

Operating Instruction

IECEX BVS 14.0020X

ATEX BVS 14 ATEX E 025X

CSA 15.70010389X

Cable glands: HSK-K-Ex-Active, HSK-K-Multi-Ex-Active, HSK-K-Flaka-Ex-Active

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ENGLISH

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This documentation includes the following documents:

- Current Sales Catalog of HUMMEL AG
- Accident Prevention Regulations and related installation instructions /
Electrotechnical Regulations (responsibility lies with installer)

| | |
|-------------------------------------|---|
| Manufacturer | HUMMEL AG Lise-Meitner-Straße 2 79211 Denzlingen / Germany |
| Notified body | DEKRA Testing and Certification GmbH Dinnendahlstraße 9 44809 Bochum / Germany |
| ID number | 0158 |
| IECEX CoC | IECEX BVS 14.0020X |
| Type-examination certificate | BVS 14 ATEX E 025X |
| Scope | Cable glands: HSK-K-Ex-Active, HSK-K-Multi-Ex-Active, HSK-K-Flaka-Ex-Active |
| Reference standards | <ul style="list-style-type: none">• DIN EN IEC 60079-0 : 2019• DIN EN IEC 60079-7 : 2015 / A1:2018• DIN EN IEC 60079-31 : 2014• DIN EN IEC 60529 |
| Temperature range | -20 °C – 85 °C (-4 °F – 185 °F) |
| Type / degree of protection | IP 68, up to 10 bar |

Technical Data

| Series | Connection Thread | | Clamping Range [mm] | Torque [Nm] Dome Nut / Body / Lock Nut |
|-----------------|-------------------|------------|---------------------|--|
| | Metric | NPT | | |
| HSK-K-Ex-Active | M12 x 1,5 | | 2 – 5 | 2 |
| | M12 x 1,5 | | 3 – 6,5 | 1,5 |
| | M 16 x 1,5 | NPT 3/8" | 3 – 6 | 2 |
| | M 16 x 1,5 | NPT 3/8" | 4 – 8 | 2 |
| | M 16 x 1,5 | | 3 – 7 | 3 |
| | M 16 x 1,5 | | 5 – 10 | 3 |
| | M 20 x 1,5 | NPT 1/2" | 5 – 9 | 4,5 |
| | M 20 x 1,5 | NPT 1/2" | 6 – 12 | 4,5 |
| | M 20 x 1,5 | NPT 1/2" | 7 – 12 | 4,5 |
| | M 20 x 1,5 | NPT 1/2" | 10 – 14 | 4,5 |
| | M 25 x 1,5 | NPT 3/4" | 13 – 18 | 5 |
| | M 25 x 1,5 | NPT 3/4" | 9 – 16 | 5 |
| | M 32 x 1,5 | NPT 1" | 13 – 20 | 6,5 |
| | | NPT 1 1/4" | 13 – 20 | 6,5 |
| | M 32 x 1,5 | NPT 1" | 18 – 25 | 6,5 |
| | | NPT 1 1/4" | 18 – 25 | 6,5 |
| | M 40 x 1,5 | NPT 1 1/2" | 20 – 26 | 10 |
| | M 40 x 1,5 | NPT 1 1/2" | 22 – 32 | 10 |
| | M 50 x 1,5 | | 25 – 31 | 15 |
| | M 50 x 1,5 | | 32 – 38 | 15 |
| M 63 x 1,5 | | 37 – 44 | 22 | |
| M 63 x 1,5 | | 29 – 35 | 22 | |

| Series | Connection Thread | | Number holes x d / B x H | Torque [Nm] Dome Nut / Body / Lock Nut |
|---|-------------------|------------|------------------------------------|--|
| | Metric | NPT | | |
| HSK-K-Multi-Ex -Active HSK-K-Flako-Ex-Active | M12 x 1,5 | | | 1,5 |
| | M 16 x 1,5 | NPT 3/8" | | 2 |
| | M 20 x 1,5 | NPT 1/2" | | 4,5 |
| | M 25 x 1,5 | NPT 3/4" | valid for all drilling patterns | 5 |
| | M 32 x 1,5 | NPT 1" | | 6,5 |
| | | NPT 1 1/4" | | 6,5 |
| | M 40 x 1,5 | NPT 1 1/2" | | 10 |
| | M 50 x 1,5 | | | 15 |
| | M 63 x 1,5 | | | 22 |

The tightening torque specified in the table must be applied to the cable gland using a torque wrench.

