

Cable Glands, Plastic CG.P*DS.* Stopping Plugs SP.PE.* Sealing Plugs BP.*

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Validity

Specific processes and instructions in this instruction manual require special provisions to guarantee the safety of the operating personnel.

Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismantling lies with the plant operator.

The personnel must be appropriately trained and qualified in order to carry out mounting, installation, commissioning, operation, maintenance, and dismantling of the device. The trained and qualified personnel must have read and understood the instruction manual.

Reference to Further Documentation

Observe laws, standards, and directives applicable to the intended use and the operating location. Observe Directive 1999/92/EC in relation to hazardous areas.

The corresponding datasheets, manuals, declarations of conformity, EC-type-examination certificates, certificates, and control drawings if applicable (see datasheet) are an integral part of this document. You can find this information under www.pepperl-fuchs.com.

Intended Use

The plastic cable glands CG.P*DS.* are designed in protection type Ex e in accordance with IEC/EN 60079-0 and IEC/EN 60079-7 for the use in Zone 1, Zone 2, Zone 21 and Zone 22 hazardous areas with non-armored cables. They are made of special resistant polyamide and offer a variety of clamping ranges and thread lengths.

Variants with blue marking are available for identification of intrinsically safe Ex i circuits.

Stopping plugs SP.PE.* are used to close unused cable entries of enclosures.

Remarks on Assembly

In order to guarantee the mechanical characteristics of the glands, an additional clamping of the cables has to be ensured by appropriate clamping outside of the gland and of the enclosure.

Mounting and Installation

Observe the installation instructions according to IEC/EN 60079-14.

If you intend to install the device or enclosure in areas that may be exposed to aggressive substances, ensure that the stated surface materials are compatible with these substances. If required, contact Pepperl+Fuchs for further information.

Close all unused cable glands with the appropriate sealing plugs.

Disassemble the parts of the cable gland.

Choose the optimal seal insert combination (S*) according to the cable diameter. Use the outer seal insert S1 (4) for cables with large diameter. Use a combination of both seal inserts (3) ... (4) for cables with smaller diameter.

Fit the seal insert combination into the gland body basis (2).

Install the gland body basis (2) in the entry of the enclosure.

Push the cap nut (5) onto the cable.

Push the cable through the seal inserts (3) ... (4).

Tighten the cap nut (5) to the gland body basis (3).

Tighten all screw threads with the appropriate torque.

IP Protection Method Mode for Ex e

Ex e enclosures with metric threads

Assemble through a threaded hole with flat gasket or O-Ring on the thread outside of the enclosure. The enclosure wall has to be thick enough to engage at least 3 full threads.

Ex e enclosures with thru-holes

Tighten with locknut inside and flat gasket on the thread outside of the enclosure. An enclosure wall thickness of minimum 1.5 mm has to be respected.

Operation, Maintenance, Repair

Observe IEC/EN 60079-17 for maintenance and inspection.

If there is a defect, always replace the device with an original device.

Do not modify or manipulate the device.

Delivery, Transport, Disposal

Disposing of device, packaging, and possibly contained batteries must be in compliance with the applicable laws and guidelines of the respective country.

Type Code

| Series | |
|---|--|
| CG | cable gland |
| SP | stopping plug |
| Type | |
| PE | plastic stopping plugs, black |
| PEDS | plastic glands, double seal, black |
| PIDS | plastic glands, double seal, blue, to indicate Ex i circuits |
| Thread | |
| M* | metric ISO pitch 1.5; sizes see dimensions data table |
| Material | |
| PA | polyamide |
| Material Seal / O-Ring | |
| C | chloroprene / neoprene |
| S | silicone (cable glands only) |
| Thread length for installation in enclosure | |
| ** | length in mm |
| CG | .PIDS .M20 .PA .C .10 |

Example: Cable gland plastic, blue to indicate intrinsically safe circuits, double seals, thread size M20, body polyamide, chloroprene seals for -40 °C ... 70 °C, installation thread length 10 mm

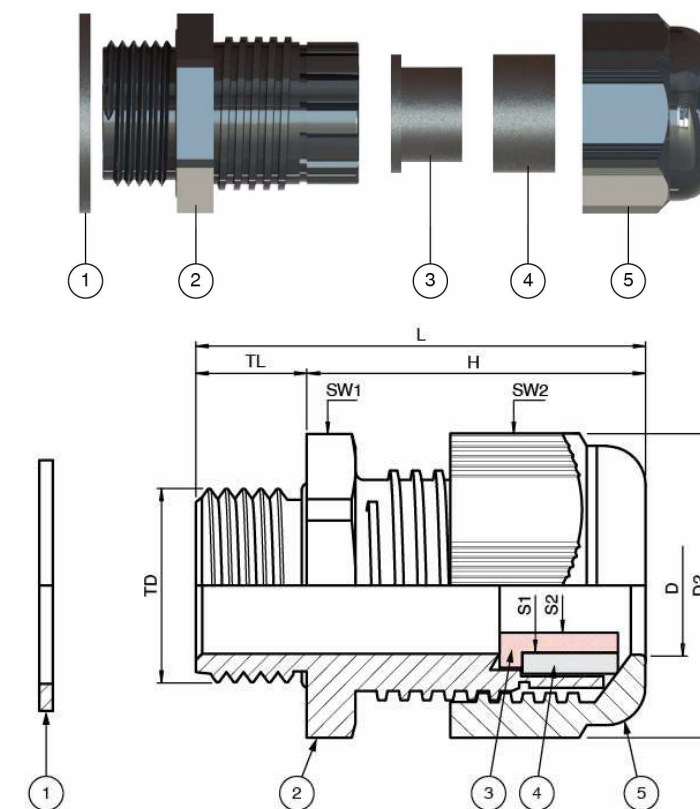
Type code of sealing plugs BP.* see allocation in data table below

