

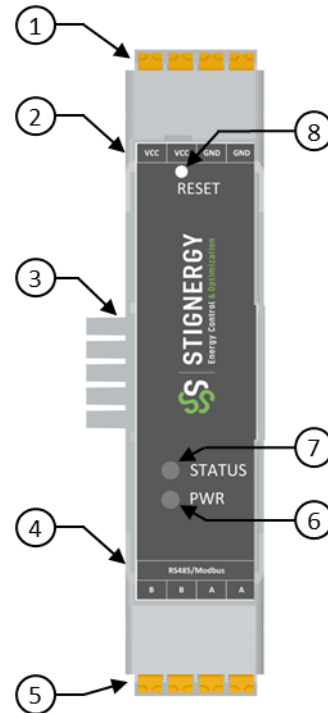
Description

SEMS IG is a RS485/Modbus communication interface with a galvanic isolation up to 2.5kV. When it is linked to a SEMS Terminal, it enables the extension of the communication wire up to 1.2 km.

Features

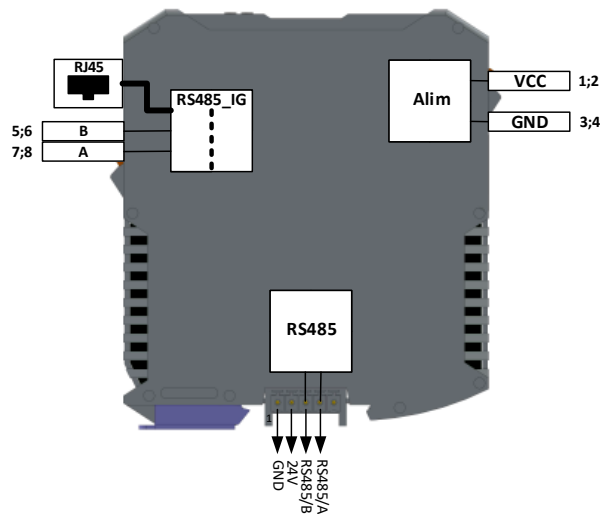
- Modular structure, due to the TBUS connectors
- RS485/Modbus communication with galvanic isolation
- Up to 255 SEMS Terminals can be connected to the RS485 interface of the SEMS IG
- Push-in spring connections
- Conformance CE-compliant

Assembly



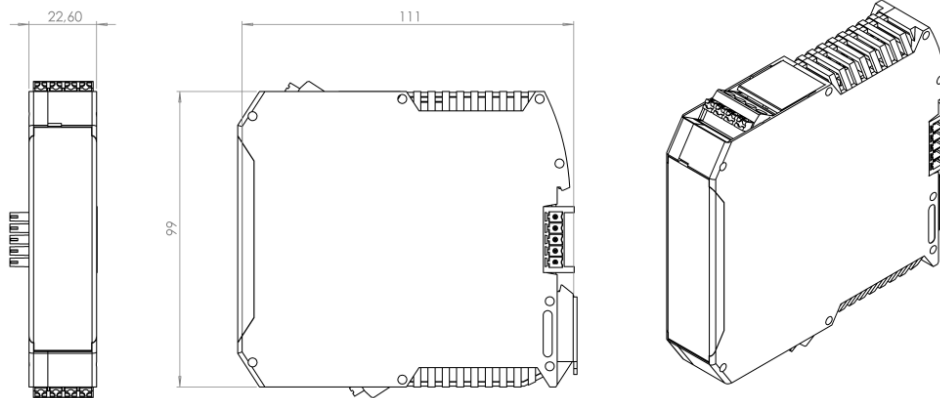
Position	Designation
1, 5	Push-in spring connections
2, 4	Mapping of Input/Output
3	TBUS connector
6	LED PWR (Power supply)
7	LED STATUS (Program running)
8	RESET button

Connections



Technical specifications

Dimensions



W x H x D

22.6 mm x 99 mm x 111 mm

Main specifications

Overvoltage category	III
Mounting position	Any, on 35 mm DIN mounting rail acc. to EN 60715
Degree of protection according to VDE 0470-1	
Housing	IP20
Connection terminal	IP20
Mounting position	IP54 min
Housing material	Polyamide PA non-reinforced
Degree of pollution	2
Flammability rating according to UL 94	V0

