

Brief Instructions

ENG

Cable Glands, Plastic CG.P*DS1.* 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 support this document. You can find this information under www.pepperl-fuchs.com.

Intended Use

The plastic cable glands CG.P*DS1.* 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 cap nuts are available for identification of intrinsically safe Ex i circuits.

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

Requirements for Cables and Connection Lines

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 (2). Simultaneously lock the hexagon SW1 of (2).

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 flat gasket or with 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.

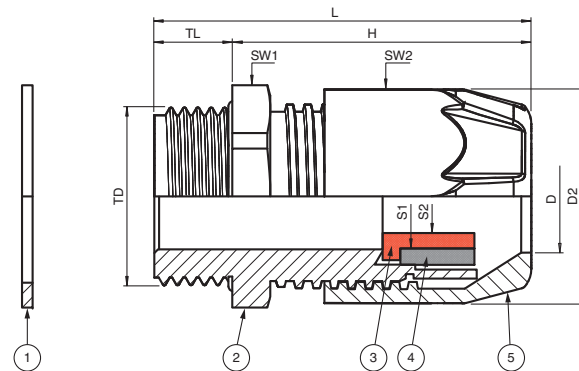
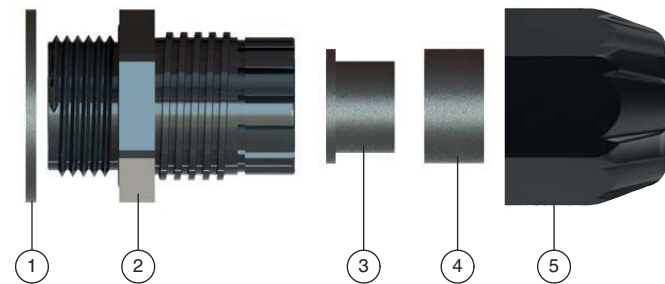
If there is a defect, always replace the device with an original device.

Do not modify or manipulate the device.

Delivery, Transport, Disposal

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

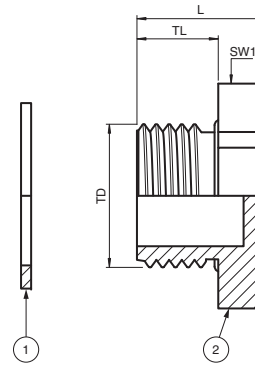
Dimensions and Assembly Cable Glands CG.P*DS1.*



Legend - details and values see data table

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

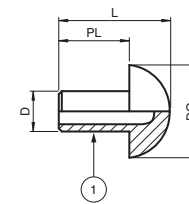
Dimensions Stopping Plugs SP.PE.*



Legend - details and values see data table

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

Dimensions Sealing Plugs BP.*



Legend - details and values see data table

1	Blanking plug
L	Total length
D	Diameter of pin
DO	Outer diameter
PL	Length of pin

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

Material polyamide, further technical information see individual datasheets.

Technical Specifications

General	
Types and variants	CG.P* - see type code table
Mechanical specifications	
Dimensions	see data tables
Cable type	non-armored cables
Thread type	metric ISO pitch 1.5 mm
Clamping range	see data tables
Degree of protection	IP66 / IP68
Mass	see data tables
Material	
Cable gland	high impact-resistant polyamide
Finish	inherent color black or inherent color black, cap nut blue
Seal insert	chloroprene / neoprene or silicone
Washer gasket	flat chloroprene gasket
Ambient conditions	
Ambient temperature	chloroprene seal: -40 ... 70 °C (-40 ... 158 °F) silicone seal: -60 ... 70 °C (-76 ... 158 °F) sealing plugs: -60 ... 70 °C (-76 ... 158 °F)
Data for application in connection with hazardous areas	
EU-Type Examination Certificate	IMQ 15 ATEX 006 X
Marking	Ex II 2 GD Ex eb IIC Gb Ex tb IIIC Db
International approvals	
IECEx approval	IECEx IMQ 15.0001X
UKCA approval	CML 21 UKEX 31379X
INMETRO approval	CG.P*: DNV 20.0030 X SP.P*: DNV 20.0032 X
EAC approval	RU C-DE.AA87.B.00459/20
CCC approval	CG.P*: 2021312313000450 SP.P*: 2021312313000455
Conformity	
Degree of protection	EN 60529
CE marking	0102
Standards	EN 60079-0:2012 + EN 60079-0/A11:2013 IEC 60079-0:2011 IEC 60079-7:2015 EN 60079-7:2015 EN 60079-31:2014 IEC 60079-31:2013