Special Conditions for Safe Use

For installation in hazardous areas of Zone 1 and Zone 2 cable glands and stopping plugs of size M50 or NPT 1½" or bigger bear a potential hazard of electrostatic charge and therefore have to be cleaned with damp or antistatic clothes.

For installation in hazardous areas of Zone 21 and Zone 22 cable glands and stopping plugs bear a potential hazard of electrostatic charge and therefore have to be cleaned with damp or antistatic clothes.

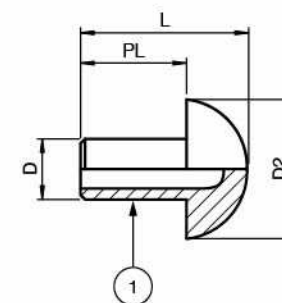
Dimensions Cable Glands CG.P*DS.*



| Legend | |
|--------|---------------------------------------|
| 1 | Flat gasket |
| 2 | Gland body basis |
| 3 | Seal insert S2 |
| 4 | Seal insert S1 |
| 5 | Cap nut |
| D | Clamping range, cable sheath diameter |
| D2 | Width across corners |
| H | Length outside enclosure |
| L | Total length |
| SW* | Width across flats |
| TD | Thread size |
| TL | Thread length |

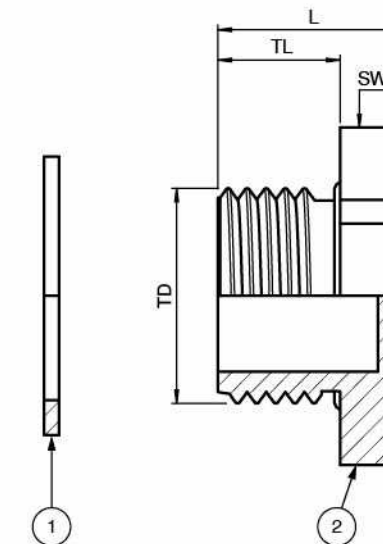
Measures see dimensions data tables and individual datasheets

Dimensions Sealing Plugs BP.*



Allocation of sealing plugs to cable glands please see data table below


Dimensions Stopping Plugs SP.PE.*



| Legend | |
|--------|--------------------|
| 1 | Flat gasket |
| 2 | Stopping plug |
| L | Total length |
| SW* | Width across flats |
| TD | Thread size |
| TL | Thread length |

Measures see dimensions data tables and individual datasheets

Technical Specifications

| General | |
|--|---|
| Types and variants | CG.P*DS.* - see type code table SP.PE.* - see type code table BP.* - see allocation in data table |
| CE Number | 0102 |
| Data for application in hazardous areas | |
| EC-Type Examination Certificate | IMQ 15 ATEX 006 X |
| Group, category, type of protection |  II 2 GD Ex e IIC Gb Ex tb IIIC Db |
| Zones of Installation | 1, 21 (Gas), 2, 22 (Dust) |
| International approvals | |
| IECEX approval | IECEX IMQ 15.0001X |
| EAC approval | TC RU C-TR.GB05.B.00918 |
| Ambient conditions | |
| Ambient temperature | chloroprene seals: -40 ... 70 °C (-40 ... 158 °F) silicone seals: -60 ... 70 °C (-76 ... 158 °F) note: M16, M20, M25 with silicone seals: -40 ... 70 °C (-40 ... 158 °F) |
| Degree of Protection according to IEC/EN 60529 | IP66 / IP68 |
| Mechanical specifications | |
| General | |
| Dimensions | see individual datasheets |
| Mass | see individual datasheets |
| Cable connection | |
| Cable type | non-armored cables |
| Clamping range | see data tables |
| Tightening torque | see data tables |
| Material | |
| Plastic parts | high impact-resistant polyamide |
| Seal inserts | chloroprene / neoprene or silicone |
| Flat gasket | chloroprene / neoprene or silicone |
| Standards | |
| Conformity | IEC/EN 60079-0: 2012 IEC/EN 60079-7: 2007 IEC/EN 60079-31: 2009 |

