



## Industrial Safety Systems

Safety Sensor T 4000 Multi





- Connection of multiple sensors to one evaluation unit
- High protection against manipulation through individually coded actuator
- Small compact design of sensor and actuator
- Sensor and actuator with IP 67 enclosure rating



## Overview of technical specifications

<b>Sensor principle</b>	Transponder
<b>Control category to EN 954-1</b>	4
<b>Number of safety sensors from ... to (depending on type)</b>	1 ... 2 / 1 ... 4
<b>Type of output</b>	Relay
<b>Number of safe outputs (N/O)</b>	2
<b>Number of application diagnostic outputs (depending on type)</b>	2 x semiconductor, p-switching / 4 x semiconductor, p-switching

## Product description

The T 4000 Multi safety sensor system comprises of the following components:

- 1 to 4 sensors
- 1 to 4 coded actuators (unique copy)
- 1 evaluation unit

The evaluation unit is further equipped with:

- 2 LED status displays
- External device monitoring (EDM)
- Restart interlock

## Order information

System part	Connection type	Cable length	Number of sensors from ... to	Type	Part number
Evaluation unit	–	–	1 ... 2	T4000-1RCA02	6 029 946
			1 ... 4	T4000-1RCA04	6 029 947
Sensor	Connector	–	–	T4000 DNAC	6 021 912
	Cable	5 m	–	T4000 DNA05P	6 012 144
		10 m	–	T4000 DNA10P	6 012 145
		15 m	–	T4000 DNA15P	6 012 146
Actuator	–	–	–	T4000-1 KBA	5 306 531

Connecting cable not supplied with delivery

Further information	Page
→ Dimensional drawings	4
→ Response range	5
→ Internal circuitry	6

## Detailed technical specifications

### Evaluation unit

Type	T4000-1RCA02	T4000-1RCA04
Control category to EN 954-1	4	
Classification in compliance with IEC/EN 60947-5-3	PDF-M	
Housing material	Plastic PA6.6	
Enclosure rating	IP 20	
Mechanical life (relay contacts)	10 x 10 <sup>6</sup> switching cycles	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Protection class	III	
Operating voltage	24 V DC (21 V DC ... 27 V DC)	
Number of safety sensors from ... to	1 ... 2	1 ... 4
Rated insulation voltage U <sub>i</sub>	250 V	
Impulse withstand voltage U <sub>imp</sub>	4000 V AC	
Type of output	Relay	
Number of safe outputs (N/O)	2	
Number of application diagnostic outputs	2 x semiconductor, p-switching	4 x semiconductor, p-switching
Short-circuit protection	6A gG	
Usage category in compliance with IEC 947-5-1	AC-15/DC-13	
Rated operating current (voltage)	1.5 A (230 V AC), 1.2 A (24 V DC)	
Minimum switching current (switching voltage)	1 mA (1 V DC)	
Maximum switching current (switching voltage)	6 A (240 V AC)	
Weight	250 g	
Out indication	✓	
Power indication	✓	
Error indication	✓	
Status display	✓	
Maximum switch-on time	12 s	
Switching delay from state change	290 ms	450 ms
External device monitoring	✓	
Restart interlock	✓	

