



TR10-SLM01C

TR10 Lock

SAFETY LOCKING DEVICES

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
TR10-SLM01C	6054761

Other models and accessories → www.sick.com/TR10_Lock



Detailed technical data

Features

Sensor principle	RFID
Locking principle	Power to lock
Number of safe outputs	2
Coding	Universally coded
Locking force F_{max}	1,690 N (EN ISO 14119)
Locking force F_{Zh}	1,300 N (EN ISO 14119)
Retaining force	0 N
Actuation directions	4
Approach speed	≥ 2 mm/s

Safety-related parameters

Safety integrity level	SIL3 (IEC 61508)
Category	Category 4 (EN ISO 13849)
Performance level	PL e (EN ISO 13849)
PFH_D (mean probability of a dangerous failure per hour)	9.1×10^{-10}
T_M (mission time)	20 years (EN ISO 13849)
Type	Type 4 (EN ISO 14119)
Actuator coding level	Low coding level (EN ISO 14119)
Safe state in the event of a fault	At least one safety-related semiconductor output (OSSD) is in the OFF state.

Functions

Switching behavior of the OSSDs	Locking monitoring
Safe series connection	With T-connector (without diagnostics) With Flexi Loop (with diagnostics)

Interfaces

Connection type	Cable with plug M12, 8-pin
Length of cable	0.2 m
Long connecting cable	≤ 200 m
Cable diameter	6.5 mm
Conductor cross section	0.25 mm ²
Bend radius (with fixed installation)	> 7 x cable diameter
Bend radius (with moving cable)	> 14 x cable diameter
Cable material	PVC
Conductor material	Copper
Coupling nut material	Stainless steel
Diagnostics indicator	✓
Status display	✓

Electrical data

Protection class	II (IEC 61140)
Contamination rating	3
Classification according to cULus	Class 2
Usage category	DC-13 (IEC 60947-5-1)
Rated operating current (voltage)	200 mA (24 V DC)
Rated insulation voltage U_i	75 V
Rated impulse withstand voltage U_{imp}	1,000 V
Supply voltage V_s	24 V DC (20.4 V DC ... 26.4 V DC)
Type of output	Self-monitoring semiconductor outputs (OSSDs)
Output current	≤ 200 mA
Peak current	400 mA, 100 ms ¹⁾
Power consumption	2.5 W
Response time	100 ms for the first switch, 50 ms for each subsequent switch ²⁾
Release time	600 ms
Risk time	100 ms
Switch-on time	7 s
Locking principle	Power to lock

¹⁾ During switching on, locking, or unlocking.

²⁾ Time until the outputs are switched off.

Mechanical data

Weight	+ 0.4 kg
Housing material	ABS
Locking bolt material	Stainless steel 304
Mechanical life	5 x 10 ⁵ switching cycles

Ambient data

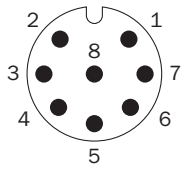
Enclosure rating	IP66 (IEC 60529) IP67 (IEC 60529) IP69K (IEC 60529)
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Ambient operating temperature	0 °C ... +55 °C
Storage temperature	-25 °C ... +75 °C
Vibration resistance	10 Hz ... 55 Hz (IEC 60068-2-6)
Shock resistance	30 g, 11 ms (EN 60068-2-27)
EMC	IEC 60947-5-3

Classifications

eCl@ss 5.0	27272603
eCl@ss 5.1.4	27272603
eCl@ss 6.0	27272603
eCl@ss 6.2	27272603
eCl@ss 7.0	27272603
eCl@ss 8.0	27272603
eCl@ss 8.1	27272603
eCl@ss 9.0	27272603
eCl@ss 10.0	27272603
eCl@ss 11.0	27272603
eCl@ss 12.0	27272603
ETIM 5.0	EC002593
ETIM 6.0	EC002593
ETIM 7.0	EC002593
ETIM 8.0	EC002593
UNSPSC 16.0901	39122205

