



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEx ICS 19.0018X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-02-28

Applicant: **Pratley Manufacturing (Pty) Ltd**  
No 14 Jackson Street  
Factoria  
Krugersdorp  
1745  
**South Africa**

Equipment: **Flameproof Cable Glands for Unarmoured, Armoured and Braided Cable**

Optional accessory:

Type of Protection: **Flameproof, Increased Safety, Non-Sparking, Dust Ignition Proof**

Marking: Ex db I Mb, Ex db IIC Gb, Ex eb I Mb, Ex eb IIC Gb,  
Ex nR IIC Gc, Ex ta IIIC Da.  
IP66/68

Approved for issue on behalf of the IECEx  
Certification Body:

**Roelof Viljoen**

Position:

**Certification Authority**

Signature:  
(for printed version)

Date:

2020-02-28

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Certificate issued by:

**South Africa Mining and Surface Certification (MASC)**  
45 Jurg Street  
Lelyta Park Unit 5  
Hennopspark Ext 87, Centurion, 0157, Gauteng  
South Africa





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No 14 Jackson Street  
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Additional  
manufacturing  
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-15:2017** Explosive atmospheres - Part 15: Equipment protection by type of protection "n"  
Edition:5.0

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

**IEC 60079-7:2015** Explosive atmospheres – Part 7: Equipment protection by increased safety "e"  
Edition:5.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[ZA/ICS/ExTR19.0017/00](#)

Quality Assessment Report:

[GB/SIR/QAR06.0042/06](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Flameproof Cable Gland range is manufactured from brass, 304 or 316 stainless steel. The cable glands utilize cylindrical threaded joints and are intended to terminate unarmoured, armoured or braided cables of circular type into an enclosure without compromising the explosion protection provided by the enclosure in accordance with relevant codes of practice.

Sealing is achieved by an elastomeric sealing ring which seals against the cable inside the gland. Retention is achieved by the same method as sealing, in the case of the glands for unarmoured cable, and by means of a metallic cone arrangement, in the case of the glands for armoured cable. Retention of braided cable is achieved by the forward flame seal and outer environmental seal in the armoured gland, where the metallic cone arrangement is then only to provide continuity in this case.

Protection concepts include; flameproof, increased safety and restricted breathing, for groups I and IIC, along with dust protection for Group IIIC.

The cable gland range has an ingress protection rating of IP66 and IP68 with the degree of protection IPX8 corresponding to an immersion of 350 meters under water.

The rated service temperature of the glands are -35°C to 120°C.

Refer to Annex for Gland selection and Sizes.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

### **Special conditions of use:**

- The cable glands shall only be used where the temperature, at the point of entry, is between -35°C and 120°C.
- The appropriate ingress protection level / restricted breathing and / or flameproof characteristics must be achieved and maintained at the interface of the gland with the enclosure.

## **Annex:**

[Annex to Certificate 19.0018X.pdf](#)



# IECEx Certificate of Conformity – Annex



**Certificate No.:** IECEx ICS 19.0018X      **Issue:** 0      **Date:** 2020-02-28  
**Electrical Apparatus:** Flameproof Cable Glands for unarmoured, armoured and braided cable.

## 1. EQUIPMENT

The Flameproof Cable Gland range is manufactured from brass, 304 or 316 stainless steel. The cable glands utilize cylindrical threaded joints and are intended to terminate unarmoured, armoured or braided cables of circular type into an enclosure without compromising the explosion protection provided by the enclosure in accordance with relevant codes of practice. Sealing is achieved by an elastomeric sealing ring which seals against the cable inside the gland. Retention is achieved by the same method as sealing, in the case of the glands for unarmoured cable, and by means of a metallic cone arrangement, in the case of the glands for armoured and braided cables. Protection concepts include; flameproof, increased safety and restricted breathing, for groups I and IIC, along with dust protection for Group IIIC. The cable gland range has an ingress protection rating of IP66 and IP68 with the degree of protection IPX8 corresponding to an immersion of 350 meters under water.

