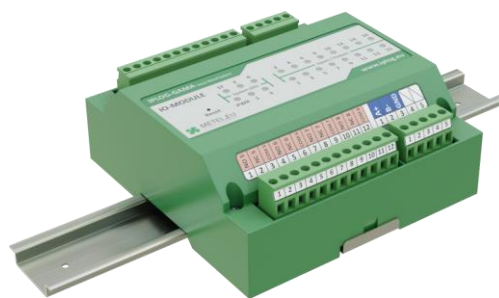


- ❖ 8x NOC 24 V Relay Outputs
- ❖ 1x RS485
- ❖ Operating Range -40°C to $+70^{\circ}\text{C}$
- ❖ 600 W Integrated Surge Protections
- ❖ Mounting on DIN35 Rail
- ❖ Cover Made of Self-Extinguishing Material UL94 V0



RE8.3E is an industrial IO module of the IPLOG system. The Modbus RTU communication interface allows it to be easily connected to systems from other manufacturers. The module is supplied with a plastic cover for mounting on a DIN35 rail.

DEVICE	PARAMETER	VALUES	NOTE
	Power Supply	12, 24, 48 VDC	10 to 60 VDC
	Consumption	Max. 1.5 W	
	Surge Protection	600 W	10/1000 μs
	Operating Range	-40 to $+70^{\circ}\text{C}$	
	Storage Range	-40 to $+70^{\circ}\text{C}$	
	Humidity	Max. 95 %	No-condensing
	Dimension	120 x 123 x 49,5 mm W x H x D	
	Weight	Max. 0.32 kg	
	Installation	DIN35	
	Device Class	I	EN 61140
	Ingress Protection	IP 20	EN 60529
	Cover Material	ABS UL94 V0	
	Degree of pollution	II	EN 60664-1
	Connections	Screw Terminals	
	Conduct. cross-section	Max. 2.5 mm ²	

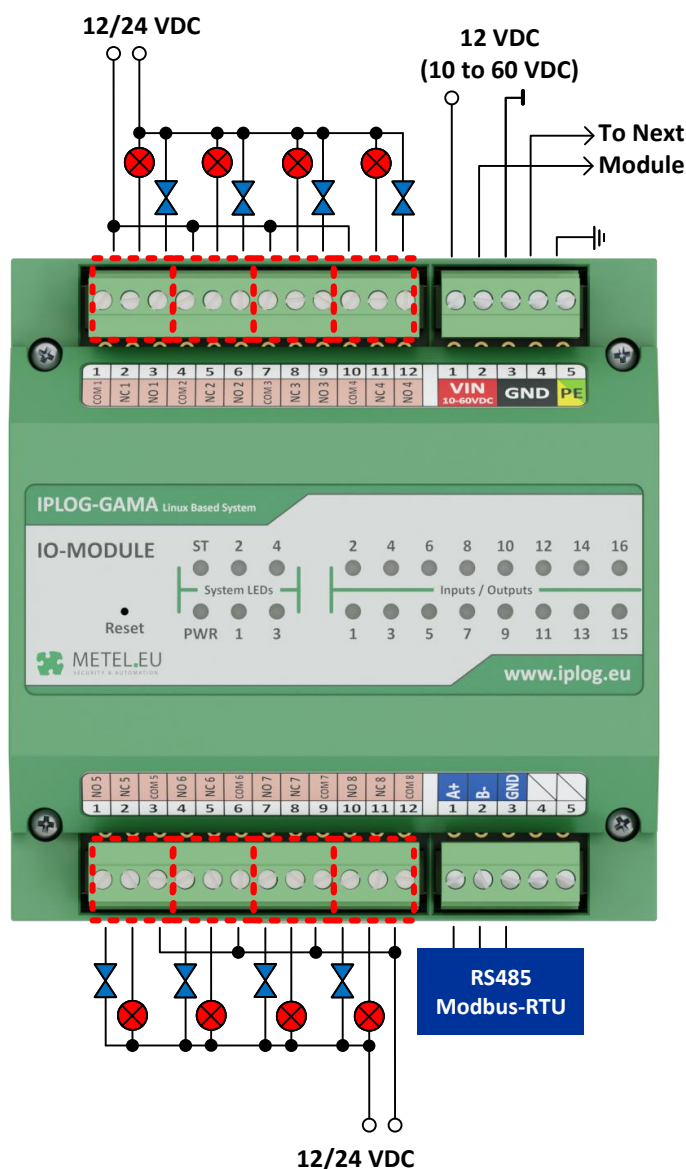
CPU	PARAMETER	VALUES	NOTE
	Series	32-bit MCU	
	Frequency	64 MHz	
	Flash	512 kB	
	RAM	64 kB	



