



SDI208 Safety digital input module

The SDI208 module adds an additional 8 input channels to the SLC284 safety processor module. A homogeneous total system is created through independent and safe integration in the M200 controller. Through the free choice of the slot – either directly beside the safety processor module, through bus expansion, or several hundred meters away through the FASTBUS – the safety system can be optimally adapted to the distributed requirements and existing infrastructure of the system.

The SDI208 safety digital input module is approved in accordance with the latest safety standard, IEC 61508. The module can be easily integrated in the safety application, comparable with a standard I/O module – as the proven SolutionCenter development platform offers the easiest configuration, most flexible type of programming, and a safe simulation via easily combinable PLCopen function blocks. All variables, and states of the SDI208 safety digital input module are accessible in all other machine program languages (PLC, C/C++); visualization is also available and makes cumbersome parallel wiring unnecessary.

Features

- 16 digital inputs – can be used redundantly in pairs (PL e/SIL 3/Cat 4)
- Safe monitoring of the inputs with redundant 32-bit microcontrollers
- Several SDI208 modules per controller possible
- All safety I/O states can be used by M200 controller
- Safety programming via SolutionCenter
- Galvanic isolation between the groups
- Galvanic isolation from the system
- Operating status indication "SAFE"
- Status indication for each channel via LED

Part type designation	Part number
SDI208	00014544-00
SDI208 CC	00017459-00

SDI208

Digital inputs		
Number	16 digital inputs – can be used redundantly in pairs (PL e / SIL3 / Cat 4)	
Input voltage range (H)	15 V DC to 34 V DC	
Input voltage range (L)	-34 V DC to +5 V DC	
Input delay (typically) HW	300 µs	
Input delay (typically) SW	1 ms in the case of disabled test pulsing	
Input type acc. to IEC 61131-2	Type 1	
Minimum input current	3.5 mA at 24 V DC	
Status indication (LED)	Green	
Error monitoring	Internal function monitoring, external test pulsing optional	
Internal power supply		
Galvanic isolation from the system	500 V	
Galvanic isolation between groups	500 V	
Internal power supply	Backplanes BS2xx	
Internal current consumption	5 V / 500 mA via backplane	
External power supply		
Reverse polarity protection	Yes	
Input voltage	24 V DC (18 V to 34 V)	
Current consumption	Typ. 65 mA at 24 V DC + Σ current consumption of the encoders and sensors	
Connection technology		
I/O connection	RM 3.5 connector with flange	
Power supply	RM 5.08 connector with flange	
Connection technology	Screw or spring terminal Connector can be coded and labeled	
Standards and approvals		
Machine safety	EN 61508:2010: Functional safety of E/E/PE safety-related systems	
Approved for	EN ISO 13849-1:2015: Safety of machinery EN 62061:2005/A2:2015: Functional safety machine-related E/E/PE systems EN 61511-1:2017 & IEC 61511-1:2016: Functional safety equipment and process industry	
Product standard	EN 61131-2:2007 & EN 61131-6:2012 UL 61010-1 & UL 61010-2-201	
Additional features		
Status indication via LEDs		
Approvals/Certificates		
	Standard	ColdClimate (❄️)
General	CE, UKCA, cULus	
Marine	ABS, BV, DNV, LR	ABS, BV, DNV, KR, LR, NK, RINA

Environmental conditions	Standard	ColdClimate (❄)
Operating temperature	-30 °C to +60 °C fanless	
Relative humidity, operation	5 % to 95 % noncondensing	5 % to 95 % with condensation
Storage temperature	-40 °C to +85 °C	
Relative humidity, storage	5 % to 95 % noncondensing	5 % to 95 % with condensation
Maximum altitude ¹⁾	4500 m above sea level	
Pollution degree (IEC 60664-1)	2 (noncondensing)	2
Protection class	3	

¹⁾ For operation at an altitude of 2000 m above sea level, a derating of -0.5 Kelvin per 100 m to a maximum altitude of 4500 m above sea level must be taken into account

Order data

Part type designation	Part number	Description
SDI208	00014544-00	Safety digital input module; SIL3/PL e: 8x DI 24 V; (SIL2/PLd: 16x DI)
SDI208 CC	00017459-00	Like SDI208; ColdClimate (❄)

Accessories

Part type designation	Part number	Description
KZ-SDI208 B+C	00014774-50	Terminal set Phoenix cage clamp (1x KZ 51/05; 2x KZ 35/12) with labeling strips + keying elements