



## ZV12H 235-11Z-M20

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

## Data

### Ordering data

|                               |                   |
|-------------------------------|-------------------|
| Product type description      | ZV12H 235-11Z-M20 |
| Article number (order number) | 151164475         |

### Approvals - Standards

|              |       |
|--------------|-------|
| Certificates | cULus |
|              | CCC   |
|              | EAC   |

### General data

|                                      |                                                   |
|--------------------------------------|---------------------------------------------------|
| Standards                            | BG-GS-ET-15<br>EN ISO 13849-1<br>EN IEC 60947-5-1 |
| Housing construction form            | Norm construction design                          |
| Actuator type to DIN EN 50047        | A                                                 |
| Enclosure material                   | Metal, zinc die-cast                              |
| Material of the contacts, electrical | Silver                                            |

|                |            |
|----------------|------------|
| Lever material | Metal film |
|----------------|------------|

|              |       |
|--------------|-------|
| Gross weight | 215 g |
|--------------|-------|

### General data - Features

|                  |     |
|------------------|-----|
| Safety functions | Yes |
|------------------|-----|

|                              |   |
|------------------------------|---|
| Number of auxiliary contacts | 1 |
|------------------------------|---|

|                           |   |
|---------------------------|---|
| Number of safety contacts | 1 |
|---------------------------|---|

### Safety classification

|           |                |
|-----------|----------------|
| Standards | EN ISO 13849-1 |
|-----------|----------------|

|              |            |
|--------------|------------|
| Mission time | 20 Year(s) |
|--------------|------------|

### Safety classification - Safety outputs

|                                               |                       |
|-----------------------------------------------|-----------------------|
| B <sub>10D</sub> Normally-closed contact (NC) | 20,000,000 Operations |
|-----------------------------------------------|-----------------------|

### Mechanical data

|                   |              |
|-------------------|--------------|
| Actuating element | Roller lever |
|-------------------|--------------|

|                 |         |
|-----------------|---------|
| Roller material | Plastic |
|-----------------|---------|

|                          |                       |
|--------------------------|-----------------------|
| Mechanical life, minimum | 20,000,000 Operations |
|--------------------------|-----------------------|

|                          |            |
|--------------------------|------------|
| Actuating speed, minimum | 687 mm/min |
|--------------------------|------------|

|                          |       |
|--------------------------|-------|
| Actuating speed, maximum | 1 m/s |
|--------------------------|-------|

|                        |                                                         |
|------------------------|---------------------------------------------------------|
| Note (Actuating speed) | Actuating speed with actuating angle 30° to switch axis |
|------------------------|---------------------------------------------------------|

|                           |        |
|---------------------------|--------|
| Actuating torque, minimum | 0.2 Nm |
|---------------------------|--------|

|                       |        |
|-----------------------|--------|
| Positive break torque | 0.2 Nm |
|-----------------------|--------|

### Mechanical data - Connection technique

|             |                           |
|-------------|---------------------------|
| Termination | Screw terminals M20 x 1.5 |
|-------------|---------------------------|

|                        |                      |
|------------------------|----------------------|
| Cable section, minimum | 0.75 mm <sup>2</sup> |
|------------------------|----------------------|

|                        |                     |
|------------------------|---------------------|
| Cable section, maximum | 2.5 mm <sup>2</sup> |
|------------------------|---------------------|

Note (Cable section)

All indications including the conductor ferrules.

### Mechanical data - Dimensions

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

### Ambient conditions

|                              |              |
|------------------------------|--------------|
| Degree of protection         | IP67<br>IP65 |
| Ambient temperature, minimum | -30 °C       |
| Ambient temperature, maximum | +80 °C       |

### Ambient conditions - Insulation values

|                                           |       |
|-------------------------------------------|-------|
| Rated insulation voltage $U_i$            | 500 V |
| Rated impulse withstand voltage $U_{imp}$ | 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                                  | Snap action            |
| Bounce duration, maximum                             | 3 ms                   |
| Switching frequency                                  | 5,000 /h               |
| Switchover time, maximum                             | 5.5 ms                 |

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The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.