PRODUCT NAME	CODE	NOTE
RE8.3E-DIN	6000-1100	1x RS485

Complete information on available IPLOG devices can be found on the websites: <https://www.metel.eu> and <https://www.iplog.eu>

ORDERING



Galvanic Isolation

Location and Designation of Connectors and LEDs

NOTE: The order of the terminal numbers in the table below corresponds to the order of the terminal numbers found on the device.

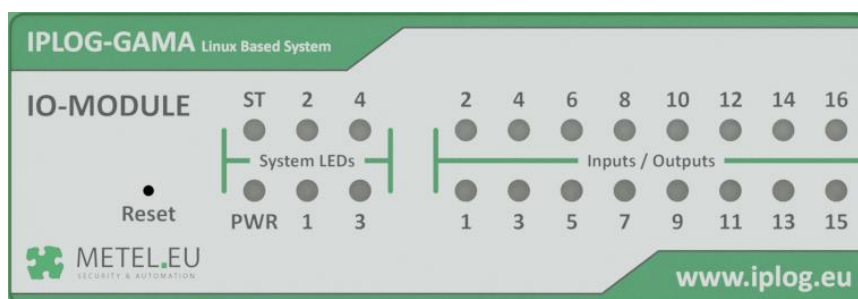
CONNECTOR			Inputs / Outputs LED	
12	NO 4	Normally Open	4	Closed = Log. 1 = Lights
11	NC 4	Normally Closes		
10	COM 4	Common terminal of NOC 4 Relay		
9	NO 3	Normally Open	3	Closed = Log. 1 = Lights
8	NC 3	Normally Closes		
7	COM 3	Common terminal of NOC 3 Relay		
6	NO 2	Normally Open	2	Closed = Log. 1 = Lights
5	NC 2	Normally Closes		
4	COM 2	Common terminal of NOC 2 Relay		
3	NO 1	Normally Open	1	Closed = Log. 1 = Lights
2	NC 1	Normally Closes		
1	COM 1	Common terminal of NOC 1 Relay		

CONNECTOR			System LEDs	
5	PE	Earthing Terminal		
4	GND	Power Input – Minus Terminals	PWR	Power is Connected, LED Lights Up.
3		Terminals are Internally Interconnected		
2	VIN	Power Input – Plus Terminals		
1	10-60 V DC	Terminals are Internally Interconnected		

