable oil.

The Walther Electric non-metallic liquid-tight strain relief dome connectors fit a wide range of cord diameters and are easily installed in either a clearance hole with a locking nut or a threaded hole. The connectors are well suited for cables used with, but not limited to, fiber optics, computers, control cabinets, instruments, medical/dental equipment, car washes, hot tubs and carpet cleaning machines.

Connector Cable Assembly

Connector Assembled With PROCON Hood

Gray without Locknut

Gray with Locknut

Black without Locknut

Black with Locknut

Connector with Locknut

Walther Part Numbering System for Connectors

S R 2 9 - 1 8 2 5 - G R Y R N

Color
GRY = Gray
BLK = Black

O-Ring Accessory Included

Locknut Accessory Included

PG (PANZER-GEWINDE)

Straight threads with smaller thread depth and larger flank angle than metric

DUST TIGHT IP68 WT - MARINE


SR7-36-GRY


SR7-36-GRYR


SR7-36-GRYN


SR7-36-GRYRN

Thread Size	Thread Length in (mm)	Cable Range in (mm)	Color	Strain Relief Dome Connectors			
				Connector Only	w/ O-Ring	w/ Locknut	w/ O-Ring w/ Locknut
PG7	0.32 (8.13)	0.11 - 0.26 (2.79 - 6.6)	Gray	SR7-25-GRY	SR7-25-GRYR	SR7-25-GRYN	SR7-25-GRYRN
			Black	SR7-25-BLK	SR7-25-BLKR	SR7-25-BLKN	SR7-25-BLKRN
PG9	0.32 (8.13)	0.07 - 0.24 (1.78 - 6.1)	Gray	SR9-26-GRY	SR9-26-GRYR	SR9-26-GRYN	SR9-26-GRYRN
			Black	SR9-26-BLK	SR9-26-BLKR	SR9-26-BLKN	SR9-26-BLKRN
		0.15 - 0.32 (3.81 - 8.13)	Gray	SR7-36-GRY	SR7-36-GRYR	SR7-36-GRYN	SR7-36-GRYRN
			Black	SR7-36-BLK	SR7-36-BLKR	SR7-6-BLKN	SR7-36-BLKRN
PG11	0.32 (8.13)	0.11 - 0.28 (2.79 -7.11)	Gray	SR11-26-GRY	SR11-26-GRYR	SR11-26-GRYN	SR11-26-GRYRN
			Black	SR11-26-BLK	SR11-26-BLKR	SR11-26-BLKN	SR11-26-BLKRN
		0.19 - 0.39 (4.83 - 9.91)	Gray	SR11-510-GRY	SR11-510-GRYR	SR11-510-GRYN	SR11-510-GRYRN
			Black	SR11-510-BLK	SR11-510-BLKR	SR11-510-BLKN	SR11-510-BLKRN
PG13.5	0.35 (8.89)	0.19 - 0.35 (4.83 - 8.89)	Gray	SR135-59-GRY	SR135-59-GRYR	SR135-59-GRYN	SR135-59-GRYRN
			Black	SR135-59-BLK	SR135-59-BLKR	SR135-59-BLKN	SR135-59-BLKRN
		0.23 - 0.47 (5.84 - 11.94)	Gray	SR135-612-GRY	SR135-612-GRYR	SR135-612-GRYN	SR135-612-GRYRN
			Black	SR135-612-BLK	SR135-612-BLKR	SR135-612-BLKN	SR135-612-BLKRN
PG16	0.39 (9.90)	0.27 - 0.47 (6.86 - 11.94)	Gray	SR16-712-GRY	SR16-712-GRYR	SR16-712-GRYN	SR16-712-GRYRN
			Black	SR16-712--BLK	SR16-712--BLKR	SR16-712--BLKN	SR16-712--BLKRN
		0.39 - 0.55 (9.91 - 13.97)	Gray	SR16-1014-GRY	SR16-1014-GRYR	SR16-1014-GRYN	SR16-1014-GRYRN
			Black	SR16-1014-BLK	SR16-1014-BLKR	SR16-1014-BLKN	SR16-1014-BLKRN
PG21	0.43 (10.92)	0.35 - 0.63 (8.89 - 16)	Gray	SR21-916-GRY	SR21-916-GRYR	SR21-916-GRYN	SR21-916-GRYRN
			Black	SR21-916-BLK	SR21-916-BLKR	SR21-916-BLKN	SR21-916-BLKRN
		0.51 - 0.71 (12.95 - 18.03)	Gray	SR21-1318-GRY	SR21-1318-GRYR	SR21-1318-GRYN	SR21-1318-GRYRN
			Black	SR21-1318--BLK	SR21-1318--BLKR	SR21-1318--BLKN	SR21-1318--BLKRN
PG29	0.43 (10.92)	0.47 - 0.79 (11.94 - 20.07)	Gray	SR29-1220-GRY	SR29-1220-GRYR	SR29-1220-GRYN	SR29-1220-GRYRN
			Black	SR29-1220-BLK	SR29-1220-BLKR	SR29-1220-BLKN	SR29-1220-BLKRN
		0.70 - 0.98 (17.78 - 24.89)	Gray	SR29-1825-GRY	SR29-1825-GRYR	SR29-1825-GRYN	SR29-1825-GRYRN
			Black	SR29-1825-BLK	SR29-1825-BLK	SR29-1825-BLKN	SR29-1825-BLKRN

