



# UE43-3MF2D3

## UE43-3MF

SAFETY RELAYS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

| Type        | part no. |
|-------------|----------|
| UE43-3MF2D3 | 6024897  |

Other models and accessories → [www.sick.com/UE43-3MF](http://www.sick.com/UE43-3MF)

Detailed technical data

Safety-related parameters

|                                                                           |                                                                                                                                                                                                    |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safety integrity level</b>                                             | SIL 3 (IEC 61508)                                                                                                                                                                                  |
| <b>Category</b>                                                           | Category 4 (EN ISO 13849)                                                                                                                                                                          |
| <b>Performance level</b>                                                  | PL e (EN ISO 13849)                                                                                                                                                                                |
| <b>B<sub>10d</sub> parameter</b>                                          | 1 x 10 <sup>6</sup> switching cycles (AC-15, 230 V, I = 0.5 A)<br>3.5 x 10 <sup>5</sup> switching cycles (DC-13, 24 V, I = 2 A)<br>1.2 x 10 <sup>6</sup> switching cycles (DC-13, 24 V, I = 0.5 A) |
| <b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b> | 3.0 x 10 <sup>-8</sup> (EN ISO 13849)                                                                                                                                                              |
| <b>T<sub>M</sub> (mission time)</b>                                       | 20 years (EN ISO 13849)                                                                                                                                                                            |
| <b>Stop category</b>                                                      | 0 (EN 60204-1)                                                                                                                                                                                     |

Electronics - Operating data

|                                                        |                                        |
|--------------------------------------------------------|----------------------------------------|
| <b>Voltage supply</b>                                  | A1, A2                                 |
| Output circuit > 25 V AC / 60 V DC                     | PELV                                   |
| Output circuit ≤ 25 V AC / 60 V DC                     | PELV or SELV                           |
| <b>Supply voltage V<sub>s</sub></b>                    | A1, A2                                 |
|                                                        | 24 V DC (20.4 V DC ... 26.4 V DC)      |
| <b>Residual ripple</b>                                 | (≤ 2.4 V <sub>pp</sub> ) <sup>1)</sup> |
| <b>Power consumption</b>                               | (≤ 1 W (DC))                           |
| <b>Overvoltage category</b>                            | II                                     |
| <b>Rated insulation voltage U<sub>i</sub></b>          | 300 V AC                               |
| <b>Rated impulse withstand voltage U<sub>imp</sub></b> | 4 kV                                   |
| <b>Test voltage</b>                                    | 2 kV (50 Hz) (EN 60439-1)              |

<sup>1)</sup> In DC operation, within the limits of V<sub>s</sub>.

Electronics - Control voltage: Y11, Y21

|                        |         |
|------------------------|---------|
| <b>Control voltage</b> | 24 V DC |
|------------------------|---------|

|                                 |                           |
|---------------------------------|---------------------------|
| <b>Short-circuit current</b>    | ≤ 1 A, between Y11 and A2 |
| <b>Short-circuit protection</b> | PTC resistor              |

Electronics - Input circuits: Y12 , Y31, Y22

|                                    |                   |
|------------------------------------|-------------------|
| <b>Input current</b>               | ≤ 15 mA           |
| <b>Reset time</b>                  |                   |
| Manual                             | 150 ms            |
| Automatic                          | 800 ms            |
| <b>Synchronous time monitoring</b> | ≤ 500 ms ≤ 500 ms |
| <b>Cable resistance</b>            | ≤ 70 Ω            |

