

3.4.2 Indicators

The following figure shows the LED indicators for the module.

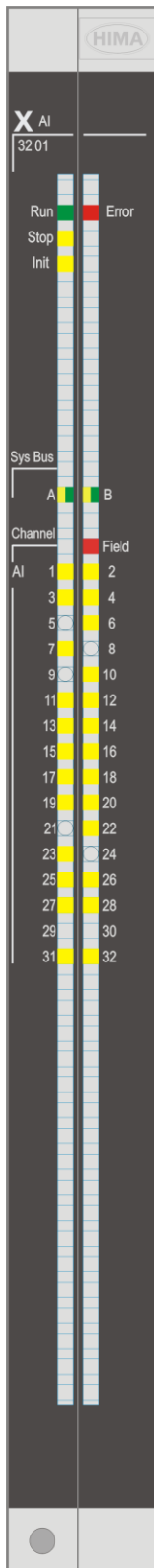


Figure 3: Indicators

The LEDs indicate the operating state of the module.

The LEDs on the module are divided into three groups:

- Module status indicators (Run, Error, Stop, Init)
- System bus indicators (A, B)
- I/O indicators (AI 1...32, Field)

When the supply voltage is switched on, a LED test is performed and all LEDs are briefly lit.

Definition of blinking frequencies

The following table defines the blinking frequencies of the LEDs:

Name	Blinking frequencies
Blinking1	Long (approx. 600 ms) on, long (approx. 600 ms) off
Blinking2	Short (approx. 200 ms) on, short (approx. 200 ms) off, short (approx. 200 ms) on, long (approx. 600 ms) off
Blinking-x	Ethernet communication: Blinking synchronously with data transfer

Table 3: Blinking Frequencies of LEDs

3.4.3 Module Status Indicators

These LEDs are located on the front plate, on the upper part of the module.

LED	Color	Status	Description
Run	Green	On	Module in RUN, normal operation
		Blinking1	Module state: STOP/OS_DOWNLOAD or OPERATE (only with processor modules)
		Off	Module not in RUN, observe the other status LEDs
Error	Red	On/Blinking1	Internal module faults detected by self-tests, e.g., hardware or voltage supply. Fault while loading the operating system
		Off	Normal operation
Stop	Yellow	On	Module state: STOP / VALID CONFIGURATION
		Blinking1	Module state: STOP / INVALID CONFIGURATION or STOP / OS_DOWNLOAD
		Off	Module not in STOP, observe the other status LEDs
Init	Yellow	On	Module state: INIT, observe the other status LEDs
		Blinking1	Module state: LOCKED, observe to the other status LEDs
		Off	Module state: neither INIT nor LOCKED, observe the other status LEDs

Table 4: Module Status Indicators

3.4.4 System Bus Indicators

The system bus LEDs are labeled Sys Bus.

LED	Color	Status	Description
A	Green	On	Physical and logical connection to the system bus module in slot 1.
		Blinking1	No physical connection to the system bus module in slot 1.
	Yellow	Blinking1	The physical connection to the system bus module in slot 1 has been established. No connection to a (redundant) processor module running in system operation.
B	Green	On	Physical and logical connection to the system bus module in slot 2.
		Blinking1	No physical connection to the system bus module in slot 2.
	Yellow	Blinking1	The physical connection to the system bus module in slot 2 has been established. No connection to a (redundant) processor module running in system operation.
A+B	Off	Off	Neither physical nor logical connection to the system bus modules in slot 1 and slot 2.

Table 5: System Bus Indicators

3.4.5 I/O Indicators

LED	Color	Status	Description
Channel 1...32	Yellow	On	The input current is > 4 mA or greater than the HIGH switching point (dig) configured in SILworX.
		Blinking2	Channel fault (module field or hardware fault). Input current > 20 mA
		Off	The input current is < 4 mA or less than the LOW switching point (dig) configured in SILworX.
Field	Red	Blinking2	Field fault on at least one channel or supply (open-circuit, short-circuit, over-current, etc.) Depending on the configured current thresholds.
		Off	No field fault displayed!

