

# INSTALLATION GUIDE

- RS485-P MI485P
- RS485 MI485

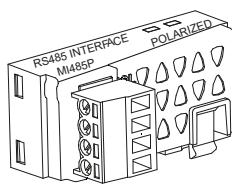
**Millenium** Modbus interface

## PRODUCT OVERVIEW

### 1. RS485-P interface MI485P

3.3 VDC / 150 mA max / 0.5 W

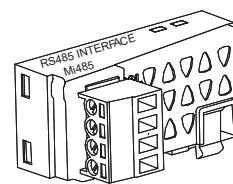
*With polarization*



### 2. RS485-P interface MI485

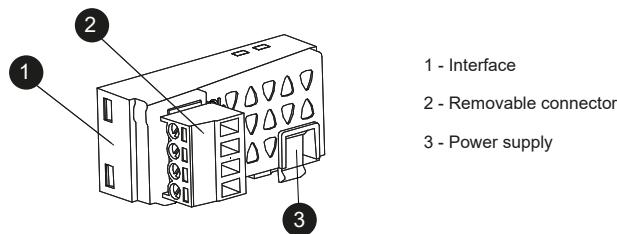
3.3 VDC / 150 mA max / 0.5 W

*Without polarization*

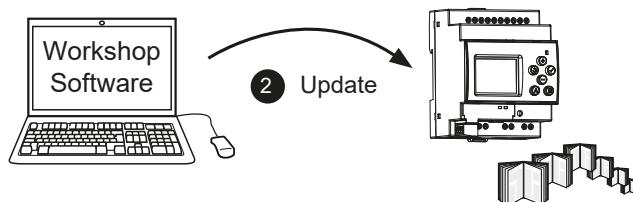


*Compatibilities:* These RS485-P and RS485 interfaces are compatible with the Millenium ranges.

## DESCRIPTION



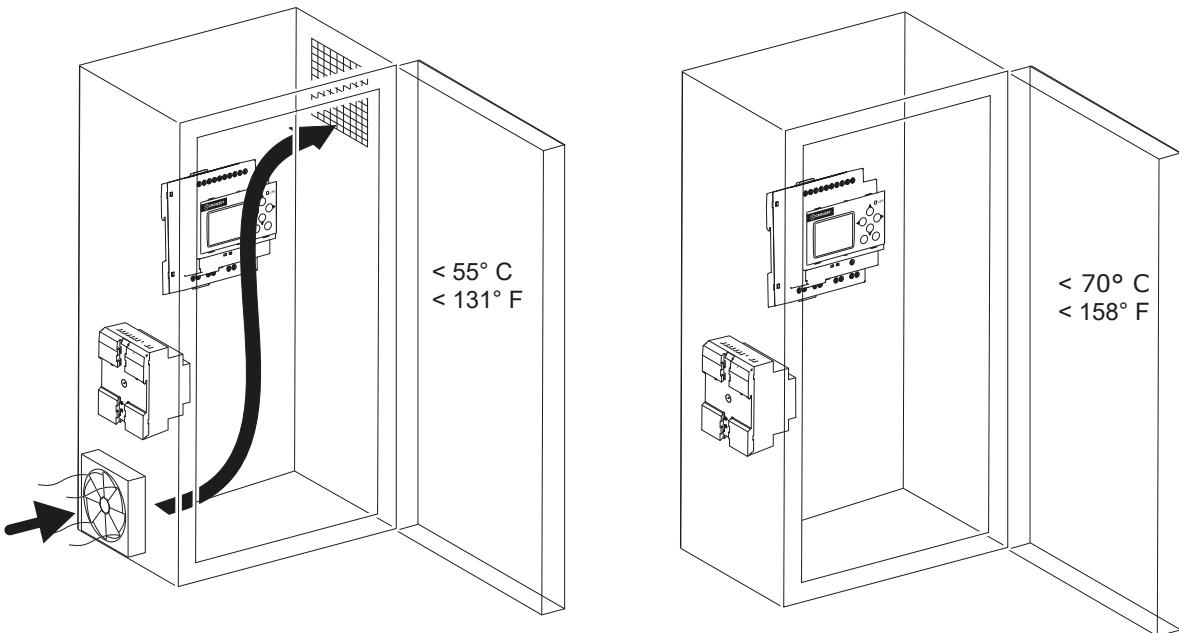
- 1 Download Crouzet Soft : [www.crouzet.com](http://www.crouzet.com)



