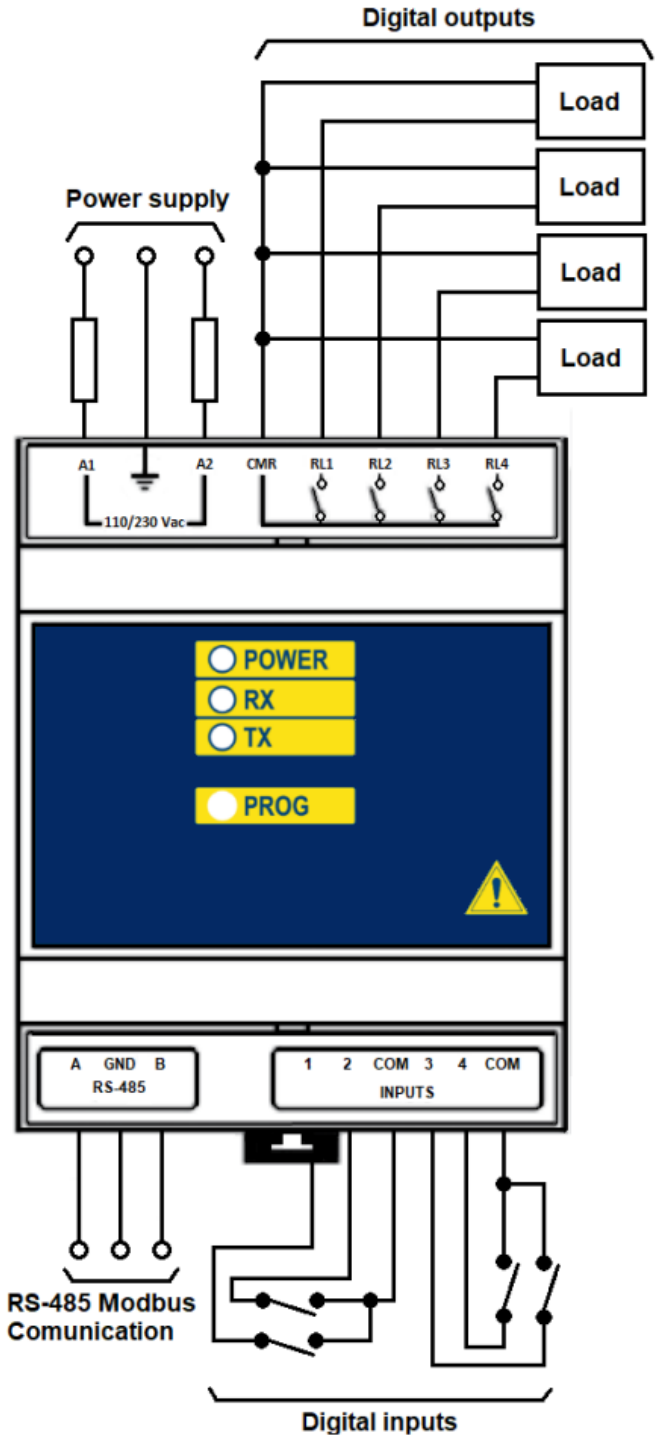
SBC8 IO 40

Multi I/O Hubs

Description	
	Pulse centralizer with 4 optocoupled digital inputs and 4 relay outputs. The digital inputs are associated with four memory registers for pulse counting. In the case of outputs, the pulse duration can be programmed in the device.
Featured Features	
	- Ideal for water or gas meter reading and remote control applications - Digital inputs for pulse counting or for open/closed contact detection - RS-485 Modbus RTU communications to allow remote telemanagement
Electrical data	
Power supply	85 .. 265 VAC. / 120 .. 374 VDC.
Frequency	47 .. 63 Hz
Maximum consumption	4,6 V·A AC. / 2,5 V·A DC
Environmental conditions	
Temperature	-10 .. +50 ºC
Humidity	5% .. 95%
Maximum working altitude	2000 m
Mechanical data	
Surround material	UL94-V0 self-extinguishing plastic
Protection degree	IP20
Dimensions	105 x 88,5 x 48mm
Weight	170 g
Mounting	DIN rail
Serial interface	
Type	RS-485 three threads (A+/S GND/ B-) (RX/GND/TX)
Transmission speed	9600 / 19200 bps configurable
Data bits	8
Parity	No parity
Stop bit	1
Characteristics and electrical safety	
Electrical safety	CAT III 300 V according to EN 61010
Electric shock protection	Double insulation class II
Digital input features	
Type	Optoisolated voltage free (dry contact)
Maximum activation current	50mA
Characteristics digital outputs	
Type	Relay
Nominal voltage	250 VAC
Electrical endurance	3·10^4 operations
Rated Current	
With resistive load	250 VAC / 5 AAC
With inductive load (AC)	250 VAC / 5 AAC
With inductive load (DC)	24 VDC / 5 ADC
Regulations	
	IEC 60664, VDE 0110, UL 94, EN-61010-1, EN 55011, EN 61000-4-3, EN 61000-4-11, EN 61000-6-4, EN 61000-4-2, EN 61000-6-2, EN 61000-6-1, EN 61000-6-3, EN 61000-4-5 -CE