Continued on next page

**Sensor**

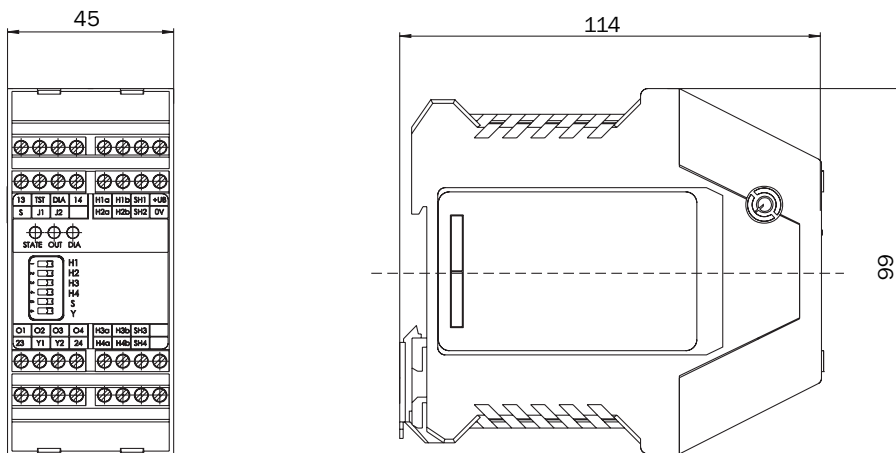
Type	T4000 DNAC	T4000 DNA05P	T4000 DNA10P	T4000 DNA15P
Sensor principle	Transponder			
Housing material	Fortron, glassfibre-reinforced thermoplastic			
Enclosure rating	IP 67			
Ambient operating temperature from ... to	-25 °C ... +70 °C			
Connection type	Connector	Cable		
Size of the cable gland	M8			
Weight	0.12 kg	0.25 kg	0.39 kg	0.53 kg
Monitoring time minimum dwell time	0.5 s			
Cable length	-	5 m	10 m	15 m
Maximum cable length	50 m			
Cable material	-	PVC		

**Actuator**

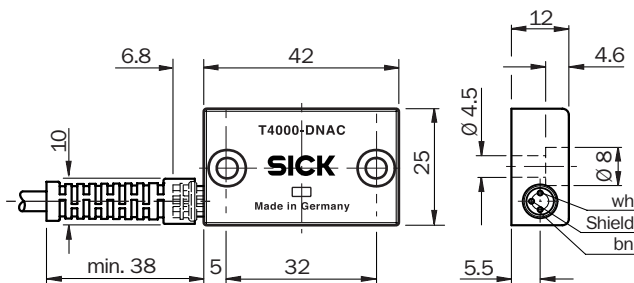
Housing material	Fortron, glassfibre-reinforced thermoplastic
Enclosure rating	IP 67
Ambient operating temperature from ... to	-25 °C ... +70 °C
Weight	0.03 kg
Monitoring time minimum dwell time	0.5 s

