






GENERAL

This User's Manual has been drawn up in accordance with:

- *Technical requirements for equipment and protective systems intended for use in potentially explosive atmospheres (2014/34/EU).*
- *Technical requirements for products from the point of their electromagnetic compatibility (2014/30/EU).*

SAFETY GUIDELINES AND IMPROPER USE

- When handling a cable gland or plug, **avoid causing mechanical damage!**
- When tightening screw connections, observe the specified tightening torques – see table below.
- Cable glands in Ex “d” design may be used for **direct entry** to flameproof enclosure only under conditions according to **EN 60079 -14!**
- **The vector sum of the alternating currents** in a cable passing through the metal cable gland must be zero at any time. Do not connect a single-wire AC-powered cable to the metal cable gland. It can result in overheating of the metal parts of cable glands due to electromagnetic induction.
- Carry out storage, transport, assembly, installation, revision and preventive maintenance, repairs and service in accordance with the instructions stated hereunder.

1. USE

Flange cable glands 50P-PO..., 50P-TO..., 70P-TO... and blank plugs 70P-VO are designed for installation in areas with a risk of explosion of flammable gases, vapours, dust, explosives and methane-containing mines.

The cable glands are used to seal and attach armoured and non-armoured cables entering an explosion-proof enclosure. Plugs are used to blank unused inputs.

Thanks to uniform spacing of mounting holes, the flange cable glands and plugs can also be used as a replacement for MEP Postřelmov cable glands of type 2XT 30 to 67, 2XP, X1GT 35 to 67, X1GY 20 to 50.

2. OPERATING CONDITIONS

2.1. The use in areas and environments according to installation regulations is based on the explosion-proof design of Ex equipment, in which the flange cable glands are used.

2.2. Work position:

Any

3. TECHNICAL DATA

Name	Specification	Standard, note
Explosion-proof design ¹⁾	Ex db I Mb Ex db IIB Gb Ex tc IIIB Dc	ČSN EN 60079-0 ČSN EN 60079-1 ČSN EN 60079-31
Explosion-proof design ²⁾	Ex eb I Mb Ex eb IIC Gb Ex tb IIIC Db	ČSN EN 60079-0 ČSN EN 60079-7 ČSN EN 60079-31
Group and category	I M2 / II 2G II 3D ¹⁾ / 2D ²⁾	2014/34/EU
Degree of protection	IP 54 ¹⁾ / IP 65 ²⁾	ČSN EN 60529
Type certificate	FTZU 03 ATEX 0302 U	ČR, FTZU NB 1026
Material	steel, class 11 373	

¹⁾ Types 50P-.Od, 70P-TOd, 70P-VOd

²⁾ Types 50P-.Oe, 70P-.TOe, 70P-VOe

4. INSTALLATION INSTRUCTIONS

4.1. Installation of non-shielded cables (clamp cable glands 50P-TO., 70P-TO.)

First, loosen the four hexagon socket screws (2x M8, 2x M12) so that the clamp and the sealing ring do not prevent cable insertion. Cut the cable sheath to make the wires long enough for connection. Thoroughly clean the contact part of the cable sheath and sealing ring of the cable gland from dirt. Insert the cable in the cable gland so that the end of the cable sheath extends beyond the enclosure surface of the flange by at least 8 mm. Tighten the two M12 hexagon socket screws with the specified tightening torque (see 4.3), which will

compress the sealing ring and properly seal the cable. Do not exceed the specified tightening torques! Tighten the two M8 hexagon socket screws on the clamp. Finally, connect individual cable wires to terminals in the cabinet.

4.2. Installation of shielded (armoured) cables (cable glands 50P-PO.)

Shielding (armouring) is not attached by the equipment inside the cable gland. First, measure the cable with respect to the cable gland and mark the cut location. Cut and strip the protective cover up to the end of the cable. Unscrew the four hexagon socket screws (2x M8, 2x M12) and remove both flanges. Insert the cable in the upper flange and shorten the individual steel wires (steel strip) of the shielding (armouring) so that they can be securely fastened between the flanges. Bend the wires (strips), slide the bottom flange on the cable, fasten evenly distributed steel wires (strips) circumferentially between the flanges and tighten the two M8 hexagon socket screws.

