

# Instruction Manual

## 1. Marking

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| Cable Glands, Metal, for armored cables<br>CG.AR*  |
| ATEX certificate: CESI 14 ATEX 033X<br>ATEX marking:<br>Ⓢ II 2 GD<br>Ex db IIC Gb<br>Ex eb IIC Gb<br>Ex tb IIIC Db   |
| IECEX certificate: IECEx CES 14.0022X<br>CCC certificate: 2021312313000346<br>UL approval: cULus<br>E490324 tested to UL 514B<br>E490962 tested to UL 2225<br>CSA 60079-7 , CSA 60079-31 |

The \*-marked letters of the type code are placeholders for versions of the device.

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| Pepperl+Fuchs Group<br>Lilienthalstraße 200, 68307 Mannheim, Germany       |
| Internet: <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> |

## 2. 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.

## 3. Reference to Further Documentation

Observe directives, standards, and national laws applicable to the intended use and the operating location.

The corresponding datasheets, manuals, declarations of conformity, EU-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](http://www.pepperl-fuchs.com).

For specific device information such as the year of construction, scan the QR code on the device. As an alternative, enter the serial number in the serial number search at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

## 4. Intended Use

The device is only approved for appropriate and intended use. Ignoring these instructions will void any warranty and absolve the manufacturer from any liability.

The cable glands of the CG.AR.\* series are made of metal.

The device can be used indoors.

The device can be used outdoors.

The device can be used in Zone 1.

The device can be used in Zone 21.

The device can be used in Zone 2.

The device can be used in Zone 22.

The device can be used with intrinsically safe circuits.

Only use the device in fixed installations.

The cable glands can be used with armored cable.

The cable glands provide a combination of explosion protection and environmental protection on the outer and inner cable sheath.

## 5. Improper Use

Protection of the personnel and the plant is not ensured if the device is not used according to its intended use.

## 6. 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.

Observe the instruction manuals for the associated components.

Refer to the corresponding technical data of the installed components for the actual type of protection or any possible restrictions.

Ensure that the degree of protection is maintained by the entire installation.

Ensure that the surface of the enclosure is smooth enough to achieve the required degree of protection.

Ensure that the enclosure entries are perpendicular, circular and free of burrs.

### Requirements for Cable Glands

Only use cable glands that are suitably certified for the application. Only use cable glands with a temperature range appropriate to the application.

Use seals that are suitable for the specified application.

Ensure that the degree of protection is not violated by the cable glands. Install cables and cable glands in a way that they are not exposed to mechanical hazards.

The cables and connection lines must be free from mechanical stress. Use appropriate strain relief, which must be fitted outside of the enclosure.

Ensure that all cable glands are in good condition and are securely tightened.

Tighten all cable glands with the appropriate torque.

Ensure that the armor is securely clamped.

### 6.1. Requirements in Relation to Flameproof Enclosure

Install the cables and connection lines through tapped holes.

#### Requirements in Relation to Tapered Threads

Ensure that the enclosure wall is thick enough to engage at least 5 full thread turns.

To ensure the degree of protection use a thread sealant. Apply the thread sealant to at least 2 full thread turns before installing the stuffing gland in the cable gland.

Ensure electrical conductivity.

#### Requirements in Relation to Metric Threads

Ensure that the enclosure wall is thick enough to engage at least 5 full thread turns.

Provide the tapped hole with an O-ring on the thread outside of the enclosure.

### 6.2. Requirements in Relation to Increased Safety

#### Requirements in Relation to Non-Threaded Enclosures

The minimum wall thickness of the enclosure has to be 1.5 mm.

If the enclosure has no threads, use locknuts for tightening.

Use washer gaskets between the screw-in parts and the enclosure for sealing.

During mounting, it may be necessary to rotate the locknut or the cable gland. If it is necessary to rotate the cable gland, use an O-ring for sealing.

Adhere to the required hole diameters.

#### Requirements in Relation to Tapered Threads

The minimum wall thickness of the enclosure has to be 1.5 mm.

When mounting on the enclosure, at least 3 thread turns has to be mechanically connected to the enclosure. If this is not possible, use a locknut.

To ensure the degree of protection use a thread sealant. Apply the thread sealant to at least 2 full thread turns before installing the stuffing gland in the cable gland.

Ensure electrical conductivity.

Tighten the locknut inside and the washer gasket on the thread outside of the enclosure.

If necessary, mount an O-ring between the washer gasket and the screw head.

#### Requirements in Relation to Metric Threads

The minimum wall thickness of the enclosure has to be 1.5 mm.

When mounting on the enclosure, at least 3 thread turns has to be mechanically connected to the enclosure. If this is not possible, use a locknut.

Tighten the locknut inside and the washer gasket on the thread outside of the enclosure.

If necessary, mount an O-ring between the washer gasket and the screw head.

## 7. Operation, Maintenance, Repair

Do not use a damaged or polluted device.

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

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

Do not modify or manipulate the device.

Only use spare parts specified by the manufacturer.

Ensure that the device is de-energized before maintain or repair the device.

Dissimilar metals will corrode when placed against each other in an assembly.

When selecting the enclosure material, observe the possible effects of galvanic corrosion.

## 8. Delivery, Transport, Disposal

Check the packaging and contents for damage.

Check if you have received every item and if the items received are the ones you ordered.

The device, built-in components, packaging, and any batteries contained within must be disposed in compliance with the applicable laws and guidelines of the respective country.