



## TV12H235-11ZUE

- Metal enclosure
- 30 mm x 63,5 mm x 30 mm
- 1 Cable entry M 20 x 1.5
- Mounting details to EN 50047
- Wide range of alternative actuators
- Lever angle adjustable in 10° steps
- Good resistance to oil and petroleum spirit
- Actuator heads can be repositioned by 4 x 90°

## Data

### Ordering data

|                               |                 |
|-------------------------------|-----------------|
|                               | TV12H 235-11ZUE |
|                               | 101145036       |
| EAN (European Article Number) | 4030661135533   |
| eCl@ss number, Version 9.0    | 27-27-26-01     |

### Approval - Standards

cULus  
cCSAus  
CCC  
EAC

### General data

|                                      |                                                                       |
|--------------------------------------|-----------------------------------------------------------------------|
| Product name                         | T 235 roller lever 12H<br>IEC 60947-5-1<br>ISO 13849-1<br>BG-GS-ET-15 |
| Housing construction form            | Norm construction design                                              |
| Actuator type to DIN EN 50047        | A                                                                     |
| Enclosure material                   | Zink                                                                  |
| Enclosure coating material           | painted                                                               |
| Material of the contacts, electrical | Silver                                                                |
| Lever material                       | Metal film                                                            |
| Roller material                      | Plastic                                                               |
| Gross weight                         | 195 g                                                                 |

## General data - Features

|                              |     |
|------------------------------|-----|
| Safety functions             | Yes |
| Number of auxiliary contacts | 1   |
| Number of safety contacts    | 1   |

## Safety appraisal

|              |             |
|--------------|-------------|
|              | ISO 13849-1 |
| Mission Time | 20 Year(s)  |

## Safety appraisal - Safety outputs

|                                   |                       |
|-----------------------------------|-----------------------|
| B10d Normally-closed contact (NC) | 20,000,000 Operations |
|-----------------------------------|-----------------------|

## Mechanical data

|                           |                                                         |
|---------------------------|---------------------------------------------------------|
| Actuating element         | Roller 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                                                  |
| Positive break torque     | 0.2 Nm                                                  |

## Mechanical data - Connection technique

|                      |                                                                               |
|----------------------|-------------------------------------------------------------------------------|
| Terminal Connector   | Screw connection                                                              |
|                      | 0.75 mm <sup>2</sup>                                                          |
|                      | 2.5 mm <sup>2</sup>                                                           |
| Note (Cable section) | All indications about the cable section are including the conductor ferrules. |

## Mechanical data - Dimensions

|                  |          |
|------------------|----------|
| Height of sensor | 110.5 mm |
| Length of sensor | 46 mm    |
| Width of sensor  | 30 mm    |

## Ambient conditions

|                              |        |
|------------------------------|--------|
|                              | IP67   |
| Ambient temperature, minimum | -30 °C |
| Ambient temperature, maximum | +80 °C |

## Ambient conditions - Insulation value

Rated impulse withstand voltage 6 kV

## Electrical data

Thermal test current 10 A  
Required rated short-circuit current to EN 60947-5-1 1,000 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 NO contact, NC contact  
Switching principle Slow action with overlapping contacts  
Switching frequency 5,000 /h

## Ordering code

Product type description:

(1)(2) 2(3)5-(4)Z(5)-(6)-(7)-(8)-(9)

(1)

**Z** Snap action

**T** Slow action (not available 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

**AF** Spring rod lever AF

**RMS** Brass roller

- (3)
- 3** slim design
- 5** large design
- (4)
- 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)
- (5)
- H** Slow action with staggered contacts
- UE** Slow action with overlapping contacts
- (6)
- |                |                                                                                                                                 |
|----------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>without</b> | Cable entry M20                                                                                                                 |
| <b>ID</b>      | IDC method of termination                                                                                                       |
| <b>NPT</b>     | Cable entry NPT 1/2"                                                                                                            |
| <b>ST</b>      | M12 connector with A-coding (Caution! According to EN 60204-1, the versions with connector must only be used in PELV circuits.) |
| <b>ST-2310</b> | M12 connector with B-coding (Caution! According to EN 60204-1, the versions with connector must only be used in PELV circuits.) |
- (7)
- 2574** Enclosure with L-shaped mounting holes (horizontally or vertically adjustable)
- (8)
- 2138** Roller lever 7H for position switches with safety function
- (9)
- 1637** Gold-plated contacts

## Pictures

### Photo/Product/Catalogue



ID: k235hf04

| 372,1 kB | .jpg | 107.95 x 323.144 mm - 306 x 916  
Pixel - 72 dpi  
| 211,3 kB | .png | 74.083 x 221.544 mm - 210 x 628  
Pixel - 72 dpi

### Dimension/Product/Basic

```
+010021amSunday.31am31Europe/BerlinCET2801Europe/BerlinJanuary2021Sun, 31 Jan 2021 03:28:21
+010001am31
```