NPT (NATIONAL PIPE TAPER)

American National Standard (ANSI/ASME B1.20.1) – 60° thread angle and a conical shape, with a wider diameter at the base of the threads

DUST TIGHT IP68 WT - MARINE


SR38-37-GRY


SR38-37-GRYR


SR38-37-GRYN


SR38-37-GRYRN

Thread Size	Thread Length in (mm)	Cable Range in (mm)	Color	Strain Relief Dome Connectors			
				Connector Only	w/ O-Ring	w/ Locknut	w/ O-Ring w/ Locknut
3/8" NPT	0.59 (14.99)	0.12 - 0.28 (3.05 - 7.11)	Gray	SR38-37-GRY	SR38-37-GRYR	SR38-37-GRYN	SR38-37-GRYRN
			Black	SR38-37-BLK	SR38-37-BLKR	SR38-37-BLKN	SR38-37-BLKRN
		0.19 - 0.39 (4.83 - 9.91)	Gray	SR38-510-GRY	SR38-510-GRYR	SR38-510-GRYN	SR38-510-GRYRN
			Black	SR38-510-BLK	SR38-510-BLKR	SR38-510-BLKN	SR38-510-BLKRN
1/2" NPT	0.59 (14.99)	0.19 - 0.35 (4.83 - 8.89)	Gray	SR50-59-GRY	SR50-59-GRYR	SR50-59-GRYN	SR50-59-GRYRN
			Black	SR50-59-BLK	SR50-59-BLKR	SR50-59-BLKN	SR50-59-BLKRN
		0.23 - 0.47 (5.84 - 11.94)	Gray	SR50-612-GRY	SR50-612-GRYR	SR50-612-GRYN	SR50-612-GRYRN
			Black	SR50-612-BLK	SR50-612-BLKR	SR50-612-BLKN	SR50-612-BLKRN
		0.27 - 0.47 (6.86 - 11.94)	Gray	SR50-712-GRY	SR50-712-GRYR	SR50-712-GRYN	SR50-712-GRYRN
			Black	SR50-712-BLK	SR50-712-BLKR	SR50-712-BLKN	SR50-712-BLKRN
		0.39 - 0.55 (9.91 - 13.97)	Gray	SR50-1014-GRY	SR50-1014-GRYR	SR50-1014-GRYN	SR50-1014-GRYRN
			Black	SR50-1014-BLK	SR50-1014-BLKR	SR50-1014-BLKN	SR50-1014-BLKRN
3/4" NPT	0.59 (14.99)	0.35 - 0.63 (8.89 - 16)	Gray	SR75-916-GRY	SR75-916-GRYR	SR75-916-GRYN	SR75-916-GRYRN
			Black	SR75-916-BLK	SR75-916-BLKR	SR75-916-BLKN	SR75-916-BLKRN
		0.51 - 0.71 (12.95 - 18.03)	Gray	SR75-1318-GRY	SR75-1318-GRYR	SR75-1318-GRYN	SR75-1318-GRYRN
			Black	SR75-1318-BLK	SR75-1318-BLKR	SR75-1318-BLKN	SR75-1318-BLKRN
1" NPT	0.70 (17.78)	0.47 -0.79 (11.94 - 20.07)	Gray	SR100-1220-GRY	SR100-1220-GRYR	SR100-1220-GRYN	SR100-1220-GRYRN
			Black	SR100-1220-BLK	SR100-1220-BLKR	SR100-1220-BLKN	SR100-1220-BLKRN
		0.70 - 0.98 (17.78 - 24.89)	Gray	SR100-1825-GRY	SR100-1825-GRYR	SR100-1825-GRYN	SR100-1825-GRYRN
			Black	SR100-1825-BLK	SR100-1825-BLKR	SR100-1825-BLKN	SR100-1825-BLKRN

