



DATA SHEET

RLY3-OSSD300

ReLy
Safety relays

SICK

Sensor Intelligence



Illustration may differ

SAFETY RELAYS

RLY3-OSSD300

ORDERING INFORMATION

Type	part no.
RLY3-OSSD300	1099969

Further device versions and accessories at www.sick.com/RelY



DETAILED TECHNICAL DATA

FEATURES

Applications	Evaluation unit
Compatible sensor types	Safety sensors with OSSDs

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)	1.0 x 10 ⁻⁹
T _M (mission time)	20 years (ISO 13849-1)
Stop category	0 (IEC 60204-1)

FUNCTIONS

Sensor monitoring	Sequence monitoring
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)

	1 test pulse output (not safe)
Display elements	LEDs
Configuration method	Hard wired

ELECTRONICS

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	<div> <div>Number</div> <div>2</div> </div> <div> <div>Input voltage HIGH</div> <div>24 V DC (11 V ... 30 V)</div> </div> <div> <div>Input voltage LOW</div> <div>0 V DC (-3 V ... 5 V)</div> </div> <div> <div>Input current</div> <div>4 mA ... 6 mA</div> </div> <div> <div>Test pulse width</div> <div>≤ 1 ms</div> </div> <div> <div>Test pulse rate</div> <div>≤ 10 Hz</div> </div>
Reset pushbutton or external device monitoring (EDM) input	<div> <div>Number</div> <div>1</div> </div> <div> <div>Input voltage HIGH</div> <div>24 V DC (11 V ... 30 V)</div> </div> <div> <div>Input voltage LOW</div> <div>0 V DC (-3 V ... 5 V)</div> </div> <div> <div>Input current</div> <div>4 mA ... 6 mA</div> </div>
Enabling current paths	
Response time (opening of enabling current paths)	12 ms
	<div> <div>Number</div> <div>3</div> </div> <div> <div>Type of output</div> <div>N/O contacts, positively guided</div> </div> <div> <div>Contact material</div> <div>Silver alloy, gold flashed</div> </div> <div> <div>Switching voltage</div> <div>10 V AC ... 230 V AC</div> </div> <div> <div></div> <div>10 V DC ... 230 V DC</div> </div> <div> <div>Switching current</div> <div>10 mA ... 6 A</div> </div> <div> <div>Total current</div> <div>12 A</div> </div> <div> <div>Mechanical life</div> <div>1×10^7 switching cycles</div> </div> <div> <div>Overvoltage category</div> <div>III (EN 60664-1)</div> </div> <div> <div>Rated impulse withstand voltage U_{imp}</div> <div>6 kV (EN 60664-1)</div> </div>
Application diagnostic outputs	<div> <div>Number</div> <div>2</div> </div> <div> <div>Type of output</div> <div>Push-pull semiconductor output, short-circuit protected</div> </div> <div> <div>Output voltage HIGH</div> <div>$\geq V_s - 3$ V</div> </div> <div> <div>Output voltage LOW</div> <div>≤ 3 V</div> </div> <div> <div>Input current (NPN)</div> <div>≤ 15 mA</div> </div> <div> <div>Output current (PNP)</div> <div>≤ 120 mA</div> </div>
Test pulse outputs	<div> <div>Number</div> <div>1</div> </div> <div> <div>Type of output</div> <div>PNP semiconductors, short-circuit protected</div> </div> <div> <div>Output voltage</div> <div>$\geq V_s - 3$ V</div> </div> <div> <div>Test pulse width</div> <div>2 ms</div> </div> <div> <div>Test pulse interval</div> <div>40 ms</div> </div>

MECHANICS

Dimensions (W x H x D)	18 mm x 124.6 mm x 85.5 mm
Weight	150 g

AMBIENT DATA

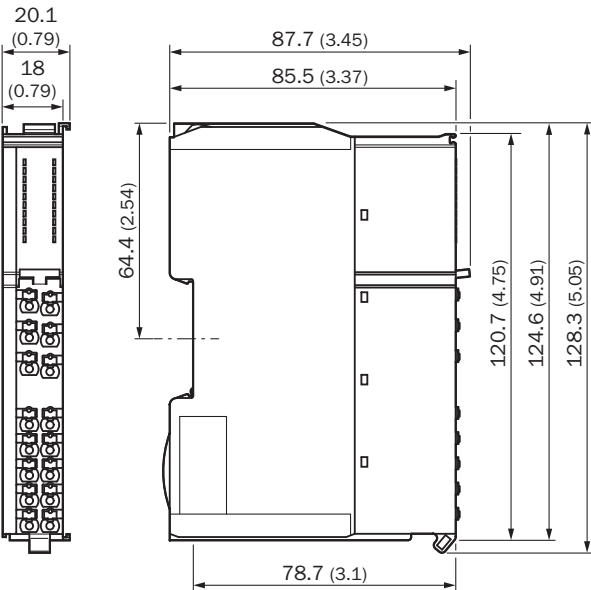
Enclosure rating	IP20 (IEC 60529)
Ambient operating temperature	-25 °C ... +55 °C
Storage temperature	-25 °C ... +70 °C

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

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
CCC certificate	✓
UK-Type-Examination approval	✓
cULus certificate	✓
EAC certificate / DoC	✓
cTUVus certificate	✓
S Mark certificate	✓
EC-Type-Examination approval	✓
EC-Type-Examination approval (Machinery Directive)	✓
EC-Type-Examination approval (Machinery Regulation)	✓
Third party certificate	✓

DIMENSIONAL DRAWING EMSS3, LOOP1, MULT1, OSSD3



Dimensions in mm (inch)

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1099969



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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