Download installation sheet, datasheet:  
<https://soda.crouzet.com/>

*Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Crouzet for any consequences arising out of use of this manual.*

## Installation conditions



## Service conditions

Operating temperature	(-20° C to +55° C) / (-4° F to +31° F)
Storage temperature	(-30° C to +70 °C) / (-22° F to +158° F)
UL: Maximum surrounding air temperature	of 50° C / 122° F.
Pollution degree	2

### Important: This document provides installation instructions only

See the workshop's help for the programming workshop and operation. Those responsible for the application, implementation or use of this product must ensure that the necessary design considerations have been incorporated into each application, completely adhering to applicable laws, performance and safety requirements, regulations, codes and standards.

The customer is responsible for all consequences of the application.

## ⚠ WARNING

### Explosion hazard

Confirm that the product power supply voltage and its tolerances are compatible with those of the network.

Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.

### Unintended equipment operation

This product is not intended for use in safely critical machine functions.

Where personnel and or equipment hazard exist, use appropriate hard wired safety interlocks.

Do not disassemble, repair or modify.

This controller is designed for use within an enclosure according to specifications described in these instructions.

Install the controllers in the operating environment conditions described below.

**Failure to follow these instructions can result in death, serious injury or equipment damage.**

## ⚠ DANGER

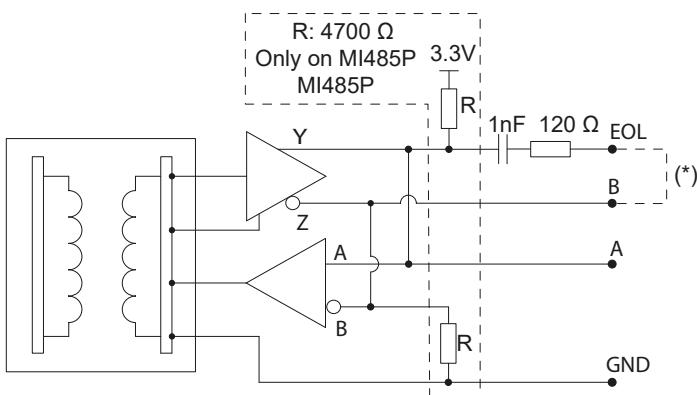
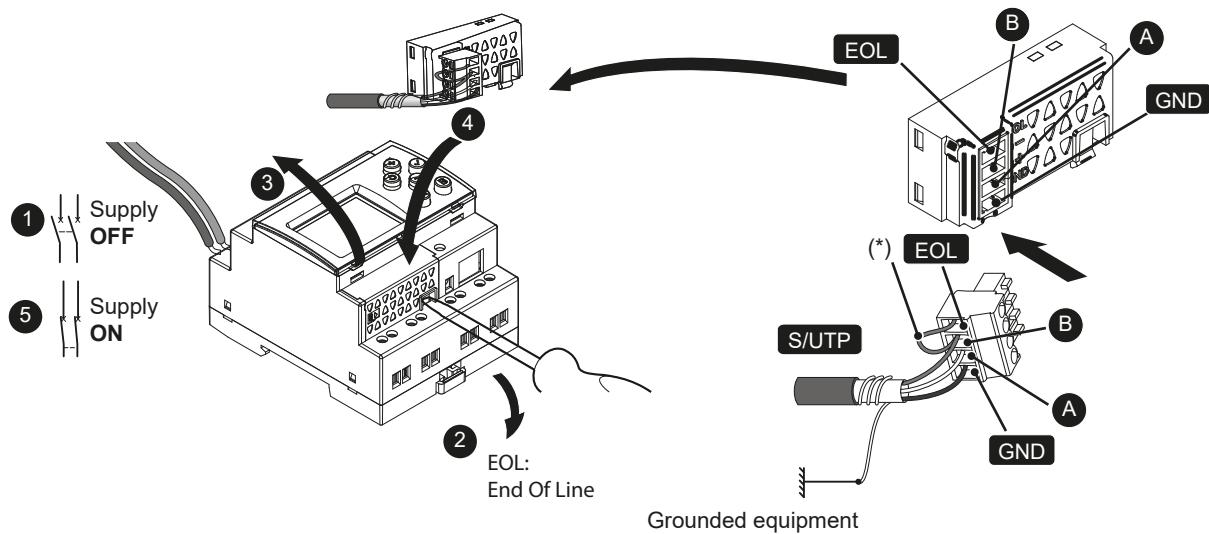
### Hazard of electric shock, explosion or arc flash.

