# DATASHEET



## EX-TV10H 235-20Z-3D

## Data

### Ordering data

| | |
|---|---|
| Product type description | EX-TV10H 235-20Z-3D |
| Article number (order number) | 103002227 |
| EAN (European Article Number) | 4030661423340 |
| eCl@ss number, version 12.0 | 27-27-06-01 |
| eCl@ss number, version 11.0 | 27-27-06-01 |
| eCl@ss number, version 9.0 | 27-27-06-01 |
| ETIM number, version 7.0 | EC000030 |
| ETIM number, version 6.0 | EC000030 |

### Approvals - Standards

| | |
|---|---|
| Certificates | INMETRO |

### Explosion protection

| | |
|---|---|
| Explosion protection: regulations | EN IEC 60079-0<br>EN IEC 60079-15<br>EN 60079-31 |
| Explosion protection zones | 2<br>22 |

| | |
|---|---|
| Explosion protection category | 3G<br>3D |
| Explosion protection designation | II 3G Ex nC IIC T5 Gc X<br>II 3D Ex tc IIIC T90°C Dc X |
| Manufacturer declaration | Additional simple electrical apparatus (Zone 0 and 20) |

## General data

| | |
|---|---|
| Standards | BG-GS-ET-15<br>EN IEC 60947-5-1 |
| Housing construction form | Norm construction design |
| Housing material | Metal, zinc die-cast |
| Housing coating material | painted |
| Lever material | Metal film |
| Material of the rod | Plastic |
| Gross weight | 292 g |

## General data - Features

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|---|---|
| Number of auxiliary contacts | 2 |
| Number of safety contacts | 0 |

### Safety classification

| | |
|---|---|
| Standards | EN ISO 13849-1 |
| Mission time | 20 Year(s) |

## Mechanical data

| | |
|---|---|
| Actuating element | Rod lever |
| Mechanical life, minimum | 20,000,000 Operations |
| Actuating speed, minimum | 4,122 mm/min |
| Actuating speed, maximum | 1 m/s |
| Note (Actuating speed) | Actuating speed with actuating angle 30° to switch axis |
| Note Bounce duration | Bounce duration in accordance with actuating speed |

| | |
|---|---|
| Note (Switchover time) | Switchover time in accordance with actuating speed |
| Actuating torque, minimum | 0.2 Nm |

## Mechanical data - Connection technique

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|---|---|
| Termination | Screw terminals M20 x 1.5 |
| Cable cross-section of the cable glands, minimum | 7 mm |
| Cable cross-section of the cable glands, maximum | 12 mm |
| Cable section, minimum | 0.75 mm² |
| Cable section, maximum | 2.5 mm² |
| Note (Cable section) | All indications including the conductor ferrules. |
| Wire cross-section | 13 AWG |

## Mechanical data - Dimensions

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|---|---|
| Length x Width x Height | Height of sensor: 98.5 mm (without rod) |
| Length of sensor | 43.5 mm |
| Width of sensor | 30 mm |

## Ambient conditions

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|---|---|
| Degree of protection | IP67 |
| Ambient temperature | -20 ... +60 °C |

## Ambient conditions - Insulation values

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|---|---|
| Rated insulation voltage $U_i$ | 500 V |
| Rated impulse withstand voltage $U_{imp}$ | 6 kV |

## Electrical data

| | |
|---|---|
| Thermal test current | 10 A |
| Utilisation category AC-15 | 230 VAC |
| Utilisation category AC-15 | 4 A |

| | |
|---|---|
| Utilisation category DC-13 | 24 VDC |
| Utilisation category DC-13 | 1 A |
| Switching element | Normally open contact (NO) |
| Switching principle | Slow action |
| Switching frequency | 5,000 /h |
| Material of the contacts, electrical | Silver |

