



(1) **EU-TYPE-EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment or Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 14 ATEX 1015 X

Issue: 01

(4) Product: Cable gland type GHG 960 **** * ****

(5) Manufacturer: COOPER Crouse-Hinds GmbH

(6) Address: Neuer Weg Nord 49, 69412 Eberbach, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 16-15133.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012 + A11:2013, EN 60079-7:2015, EN 60079-31:2014

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.


(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

 **II 2 G Ex eb IIC Gb**
 **II 2 D Ex tb IIIC Db**

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 16, 2017


Dr.-Ing. D. Markus
Oberregierungsrat



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EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

(13)

SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 14 ATEX 1015 X, Issue: 01**

(15) Description of Product

The cable gland, type GHG 960 **** * ****, made of polyamide serves to introduce permanently laid cables into electrical equipment of the type of protection Increased Safety "eb" and Protection by enclosure "tb". The cable entry is composed of intermediate glands with two different widths of threaded joint, sealing rings of different designs and a cap nut. Accessories are: blanking plug, reducing gland, multiple cable gland, flat cable gland and expansion gland. The cap nut is optionally made in black resp. blue for the distinction of Ex-e and Ex-i circuits.

They are installed in enclosures with through-holes or threaded holes, with or without lock nut.

Technical data

| Type | Ø Clamping range in mm | Service temperature | One pcs. | Packing set |
|-----------------------------|-------------------------------------|---------------------|--------------------|--------------------|
| Cable Gland M12 | Ø 5 – 7 | -20°C - +70°C | GHG 960 9235 P**** | GHG 960 1955 R**** |
| Cable Gland M16 | Ø 5.5 – 7 Ø 7 – 10 | -20°C - +70°C | GHG 960 9235 P**** | GHG 960 1955 R**** |
| Cable Gland M20 | Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 13 | -20°C - +70°C | GHG 960 9235 P**** | GHG 960 1955 R**** |
| Cable Gland M20 | Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 11 | -40°C - +70°C | GHG 960 9248 P**** | GHG 960 1955 R**** |
| Cable Gland M25 | Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 17.5 | -25°C - +70°C | GHG 960 9235 P**** | GHG 960 1955 R**** |
| Cable Gland M25 | Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 15 | -55°C - +70°C | GHG 960 9235 P**** | GHG 960 1955 R**** |
| Cable Gland M32 | Ø 14 – 17 Ø 17.5 – 21 | -55°C - +70°C | GHG 960 9248 P**** | GHG 960 1955 R**** |
| Cable Gland M32 | Ø 14 – 17 Ø 17.5 – 21 | -20°C - +70°C | GHG 960 9235 P**** | GHG 960 1955 R**** |
| Cable Gland M40 | Ø 19 – 22 Ø 22 – 28 | -55°C - +70°C | GHG 960 9235 P**** | GHG 960 1955 R**** |
| Cable Gland M50 | Ø 24 – 28 Ø 28 – 35 | -55°C - +70°C | GHG 960 9235 P**** | GHG 960 1955 R**** |
| Cable Gland M63 | Ø 29 – 35 Ø 36 – 41 * | -55°C - +70°C | GHG 960 9235 P**** | GHG 960 1955 R**** |
| Extension gland M16/M20X1.5 | Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 13 | -20°C - +70°C | GHG 960 9244 P**** | GHG 960 1956 R**** |
| Extension gland M20/M25X1.5 | Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 15 | -20°C - +70°C | GHG 960 9244 P**** | GHG 960 1956 R**** |
| Extension gland M25/M32X1.5 | Ø 14 – 17 Ø 17.5 – 21 | -55°C - +70°C | GHG 960 9244 P**** | GHG 960 1956 R**** |
| Extension gland M32/M40X1.5 | Ø 19 – 22 Ø 22 – 28 | -55°C - +70°C | GHG 960 9244 P**** | GHG 960 1956 R**** |
| Extension gland M40/M50X1.5 | Ø 24 – 28 Ø 28 – 35 | -55°C - +70°C | GHG 960 9244 P**** | GHG 960 1956 R**** |
| Extension gland M50/M63X1.5 | Ø 29 – 35 Ø 36 – 41 * | -55°C - +70°C | GHG 960 9244 P**** | GHG 960 1956 R**** |
| Reducing gland M16-M12 | | -55°C - +70°C | GHG 960 9237 P**** | GHG 960 1946 R**** |
| Reducing gland M20-M12 | | -55°C - +70°C | GHG 960 9237 P**** | GHG 960 1946 R**** |
| Reducing gland M20-M16 | | -55°C - +70°C | GHG 960 9237 P**** | GHG 960 1946 R**** |
| Reducing gland M25-M12 | | -55°C - +70°C | GHG 960 9237 P**** | GHG 960 1946 R**** |
| Reducing gland M25-M16 | | -55°C - +70°C | GHG 960 9237 P**** | GHG 960 1946 R**** |
| Reducing gland M25-M20 | | -55°C - +70°C | GHG 960 9237 P**** | GHG 960 1946 R**** |
| Reducing gland M32-M12 | | -55°C - +70°C | GHG 960 9237 P**** | GHG 960 1946 R**** |
| Reducing gland M32-M16 | | -55°C - +70°C | GHG 960 9237 P**** | GHG 960 1946 R**** |
| Reducing gland M32-M20 | | -55°C - +70°C | GHG 960 9237 P**** | GHG 960 1946 R**** |

