

I/O Module 16

I/O-Extension for Smart Manager 4.0

Art. No.: 095430



■ Article description

The I/O extension for the Smart Manager 4.0 offers you a fast and flexible solution for controlling up to 16 inputs or outputs per module.

The I/O module offers the highest possible flexibility with 4 permanently assigned inputs and outputs and 8 additional, freely configurable I/Os. Thanks to the innovative STV mounting rail bus, the I/O module can be directly attached to the Smart Manager. This ensures a compact design and minimises the wiring effort.

Optionally, the I/O module can also be operated detached from the Smart Manager, connected via the terminal strips of the unit.

The inputs and outputs are available on the underside of the I/O module via a 28-pin plug connector. Wiring and connection can thus be carried out easily even under difficult conditions.

Communication with the Smart Manager takes place via the RS-485 interface. By means of address preselection on the I/O module, up to 16 extensions can be connected to a Smart Manager. This means that the system can be flexibly expanded to up to 256 I/Os.

Configuration and evaluation is done via a dedicated API on the Smart Manager. In addition, a web interface is provided on which the configuration of the modules can be carried out and the status can be viewed.



■ Properties

- Supply voltage: 24 V_{DC (nom.)}
- Configuration: Flexibly configurable inputs and outputs
API, web interface, rotary coding switch for addressing
- Inputs: 4 fixed, galvanically isolated, 24 V_{DC (nom.)}
- Outputs: 4 fixed, galvanically isolated, 500 mA_(nom.)
- In- / Output: 8 configurable, galvanically isolated
24 V_{DC (nom.)} / 500 mA_(nom.)
- Connection: RS-485 directly via STV mounting rail bus or on terminal strip
Automatic switching of the interface used
Up to 16 I/O modules on one Smart Manager
I/O interface via 28-pin connector
- Applications: Wide range of applications from mechanical engineering and industrial automation to home and building automation.
- Availability: 10 years (compatible device version)

STV Electronic GmbH

Hellweg 203-205
33758 Schloß-Holte
www.stv-electronic.de

Seite | 1

en_r02

I/O Module 16

I/O-Extension for Smart Manager 4.0

Art. No.: 095430



■ Technical Data

□ Supply:

Rated voltage	+24 V _{DC}
Supply voltage range	+18 V _{DC (min.)} to +30 V _{DC (max.)}
Power consumption supply voltage without load	approx.. 40 mA

□ Digital Inputs:

Number of digital Inputs (fixed / configurable)	4 / 8
Signal type	voltage, DC 24 V _(nom.)
Voltage range for signal: low	DC 0 V .. +9 V _(max.)
Voltage range for signal: high	DC +11 V _(min.) .. +30 V
Input current per channel (Signal: high)	2,25 mA _(nom.)
Input logic	positive switching (non-inverting)
Input characteristics	According to IEC 61131-2; Type 1
Input protection	Galvanic isolation (basic) 2.500V _{RMS} acc. to DIN VDE V 0884-11 ESD interference immunity ±30 kV acc. to IEC 61000-4-2

□ Digital Outputs:

Number of digital Outputs (static / configurable)	4 / 8
Type of Output	High-Side (Open Drain)
Output voltage	DC 24 V _(nom.)
Output current (per channel)	500 mA _(nom.)
Current limitation (per channel)	600 mA _(nom., ±15%)
Output protection	Protection against short circuit, overload, overheating acc. to DIN EN 61131-2 Galvanic isolation (reinforced) 3.000 V _{RMS} nach DIN VDE V 0884-11 ESD interference immunity ±30 kV acc. to IEC 61000-4-2

STV Electronic GmbH

Hellweg 203-205
33758 Schloß-Holte
www.stv-electronic.de

Seite | 2

en_r02

I/O Module 16

I/O-Extension for Smart Manager 4.0

Art. No.: 095430



■ **Technical Data**

(continued)

□ Communication:

Interface	RS-485 (TIA/EIA-485-A)
Data rate	115.200 Bd, half-duplex
Input impedance	48 k Ω (¼ Unit Load)
Termination	optionally via jumper 120 Ω + fail-safe biasing
Protection of interface	Galvanic isolation (reinforced) 2.500 V _{RMS} acc. to DIN VDE 0884-10 ESD interference immunity \pm 30 kV acc. to IEC 61000-4-2

□ Connection details:

Power supply / interface:

Type of connection	Push-in spring connection
Type of operation	Push button
Conductor cross-section of solid conductors	0,25 .. 0,75 mm ² / 24 .. 19 AWG
Conductor cross-section of fine-stranded conductors	0,25 .. 0,75 mm ² / 24 .. 19 AWG
Conductor cross-section of fine-stranded conductor with ferrule	0,25 .. 0,5 mm ² / 24 .. 20 AWG
Stripping length	9 mm

I/O Connecting terminal:

Type of connection	Push-in spring connection
Type of operation	Push button
Conductor cross-section of solid conductors	0,14 .. 0,5 mm ² / 26 .. 20 AWG
Conductor cross-section of fine-stranded conductors	0,14 .. 0,5 mm ² / 26 .. 20 AWG
Conductor cross-section of fine-stranded conductor with ferrule	0,14 .. 0,25 mm ² / 26 .. 24 AWG
Stripping length	7 mm
Counter plug	Phoenix Contact DFMC 0,5/14-ST-2,54

STV Electronic GmbH

Hellweg 203-205
33758 Schloß-Holte
www.stv-electronic.de

Seite | 3

en_r02

I/O Module 16

I/O-Extension for Smart Manager 4.0

Art. No.: 095430



■ Ambient conditions

Ambient temperature (storage)	-40 °C to +65 °C
Ambient temperature (mounting)	-5 °C to +65 °C
Ambient temperature (operating)	-40 °C to +55 °C
Relative humidity (without condensation)	93 %

■ Housing data

Type of housing	Installation housing acc. to DIN 43880
Housing material	Plastic, polycarbonate
Colour	Light grey (RAL 7035) Black (RAL 9005)
Flammability category	V0 acc. to UL 94
Ingress Protection	IP 20
Mounting	Mounting rail 35 acc. to DIN EN 50022
Mounting position	parallel to mounting rail

■ Standards and regulations

Conformity marking	CE
EMC interference immunity	acc. to DIN EN 55024
EMC interference emission	acc. to DIN EN 55032
Elektromagnetic compatibiliy	acc. to DIN EN IEC 61000-6-2

