

# S-DIAS Safety Digital Output Module

## STO 081



with 8 secure outputs

The S-DIAS Safety 081 digital output module has the safety integrity level SIL3 (EN / IEC 62061) or Performance level e (PL e) (EN ISO 13849-1/-2).

The safe outputs are used for the safety-oriented output of eight actuator signals to, for example, control relays, valves, etc.

### Output Specifications

Number	8		
Rated output voltage	+24 V DC		
Output voltage range	minimum +18 V	maximum +30 V	
Maximum output current	2 A		
Maximum total current Per output group (2 outputs)	5 A		
Maximum total current (complete module)	10 A up to a max. of 45 °C Ambient temperature	8 A up to a max. of 55 °C Ambient temperature	6 A up to a max. of 60 °C Ambient temperature
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 maximum 1.2 Joule (entire module)		
Turn-on delay	< 200 µs		
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)	typically 42 mA	maximum 50 mA
Voltage supply from Safety bus	+24 V	
Current consumption on the Safety bus (+24 V power supply)	typically 36 mA	maximum 40 mA

### Article Number and Miscellaneous

Article number	20-892-081	
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
Shock resistance	EN 60068-2-27	15 g
Protection type	EN 60529	IP20