Table 6: I/O Indicators

3.5 Product Data

General	
Supply voltage	24 VDC, -15 %...+20 %, $r_p \leq 5\%$, SELV, PELV
Current input	min. 500 mA (without channels/transmitter supplies) max. 1.5 A (if the transmitter supplies are short-circuited)
Current input per channel	min. 0 mA (without transmitter supply) min. 30 mA (with transmitter supply)
Operating temperature	0...+60 °C
Storage temperature	-40...+85 °C
Humidity	max. 95 % relative humidity, non-condensing
Type of protection	IP20
Dimensions (H x W x D) in mm	310 x 29.2 x 230
Weight	approx. 1.4 kg

Table 7: Product Data

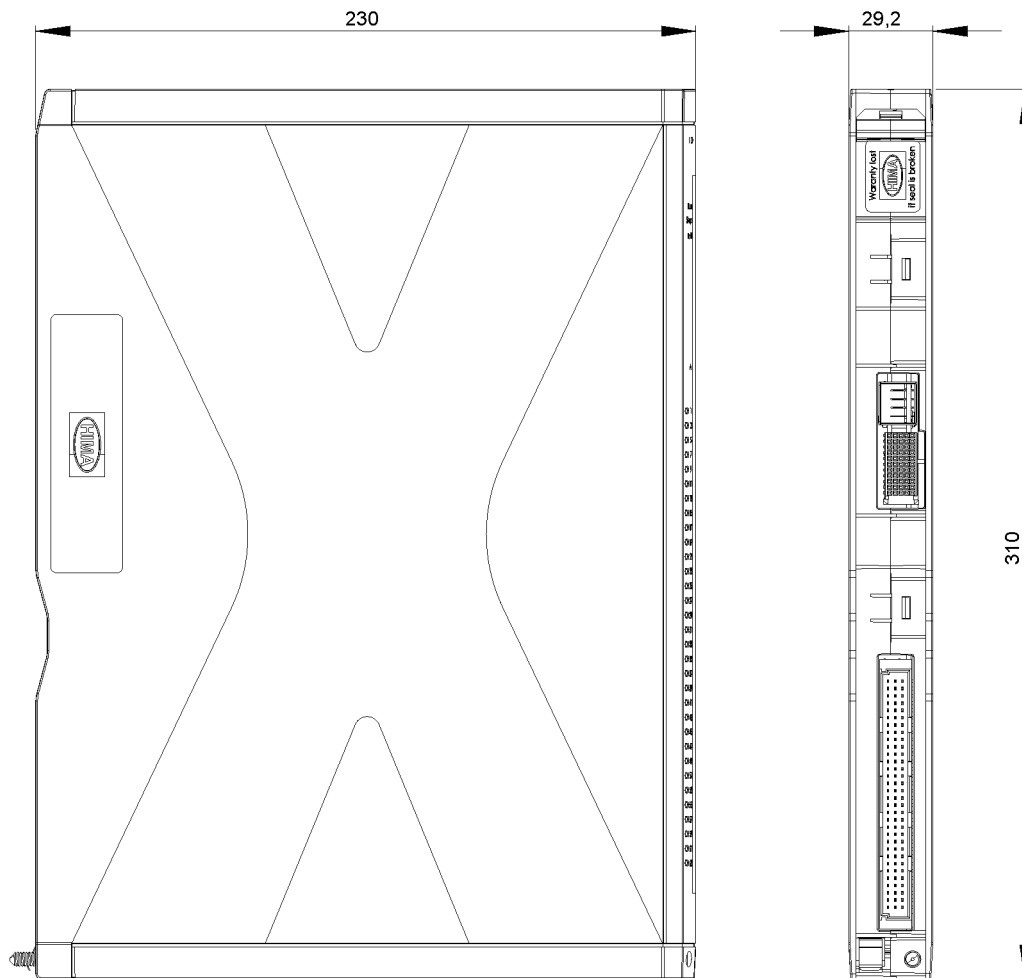


Figure 4: Views

Analog inputs	
Number of inputs (number of channels)	32 with common ground AI- (galvanic separation from the system bus and the 24 VDC supply voltage).
Nominal range	0/4...20 mA
Operating range	0...22.5 mA
Digital resolution	12-bit
Shunt for current measurement	200 Ω
Maximum permitted current via shunt	50 mA
Withstand voltage of the input	≤ 10 VDC
Interference voltage suppression	> 60 dB (common mode 50/60 Hz)
Measured value renewal (in the user program)	Cycle time of the user program
Sampling time	2 ms
Metrological accuracy	
Metrological accuracy on the entire temperature range (-10 °C...70 °C)	± 0.15 % of final value
Settling time to 99 % of the process value when the input signal changes	15 ms

Table 8: Specifications for the Analog Inputs

Transmitter supply	
Number of transmitter supplies	32
Output voltage for transmitter supply	26.5 VDC +0/-15 %
Output current of transmitter supply	max. 30 mA
Monitoring of transmitter supply	Undervoltage: 22.5 VDC Overvoltage: 30 VDC
Max. number of transmitter supplies that may be simultaneously short-circuited.	12 If more than 12 supplies are closed for longer than 3 seconds, the entire transmitter supply is switched off. If the overload disappears within 30 seconds, the transmitter supply is switched on again.
Maximum connectable load (transmitter + line)	≤ 750 Ω at 22.5 mA

Table 9: Product Data for the Transmitter Supply