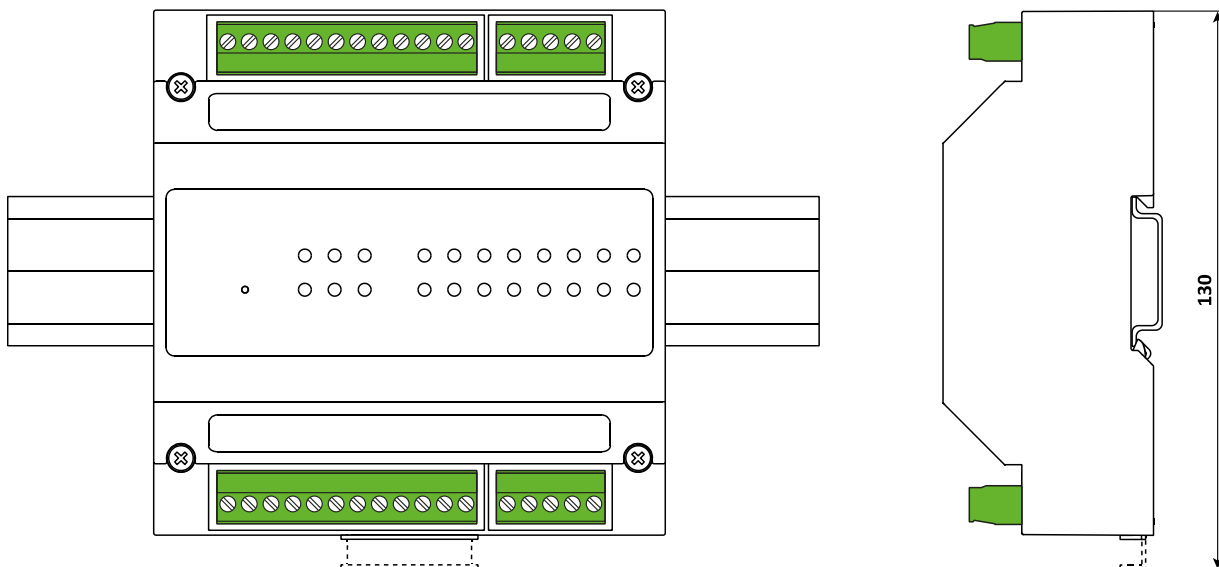
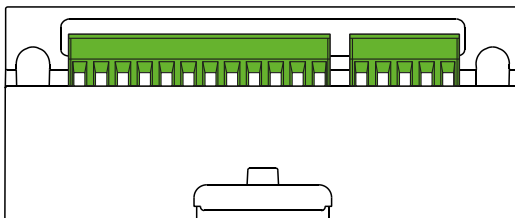
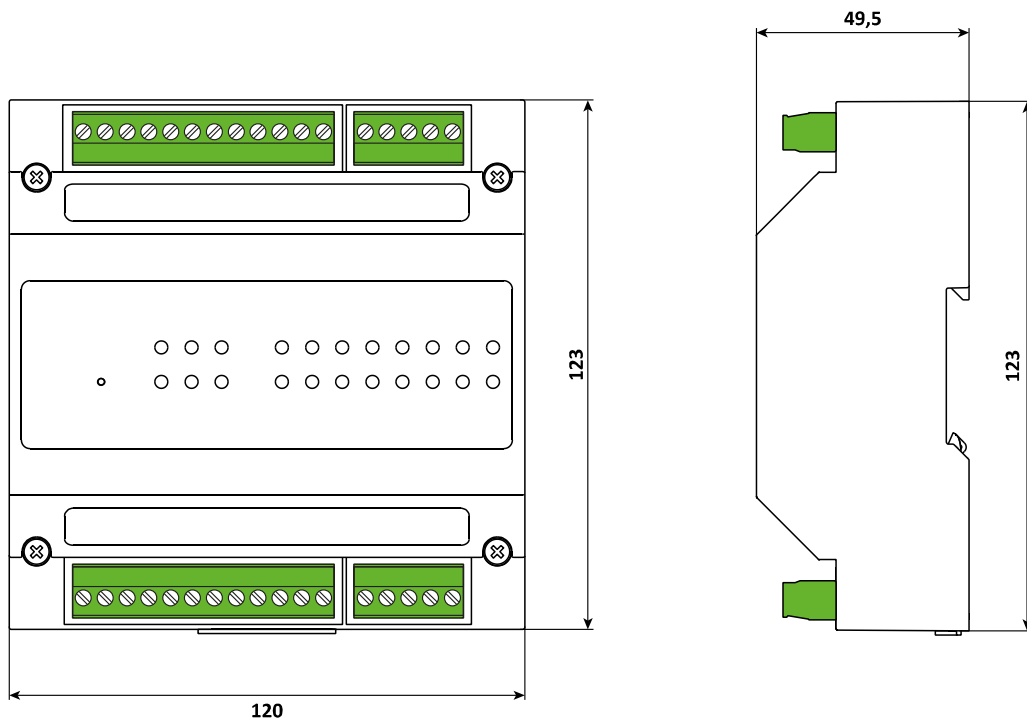
CONNECTOR			Inputs / Outputs LED	
12	COM 8	Common terminal of NOC 8 Relay		
11	NC 8	Normally Closes		
10	NO 8	Normally Open	8	Closed = Log. 1 = Lights
9	COM 7	Common terminal of NOC 7 Relay		
8	NC 7	Normally Closes		
7	NO 7	Normally Open	7	Closed = Log. 1 = Lights
6	COM 6	Common terminal of NOC 6 Relay		
5	NC 6	Normally Closes		
4	NO 6	Normally Open	6	Closed = Log. 1 = Lights
3	COM 5	Common terminal of NOC 5 Relay		
2	NC 5	Normally Closes		
1	NO 5	Normally Open	5	Closed = Log. 1 = Lights

