



## Transponder safety switches T4000 Standard Evaluation unit

T4000-1RBA01



**Model Name** > T4000-1RBA01  
**Part No.** > 6012147



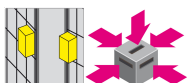
#### At a glance

- Small sensors with external evaluation unit
- Response range of up to 10 mm
- Sensors with plug connector or connected cable
- Up to performance level PL e / Cat. 4 (EN ISO 13849)

#### Your benefits

- High level of prevention against tampering due to individually coded actuator
- High level of machine availability due to high tolerances for door misalignment
- High level of machine reliability due to resistance to shocks and vibrations
- Space-saving mounting due to compact housing design
- Just one safety switch in conjunction with a suitable safety module makes it possible to solve applications up to PL e and Cat. 4 (EN ISO 13849)
- The devices are easy to clean, making them suitable for contaminated areas or environments with strict hygiene standards
- Long service life due to durable and low-maintenance design

**Note: The technical data SILCL, category, PL, PFHd and TM apply at maximum switch load.**



#### Functions

|                                   |   |
|-----------------------------------|---|
| External device monitoring (EDM): | - |
| Self-testing:                     | ✓ |

#### Technical data

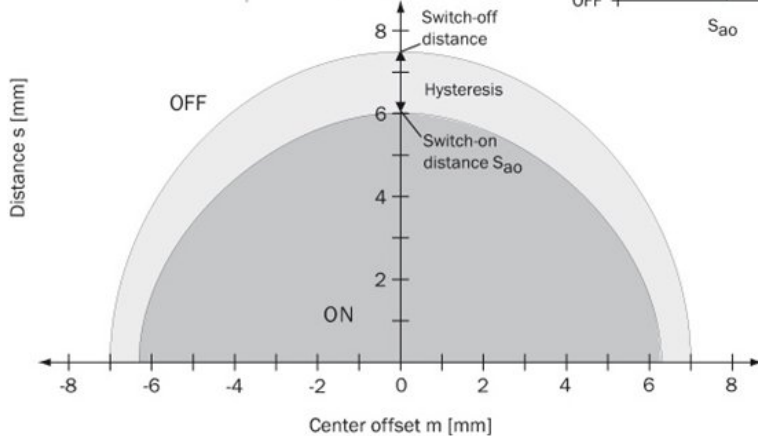
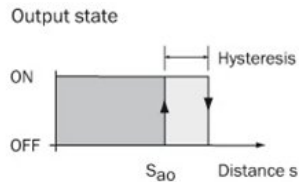
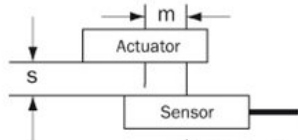
|                                                     |                                                                           |
|-----------------------------------------------------|---------------------------------------------------------------------------|
| Safety integrity level:                             | SILCL2 (EN 62061)                                                         |
| Category:                                           | Category 3 (EN ISO 13849)                                                 |
| Performance level:                                  | PL e (EN ISO 13849)                                                       |
| PFHd::                                              | 4.3 * 1E-08 (EN ISO 13849) <sup>1) 2)</sup><br>8.8 * 1E-08 (EN ISO 13849) |
| TM (mission time)::                                 | 20 a (EN ISO 13849) <sup>3) 4)</sup><br>8 a (EN ISO 13849)                |
| Classification in compliance with IEC/EN 60947-5-3: | PDF-M                                                                     |
| Housing material:                                   | Plastic PA6.6                                                             |
| Enclosure rating:                                   | IP 20 (EN 60529)                                                          |

|                                            |                                                                                                                     |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Protection class:                          | III (EN 50178)                                                                                                      |
| Ambient operating temperature from ... to: | 0 °C ... 55 °C                                                                                                      |
| Connection type:                           | Plug-in terminals                                                                                                   |
| Type of output:                            | Relays                                                                                                              |
| Number of safe outputs (N/O):              | 2                                                                                                                   |
| Response time:                             | 180 ms                                                                                                              |
| Supply voltage typical, from, to:          | 24 V DC, 21 V DC, 27 V DC                                                                                           |
| Usage category:                            | AC-12/DC-12, AC-14/DC-13 (EN 60947-5-2)                                                                             |
| Rated operating current (voltage):         | 0.3 A (60 V AC) 50 Hz<br>6 A (30 V AC) 50 Hz<br>0.3 A (60 V DC) 6 A<br>30 V DC (2 A) 30 V AC<br>50 Hz (3 A) 24 V DC |
| Mechanical life (relay contacts):          | 10* 1E 06 switching cycles                                                                                          |
| Number of non-contact safety switches:     | 1                                                                                                                   |
| Type of connectable sensors:               | T4000 DNAC, T4000 DNA05P, T4000 DNA10P, T4000 DNA15P                                                                |
| Status display:                            | ✓                                                                                                                   |
| Weight:                                    | 0.327 kg                                                                                                            |
| ATEX approval:                             | -                                                                                                                   |