Turn power off before installing, removing, wiring or maintaining.

**Failure to follow this instruction will result in death or serious injury.**

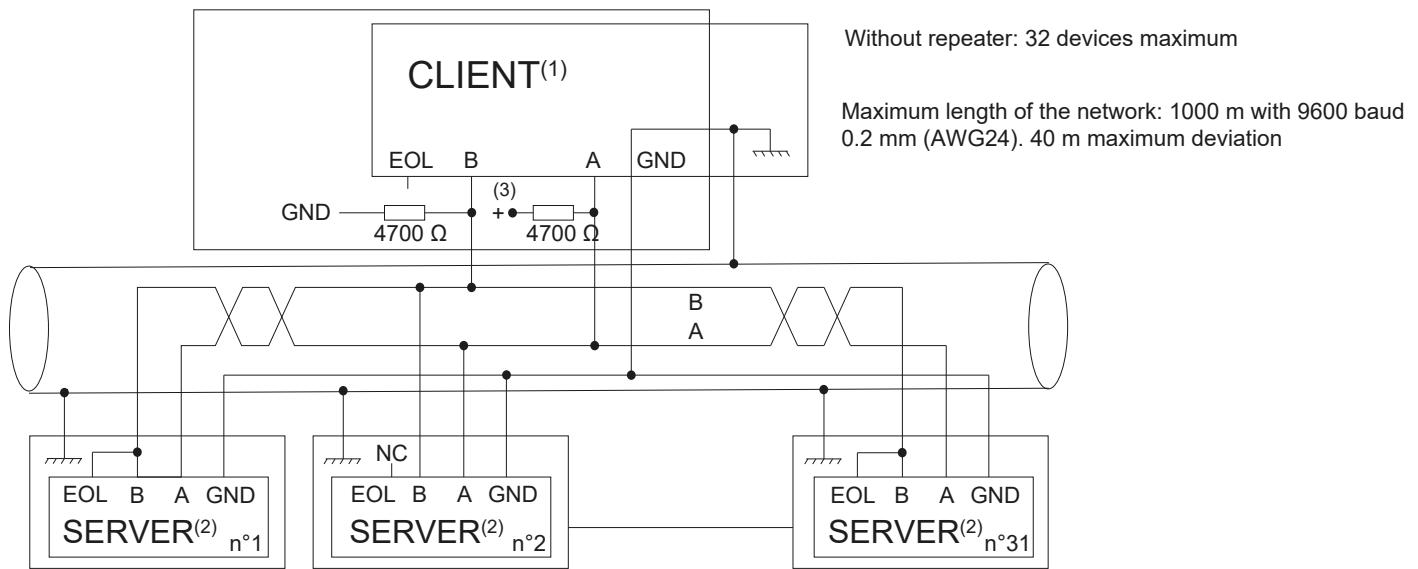
# INSTALLATION

## Connection



(\*) Connection between EOL and B on both products at the end of line.