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SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Torque cable gland

| Type | Service temperature range | Impact energy | Clamping range | Torque Pressure screw | Torque Gland body |
|------------------|---------------------------|---------------|--|-------------------------------------|-------------------|
| KLE | °C | Joule | Ø mm | Nm | Nm |
| M16 | -20 - +70 | low, 4 | 5.5 – 7.0 7.0 – 10.0 | 1.0 / 1.0 1.0 / 1.4 | 3.3 |
| M20 | -20 - +70 | high, 7 | 5.5 – 7.0 7.0 – 9.0 9.5 – 13.0 | 1.5 / 1.0 1.5 / 1.4 1.0 / 1.7 | 2.7 |
| M20 | -40 - +70 | low, 4 | 5.5 – 7.0 7.0 – 9.0 9.5 – 13.0 | 1.5 / 1.0 1.5 / 1.4 1.0 / 1.7 | 2.7 |
| M20 split gasket | -20 - +70 | high, 7 | 2,0 7.0 – 9.0 | 3,5 1.5 / 1.4 | 2.7 |
| M25 | -20 - +70 | high, 7 | 10.0 – 13.0 13.5 – 17.5 | 2.3 / 2.6 1.3 / 2.3 | 3.0 |
| M25 | -25 - +70 | high, 7 | 8.0 – 10.0 10.0 – 13.0 13.5 – 17.5 | 1.5 / 2.0 2.3 / 2.6 1.3 / 2.3 | 3.0 |
| M25 | -55 - +70 | high, 7 | 8.0 – 10.0 10.0 – 13.0 13.5 - 15 | 1.5 / 2.0 2.3 / 2.6 1.5 / 2.3 | 3.0 |
| M25 flat cable | -55 - +70 (+110°C) | high, 7 | 5-8x11-12.5 6-8x11-14 | 5.0 3.5 | 5.0 |
| PG16 | -25 - +70 | high, 7 | 10.0 – 13.0 13.5 – 15.0 | 2.3 / 2.6 1.5 / 2.3 | 5.0 |
| PG16 | -55 - +70 | high, 7 | 10.0 – 13.0 13.5 - 17.5 | 2.3 / 2.6 1.3 / 2.3 | 5.0 |
| M32 | -20 - +70 | high, 7 | 14.0 – 17.0 17.5 – 21.0 | 3.0 / 4.0 1.5 / 1.3 | 5.0 |
| M32 | -55 - +70 | high, 7 | 14.0 – 17.0 17.5 – 21.0 | 3.0 / 4.0 1.5 / 1.3 | 5.0 |
| M40 | -55 - +70 | high, 7 | 19.0 – 22.0 22.0 – 28.0 | 3.3 / 5.5 3.3 / 6.7 | 7.5 |
| M50 | -55 - +70 | high, 7 | 24.0 – 28.0 28.0 – 35.0 | 6.0 / 7.0 5.0 / 7.0 | 7.5 |
| M63 | -55 - +70 | high, 7 | 29.0 – 35.0 36.0 - 41.0 | 12.0 / 12.0 12.0 / 13.0 | 7.5 |

