

Technical Data SDO

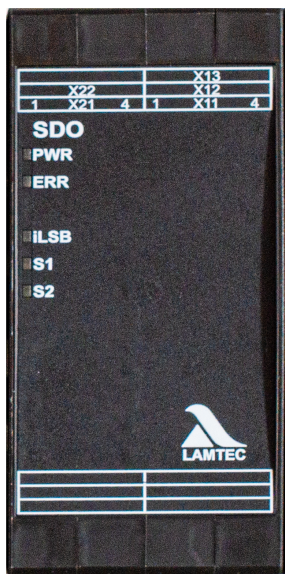


Fig. 1 SDO photo

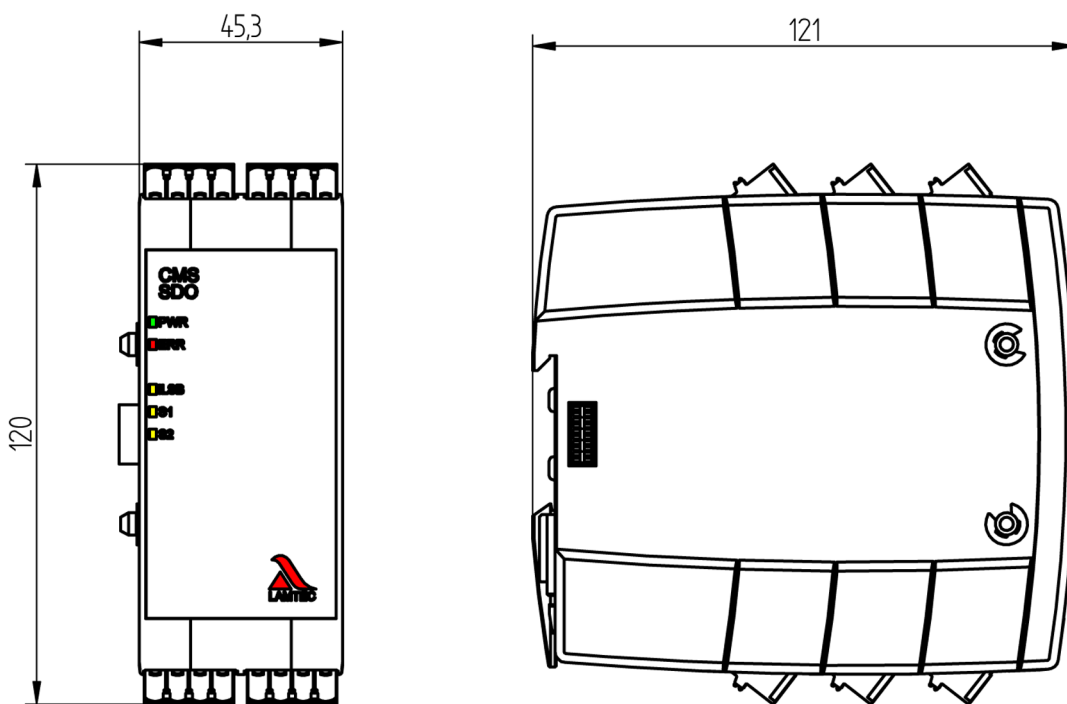


Fig. 2 SDO dimensional drawing

Item number	
SDO Safe digital output component	Type 668R0500-XX*

* XX = dependent on the configuration

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SDO technical data

Dimensions (H x W x D)	120 x 45.3 x 121 mm
Weight	0.335 kg
Power supply voltage	24 VDC \pm 20% (via internal plug connector from MCC)
Outputs	230 V/120 V \pm 10/-15%, 47-63 Hz, 24 VDC \pm 20%
Pre-fuse max. of the outputs	8 A fast-acting
Current consumption	min: 40 mA max: 170 mA
Power consumption	5 W
Flammability	UL94 V-0