Type Code / Model Number Cable Glands

1	2	3	4	5	6	7						
CG	.	**	.	***	.	**	.	*	.	**	.	K**
CG	.	PIDS1	.	M20	.	PA	.	C	.	10	.	K50

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, fifty pieces

1	Series
CG	cable glands
2	Type
PEDS1	plastic glands, double seal, black
PIDS1	plastic glands, double seal, blue to indicate Ex i circuits
3	Thread, type and size
M*	metric ISO pitch 1.5; sizes see dimensions data table
4	Material
PA	polyamide
5	Material seals / O-Ring
C	chloroprene / neoprene
S	silicone
6	Thread length for installation in enclosure
**	length in mm
7	Packaging unit
	units not packaged, for use in Pepperl+Fuchs Solution Engineering Centers
K**	units quantity per package

Variant-Specific Data Cable Glands

Type	Thread size	Clamping range [mm] seal insert combinations			Dimensions [mm]						Diameter thru-hole [mm]	Nut torques [Nm] seal insert combinations			Sealing plugs
	TD	D	S1+S2	S1	H	L	TL	D2	SW1	SW2	DT	SW1	SW2 S1+S2	SW2 S1	
CG.P*DS1.M12.*.10.*	M12	3 ... 6.5	3 ... 4	4 ... 6.5	30.3	40.3	10	17	15	15	12 ... 12.2	1.5	1	2	BP.PDS.M12.PA
CG.P*DS1.M12.*.15.*	M12	3 ... 6.5	3 ... 4	4 ... 6.5	30.3	45.3	15	17	15	15	12 ... 12.2	1.5	1	2	BP.PDS.M12.PA
CG.P*DS1.M16S.*.10.*	M16	4 ... 8	4 ... 5	5 ... 8	33.6	43.6	10	21.7	19	19	16 ... 16.2	1.5	3.5	4	BP.PDS.M16S.PA
CG.P*DS1.M16S.*.15.*	M16	4 ... 8	4 ... 5	5 ... 8	33.6	48.2	15	21.7	19	19	16 ... 16.2	1.5	3.5	4	BP.PDS.M16S.PA
CG.P*DS1.M16.*.15.*	M16	4 ... 10	4 ... 6	6 ... 10	37.2	47.2	15	25	22	22	16 ... 16.2	1.5	3.5	4	BP.PDS.M16-M20S.PA
CG.P*DS1.M20.*.10.*	M20	6 ... 12	6 ... 7.5	7.5 ... 12	37.8	47.8	10	27	24	24	20 ... 20.2	2	5	5	BP.PDS.M20.PA
CG.P*DS1.M20.*.15.*	M20	6 ... 12	6 ... 7.5	7.5 ... 12	37.8	52.4	15	27	24	24	20 ... 20.2	2	5	5	BP.PDS.M20.PA
CG.P*DS1.M20XL.*.15.*	M20	8 ... 14	8 ... 11	11 ... 14	37	52	15	30.9	27	27	20 ... 20.2	2	5.5	5.5	BP.PDS.M20XL-M25S.PA
CG.P*DS1.M25.*.10.*	M25	9 ... 17	9 ... 13	13 ... 17	42.2	47.7	10	32.5	29	29	25 ... 25.2	2.5	5	5	BP.PDS.M25.PA
CG.P*DS1.M25.*.15.*	M25	9 ... 17	9 ... 13	13 ... 17	42.2	47.7	15	32.5	29	29	25 ... 25.2	2.5	5	5	BP.PDS.M25.PA
CG.P*DS1.M25L.*.15.*	M25	10 ... 18	10 ... 13	13 ... 18	43.6	58.6	15	37.2	33	33	25 ... 25.2	2.5	5.5	8	BP.PDS.M25L-M32S.PA
CG.P*DS1.M32.*.10.*	M32	12 ... 21	12 ... 16	16 ... 21	47.3	57.3	10	41	36	36	32 ... 32.3	4	4.5	6	BP.PDS.M32.PA
CG.P*DS1.M32.*.15.*	M32	12 ... 21	12 ... 16	16 ... 21	47.3	62.3	15	41	36	36	32 ... 32.3	4	4.5	6	BP.PDS.M32.PA
CG.P*DS1.M32L.*.15.*	M32	14 ... 25	14 ... 20	20 ... 25	48.7	63.7	15	47.1	42	42	32 ... 32.3	4	8	9	BP.PDS.M32L.PA
CG.P*DS1.M40.*.10.*	M40	17 ... 28	17 ... 21	21 ... 28	52.4	62.4	10	52.4	46	46	40 ... 40.3	6	5	5	BP.PDS.M40.PA
CG.P*DS1.M40.*.15.*	M40	17 ... 28	17 ... 21	21 ... 28	52.4	67.4	15	52.4	46	46	40 ... 40.3	6	5	5	BP.PDS.M40.PA
CG.P*DS1.M50.*.18.*	M50	22 ... 38	22 ... 31	31 ... 38	60.1	78.1	18	67.8	60	60	50 ... 50.3	8	18	22	BP.PDS.M50.PA
CG.P*DS1.M63.*.18.*	M63	28 ... 44	28 ... 35	35 ... 44	60.4	78.4	18	72.4	65	65	63 ... 63.3	10	22	24	BP.PDS.M63.PA

