RLY3-MULT100

ReLy

SAFETY RELAYS

RLY3-MULT100 | ReLy
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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

Electrical 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)
Input voltage 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)
Input voltage 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	≥ V_s – 3 V
Output voltage LOW	≤ 3 V
Input current (NPN)	≤ 15 mA
Output current (PNP)	≤ 120 mA
Test pulse outputs	

[1] For details see operating instructions.

Number	2
Type of output	PNP semiconductors, short-circuit protected
Output voltage	$\geq V_s - 3$ 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

ECLASS 5.0	27371990
ECLASS 5.1.4	27371990
ECLASS 6.0	27371819
ECLASS 6.2	27371819
ECLASS 7.0	27371819
ECLASS 8.0	27371819
ECLASS 8.1	27371819
ECLASS 9.0	27371819
ECLASS 10.0	27371819
ECLASS 11.0	27371819
ECLASS 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

20.1
(0.79)

18
(0.79)

87.7 (3.45)

85.5 (3.37)

64.4 (2.54)

120.7 (4.75)

124.6 (4.91)

128.3 (5.05)

78.7 (3.1)
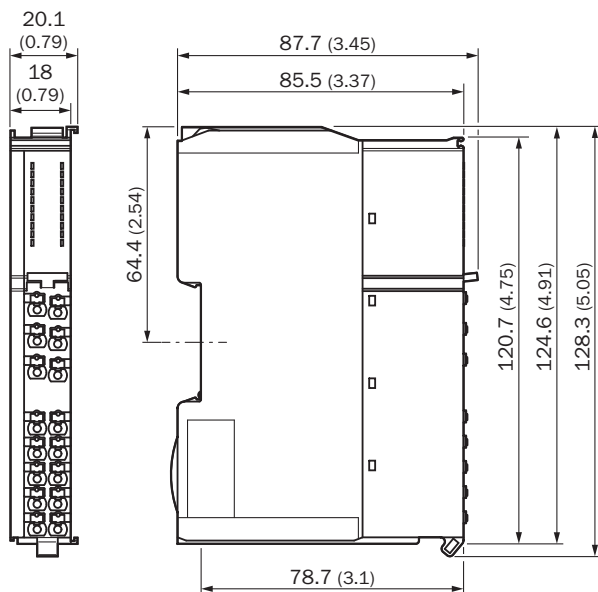
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