

S-DIAS Safety Digital Mixed Module

SDM 081



- with 6 safe inputs
- 2 safe outputs
- 1 redundant output signal (short-circuit proof)

The S-DIAS Safety SDM 081 digital mixed module has the safety integrity level SIL3 in accordance with EN / IEC 62061 or Performancelevel e (PL e) in accordance with EN ISO 13849-1/-2. The safe outputs are used for the safety-oriented output of two actuator signals to, for example, control relays, valves, etc. The safety inputs are used for reading six actuator signals. To test inputs and detect cross circuits the SDM 081 has two non-safe signal outputs, A and B.

Input Specifications

Number	6	
Input voltage	+24 V DC	
Input voltage range	minimum +18 V	maximum +30 V
Signal level	low: $\leq +5$ V	high: $\geq +15$ V
Switching threshold	typically +11 V	
Input current	3 mA at +24 V	
Input delay	0.5 ms	

Signal Output Cross-Circuit Detection Specifications

Number	3x signal A	3x signal B
Rated output voltage	+24 V DC	
Output voltage range	minimum +18 V	maximum +30 V
Output current	100 mA at +24 V	
Miscellaneous	short-circuit proof	

Output Specifications

Number	2	
Rated output voltage	+24 V DC	
Output voltage range	minimum +18 V	maximum +30 V
Maximum output current	2 A	
Maximum total current (2 outputs)	4 A up to a max. environmental temperature of 55 °C	
Brake voltage with switching-off inductive loads	typically 0.85 V	
Maximum switch-off energy of the outputs (inductive load)	maximum 0.4 Joule per channel	
Turn-on delay	< 200 μ s	
Turn-off delay	< 1 ms	
Miscellaneous	short-circuit proof	
Cut-off test signal	< 1.5 ms	
Cutoff test pulse width (t_1)	minimum 0.1 ms	maximum 1.5 ms
Cutoff test pulse interval bet. FET Test and HSS Test (t_2)	minimum 112 ms	maximum 6450 ms
Cutoff test pulse interval (t_3)	60 s	

Electrical Requirements

Voltage supply from Safety bus	+12 V
Current consumption on the Safety bus (+12 V power supply)	maximum 34 mA
Voltage supply from Safety bus	+24 V
Current consumption on the Safety bus (+24 V power supply)	maximum 21 mA

Article Number and Miscellaneous

Article number	20-895-081
Dimensions	12.5 x 104.2 x 72 mm (W x H x D)
Standard	UL 508 (E247993)
Approvals	cULUS, CE, TÜV Austria EG type-tested

Environmental Conditions

Storage temperature	-20 ... +85 °C	
Environmental temperature	0 ... +60 °C	
Humidity	0-95 %, non-condensing	
Installation altitude above sea level	0-2000 m without derating > 2000 m with derating of the maximum environmental temperature by 0.5 °C per 100 m	
Operating conditions	pollution degree 2	
EMC resistance	in accordance with 61000-6-7:2015 (Generic standards - Immunity requirements for equipment intended to perform functions in safety-related systems (functional safety) at industrial locations) in accordance with EN 61000-6-2:2007 (industrial area) (increased requirements in accordance with IEC 62061)	
EMC noise generation	in accordance with EN 61000-6-4:2007 (industrial area)	
Vibration resistance	EN 60068-2-6	3.5 mm from 5-8.4 Hz 1 g from 8.4-150 Hz 5 g from 8 Hz-150 Hz
Shock resistance	EN 60068-2-27	15 g
Protection type	EN 60529	IP20

Notes