**Dimensional drawings**

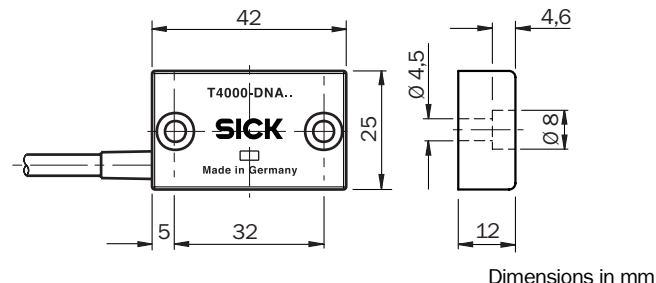
Evaluation unit



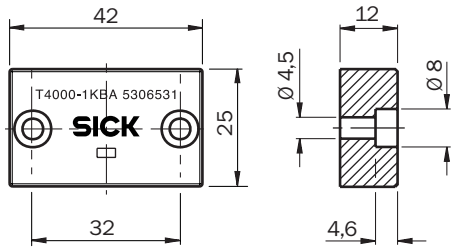
Sensor, Connector



Sensor, Cable

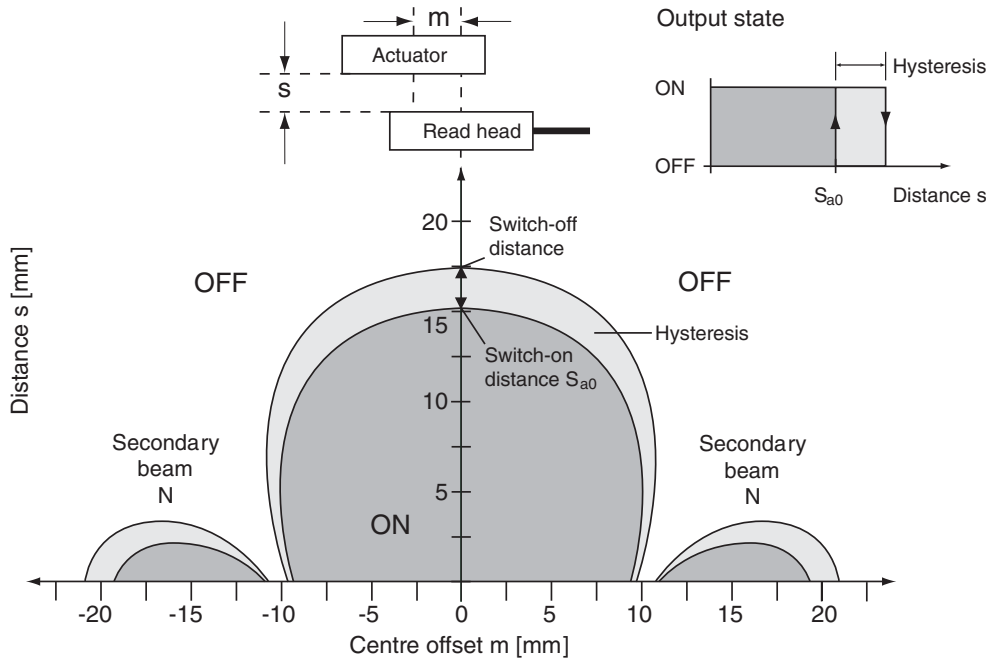


Actuator



Dimensions in mm

Response range

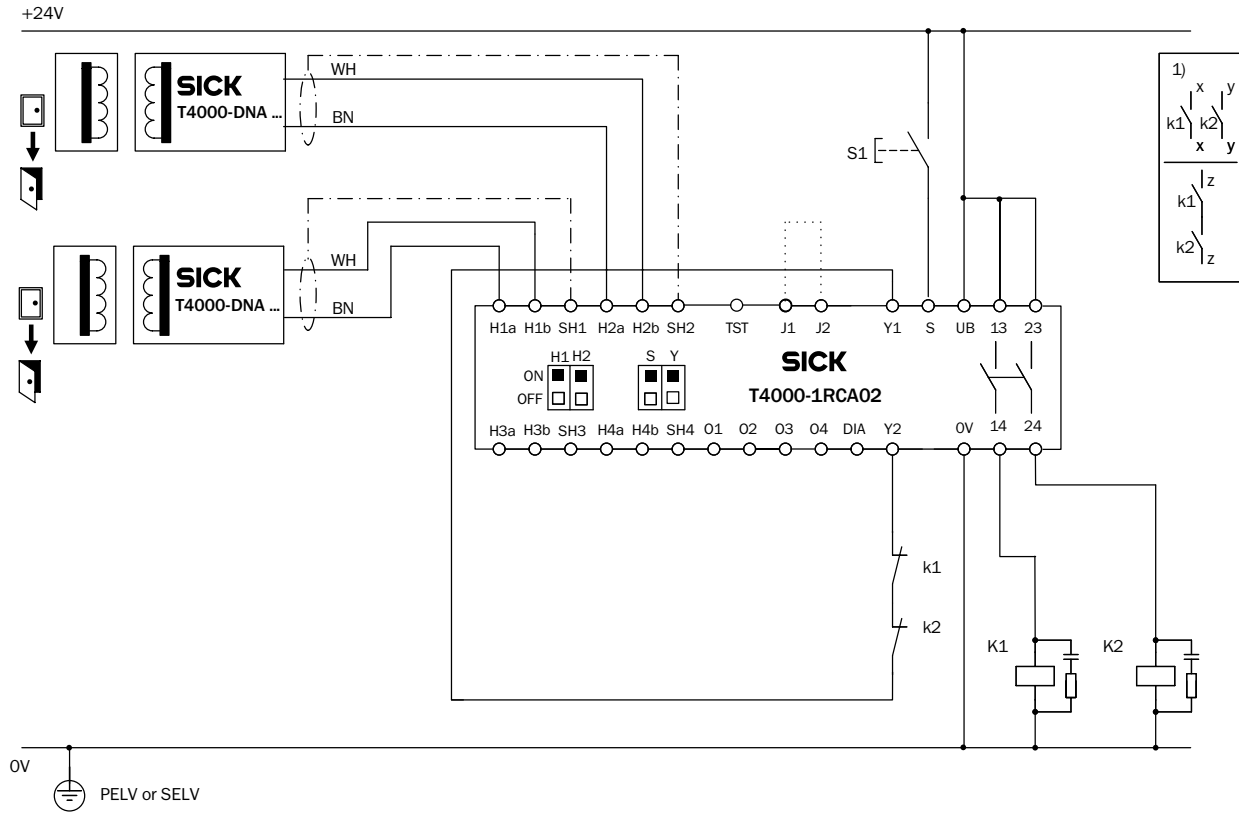


	Operating distance for center offset $m = 0^1$	
	Cable length $l = 0 \dots 25 \text{ m}$	Cable length $l = 25 \dots 50 \text{ m}$