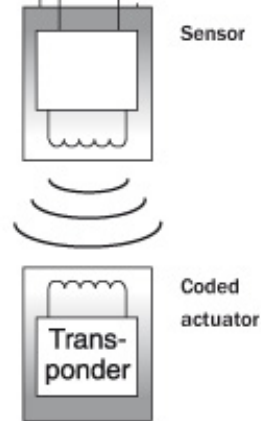
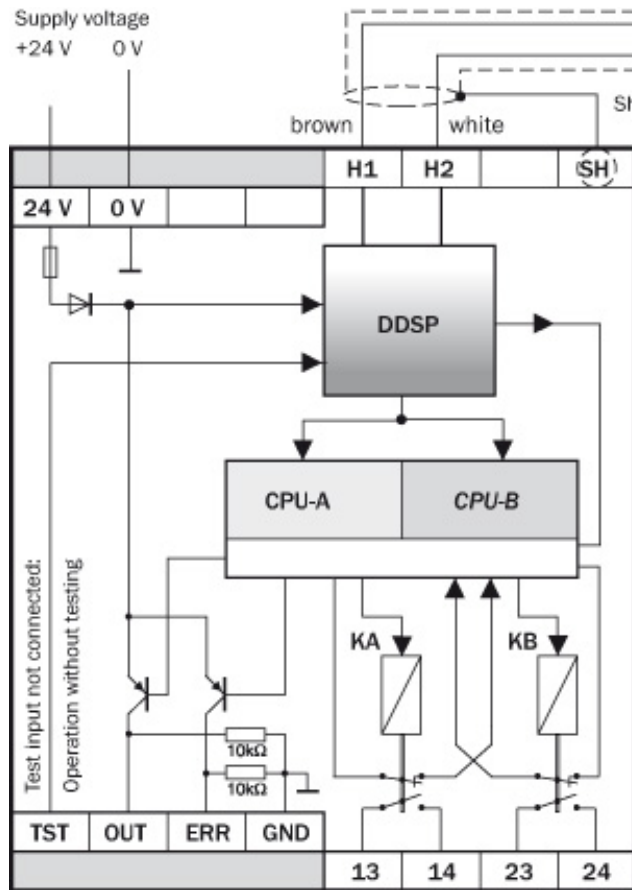
1) 3) With < 34.600 switching cycles p.a.      2) 4) With < 90.000 switching cycles p.a.

## Response range

Observe the safe switch-off distance  $s_{ar} = 23 \text{ mm}$ . Relay outputs are safely deactivated

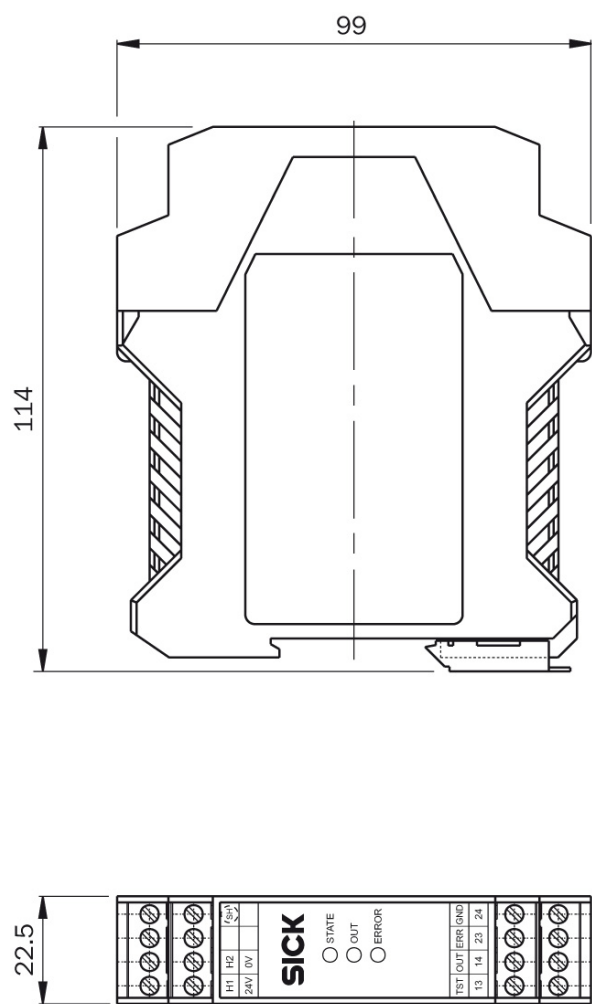


## Connection diagram



**DDSP:**  
Double Dynamic Safety-Path  
with error monitoring of the actuator,  
of the sensor and of the cable  
to the sensor

|         |                                                        |
|---------|--------------------------------------------------------|
| TST     | Test input (STATE)                                     |
| OUT     | Enable output                                          |
| ERR     | Diagnostic output (ERROR)                              |
| GND     | 0 V                                                    |
| H1 / H2 | Connection, sensor                                     |
| 13 / 14 | Connection, N/O contact 1, enable contact safety relay |
| 23 / 24 | Connection, N/O contact 2, enable contact safety relay |



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