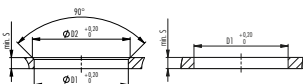
Installation conditions - general

Be sure to check the products for proper working order (integrity) before mounting them. Only qualified personnel (electricians) may carry out installations, using suitable tools. The products must be used as delivered, no modifications permitted. To prevent accidental loosening, use a lock nut or suitable safeguard adhesive. As the tightening torques depend on the cables used, it is the user's responsibility to determine the appropriate torque in each case. Both the gland screw and the cap nut must be properly tightened. Note that undertightening or overtightening the connecting thread or the cap nut may adversely affect the type of protection, the tightness and / or the strain relief.

| | |
|--------------------|--|
| Surface roughness: | max. Rz 16 |
| Perpendicularity: | The sealing surface of the cable gland must always be mounted at right angle to the housing surface. |
| Earthtag: | The installation of earthtags is not intended. |
| Housing material: | There are no restrictions regarding the housing material. |
| Sealing method: | The sealing at the cable is done by the sealing insert. Sealing at the housing is done by an O-ring. |

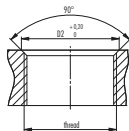
Installation conditions - through hole

The cable gland must be fixed with a lock nut



Installation conditions - thread

For all thread sizes the thread tolerance is 6g, at least 3 full threads engaged



| Thread | D1 | D2 | S |
|---------|-----|-------|-----|
| M6x1 | 6 | 7,3 | 2,5 |
| M8x1,25 | 8 | 9 | 2,5 |
| M10x1,5 | 10 | 10,4 | 2,5 |
| M12x1,5 | 12 | 13 | 2,5 |
| M16x1,5 | 16 | 17 | 2,5 |
| M20x1,5 | 20 | 21 | 2,5 |
| M25x1,5 | 25 | 26 | 2,5 |
| M32x1,5 | 32 | 33 | 2,5 |
| M40x1,5 | 40 | 41 | 2,5 |
| M50x1,5 | 50 | 51 | 2,5 |
| M63x1,5 | 63 | 64 | 2,5 |
| M75x1,5 | 75 | 76 | 2,5 |
| M80x2 | 80 | 81 | 4 |
| M90x2 | 90 | 91 | 5 |
| M100x2 | 100 | 101,3 | 5 |
| M110x2 | 110 | 111 | 5 |

| Thread | D1 | D2 | S |
|--------|------|------|-----|
| Pg7 | 12,7 | 13,2 | 2,5 |
| Pg9 | 15,4 | 15,9 | 2,5 |
| Pg11 | 18,8 | 19,3 | 2,5 |
| Pg13,5 | 20,7 | 21,2 | 2,5 |
| Pg16 | 22,8 | 23,3 | 2,5 |
| Pg21 | 28,6 | 29,1 | 3 |
| Pg29 | 37,4 | 38,4 | 3 |
| Pg36 | 47,5 | 48,5 | 3 |
| Pg42 | 54,5 | 55,5 | 3 |
| Pg48 | 59,8 | 60,8 | 3 |

| Thread | D1 | D2 | S |
|------------|------|------|---|
| NPT 3/8" | 17,3 | 18 | 4 |
| NPT 1/2" | 21,1 | 22 | 5 |
| NPT 3/4" | 26,7 | 27,5 | 4 |
| NPT 1" | 34,3 | 35 | 4 |
| NPT 1 1/4" | 41,9 | 42,5 | 5 |
| NPT 1 1/2" | 48,8 | 49,5 | 5 |
| NPT 2" | 61,1 | 62,0 | 5 |
| NPT 2 1/2" | 74,0 | 76,5 | 6 |
| NPT 3" | 89,8 | 92,5 | 6 |

D1: through hole
D2: countersink



If the cable gland is used in a way that deviates from the specified installation conditions, the user must ensure the safety of the system.