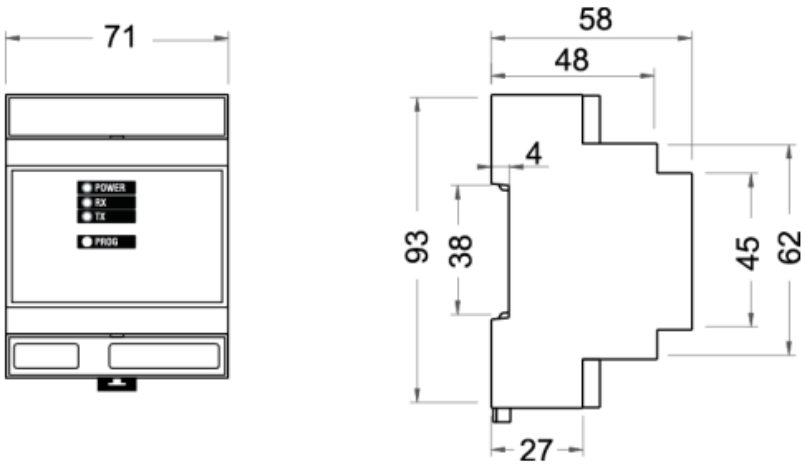
Installation	
	The equipment is installed on a DIN rail, leaving all the connections inside an electrical panel.
	The equipment must be connected to a power circuit protected with type gl (IEC 269) or type M fuses, between 0.5 and 2 A. A magneto-thermal switch or equivalent device must be provided to disconnect the equipment from the power supply network. The power supply circuit of the equipment will be connected with a cable with a minimum section of 2.5 mm².
Electrical wiring	



Leds

Power	Activity in case of supplying the equipment with auxiliary power
RX	Blinking during RS-485 reception
TX	Blinking during RS-485 transmission

Dimensions



RS-485 communication

The equipment has an RS-485 type communication port for reading and writing the device parameters. To do this, the equipment uses the Modbus/RTU communication protocol. By default, it is configured with the peripheral number 98 (in hexadecimal 62) and communication speed 192000 bps, 8, N, 1. By means of the address change command we can assign any other address (at most FF in hexadecimal which is equivalent to peripheral 255).

If you do not remember the slave number, you can retrieve the default address (98 decimal or 62 in hexadecimal):

- Remove auxiliary power to the equipment
- Permanently activate the button located on the front of the equipment
- Powered up again, stop pressing the button and the equipment automatically recovers the default peripheral number (98 Decimal / 62 Hexadecimal).

Modbus RTU memory map

Magnitude	Input registers	Unit	Function
Peripheral number	0x3000	-	4,16(0x10)
Transmission speed	0x3001	1: 9600bps 2: 19200bps	4,16(0x10)
Device version	0x3500-0x3502	Format: "V1.10" values in ASCII and the last byte is always 0	4
Serial no.	0x3503-0x3504	-	4
Counter value 1	0x0000-0x0001	-	4
Counter value 2	0x0002-0x0003	-	4
Counter value 3	0x0004-0x0005	-	4
Counter value 4	0x0006-0x0007	-	4
Digital input status Activated = Closed (1) Deactivated = Open (0) Minimum 0 Maximum F	0x2000	0000: Inputs deactivated 0001: Input 1 active 0003: Inputs 1 and 2 activated Bin0001: Bit lower weight E1 Bin1000: Bit higher weight E4	4
Control digital outputs Activated = Closed (1) Deactivated = Open (0) Minimum 0 Maximum F	0x1000	0000: Outputs deactivated 0001: Output 1 active 0003: Outputs 1 and 2 active Bin0001: Bit lower weight R1 Bin 1000: Bit higher weight R4	4,16(0x10)
Control digital outputs by impulse Activated = Closed (1) Deactivated = Open (0) Minimum 0 Maximum F	0x1500	0000: Pulses deactivated 0001: Pulse 1 active 0003: Pulse 1 and 2 active Bin 0001: Bit lower weight imp R1 Bin 1000: Bit higher weight inp. R4	4,16(0x10)
Pulse duration (Low Byte - Relay 1 / High Byte - Relay 2)	0x2500	01: Duration 20ms FF: Duration 5100ms	4,16(0x10)