<b>Safe switch-off distance <math>S_{ar}</math></b>	Max. 32 mm	Max. 32 mm
<b>Switch-on distance <math>S_{a0}</math></b>	Min. 10 mm, typ. 15 mm	Min. 8 mm, typ. 12 mm
<b>Switching hysteresis</b>	Min. 0.5 mm, typ. 2 mm	Min. 0.4 mm, typ. 1.6 mm

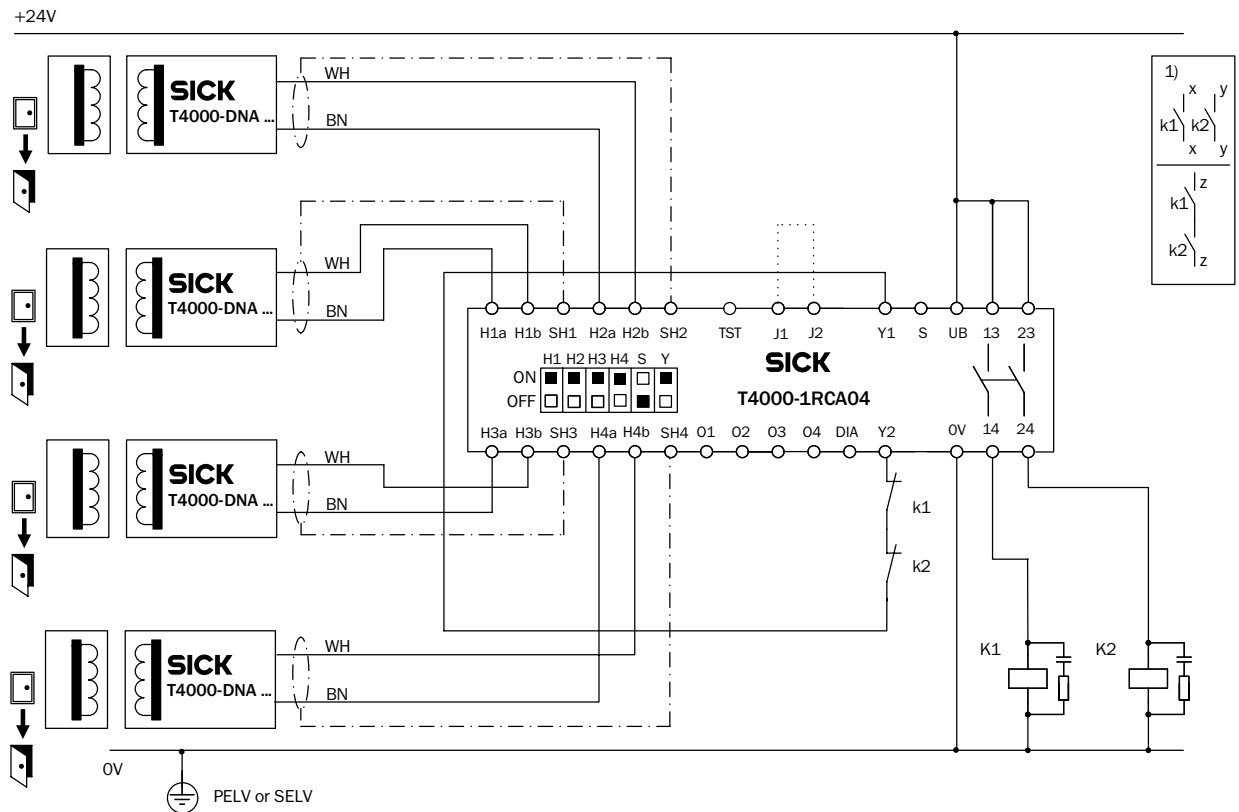
<sup>1)</sup> These values only apply for the protruding installation of the sensor and the actuator.