Dimensions and Torques

| | (I) | (II) | (III) | (IV) | | | (V) | | | (VI) | |
|------------------------|-------|-----------|---------|--------|----|-----|-------|-----|-------------|----------------------|----------|
| | | | | L | TL | SW1 | SW2 | SW1 | SW2 (S1+S2) | | SW2 (S1) |
| | | TD | D | L | TL | SW1 | SW2 | SW1 | SW2 (S1+S2) | SW2 (S1) | |
| CG.P*DS.M12.*.*.10.* | M12 | 3 ... 6.5 | 32 | 10 | 15 | 15 | 2 | 1 | 2 | BP.PDS.M12.PA | |
| CG.P*DS.M12.*.*.15.* | M12 | 3 ... 6.5 | 37 | 15 | 15 | 15 | 2 | 1 | 2 | BP.PDS.M12.PA | |
| CG.P*DS.M16S.*.*.10.* | M16 | 4 ... 8 | 36 | 10 | 19 | 19 | 4 | 3.5 | 4 | BP.PDS.M16S.PA | |
| CG.P*DS.M16S.*.*.15.* | M16 | 4 ... 8 | 41 | 15 | 19 | 19 | 4 | 3.5 | 4 | BP.PDS.M16S.PA | |
| CG.P*DS.M16.*.*.10.* | M16 | 4 ... 10 | 36 | 10 | 22 | 22 | 4 | 3.5 | 4 | BP.PDS.M16-M20S.PA | |
| CG.P*DS.M20.*.*.10.* | M20 | 6 ... 12 | 40 | 10 | 24 | 24 | 5 | 5 | 5 | BP.PDS.M20.PA | |
| CG.P*DS.M20.*.*.15.* | M20 | 6 ... 12 | 45 | 15 | 24 | 24 | 5 | 5 | 5 | BP.PDS.M20.PA | |
| CG.P*DS.M20XL.*.*.15.* | M20 | 8 ... 14 | 48 | 15 | 27 | 27 | 5.5 | 5.5 | 5.5 | BP.PDS.M20XL-M25S.PA | |
| CG.P*DS.M25.*.*.10.* | M25 | 9 ... 17 | 44 | 10 | 29 | 29 | 5 | 5 | 5 | BP.PDS.M25.PA | |
| CG.P*DS.M25.*.*.15.* | M25 | 9 ... 17 | 44 | 15 | 29 | 29 | 5 | 5 | 5 | BP.PDS.M25.PA | |
| CG.P*DS.M25L.*.*.15.* | M25 | 10 ... 18 | 50 | 15 | 15 | 33 | 8 | 5.5 | 8 | BP.PDS.M25L-M32S.PA | |
| CG.P*DS.M32.*.*.10.* | M32 | 12 ... 21 | 52 | 10 | 36 | 36 | 6 | 4.5 | 6 | BP.PDS.M32.PA | |
| CG.P*DS.M32.*.*.15.* | M32 | 12 ... 21 | 52 | 15 | 36 | 36 | 6 | 4.5 | 6 | BP.PDS.M32.PA | |
| CG.P*DS.M32L.*.*.15.* | M32 | 14 ... 25 | 55.5 | 15 | 42 | 42 | 9 | 8 | 9 | BP.PDS.M32L.PA | |
| CG.P*DS.M40.*.*.10.* | M40 | 17 ... 28 | 56 | 10 | 46 | 46 | 5 | 5 | 5 | BP.PDS.M40.PA | |
| CG.P*DS.M40.*.*.15.* | M40 | 17 ... 28 | 61 | 15 | 46 | 46 | 5 | 5 | 5 | BP.PDS.M40.PA | |
| CG.P*DS.M50.*.*.18.* | M50 | 22 ... 38 | 72 | 18 | 60 | 60 | 22 | 18 | 22 | BP.PDS.M50.PA | |
| CG.P*DS.M63.*.*.18.* | M63 | 28 ... 44 | 72 | 18 | 65 | 65 | 24 | 22 | 24 | BP.PDS.M63.PA | |

| | (I) | (II) | (IV) | | (V) |
|--------------------|-------|--------|--------|----|-------|
| | | | L | TL | SW1 |
| | | TD | L | TL | SW1 |
| SP.PE.M12.*.*.10.* | M12 | 15 | 10 | 15 | 1.5 |
| SP.PE.M16.*.*.11.* | M16 | 15.3 | 11 | 19 | 1.5 |
| SP.PE.M20.*.*.11.* | M20 | 17 | 11 | 23 | 2 |
| SP.PE.M25.*.*.10.* | M25 | 15.8 | 10 | 28 | 2.5 |
| SP.PE.M32.*.*.15.* | M32 | 22.8 | 15 | 36 | 4 |
| SP.PE.M40.*.*.18.* | M40 | 26.5 | 18 | 46 | 6 |
| SP.PE.M50.*.*.18.* | M50 | 27.5 | 18 | 55 | 8 |
| SP.PE.M63.*.*.18.* | M63 | 27.5 | 18 | 69 | 10 |

- (I) = Type, details see type code table
 (II) = Thread, M* metric ISO pitch 1.5 mm
 (III) = Clamping Range [mm], note various seal combinations!
 (IV) = Dimensions [mm], see drawings and legend
 (V) = Nut torques [Nm], note various seal combinations
 (VI) = Allocation sealing plugs to cable glands, BP* type code of sealing plugs
- For further information please see individual datasheets
 or contact Pepperl+Fuchs