Measure the cable with flanges with respect to the cable gland again and mark the cut location for the inner sheath so that its end extends beyond the enclosure surface of the flange by at least 8 mm. Cut and strip the sheath up to the end of the cable. At a distance of 5–10 mm from the ended inner sheath, end the bedding and remove the rest. Insert this modified cable with flanges gradually all the way into the cable gland. Screw in the M12 hexagon socket screws with the specified torque (see. 4.3), which will compress the sealing ring and properly seal the cable. Check the tightness of the M8 hexagon socket screws and connect individual wires to the terminals. Finally, connect the earth terminal of the cabinet to the M8 earthing screw on the inlet flange of the cable gland.

4.3. Tightening torques

Cable gland type	Max. cable outer Ø incl. armour [mm]	Cable sealing ring Ø [mm]	Tightening torque [Nm]
70P-TOe70 70P-TOd70	-	60-70	47 28
70P-TOe62 70P-TOd62	-	52-62	47 28
70P-TOe54 70P-TOd54	-	44-54	47 28
50P-TOe50 50P-TOd50	-	40-50	33 24
50P-TOe42 50P-TOd42	-	32-42	33 24
50P-POe50 50P-Pod50	65	40-50	49 39
50P-POe42 50P-Pod42	65	32-42	49 39
50P-POe34 50P-Pod34	50	24-34	49 39
50P-POe26 50P-Pod26	40	16-26	49 39
50P-POe18 50P-Pod18	30	8-18	49 39

5. INSTALLATION ACCORDING TO APPLICABLE REGULATIONS

The use of flange cable glands in Ex equipment must be in accordance with this User's Manual, ČSN EN 60079-0 and other related regulations.

6. REVISION AND PREVENTIVE MAINTENANCE

Before closing the flat enclosure surface (Ex “d” cable glands and plugs), **always clean it and coat it** with a thin layer of graphite lubricant for corrosion protection, e.g. BELLEVILLE – blue series (supplied by GENERI, s.r.o.). **Cleaning of enclosure surfaces** can only be performed with **non-metal scrapers** and corrosion-free liquid. **Re-lubricate the enclosure surface at least once a year.**

7. REPAIRS AND GENERAL INSPECTIONS, SERVICE

Cable glands 50P-PO..., 50P-TO..., 70P-TO... and blank plugs 70P-VO 50 are irreparable parts that must be replaced when damaged.



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USER'S MANUAL

EXPLOSION-PROOF FLANGE CABLE GLANDS AND PLUGS

TYPE: **50P-PO...**, **50P-TO...**, **70P-TO...**, **70P-VO.**

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8. STORAGE, PACKAGING AND TRANSPORT

Flange cable glands are to be **stored** at ambient temperatures of +5 °C to +40 °C, in non-aggressive indoor areas without exposure to UV radiation and the weather, in which the quality will not worsen (climate conditions 1K2, biological conditions 1B1, chemical active substances 1C2, mechanically active substances 1S1 and mechanical conditions 1M2 in accordance with ČSN EN 60 721-3-1).

Flange cable glands are **packed** into protective foil and **shipped** in cardboard boxes.

Transport is generally provided by an express service within 24 hours, or according to the demands of the customer. C.O.D. is also possible.

Transport conditions are 2K2, 2B1, 2C2, 2S1, 2M2 in accordance with ČSN EN 60,721-3-2.

9. DELIVERY TERMS AND CONDITIONS

The **price of goods, delivery terms, payment method, and transport mode** are stated in the purchase agreement, which the Sales Department sends out after obtaining an order form. Unless stated otherwise in the purchase agreement, the goods is provided with a 12-month warranty.

10. DISPOSAL OF THE PRODUCT



Dispose of unnecessary products in accordance with effective regulations.

!!! All components and parts may release harmful vapours when burning!!!

11. DOCUMENTATION PROVIDED WITH THE PRODUCT

- Certificate of Conformity
- This User's Manual including the warranty
- Delivery note

The certificate is available at www.generi.cz or on request.



WE WISH YOU MAXIMUM SATISFACTION WITH OUR PRODUCTS AND SERVICES

WARRANTY

Product type	Amount [units]
Reference number:	
<p>This product is provided with a 12-month warranty (unless stated otherwise in the purchase agreement), commencing on the day it was accepted. We guarantee the quality of work and materials. Nevertheless, defects may arise as a result of storage, transport or use, which are undetectable in the production plant. If such defects have been incurred by defective material or production, we shall render the product into a perfect state at our own expense. The warranty does not apply to defects incurred by improper use, mechanical damages and by not adhering to the instructions for assembly and maintenance.</p>	

FINAL INSPECTION

Authorised worker:	result:	Stamp and signature:
	OK	