Electronics - Output current paths: 13/14, 23/24, 33/34, 41/42

|                                                            |                                                                                                                         |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Response time</b>                                       | 50 ms (≤ 50 ms) <sup>1)</sup>                                                                                           |
| <b>Number of enabling current paths (N/O)</b>              | 3, relevant for safety                                                                                                  |
| <b>Number of signaling current paths (normally closed)</b> | 1, not safety-relevant                                                                                                  |
| <b>Contact type</b>                                        | Positively driven                                                                                                       |
| <b>Contact material</b>                                    | Silver alloy, gold flashed                                                                                              |
| <b>Switching voltage</b>                                   |                                                                                                                         |
| Enabling current path                                      | 10 V AC ... 230 V AC                                                                                                    |
|                                                            | 10 V DC ... 300 V DC                                                                                                    |
| Signaling current path                                     | 10 V AC, 10 V DC ... 230 V AC, 300 V DC                                                                                 |
| <b>Current loading</b>                                     |                                                                                                                         |
| Enabling current path                                      | 10 mA ... 6 A                                                                                                           |
| Signaling current path                                     | 10 mA ... 6 A                                                                                                           |
| Total current                                              | ≤ 18 A                                                                                                                  |
| <b>Usage category</b>                                      | AC-15/DC-13 (EN 60947-5-1)                                                                                              |
| <b>Rated operating current (voltage)</b>                   | 6 A (230 V AC) 3600 switching cycles/h<br>4 A (24 V DC) 360 switching cycles/h<br>3 A (24 V DC) 3600 switching cycles/h |
| <b>Switching frequency</b>                                 | ≤ 3600/h                                                                                                                |
| <b>Mechanical life (relay contacts)</b>                    | 1 x 10 <sup>7</sup> switching cycles                                                                                    |
| <b>Electrical life (relay contacts)</b>                    | 2 x 10 <sup>6</sup> switching cycles                                                                                    |

<sup>1)</sup> K1/K2.

Mechanics

|                               |                          |
|-------------------------------|--------------------------|
| <b>Dimensions (W x H x D)</b> | 45 mm x 120.5 mm x 75 mm |
| <b>Contamination rating</b>   | 3 (EN 50178)             |
| <b>Weight</b>                 | 0.3 kg                   |

Certificates

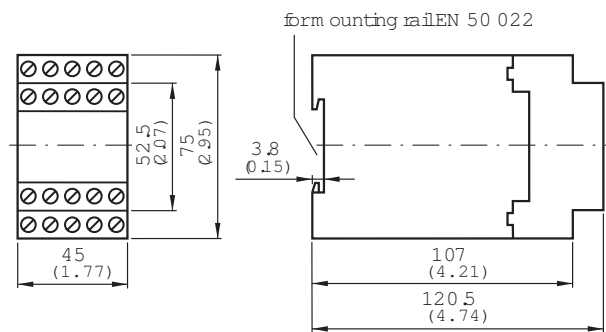
|                                     |   |
|-------------------------------------|---|
| <b>EU declaration of conformity</b> | ✓ |
|-------------------------------------|---|

Classifications

|                   |          |
|-------------------|----------|
| <b>ECLASS 5.0</b> | 27371990 |
|-------------------|----------|

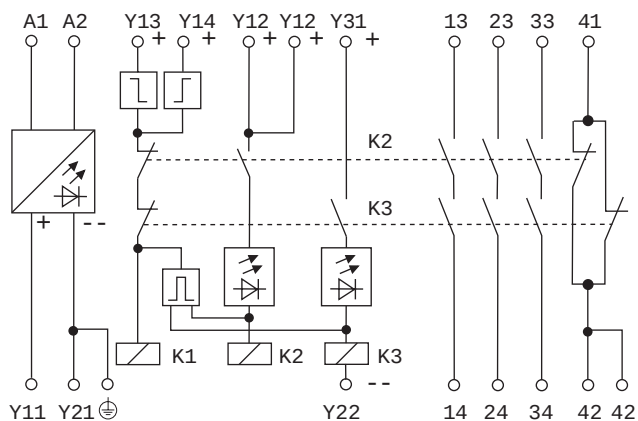
|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.1.4</b>   | 27371990 |
| <b>ECLASS 6.0</b>     | 27371819 |
| <b>ECLASS 6.2</b>     | 27371819 |
| <b>ECLASS 7.0</b>     | 27371819 |
| <b>ECLASS 8.0</b>     | 27371819 |
| <b>ECLASS 8.1</b>     | 27371819 |
| <b>ECLASS 9.0</b>     | 27371819 |
| <b>ECLASS 10.0</b>    | 27371819 |
| <b>ECLASS 11.0</b>    | 27371819 |
| <b>ECLASS 12.0</b>    | 27371819 |
| <b>ETIM 5.0</b>       | EC001449 |
| <b>ETIM 6.0</b>       | EC001449 |
| <b>ETIM 7.0</b>       | EC001449 |
| <b>ETIM 8.0</b>       | EC001449 |
| <b>UNSPSC 16.0901</b> | 41113704 |

### Dimensional drawing



Dimensions in mm (inch)

### Connection diagram



## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is “Sensor Intelligence.”**

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)