Type Code / Model Number Stopping Plugs

1	2	3	4	5	6	7						
SP	.	**	.	***	.	**	.	*	.	**	.	K**
SP	.	PE	.	M20	.	PA	.	C	.	15	.	K50

Example: Stopping plug, plastic, thread size M20, body polyamide, chloroprene seal for -40 °C ... 70 °C, installation thread length 15 mm, fifty pieces

1	Series
SP	stopping plugs
2	Type
PE	plastic, black
3	Thread, type and size
M*	metric ISO pitch 1.5; sizes see dimensions data table
4	Material
PA	polyamide
5	Material seals / O-Ring
C	chloroprene / neoprene
6	Thread length for installation in enclosure
**	length in mm
7	Packaging unit
	units not packaged, for use in Pepperl+Fuchs Solution Engineering Centers
K**	units quantity per package

Variant-Specific Data Stopping Plugs

Type	Thread size	Dimensions [mm]			Diameter thru-hole [mm]	Nut torques [Nm]
	TD	L	TL	SW1	DT	SW1
SP.PE.M12.*.10.*	M12	15	10	15	12 ... 12.2	1.5
SP.PE.M16.*.15.*	M16	19.3	15	19	16 ... 16.2	1.5
SP.PE.M20.*.15.*	M20	21	15	23	20 ... 20.2	2
SP.PE.M25.*.15.*	M25	20.8	15	28	25 ... 25.2	2.5
SP.PE.M32.*.15.*	M32	22.8	15	36	32 ... 32.3	4
SP.PE.M40.*.18.*	M40	26.5	18	46	40 ... 40.3	6
SP.PE.M50.*.18.*	M50	27.5	18	55	50 ... 50.3	8
SP.PE.M63.*.18.*	M63	27.5	18	69	63 ... 63.3	10