Supply

Rated voltage	24V DC via TBUS connector
Voltage range	20V to 30V DC
Max. current consumption	50mA /24V DC at 25°C
Protection against transient overvoltage	Yes (bidirectional TVS Diode)

External supply

Connection method	Push-in spring connection
Rated voltage	24V DC: 1A
Voltage range	20V to 30V DC
Protection against transient overvoltage	Yes (bidirectional TVS Diode)

TBUS RS485 interface

Connection	TBUS connector
Baud rate	Up to 1 Mbps

RS485 interface with galvanic isolation

Connection method	Push-in spring connection RJ45 connection
Baud rate	Up to 500kbps
Isolation voltage	2.5kV (for 1 minute)
ESD protection performance	±15kV

Connection data

Connection method	Push-in spring connection
Conductor cross section solid	0,2mm ² to 2,5mm ²
Conductor cross section flexible	0,2mm ² to 2,5mm ²
Conductor cross section	14AWG/kcmil to 24AWG/kcmil
Stripping length	10 mm

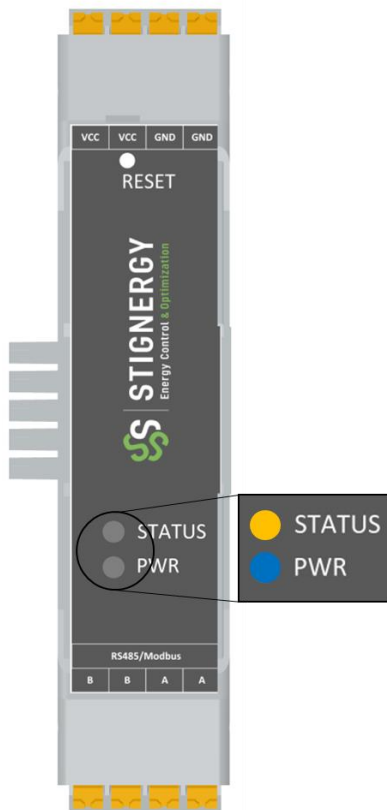
Ambient conditions

Ambient temperature (operation)	-20°C to 70 °C
Ambient temperature (storage/transport)	-40°C to 80 °C
permissible relative humidity (operation)	10% to 95%

Standards

Conformance	CE-compliant
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Operating mode and diagnostic LEDs of SEMS IG



Status display

Two LEDs to indicate the different states of the SEMS IG.

LEDs symbols means:

LED OFF ●

LED ON ☀

Blinking LED ●/☀

Slow blinking: f = 1Hz

Table 1. LED state

LED	State	Meaning
PWR	●	Power supply OFF
	☀ Blue	Power supply ON
STATUS	●	Power supply OFF
	●/☀ Yellow	Program is running

Table 2. Status of SEMS IG

PWR	STATUS	Meaning
●	●	↻ Power is off. No power supply from the TBUS
☀ Blue	●/☀ Yellow (slow)	↻ SEMS IG is working in Normal mode

Connection Terminals

Designation	Terminal bloc N°	Function
GND	1	Negative input for external power supply
	2	
VCC	3	Positive input for external power supply
	4	
A	5	A input for RS485
B	6	B input for RS458
A	7	A input for RS485
B	8	B input for RS458

Accessories

- **TRACO - TBL 030-124**
Power module for SEMS IG : 24VDC rated output currents up to 1.25A via the TBUS connector.
- **DIN Rail Terminal Blocks, PHOENIX CONTACT, ME 22.5TBUS1.5/5-ST 5P DIN RAIL BUS CONN – 2713722**
Plug component with nominal current $I_n = 8 \text{ A}$
- **Printed-Circuit board connector, PHOENIX CONTACT, IMC 1,5/ 5-ST-3,81 – 1857919**
Type : Plug component, Nominal current: $I_n 8 \text{ A}$, Rated voltage (III/2): 160V,
Number of positions: 5, Pitch: 3.81mm , Connection method: Screw connection with tension sleeve
Color: Green
Contact surface: pewter