Data sheet
SM 022 - Digital output (022-1SD00)

Technical data

Order no.	022-1SD00
Type	SM 022 - Digital output
Module ID	0C81 1E00
General information	
Note	-
Features	4x SDO DC 24 V 0.5 A Safety / PROFIsafe
Current consumption/power loss	
Current consumption from backplane bus	75 mA
Power loss	1 W
Technical data digital outputs	
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
Status information, alarms, diagnostics	
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

Isolation

Between channels	-
Between channels of groups to	-
Between channels and backplane bus	yes
Insulation tested with	DC 500 V

PWM data

PWM channels	-
PWM time basis	-
Period length	-
Minimum pulse width	-
Type of output	-

Safety

Safety protocol	PROFIsafe V2
Safety requirements	SIL CL 3, PL e, Kat 4
Secure user address	1 - 4095
Watchdog	parameterizable 10ms - 1s
Two channels	Each 2 of 4 outputs switchable
Test pulse length	parameterizable 500µs - 10ms
Circuit monitoring	yes

Datasizes

Input bytes	5
Output bytes	5
Parameter bytes	44
Diagnostic bytes	20

Housing

Material	PC / PPE GF10
Mounting	Profile rail 35 mm

Mechanical data

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

Environmental conditions

Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C

Certifications

UL certification	yes
KC certification	yes
UKCA certification	yes
ChinaRoHS certification	yes