The rated service temperature of the glands is -35°C to 120°C.

Gland selection and sizing for unarmoured cables:

| Table 1    |                    | GLAND SELECTION INFORMATION |                  |     |                   |      |                        |                                      |   |                   |
|------------|--------------------|-----------------------------|------------------|-----|-------------------|------|------------------------|--------------------------------------|---|-------------------|
| Gland size | Cable Diameter "D" |                             | Entry "C" Thread |     | Nipple Length "A" |      | Install Torque (Nm) T1 | "B" Max Protrusion Length (Nut type) | "B" Max Protrusion Length (Hosetail type) | "AC" Max Diameter |
|            | Min                | Max                         | Metric           | NPT | Metric            | NPT  |                        |                                      |   |                   |
| 00xs       | 3.0                | 6.0                         | M16              | -   | 15.0              | -    | 15                     | 33                                   | -   | 25                |
| 00         | 4.5                | 8.5                         | M16              | -   | 15.0              | -    | 15                     | 33                                   | -   | 25                |
| 0xs        | 3.0                | 6.0                         | M20              | -   | 15.0              | -    | 15                     | 33                                   | -   | 25                |
| 0s         | 4.5                | 8.5                         | M20              | ½"  | 15.0              | 19.9 | 15                     | 33                                   | 63  | 29                |
| 0          | 8.5                | 12.6                        | M20              | ½"  | 15.0              | 19.9 | 20                     | 33                                   | 63  | 29                |
| 1          | 12.6               | 14.7                        | M20              | ½"  | 15.0              | 19.9 | 25                     | 36                                   | 66  | 32                |
|            |                    |                             |                  | ¾"  |                   | 20.2 |                        |                                      |   |                   |
| 2          | 14.7               | 20.4                        | M25              | ¾"  | 15.0              | 20.2 | 35                     | 37                                   | 67  | 38                |
|            |                    |                             |                  | 1"  |                   | 25.0 |                        |                                      |   |                   |
| 3          | 20.4               | 26.3                        | M32              | 1"  | 15.0              | 25.0 | 55                     | 40                                   | 85  | 48                |
|            |                    |                             |                  | 1¼" |                   | 25.6 |                        |                                      |   |                   |
| 4          | 26.3               | 34.7                        | M40              | 1¼" | 15.0              | 25.6 | 75                     | 46                                   | 91  | 62                |
|            |                    |                             |                  | 1½" |                   | 26.0 |                        |                                      |   |                   |
| 5          | 34.7               | 43.3                        | M50              | 2"  | 15.0              | 26.9 | 90                     | 57                                   | 103                                       | 79                |
| 6S         | 43.3               | 49.3                        | M63              | 2½" | 15.0              | 39.9 | 130                    | 63                                   | 108                                       | 92                |
| 6L         | 49.3               | 55.8                        | M63              | 2½" | 15.0              | 39.9 | 130                    | 63                                   | 108                                       | 92                |
| 7S         | 55.8               | 61.7                        | M75              | 2½" | 15.0              | 39.9 | 130                    | 69                                   | -   | 93                |
| 7L         | 61.7               | 67.5                        | M75              | 2½" | 15.0              | 39.9 | 130                    | 69                                   | -   | 93                |
| 8          | 67.5               | 73.8                        | M82              | 3"  | 15.0              | 41.5 | 145                    | 71                                   | -   | 101               |

Gland selection and sizing for armoured and braided cables:

| Table 1                           |      |                       | GLAND SIZE |      |      |      |      |       |       |       |       |      |      |      |
|-----------------------------------|------|-----------------------|------------|------|------|------|------|-------|-------|-------|-------|------|------|------|
|                                   |      |                       | 0s         | 0    | 1    | 2    | 3    | 4     | 5     | 6s    | 6L    |      |      |      |
| GLAND SELECTION INFORMATION       | C    | Entry Thread          | Metric     | M20  | M20  | M20  | M25  | M32   | M40   | M50   | M63   | M63  |      |      |
|                                   |      |                       | NPT        | ½"   | ½"   | ½"   | ¾"   | ¾"    | 1"    | 1"    | 1¼"   | 1¼"  | 1½"  | 2"   |
|                                   | A    | Thread Length         | Metric     | 15.0 | 15.0 | 15.0 | 15.0 | 15.0  | 15.0  | 15.0  | 15.0  | 15.0 | 15.0 |      |
|                                   |      |                       | NPT        | 19.9 | 19.9 | 19.9 | 20.2 | 20.2  | 25.0  | 25.0  | 25.6  | 25.6 | 26.0 | 26.9 |
|                                   | (D1) | Bedding Diameter      | Min        | 6.5  | 8.5  | 12.6 | 14.7 | 20.4  | 26.3  | 34.7  | 43.3  | 49.3 |      |      |
|                                   |      |                       | Max        | 8.5  | 12.6 | 14.7 | 20.4 | 26.3  | 34.7  | 43.3  | 49.3  | 55.8 |      |      |
|                                   | (D2) | Outer Sheath Diameter | Min        | 10.3 | 12.6 | 16.0 | 21.5 | 25.0  | 32.5  | 42.0  | 52.5  | 52.5 |      |      |
|                                   |      |                       | Max        | 14.0 | 18.6 | 22.1 | 27.2 | 33.2  | 43.2  | 53.2  | 67.0  | 67.0 |      |      |
|                                   | (D3) | Armour Wire Size      | Min        | 0.9  | 0.9  | 0.9  | 1.25 | 1.6   | 1.6   | 2.0   | 2.5   | 2.5  |      |      |
|                                   |      |                       | Max        | 1.25 | 1.25 | 1.25 | 1.6  | 2.0   | 2.0   | 2.5   | 3.0   | 3.0  |      |      |
|                                   | (D4) | Braid Thickness       | Min        | N/A  | 0.3  | 0.3  | 0.3  | 0.4   | 0.6   | 0.8   | 0.8   | 0.8  |      |      |
|                                   |      |                       | Max        | N/A  | 1.0  | 1.2  | 1.2  | 1.5   | 1.6   | 1.7   | 1.7   | 1.7  |      |      |
| B Max Protrusion Length           |      |                       | 64.0       | 64.0 | 72.0 | 80.0 | 90.0 | 103.0 | 123.0 | 151.0 | 151.0 |      |      |      |
| AC Max Diameter                   |      |                       | 31.0       | 31.0 | 34.0 | 40.0 | 51.0 | 63.0  | 79.0  | 102.0 | 102.0 |      |      |      |
| T1 Install Torque (Seal)(Nm)      |      |                       | 15.0       | 20.0 | 25.0 | 35.0 | 55.0 | 75.0  | 90.0  | 115.0 | 115.0 |      |      |      |
| T2 Install Torque (Armour)(Nm)    |      |                       | 13.0       | 15.0 | 20.0 | 25.0 | 35.0 | 50.0  | 65.0  | 75.0  | 75.0  |      |      |      |
| L1 Bedding Trim Length (min)      |      |                       | 33.0       | 33.0 | 35.0 | 37.0 | 40.0 | 43.0  | 48.0  | 52.0  | 52.0  |      |      |      |
| L2 Armour/Braid Trim Length (max) |      |                       | 23.0       | 23.0 | 26.0 | 27.0 | 30.0 | 32.0  | 42.0  | 46.0  | 46.0  |      |      |      |



# IECEx Certificate of Conformity – Annex

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**Certificate No.:** IECEx ICS 19.0018X      **Issue:** 0      **Date:** 2020-02-28  
**Electrical Apparatus:** Flameproof Cable Glands for unarmoured, armoured and braided cable.

## 2. CONDITIONS OF CERTIFICATION

### Special conditions of use:

- The cable glands shall only be used where the temperature, at the point of entry, is between -35°C and 120°C.
- The appropriate ingress protection level / restricted breathing and / or flameproof characteristics must be achieved and maintained at the interface of the gland with the enclosure.