Torque multiple cable gland

| Type | Service temperature range | Impact energy | Clamping range | Torque Pressure screw | Torque Gland body |
|------------|---------------------------|---------------|----------------|-----------------------|-------------------|
| KLE | °C | Joule | Ø mm | Nm | Nm |
| M25 2-fach | -20 - +70 | high, 7 | 2x 4.5 – 7.0 | 2.0 / 2.0 | 3.0 |
| M32 4-fach | -20 - +70 | high, 7 | | 3.0 / 3.5 | 5.0 |

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Torque extension cable gland

| Type | Service temperature range | Impact energy | Clamping range | Torque Pressure screw | Torque Gland body |
|---------|---------------------------|---------------|---|--|-------------------|
| KLE | °C | Joule | Ø mm | Nm | Nm |
| M16/M20 | -20 - +70 | high, 7 | 5.5 – 7.0 7.0 – 9.0 9.5 – 13.0 | 1.0 / 1.0 1.5 / 1.4 1.0 / 1.7 | 2.7 |
| M16/M20 | -40 - +70 | low, 4 | 5.5 – 7.0 7.0 – 9.0 9.5 – 13.0 | 1.5 / 1.0 1.5 / 1.4 1.0 / 1.7 | 2.7 |
| M20/M25 | -20 - +70 | high, 7 | 8.0 – 10.0 10.0 – 13.0 13.5 – 17.5 | 1.5 / 1.0 2.3 / 2.6 1.3 / 2.3 | 3.0 |
| M20/M25 | -55 - +70 | high, 7 | 8.0 – 10.0 10.0 – 13.0 13.5 – 15.0 | 1.5 / 2.0 2.3 / 2.6 1.5 / 2.3 | 3.0 |
| M25/M32 | -55 - +70 | high, 7 | 14.0 – 17.0 17.5 – 21.0 | 3.0 / 4.0 1.5 / 1.3 | 5.0 |
| M32/M40 | -55 - +70 | high, 7 | 19.0 – 22.0 22.0 – 28.0 | 3.3 / 5.5 3.3 / 6.7 | 7.5 |
| M40/M50 | -55 - +70 | high, 7 | 24.0 – 28.0 28.0 – 35.0 | 6.0 / 7.0 5.0 / 7.0 | 7.5 |
| M50/M63 | -55 - +70 | high, 7 | 29.0 – 35.0 36.0 – 41.0 (41.0 – 48.0) | 12.0 / 12.0 12.0 / 13.0 (13.0 / 7.8) | 7.5 |

Nomenclature

| | | | |
|---------|------|---|------|
| GHG 960 | **** | * | **** |
| 1 | 2 | 3 | 4 |

- 1) Type
- 2) Design see table 1 above
- 3) P = Single part
R = Packing set
- 4) Variants e.g. colour, thread length, blanking elements, size, etc.

Details of change:

- 1) New test according to EN 60079-31:2014 and EN 60079-7:2015.
- 2) The sizes M16 to M25 have got an additional sealing ring.
- 3) The size G26 of the flat cable gland has been changed to G24.
- 4) The minimum ambient temperature of size M25x1.5 is changed to -25 °C

(16) Test Report PTB Ex16-15133

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(17) Specific conditions of use

Only permanently installed cables may be entered through the glands. The operating company must ensure that adequate strain relief is provided.

The degree of protection (IP66) will only be met if seals and cable glands are properly fitted. The manufacturer's instructions must be followed.

The types with low impact energy have to be mounted in the enclosure, so they are mechanically protected against impact energy.

The blanking plug type GHG 960 6107 P**** resp. GHG 960 1944 R**** shall only be used with the cable glands type GHG 960 92** P**** resp. GHG 960 19** R****.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 16, 2017


Dr.-Ing. D. Markus
Oberregierungsrat