Digital outputs

Digital outputs	$I_{\max} = 2 \text{ A}$ per output, in total, however, no more than 8 A $\cos\varphi \geq 0.2$		
	For operation on PLC or similar digital inputs: <ul style="list-style-type: none"> - Logic 1 = Output ON: $U = 230 \text{ V}/120 \text{ V}/24 \text{ V}$ including tolerance - Logic 0 = Output OFF: See graphics <i>Fig. 5 Power of the additional resistor with output switched on</i> and <i>Fig. 4 Residual voltage with output in off-state</i>		
	24 VDC	120 VAC	230 VAC
Short circuit current at output OFF	1.23 mA	1.41 mA	1.47 mA
	Residual voltage due to self-test function (<i>Fig. 4 Residual voltage with output in off-state</i>)		
Cable length	Max. 200 m		

NOTICE

Life Cycle:

The relays of the digital outputs are designed for a life time of 250,000 switching cycles at 2 A and $\cos \varphi \geq 0.2$ in accordance with EN298 and confirmed as part of the type examination.

Operating the outputs under reduced load increases their life time.

The following values can serve as a guide:

- 1.000.000 switching cycles 1 A AC, $\cos \varphi = 1$
- 400.000 switching cycles 2 A AC, $\cos \varphi = 1$
- 500.000 switching cycles 1 A DC, resistive load
- 300.000 switching cycles 2 A DC, resistive load

These values are not part of the type approval, but are expected values according to the relay documentation. This means that the number of switching cycles at reduced current is not tested and therefore cannot be guaranteed.

A dangerously failing relay is always reliably recognised by the CMS and leads to the safe shut-down of the burner, regardless of the number of starts completed.

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Environmental conditions		
Operation	permissible temperature range	-30 ... +70 °C (condensation prohibited)
	permissible ambient humidity	5% ... 95% relative air humidity
Transport/storage	permissible temperature range	-40 ... +80 °C (condensation prohibited)
	permissible ambient humidity	5% ... 95% relative air humidity
Protection class	DIN EN 60529	IP20 (when all terminals are fitted)

Operating altitude above sea level		
≤ 2000 m above sea level	Without restriction	
2000 m < z ≤ 5000 m above sea level	Can be used with the following restrictions: <ul style="list-style-type: none"> Reduction of the maximum ambient temperature according to the 'Temperature underload for use > 2000 m above sea level' diagram due to reduced cooling properties of the ambient air at altitudes above 2000 m and 24 VDC or 120 VAC power supply to the inputs/outputs. 	

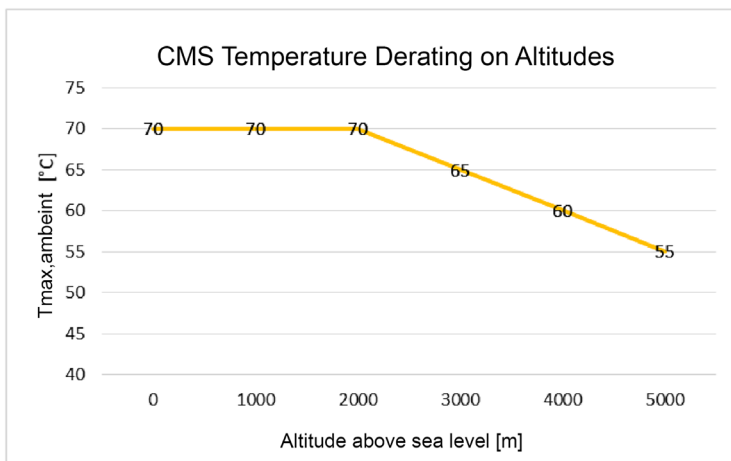


Fig. 3 Temperature underload for use >2000m above sea level



CAUTION!

