



RLY3-EMSS1

ReLy

SAFETY RELAYS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
RLY3-EMSS1	1085345

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

Detailed technical data

Safety-related parameters

Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)
Category	Category 4 (EN ISO 13849)
Performance level	PL e (EN ISO 13849)
B_{10d} parameter	3 x 10 ⁵ switching operations (AC-15, 230 V, I = 1 A), 9 x 10 ⁴ switching operations (AC-15, 230 V, I = 5 A), 2 x 10 ⁵ switching operations (DC-13, 24 V, I = 1 A), 6 x 10 ⁴ switching operations (DC-13, 24 V, I = 5 A)
PFH_D (mean probability of a dangerous failure per hour)	1,0 x 10 ⁻⁹ (EN ISO 13849)
T_M (mission time)	20 years (EN ISO 13849)

Functions

Sensor monitoring	Discrepancy monitoring Sequence monitoring Cross-circuit detection
Reset	Automatic Manual

Interfaces

Connection type	Plug-in spring terminals
Number of enable current (N/O) contacts	2, relevant for safety

Electrical data

Operating data

Voltage supply	PELV or SELV
Supply voltage V_S	24 V DC (16.8 V DC ... 30 V DC)
Residual ripple	≤ 2.4 V _{pp} ¹⁾
Power consumption (input circuits)	≤ 1.3 W
Overvoltage category	III

¹⁾ In DC operation, within the limits of V_S.

Rated impulse withstand voltage U_{imp}	6 kV (EN 60664-1)
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¹⁾ In DC operation, within the limits of V_S .

Input circuits

Input voltage	HIGH	24 V DC (11 V DC ... 30 V DC)
	LOW	-3 V DC ... 5 V DC
Input current	4 mA ... 6 mA	
Synchronous time monitoring	≤ 3 s	

Control outputs

Type of output	PNP semiconductor, short-circuit protected
Test period	40 ms

Output circuits

Type of output	PNP semiconductors, short-circuit protected
Output current	≤ 120 mA

Electrical output circuits

Typical response time	10 ms
Contact material	Silver alloy, gold flashed
Enable current contacts	
Switching voltage	10 V DC ... 250 V DC
Current-carrying capacity per OSSD	10 mA ... 6 A
Total current	≤ 12 A
Mechanical life	10 x 10 ⁶ switching operations

Mechanical data

Dimensions (W x H x D)	18 mm x 124.6 mm x 85.5 mm
Weight	130 g

Ambient data

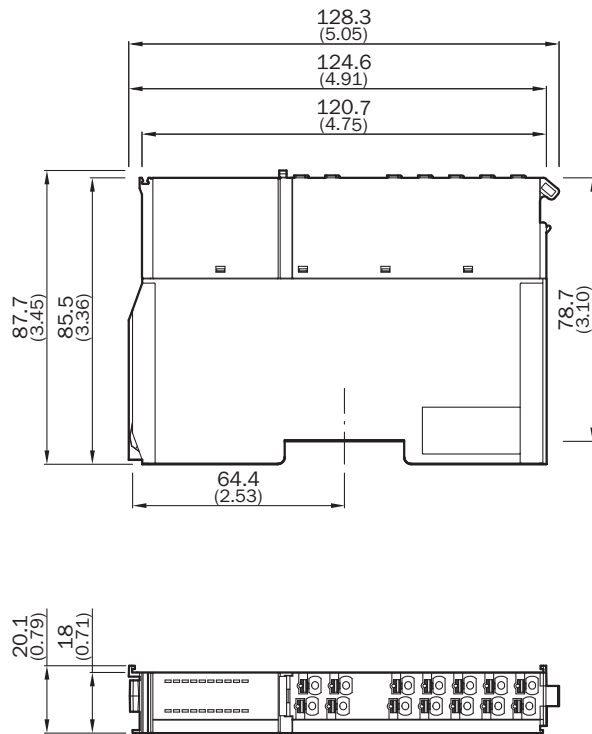
Enclosure rating	IP20 (EN 60529)
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Classifications

ECI@ss 5.0	27371990
ECI@ss 5.1.4	27371990
ECI@ss 6.0	27371819
ECI@ss 6.2	27371819
ECI@ss 7.0	27371819
ECI@ss 8.0	27371819
ECI@ss 8.1	27371819
ECI@ss 9.0	27371819
ETIM 5.0	EC001449
ETIM 6.0	EC001449
UNSPSC 16.0901	41113704

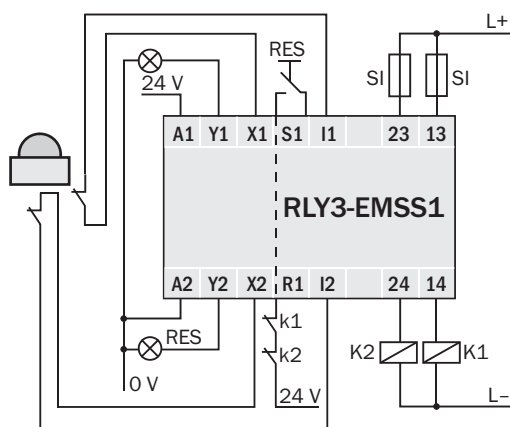
Dimensional drawing (Dimensions in mm (inch))

ReLy

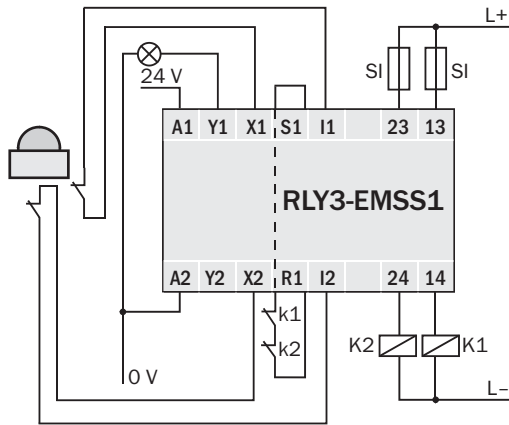


Connection diagram

RLY3-EMSS1 at dual-channel emergency switching off with manual reset and external device monitoring



RLY3-EMSS1 at dual-channel emergency switching off with automated reset and external device monitoring



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:

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