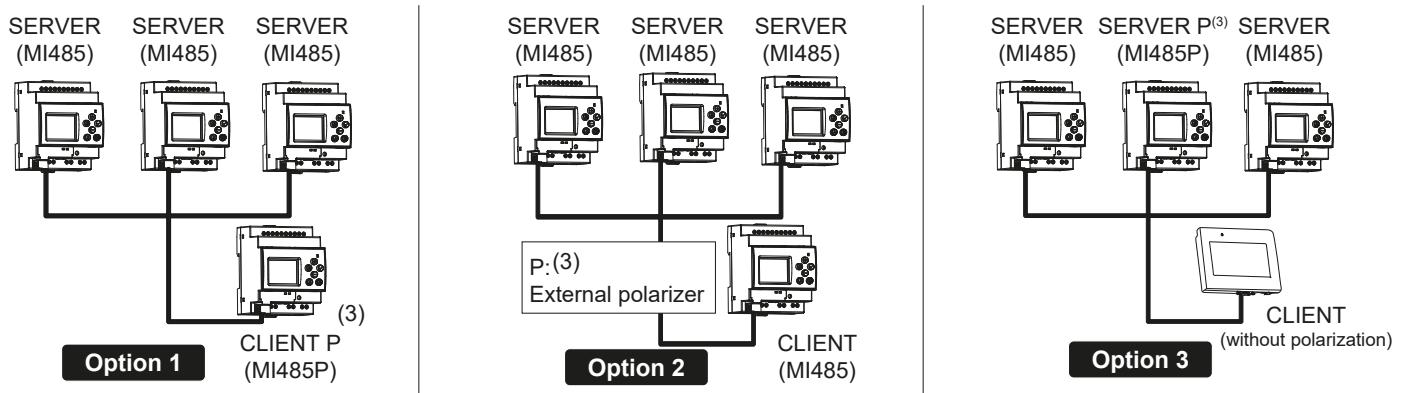
# OPERATION



1. Millenium Client + Modbus interface

2. Server or Millenium + Modbus

3. Polarization



# ADDRESSING MEMORY

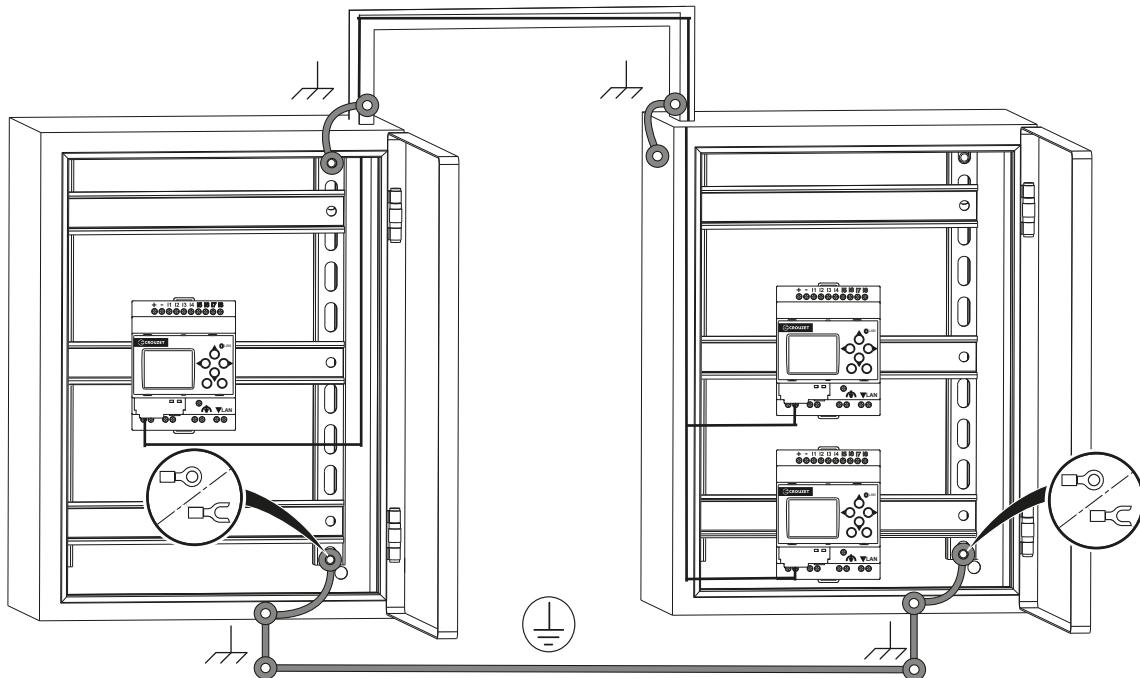
Name	R/W	Address
XWIN	R/W	0001
XWIN	R/W	0002
XWIN		0024
XBIN	R/W	0025 (Word)
XBIN		16 bits
XWOUT	R	0026
XWOUT	R	0027
XWOUT	R	0049
XBOUT	R	0050 (Word)
XBOUT		16 bits