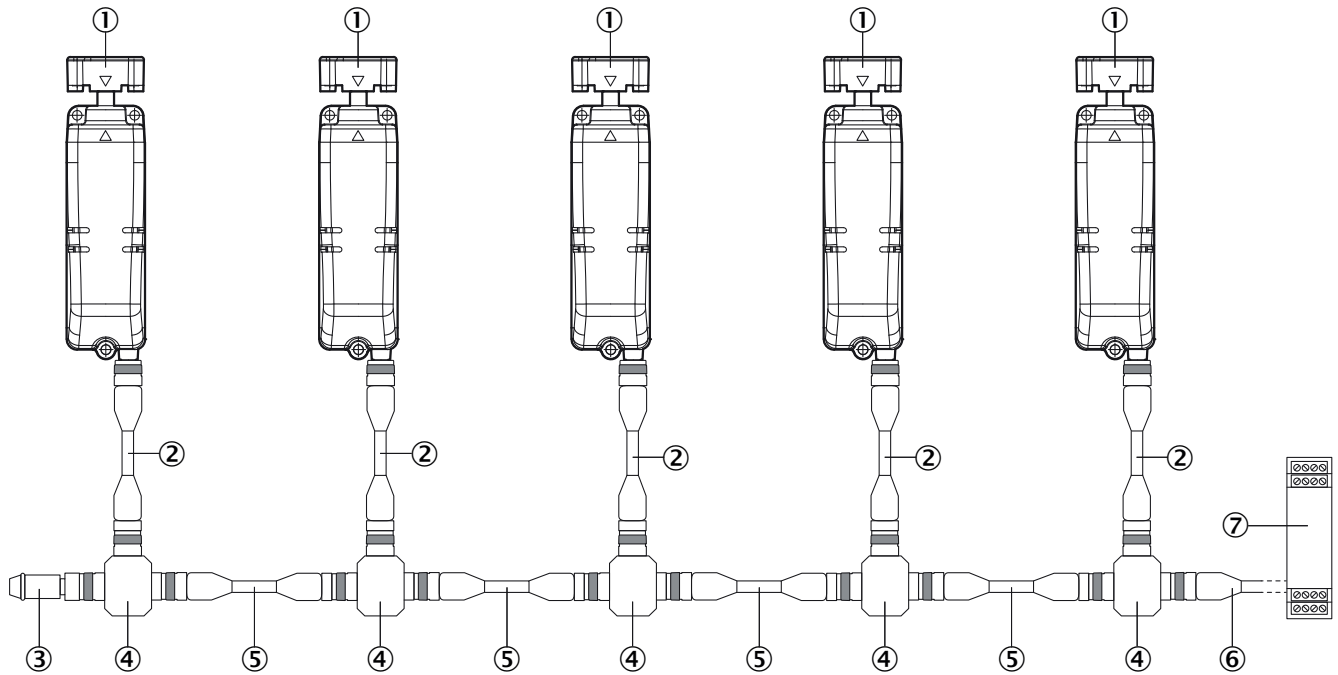
Pin assignment



1	Aux output (not safe)
2	Voltage supply 24 V DC
3	Lock control
4	OSSD 2 input
5	OSSD 1 output
6	OSSD 2 output
7	Voltage supply 0 V DC
8	OSSD 1 input

Series connection

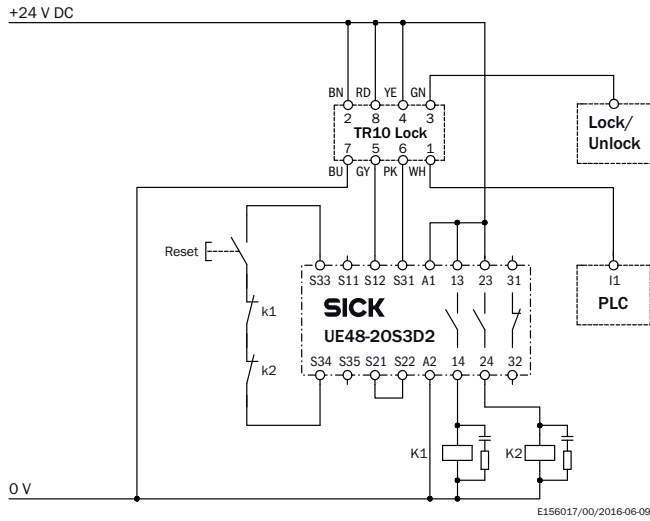
Series connection with T-piece (without diagnostics)



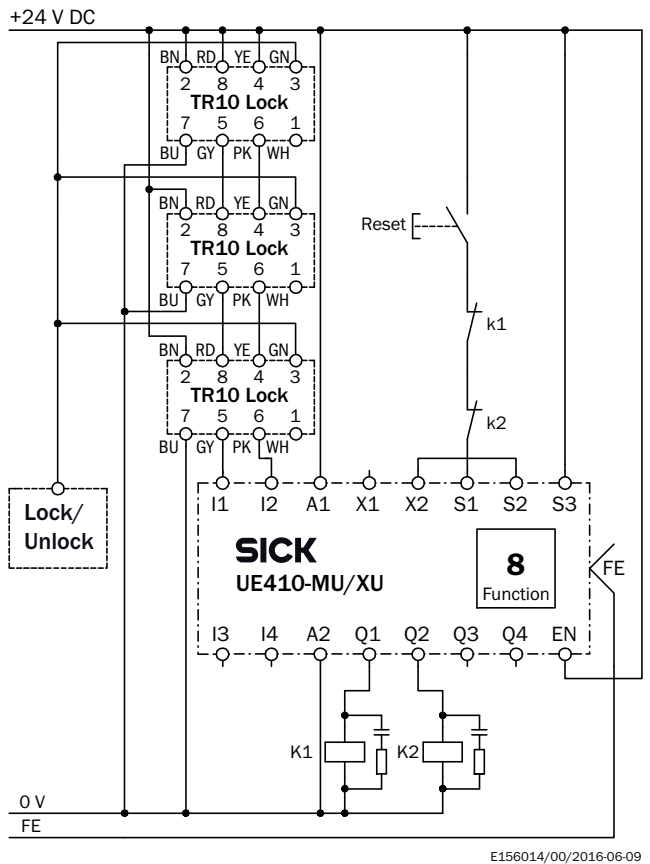
- ① TR10 Lock safety locking device
- ② Connection cable with 8-pin, M12 male connector and 8-pin, M12 female connector (e.g., DSL-1208-xxxx)
- ③ MLP1-XXT end connector
- ④ STR1-XXA T-connector
- ⑤ Connection cable with 5-pin, M12 male connector and 5-pin, M12 female connector (e.g., DSL-1205-xxxx)
- ⑥ Connecting cable with M12 female connector, 5-pin and flying leads (e.g., DOL-1205-xxxx)
- ⑦ Safe evaluation unit

Connection diagram

TR10 Lock safety locking device to UE48-20S safety relay







Series connection of three TR10 Lock safety locking devices to a Flexi Classic safety controller



Recommended accessories

Other models and accessories → www.sick.com/TR10_Lock

	Brief description	Type	Part no.
Nuts and screws			
	10 pieces, Safety screws for mounting bracket of actuator	Safety screws M5 x 10	5334497
Plug connectors and cables			
		DOL-1208-G2M5C	6058863
		YF2A18-050UA5XLEAX	2095653
		YF2A18-100UA5XLEAX	2095654
		YF2A18-200UA5XLEAX	2095680

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