System LEDs		Inputs / Outputs LED	
1	BUS 1 (Tx = Red / Rx = Green)	9-16	Not used (planned as IEC programmable)
2-4	Not used (planned as IEC programmable)		
ST	Not used (planned as IEC programmable)		

Galvanic Isolation



Dimensions and Installation of DIN Version



Default Settings of MODBUS Communication

Device ID: 1 | Speed: 115 200 | Parity: None | Data bits: 8 | Stop bits: 1

Modbus registers

	Subject	Type	R/W	Value	Offset
Device Identification	Product Type	u8[3]	R		1002-04
	Serial Number	u32	R		1005-06
	PCB Version	u32	R		1007-08
	PCB Revision	u16	R		1009
	FW Version Major	u16	R		1010
	FW Version Minor	u16	R		1011
	FW Version - Revision	u32	R		1012-13
	IF#01 Slot State	u16	R	0 = N/A 1 = IF#01 not Inserted 2 = IF#01 Inserted, CRC error 3 = IF#01 Inserted, CRC OK	1021
	IF#01 Product Type	u8[3]	R		1022-24
	IF#01 Serial Number	u32	R		1025-26
Device Control	Reset	u16	RW	55203 = To Reboot	1201
	Bootloader / Application	u16	R	0x00A – Application, 0x00B – Bootloader	1203
	Restart to Bootloader ⁽¹⁾	u16	RW	617 = To Bootloader else = deactivate bootloader	1204
Device Status	Board Power Voltage	u16	R	105 = 10,5V	1311
	Board Temperature	s16	R	-200 = -20,0°C 250 = 25,0°C	1321

⁽¹⁾ To activate the bootloader, it is necessary to write a value of 617 in the registry and restart the device. To reactivate the application, enter any value other than 617 in the appropriate registry and restart the device. If the device is in the bootloader, the LED 1 will flash red.

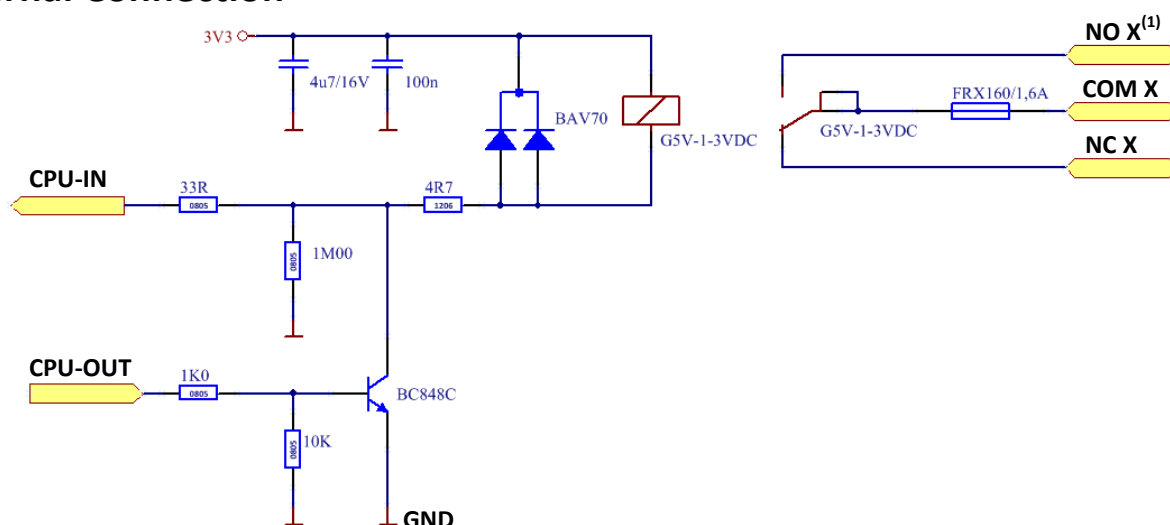
	Subject	Type	R/W	Value	Offset
BUS 1 Settings	Baudrate	u16	RW	192 = 19 200 bps 1152 = 115 200 bps 9216 = 921 600 bps 10000 = 1 000 000 bps	2110
	Databits	u16	RW	8 = 8b, 9 = 9b	2111
	Parity	u16	RW	78 = None 69 = Even 79 = Odd	2112
	Stopbits	u16	RW	10=1, 20=2, 15=1,5	2113
	MODBUS address	u16	RW	1 - 247	2120