## Scope of delivery

| | |
|---|---|
| Scope of delivery | Ex-certified screwed cable gland |

## Ordering code

Product type description:
EX-(1)(2) 235-(3)Z-(4)-(5)-(6)-(7)-3D

(1)

| | |
|---|---|
| **Z** | Snap action |
| **T** | Slow action (not for AF/S) |

(2)

| | |
|---|---|
| **S** | Plunger S |
| **R** | Roller plunger R |
| **4S** | Plunger 4S |
| **4R** | Roller plunger 4R |
| **1R** | Offset roller lever 1R |
| **K** | Offset roller lever K |
| **3K** | Angle roller lever 3K |
| **4K** | Angle roller lever 4K |
| **K4** | Angle roller lever K4 |
| **1H** | Roller lever 1H |
| **7H** | Roller lever 7H |
| **10H** | Rod lever 10H |
| **12H** | Roller lever 12H |

| | |
|---|---|
| **14H** | Roller lever 14H |

(3)

| | |
|---|---|
| **02** | 2 NC contact |
| **11** | 1 NO contacts/1 NC contact |
| **20** | 2 NO contacts, (switches with 2 NO contacts are not suitable for safety applications) |

(4)

| | |
|---|---|
| **H** | Slow action with staggered contacts |
| **UE** | Slow action with overlapping contacts |

(5)

| | |
|---|---|
| **1297** | Enclosure with transverse slotted holes |

(6)

| | |
|---|---|
| **2138** | Roller lever 7H for position switches with safety function |

(7)

| | |
|---|---|
| **1637** | Gold-plated contacts |

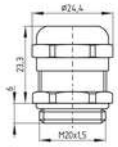
## Pictures

### Product picture (catalogue individual photo)



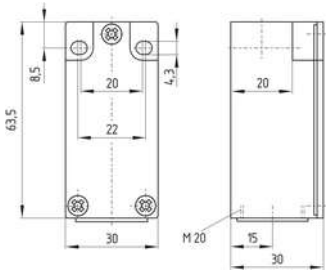
ID: k235hf03
| 1.2 MB | .jpg | 352.778 x 1366.308 mm - 1000 x 3873 px - 72 dpi
| 119.2 kB | .png | 74.083 x 286.808 mm - 210 x 813 px - 72 dpi
| 17.9 kB | .jpg | 31.75 x 123.472 mm - 90 x 350 px - 72 dpi

### Dimensional drawing basic component



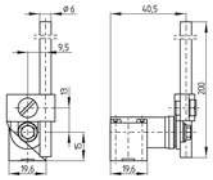
ID: 1xzm1g07
| 2.5 kB | .png | 74.083 x 51.153 mm - 210 x 145 px - 72 dpi
| 46.3 kB | .jpg | 352.778 x 243.769 mm - 1000 x 691 px - 72 dpi

## Dimensional drawing basic component



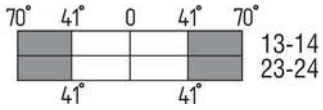

ID: k-235g01
| 24.5 kB | .cdr |
| 3.6 kB | .png | 74.083 x 61.736 mm - 210 x 175 px - 72 dpi
| 111.2 kB | .jpg | 352.778 x 293.511 mm - 1000 x 832 px - 72 dpi

## Dimensional drawing actuator



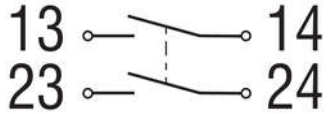
ID: 1h236g03
| 72.1 kB | .cdr |
| 3.9 kB | .png | 74.083 x 51.506 mm - 210 x 146 px - 72 dpi
| 83.4 kB | .jpg | 352.778 x 245.886 mm - 1000 x 697 px - 72 dpi

## Switch travel diagram




ID: kh235s04
| 24.5 kB | .cdr |
| 1.6 kB | .png | 74.083 x 22.931 mm - 210 x 65 px - 72 dpi
| 49.0 kB | .jpg | 352.778 x 109.714 mm - 1000 x 311 px - 72 dpi

## Diagram




ID: k--2sk01
| 51.9 kB | .jpg | 352.778 x 135.819 mm - 1000 x 385 px - 72 dpi
| 2.6 kB | .png | 74.083 x 28.575 mm - 210 x 81 px - 72 dpi