ISO / METRIC THREADS

Thread Size	Thread Length in (mm)	Cable Range in (mm)	Color	Strain Relief Dome Connectors			
				Connector Only	w/ O-Ring	w/ Locknut	w/ O-Ring w/ Locknut
M20	0.39 (9.91)	0.24 - 0.47 (6.1 - 11.94)	Gray	SR25M-612-GRY	SR25M-612-GRYR	SR25M-612-GRYN	SR25M-612-GRYRN
			Black	SR25M-612-BLK	SR25M-612-BLKR	SR25M-612-BLKN	SR25M-612-BLKRN
		0.39 - 0.55 (9.91 - 13.97)	Gray	SR20M-1014-GRY	SR20M-1014-GRYR	SR20M-1014-GRYN	SR20M-1014-GRYRN
			Black	SR20M-1014-BLK	SR20M-1014-BLKR	SR20M-1014-BLKN	SR20M-1014-BLKRN
M25	0.39 (9.91)	0.35 - 0.55 (8.89 - 13.97)	Gray	SR25M-914-GRY	SR25M-914-GRYR	SR25M-914-GRYN	SR25M-914-GRYRN
			Black	SR25M-914-BLK	SR25M-914-BLKR	SR25M-914-BLKN	SR25M-914-BLKRN
		0.51 - 0.70 (12.95 - 17.78)	Gray	SR25M-1318-GRY	SR25M-1318-GRYR	SR25M-1318-GRYN	SR25M-1318-GRYRN
			Black	SR25M-1318-BLK	SR25M-1318-BLKR	SR25M-1318-BLKN	SR25M-1318-BLKRN
M32	0.70 (17.78)	0.63 - 0.98 (16 - 24.89)	Gray	SR32M-1825-GRY	SR32M-1825-GRYR	SR32M-1825-GRYN	SR32M-1825-GRYRN
			Black	SR32M-1825-BLK	SR32M-1825-BLKR	SR32M-1825-BLKN	SR32M-1825-BLKRN
M40	0.70 (17.78)	0.86 - 1.26 (21.84 - 32)	Gray	SR40M-2232-GRY	SR40M-2232-GRYR	SR40M-2232-GRYN	SR40M-2232-GRYRN
			Black	SR40M-2232-BLK	SR40M-2232-BLKR	SR40M-2232-BLKN	SR40M-2232-BLKRN

Specifications

DIN VDE 0627/86

DIN VDE 0110-1/04.97

DIN VDE 0110/02.79

IEC 60 664-1, DIN/IEC 512

Approvals

MEIE, EZU, SEV

Inserts

Number of Contacts	In accordance with UL 746C
Working Current	Internal or external adjustable mounting feet
Rated Voltage	400V, 600V acc. to UL/CSA
Test Voltage	3kv
Pollution Degree	3
Material	Fiberglass filled thermoplastic
Temperature Range	-40°C to +125°C
Flammability	UL94V-0

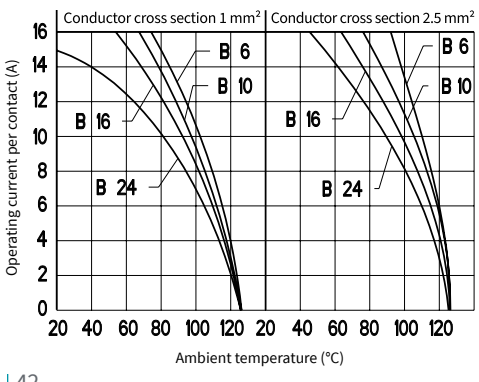
Contacts

Impact Material	Solid, drilled, copper alloy
Surface	Hard-silver plated Hard-gold plated available upon request
Contact Resistance	≤1mΩ
Screw Terminal	
w/ wire protection	20 - 14 AWG (0.5 - 2.5mm²)
w/o wire protection	20 - 12 AWG (0.5 - 4mm²)
IDC Terminal	20 - 14 AWG (0.5 - 2.5mm²)
Crimp Terminal	20 - 12 AWG (0.5 - 4mm²)

Housings

Material	Die-cast aluminum alloy, powder-coated
Locking Mechanism	
Single Locking Levels B6, 10, 16, 24, 48	Steel, since and chrome plated
Double Locking Levels B6, 10, 16, 24	Stainless steel with high impact, corrosion resistant, themoplastic thumb grip
Double Locking Levels B32	Steel, since and chrome plated
Temperature Range	-40°C to +125°C
Degree of Protection acc. to DIN VDE 0470, IEC 529	IP65
Screw-lock/Bayonet-lock housings	IP68

Current Capacity

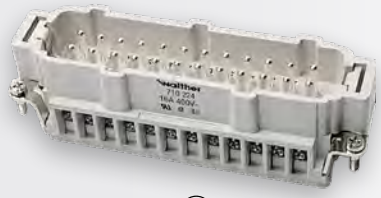


The derating diagram (corrected current capacity curve) acc. to DIN IEC 60 512 applies to such current which can – depending on ambient temperature and conductor cross section – circulate through each contact without exceeding the upper limiting temperature.

B 6 poles + ⏚

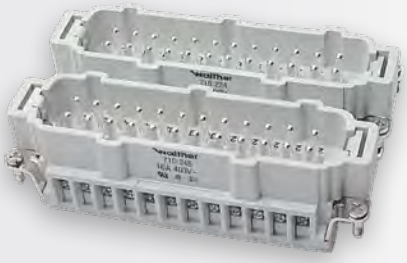
B 10 poles + ⏚

B 16 poles + ⏚



B 24 poles + ⏚

B 32 poles + ⏚



B 48 poles + ⏚

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