	Subject	Channel	Type	R/W	Value	Offset
States of Relay Outputs	COIL Relay 1	DI#01	bit	R	0 = inactive 1 = active	3001
	COIL Relay 2	DI#02	bit	R		3002
	COIL Relay 3	DI#03	bit	R		3003
	COIL Relay 4	DI#04	bit	R		3004
	COIL Relay 5	DI#05	bit	R		3005
	COIL Relay 6	DI#06	bit	R		3006
	COIL Relay 7	DI#07	bit	R		3007
	COIL Relay 8	DI#08	bit	R		3008
	Inputs	DI#16 - DI#01	u16	R	0x0000 - 0x0FFF	3001

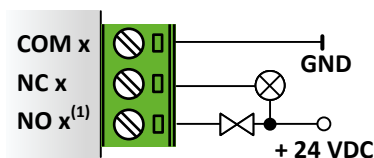
	Subject	Channel	Type	R/W	Value	Offset
Relay Outputs	Relay Output 1	DO#01	bit	RW	0 = inactive 1 = active	4001
	Relay Output 2	DO#02	bit	RW		4002
	Relay Output 2	DO#03	bit	RW		4003
	Relay Output 4	DO#04	bit	RW		4004
	Relay Output 5	DO#05	bit	RW		4005
	Relay Output 6	DO#06	bit	RW		4006
	Relay Output 7	DO#07	bit	RW		4007
	Relay Output 8	DO#08	bit	RW		4008
	Outputs	DI#16 - DI#01	u16	RW	0x0000 - 0x0007	4001

The relay output is capable of switching loads with either AC or DC voltage. The Relay output is accessible from METEL IEC 61131-3 IDE or directly from Linux scripts and can be configured independently of each other. Logic state of each output is signaled by a relevant LED diode on the front panel. For details please see the table „Location and Designation of Connectors and LEDs “.

Internal Connection



Examples of Connections



Relay NOC (Changeover) output has a common terminal COM. Two state relay can switch both AC and DC voltages to load. In the non-voltage state are relay terminals NO $x^{(1)}$ - COM disconnected and NC $x^{(1)}$ - COM connected. The relay is turned on when the program set logic 1 at its coil. When the relay is turned on, corresponding REx⁽¹⁾ LED diode on the front side light up (in default configuration).



Relay terminals must be protected with an external circuit breaker or fuse to prevent the rated current of the terminal or the load being exceeded. When switching inductive load it is recommended to protect relay outputs with an appropriate external component (e.g. varistor, RC circuit, or diode).

Technical Parameters

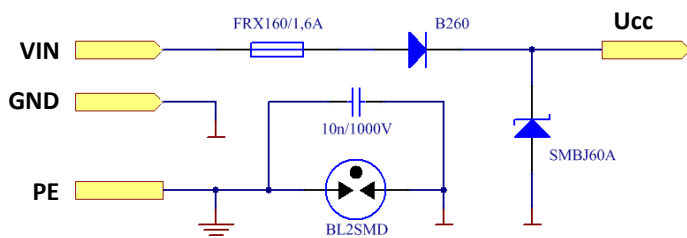
Parameter	Value	Note
Contact Type	NOC	Changeover Relay
Number of Poles	1	
Max. Load	0.5 A / 120 VAC	Resistive Load
	1 A / 24 VDC	Resistive Load
Electrical Lifetime	3,000,000 Operations	
Isolation Voltage	1.000 Vrms / 1 min.	Terminals to Electronic or Case

(1) The letter „x“ replaces the input number.

POWER INPUT

The supply voltage is connected to VIN and GND terminals. The terminals are doubled for easier connection between the modules installed side by side.

Internal Connection of POWER INPUT



The electronic circuits of the IO module are galvanically separated from the PE, which is connected to the GND by a lightning arrester. The PE and GND department enables reliable operation of the system even in applications with differences in ground potentials.

Parameter	Value	Note
Input Voltage Range	10 to 60 VDC	
Surge Protection	600 W	10 / 1000 μ s
Short Circuit Protection	Polyswitch	
Reverse Polarity Protection	Diode	