



Item	Item-No.
SLC284	00014273-00
SLC284 CC	00017465-00

## SLC284 Safety Processor Module

The SLC284 module – ideally integrated in the M1 controller – is presented as an independent, safe, and modern safety controller. The safety processor module SLC284 is approved in accordance with the latest safety norm, IEC 61508.

No additional cabling is needed for communication between the SLC284 and the safety I/O modules SDI208 and SDO204. The modules can be separated by several hundred meters and operated in a distributed manner via the bus expansion or via FASTBUS, or via CAN or bluecom.

- 16 digital inputs / 8 digital outputs – can be used redundantly in pairs (PL e/SIL3/Cat 4)
- Each output with emergency delay is configurable in the event of communication lost
- Safety Controller with two independent 32-bit microcontrollers
- Fastest program cycle 5 ms
- Decentralized I/O via FASTBUS or bus expansion with SDI208 or SDO204
- All safety I/O states can be used by the M1 controller
- Safety programming via SolutionCenter
- Galvanic isolation between the groups
- Galvanic isolation from the system bus
- Operating mode selector switch
- Operating status display »SAFE«, »PROG«, »TEST«, »ERROR«
- Status display for each channel via LED
- Programming via independent serial interface or via controller

SLC284	
<b>Processor</b>	
CPU	2x LPC2468, 72 MHz, 32 bit
<b>Controller</b>	
Programming	Via controller (I/O bus) or serial interface (COM)
Number of independent safety programs per SLC	1
Program cycle	Minimal 5 ms
I/O expansion	Via SDI208, SDO204 or SCT202 modules
<b>Digital Inputs</b>	
Quantity	16 digital inputs – can be used redundantly in pairs (PL e/SIL3/Cat 4)
Input voltage range (H)	15 to 34 V DC
Input voltage range (L)	-34 to +5 V DC
Input delay (normally) HW	300 µs
Input delay (normally) SW	1 ms with deactivated test clocking
Input type according to IEC61131-2 input current at least	Type 1 3.5 mA at 24 V DC
Status display (LED)	Green
Error monitoring	Internal function monitoring External test clocking optional
<b>Digital Outputs</b>	
Quantity	8 digital outputs – can be used redundantly in pairs (PL e/SIL3/Cat 4)
Output voltage range	18 to 34 V DC
Output current per channel	0.5 A nominal
Total current per group (max.)	2 A
Delay 0 to 1	Max. 35 µs at full load
Delay 1 to 0	Max. 155 µs at full load
Output groups	2, electronic fuse
Status display (LED)	Green
Switching frequency (max., ohmic load)	500 Hz
Error monitoring	Short circuit, overload, inadequate or excess voltage of the power supply
Time-delayed emergency shut-off	Each output individual from 0 to 1800 s configurable (resolution 100 ms); Emergency shut-off is activated in the event of communication lost e.g. failure in the supply voltage
<b>Internal Power Supply</b>	
Galvanic isolation from the system	500 V
Galvanic isolation between groups	500 V
Internal power supply	Backplanes BS2xx
Current consumption internal	5 V / 550 mA via backplane

SLC284		
<b>External Power Supply</b>		
Reverse polarity protection	Yes	
Input voltage	24 V DC (18 to 34 V)	
Current consumption	Normally 95 mA at +24 VDC + $\Sigma$ current consumption of the encoders and sensors	
<b>Connection Technology</b>		
I/O connection	Connector RM3.5 with flange	
Power supply connection	Connector RM5.08 with flange	
Connection technology	Screw or spring terminal Writable and codable plug	
<b>Standards</b>		
Machine safety	IEC 61508:2010: Functional safety – Design of complex E/E/PE safety components	
Approved for	ISO 13849: Safety of Machinery IEC 62061: Functional safety machine-related E/E/PE systems IEC 61511: Functional safety equipment and process industry	
Product standard	IEC 61131-2 UL 508	
<b>Additional Features</b>		
Status display via LEDs		
Operating mode adjustable via hex switch		
<b>Approvals / Certificates</b>		
	Standard	ColdClimate (❄)
General	CE, cULus, CCC	
Marine	-	DNV GL, LR, ABS, BV, NK, KR, RINA
<b>Ambient Conditions</b>		
	Standard	ColdClimate (❄)
Operating temperature	-30 to +60 °C fanless	-30 to +60 °C fanless
Relative humidity operation	5 to 95 % without condensation	5 to 95 % with condensation
Storage temperature	-40 to +85 °C	-40 to +85 °C
Relative humidity storage	5 to 95 % without condensation	5 to 95 % with condensation
Maximum altitude <sup>1)</sup>	4,500 m above sea level	
Pollution degree	2 (without condensation; according to IEC 60664-1)	2 (according to IEC 60664-1)
Protection class	3	

1) For operation at an altitude of 2,000 m above sea level, a derating of -0.5 Kelvin per 100 m to a maximum altitude of 4,500 m above sea level must be taken into account.