

## Data sheet

### SM 022 - Digital output (022-1SD10)

#### Technical data

<b>Order no.</b>	<b>022-1SD10</b>
Type	SM 022 - Digital output
Module ID	0C82 AE00
<b>General information</b>	
Note	-
Features	4x SDO DC 24 V 0.5 A Safety / FSoE
<b>Current consumption/power loss</b>	
Current consumption from backplane bus	75 mA
Power loss	1 W
<b>Technical data digital outputs</b>	
Number of outputs	4
Cable length, shielded	1000 m
Cable length, unshielded	600 m
Rated load voltage	DC 24 V
Permitted range	DC 20.4...28.8 V
Current consumption from power section supply (without load)	15 mA
Total current per group, horizontal configuration, 40°C	2 A
Total current per group, horizontal configuration, 60°C	-
Total current per group, vertical configuration	-
Output current at signal "1", rated value	0.5 A
Signal logic output	Sourcing output
Output delay of "0" to "1"	100 µs
Output delay of "1" to "0"	175 µs
Minimum load current	-
Lamp load	5 W
Parallel switching of outputs for redundant control of a load	not possible
Parallel switching of outputs for increased power	not possible
Actuation of digital input	yes
Switching frequency with resistive load	max. 50 Hz
Switching frequency with inductive load	max. 0.5 Hz
Switching frequency on lamp load	max. 10 Hz
Internal limitation of inductive shut-off voltage	L+ (-45 V)
Short-circuit protection of output	yes, electronic
Trigger level	1.7 A
Number of operating cycle of relay outputs	-
Switching capacity of contacts	-
Output data size	4 Bit
<b>Status information, alarms, diagnostics</b>	
Status display	green LED per channel
Interrupts	yes, parameterizable
Process alarm	no

Diagnostic interrupt	yes, parameterizable
Diagnostic functions	yes, parameterizable
Diagnostics information read-out	possible
Supply voltage display	green LED
Group error display	red SF LED
Channel error display	red ERR-LED and yellow ER2-LED
<b>Isolation</b>	
Between channels	-
Between channels of groups to	-
Between channels and backplane bus	yes
Insulation tested with	DC 500 V
<b>PWM data</b>	
PWM channels	-
PWM time basis	-
Period length	-
Minimum pulse width	-
Type of output	-
<b>Safety</b>	
Safety protocol	FSoE
Safety requirements	SIL CL 3, PL e, Kat 4
Secure user address	1 - 4095
Watchdog	parameterizable 20ms - 65s
Two channels	Each 2 of 4 outputs switchable
Test pulse length	parameterizable 10ms - 1s
Circuit monitoring	yes
<b>Datasizes</b>	
Input bytes	6
Output bytes	6
Parameter bytes	16
Diagnostic bytes	20
<b>Housing</b>	
Material	PC / PPE GF10
Mounting	Profile rail 35 mm
<b>Mechanical data</b>	
Dimensions (WxHxD)	12.9 mm x 109 mm x 76.5 mm
Net weight	64 g
Weight including accessories	69 g
Gross weight	85 g
<b>Environmental conditions</b>	
Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C
<b>Certifications</b>	
UL certification	yes
KC certification	yes
UKCA certification	yes
ChinaRoHS certification	yes