# Internal circuitry

## T4000-1RCA02



## T4000-1RCA04



# SICK Industrial Safety Systems

## Safety laser scanners and safety camera system

- S 3000
- PLS
- PLS short range
- RLS
- V 4000 Press Brake

## Safety light curtains

- C 4000 Micro
- C 4000 Basic
- C 4000 Standard/Advanced
- C 4000 Entry/Exit
- C 4000 Palletizer
- C 2000
- LGT

## Multiple light beam safety devices

- M 4000
- MSL
- MSL/MSM
- M 2000

## Single-beam photoelectric safety switches

- L 4000 System
- WSU/WEU 26/2
- WS/WE 12-2 with LE 20
- WS/WE 18-3 with LE 20
- WS/WE 24-2 with LE 20
- WS/WE 27-2 with LE 20
- VS/VE 18-2 with LE 20

## Safety switches, safety sensors and safety operating devices

- Safety position switches
- Safety switches with separate actuator
- Safety locking devices
- Safety sensors
- Safety operating devices

## SICK Industrial Safety Systems

## Safety network solutions UE 1000 series

- UE 4120, UE 4150, UE 4155
- UE 4212, UE 4215, UE 4231, UE 4232
- UE 4400 series in preparation

## Safety controllers UE 100 series

- UE 440
- UE 470

## Safety relays UE 10 series

- UE 10 to UE 48

## Software

- Safexpert

intelliface  
the intelligent interface



intelliface  
the intelligent interface

intelliface  
the intelligent interface

[www.sick.com](http://www.sick.com)

► eCatalog

► Product finder

► Applications

► and much more ...

[www.sick.com/safetysystems](http://www.sick.com/safetysystems)



Contact:

**Australia**

Phone +61 3 9497 4100  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium / Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 5091-4900  
E-Mail sac@sick.com.br

**Ceská Republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +852-2763 6966  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 (0)2 11 53 01-260  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91 (11) 2696 7651  
E-Mail ayograj@tecnovaglobal.com

**Italia**

Phone +39 02 27 40 93 19  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 3358 1341  
E-Mail info@sick.jp

**Korea**

Phone +82-2 786 6321/4  
E-Mail kang@sickkorea.net

**Netherlands**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**Republika Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail selanm@sick.com

**Russia**

Phone +7 95 775 05 30  
E-Mail info@sick-automation.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail admin@sicksgp.com.sg

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 8 680 64 50  
E-Mail info@sick.se

**Türkiye**

Phone +90 216 388 95 90 pbx  
E-Mail info@sick.com.tr

**Taiwan**

Phone +886 2 2365-6292  
E-Mail sickgrc@ms6.hinet.net

**USA / Canada / México**

Phone +1(952) 941-6780  
1 800-325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
in all major industrial nations at  
www.sick.com

SICK AG · Industrial Safety Systems · Waldkirch · Germany · www.sick.com