Frame Modbus RTU					
Address	Function	Data	CRC		
1 byte	1 byte	0 up to 252 byte(s)	2 bytes CRC low / CRC HI		
Frame Modbus ASCII					
Start	Address	Function	Data	LRC	End
1 Char	2 Char	2 Char	0 up to 2 x 252 Char	2 Char	2 Char CR LF
Modbus functions supported					
Code (Hexa)	Function	Data Type			
0x01 (R)	Read Coils	N x 8 bits			
0x03 (R)	Read multiple registers (R)	N x 16 bits (Word)			
0x05 (W)	Write single Coil (OFF) Write single Coil (ON)	2 x 16 bits - 0x0000: request the coil to be OFF 2 x 16 bits - 0xFF00: request the coil to be ON			
0x06 (W)	Write single register (W)	16 bits (Word)			
0x0F (W)	Write multiple coils (W)	N x 8 bits (Word)			
0x10 (R/W)	Write multiple registers(W)	N x 16 bits (Word)			
0x2B (R)	Read device identification (R)	ASCII string			

LSB STATE	R	0051	0x0000: Stop	0x0001: Run 0x0002: Debugging 0x0040: Setting front 0x0800: Power failure
MSB STATE	R	0052	0x0000	
LSB STATUS	R	0053	See code warning & error	
MSB STATUS	R	0054	See code warning & error	
CLOCK	R/W	0055	Second	
	R/W	0056	Minute	
	R/W	0057	Hour	
	R/W	0058	Weekday	0x0000: Monday 0x0006: Sunday
	R/W	0059	Day of the month	
	R/W	0060	Month	
	R/W	0061	Year	
SUMMER/WINTER	R/W	0063	Change	0x0000: invalid 0x0001: Europe 0x0002: USA 0x0003: manual
	R/W	0064	SUMMER Month	0x0001: January 0x000C: December
	R/W	0065	SUMMER Date	0x0001: 1 <sup>st</sup> Sunday 0x0005: 5 <sup>th</sup> Sunday
	R/W	0066	WINTER Month	0x0001: January 0x000C: December
	R/W	0067	WINTER Date	0x0001: 1 <sup>st</sup> Sunday 0x0005: 5 <sup>th</sup> Sunday
DRIFT	R/W	0068	Drift	0xFFC5: -59 0x003B: +59
RUN/STOP	W	0069	0x0000: Stop	0x0001: Run 0x0002: Run with reset
XBIN (bit)* code: 0x01 0x5	R/W	1000   1015		
XBOUT (bit)* code: 0x01	R/W	1016   1031		

# ROUTING THE WIRES

Routing the wires, running along metal structures, in trunking, through grommets, etc... must be done according to type.



Ground network



Functional earth  
Grounded equipment



If there is risk of non ground equipotentiality between two remote devices (usually this is the case of equipment in different buildings), the network (bus) must be isolated with radio links, optical links or networks insulators.