Special conditions

These cable glands are suitable only for use with permanently installed cables. The installer is responsible for providing appropriate strain relief. The cable glands of the thread sizes M 12, M 16 and NPT 3/8" have been tested with a reduced impact force and are only appropriate for installations, where a mechanical protection of the cable gland is provided. In the case of NPT connecting threads, the end-user must ensure that the necessary IP protection is guaranteed, this can be done by using a suitable thread sealing agent. By using the glands in Zone 20/Da and Zone 21/Db the user should fulfill the requirements of EN/IEC 60079-31 and EN/IEC 60079-14.

Marking

The products and /or their smallest packaging units are marked as specified below. Products marked otherwise may not be used under this type-examination certificate. Non-compliance shall void the manufacturer's liability.

- Manufacturer's name and address
- BVS 14 ATEX E 025X
- IECEx BVS 14.0020X
- CSA 15.70010389X
-  II 2G Ex eb IIC Gb / II 1D Ex ta IIIC Da
- Type and connecting thread size
- -mark incl. ID number of notified body (only on packaging)
- -20 °C – +85 °C (-4 °F – +185 °F only on packaging)
- Clamping range (only on packaging)
- IP 68 – 10bar (only on packaging)

Safety

The products may only be used within the specified temperature range. The manufacturer shall not be liable for damage caused by use in non-specified fields of application. Only qualified personnel may carry out work in hazardous areas. All relevant regulations must be observed in this case!

Resistance / Endurance

The products consist of:

| | |
|--------------------|-------------------------|
| Body of gland: | polyamide |
| Gasket and O-ring: | NBR, FKM, Silicone, TPE |

The materials used are suitable for „industrial atmospheres“, meaning that they are resistant or highly resistant to mineral oils within the specified temperature range. For all other applications, consult the manufacturer!

Maintenance

At the specified maintenance intervals it is recommended to check the articles and tighten as necessary.

Prior to use

Before putting the installation into service, check it for compliance with these installation instructions as well as local and international standards (incl. application-specific ones).

Should you have additional questions, please contact the manufacturer. Please note that unauthorized or improper application or non-compliance with these installation instructions shall void the manufacturer's liability.

Installation instruction for HSK-K-Multi-Ex-Active

Cable diameter should not be less than 20% of hole diameter and the difference between cable diameter and hole should never exceed 1 mm (.04"). When using multi-cable inserts with slits, it is permitted to remove insert from the gland and reinstall it with the cable fitted.

Installation instruction for HSK-K-Flaka-Ex-Active

The clamping range of the cable used may not deviate from the manufacturer-specified minimum values by more than 1 mm (.04") in the length and 1 mm (.04") in the width. The geometries of the cable and the insert hole must be compatible (semicircular or straight at the sides). When using flat-cable inserts with unilateral slits, it is permitted to remove insert from the gland and reinstall it with the flat-cable fitted.

EU Declaration of Conformity

issued under the sole responsibility of the manufacturer
Complying the EU Directive 2014/34/EU, Attachment X

Types Cable glands: HSK-K-Ex-Active, HSK-K-Multi-Ex-Active, HSK-K-Flaka-Ex-Active

**Certified in Type
Examination certificates** BVS 14 ATEX E 025 X

Issued by notified body DEKRA Testing and Certification GmbH
Dinnendahlstraße 9
44809 Bochum / Germany

ID number 0158

Following standards are applied

EN 60079-0 : 2019 Electrical apparatus for potentially explosive atmospheres
– General requirements

EN 60079-7 : 2015 / A1:2018 Electrical apparatus for potentially explosive atmospheres
– Increased safety „e“

EN 60079-31 : 2014 Electrical apparatus for use in the presence of combustible dust,
Electrical apparatus protected by enclosures – Construction and testing

EN 60529 Degrees of protection provided by enclosures (IP-Code)

We declare that the above articles were developed and manufactured in the responsibility of HUMMEL AG.



Michael Nörr
HUMMEL AG / COO