Devices with 230 VAC input/output power supply not approved for use >2000 m

Residual voltage at output

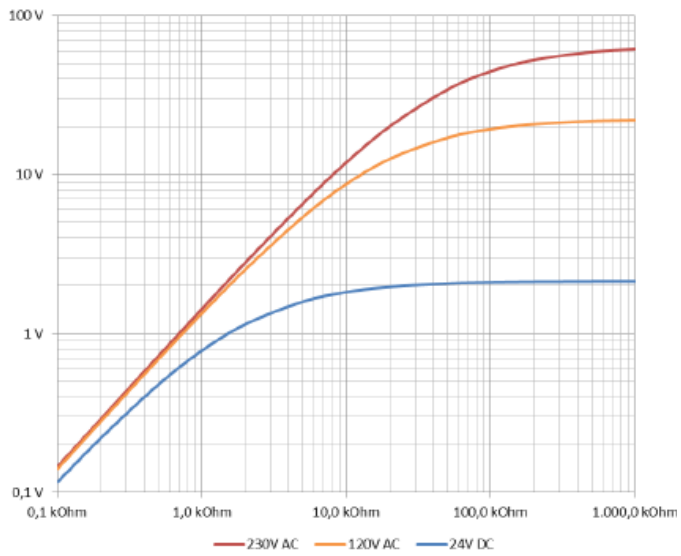


Fig. 4 Residual voltage with output in off-state

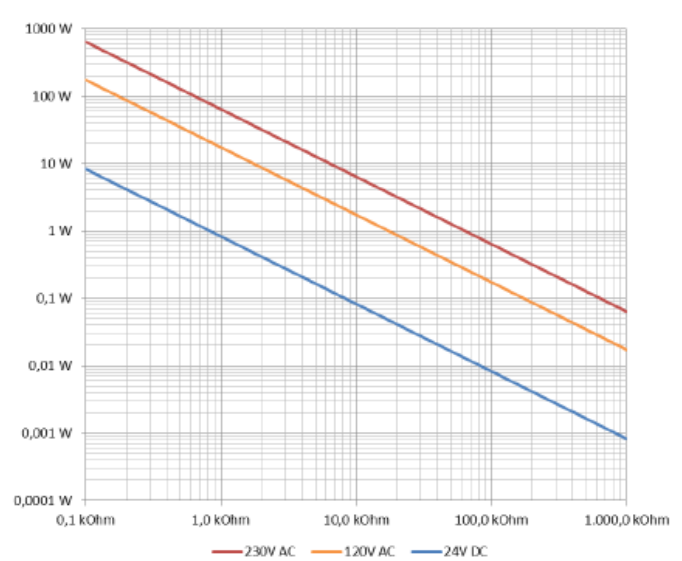


Fig. 5 Power of the additional resistor with output switched on

EU Declaration of Conformity

2014/35/EU	Low Voltage Directive
2014/30/EU	EMC Directive
2014/68/EU	Pressure Equipment Directive Kat. 4 Mod. B+D
(EU) 2016/426	Gas Appliance Regulation (GAR)
2011/65/EU	RoHS

NOTICE

The limits of the technical data must be strictly adhered to.

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Order Information

Description/Type	Order no.
SDO Safe Digital Output Component, power supply 24 VDC/4,1 W Module with 8 safety digital outputs	668R0500...
A 10 – POWER SUPPLY VOLTAGE OF THE OUTPUTS	Selection
120 VAC	120VAC
230 VAC	230VAC
24 VDC	24VDC
A 20 – CUSTOMER	Selection
STANDARD	S
A 30 – COLOR	Selection
BLACK (STANDARD)	SW
A 40 – CONNECTOR SET	Selection
SCREW TERMINALS Connector set included	SC
SPRING TERMINALS Connector set included	FED
WITHOUT Connector set not included, must be ordered separately, see „Separate Connector Sets for SDO“	0

Separate connector sets for SDO (when attribute 40 „CONNECTOR SET“ = selection „0“)

Description/Type	Order no.
Screw Terminals SDO Supply Voltage of Outputs 120/230 VAC	668R0068
Screw Terminals SDO Supply Voltage of Outputs 24 VDC	668R0069
Spring Terminals SDO Supply Voltage of Outputs 120/230 VAC	668R0078
Spring Terminals SDO Supply Voltage of Outputs 24 VDC	668R0079

Approvals



The information in this publication is subject to technical changes.



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