



Illustration may differ



Ordering information

Type	Part no.
RLY3-MULT100	1100692

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

Detailed technical data

Features

Applications	Evaluation unit
Compatible sensor types	Safety sensors with OSSDs Safety sensors with test input Safety sensors with potential-free outputs Safety pressure mats

Safety-related parameters

Safety integrity level	SIL 3 (IEC 61508)
Category	Category 4 (ISO 13849-1)
Performance level	PL e (ISO 13849-1)
PFH_D (mean probability of a dangerous failure per hour)	1.5×10^{-9}
T_M (mission time)	20 years (ISO 13849-1)
Stop category	0 (IEC 60204-1)

Functions

Sensor monitoring	Discrepancy monitoring Sequence monitoring Cross-circuit detection
Restart interlock	✓
Reset	Automatic Manual
External device monitoring (EDM)	✓

Interfaces

Connection type	Front connector with spring terminals
Inputs	2 safety inputs 1 input for reset pushbutton or external device monitoring (EDM)
Outputs	3 enabling current paths (safe) 2 application diagnostic outputs (not safe) 2 test pulse outputs (not safe)
Display elements	LEDs

Configuration method	Hard wired DIP switch
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Electrical data

Operating data

Voltage supply	PELV or SELV
Supply voltage V_s	24 V DC (16.8 V ... 30 V)
Residual ripple	≤ 2.4 V
Power consumption	≤ 2.5 W (DC)

Safety inputs

Number	2
Input voltage	HIGH 24 V DC (11 V ... 30 V)
	LOW 0 V DC (-3 V ... 5 V)
Input current	4 mA ... 6 mA
Test pulse width	≤ 1 ms
Test pulse rate	≤ 10 Hz
Activation time tolerance between the two start buttons	≤ 3 s

Reset pushbutton or external device monitoring (EDM) input

Number	1
Input voltage	HIGH 24 V DC (11 V ... 30 V)
	LOW 0 V DC (-3 V ... 5 V)
Input current	4 mA ... 6 mA

Enabling current paths

Response time	Depends on the configured sensor type, for details see operating instructions
Number	3
Type of output	N/O contacts, positively guided
Contact material	Silver alloy, gold flashed
Switching voltage	10 V AC ... 230 V AC 10 V DC ... 230 V DC
Switching current	10 mA ... 6 A
Total current	12 A
Mechanical life	1×10^7 switching cycles
Overvoltage category	III (EN 60664-1)
Rated impulse withstand voltage U_{imp}	6 kV (EN 60664-1)

Application diagnostic outputs

Number	2
Type of output	Push-pull semiconductor output, short-circuit protected
Output voltage	HIGH $\geq V_s - 3$ V
	LOW ≤ 3 V

Input current (NPN)	≤ 15 mA
Output current (PNP)	≤ 120 mA

Test pulse outputs

Number	2
Type of output	PNP semiconductors, short-circuit protected
Output voltage	≥ $V_s - 3\text{ V}$
Test pulse width	Depends on the configured sensor type ¹⁾
Test pulse interval	Depends on the configured sensor type, for details see operating instructions

¹⁾ For details see operating instructions.

Mechanical data

Dimensions (W x H x D)	18 mm x 124.6 mm x 85.5 mm
Weight	160 g

Ambient data

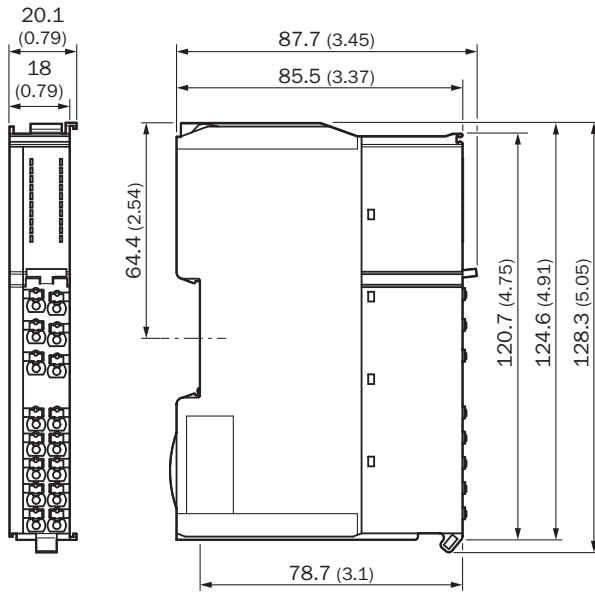
Enclosure rating	IP20 (IEC 60529)
Ambient operating temperature	-25 °C ... +55 °C
Storage temperature	-25 °C ... +70 °C
Air humidity	≤ 95 %, Non-condensing
Interference emission	According to IEC 61000-6-4
Interference resistance	According to IEC 61326-3-1 According to IEC 61000-6-2 According to IEC 60947-5-1

Classifications

eCl@ss 5.0	27371990
eCl@ss 5.1.4	27371990
eCl@ss 6.0	27371819
eCl@ss 6.2	27371819
eCl@ss 7.0	27371819
eCl@ss 8.0	27371819
eCl@ss 8.1	27371819
eCl@ss 9.0	27371819
eCl@ss 10.0	27371819
eCl@ss 11.0	27371819
eCl@ss 12.0	27371819
ETIM 5.0	EC001449
ETIM 6.0	EC001449
ETIM 7.0	EC001449
ETIM 8.0	EC001449
UNSPSC 16.0901	41113704

Dimensional drawing (Dimensions in mm (inch))

EMSS3, LOOP1, MULT1, OSSD3



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