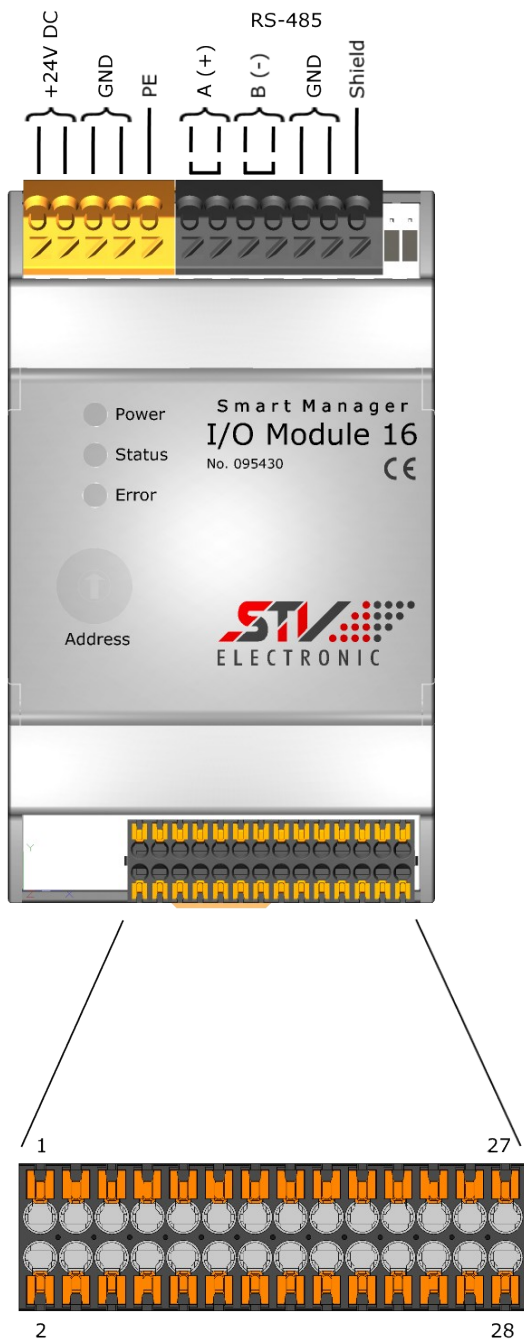
I/O Module 16

I/O-Extension for Smart Manager 4.0

Art. No.: 095430



Terminal assignment



Function	Pin	Pin	Function
+24V ¹⁾	2	1	+24V ¹⁾
+24V ¹⁾	4	3	+24V ¹⁾
INP-2	6	5	INP-1
INP-4	8	7	INP-3
GND	10	9	GND
OUTP-2	12	11	OUTP-1
OUTP-4	14	13	OUTP-3
GND	16	15	GND
I/O-2	18	17	I/O-1
I/O-4	20	19	I/O-3
I/O-6	22	21	I/O-5
I/O-8	24	23	I/O-7
GND	26	25	GND
GND	28	27	GND

Power	Input	Output	Input / Output
-------	-------	--------	----------------

1) max. 200mA total (int. limited)

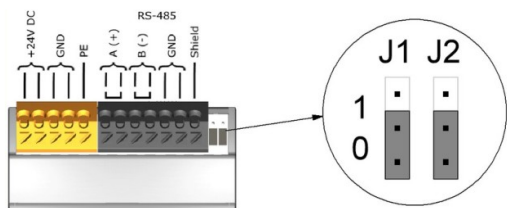
I/O Module 16

I/O-Extension for Smart Manager 4.0

Art. No.: 095430



■ Configuration Jumper

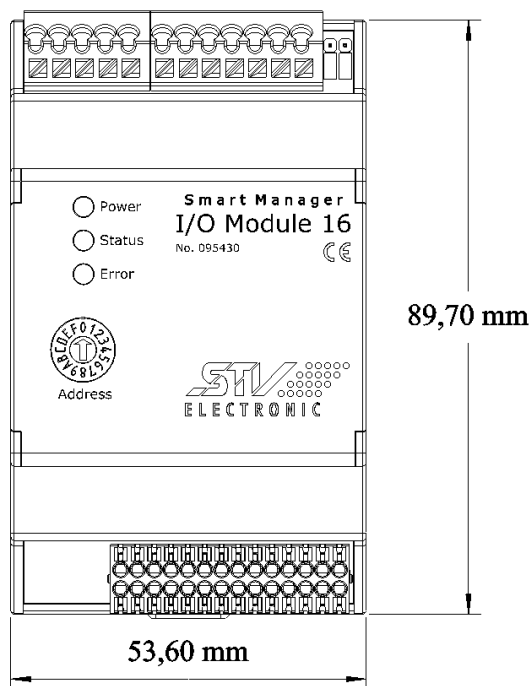


J1	RS485
POS1	RS485 Termination ON
POS2	RS485 Termination OFF

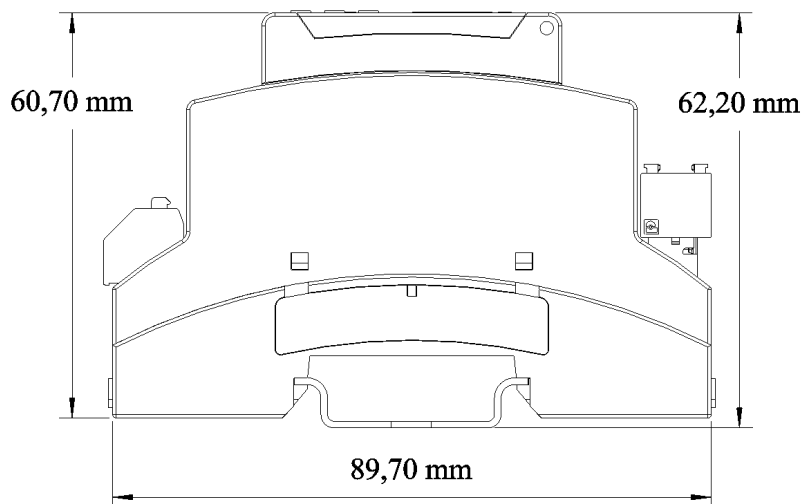
J2	RS485
POS1	RS485 is turned of for mounting rail bus
POS2	Automatic switch to RS485 for mounting rail bus and pins

■ Mechanical Data

Width	53,60 mm
Height	89,70 mm
Depth (device)	60,70 mm
Depth (incl. Mounting rail)	62,20 mm
Weight	145 g



View from above



View from left side