

# Modbus RS485 communication module for 4 120 53

Cat. N°: 4 120 55



Contents	Pages
1. Description - Use.....	1
2. Range.....	1
3. Overall dimensions.....	1
4. Preparation - Connection.....	1
5. General characteristics.....	3
6. Compliance and approvals.....	3

## 1. DESCRIPTION - USE

Modbus RS485 communication module.  
Makes available, by RS485 communication, all measurements performed as well as the configuration parameters of the multifunction measurement devices 4 120 53.

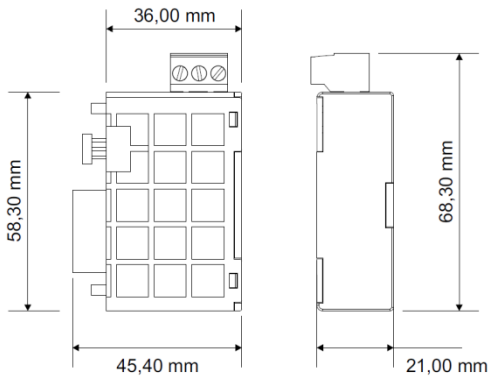
## 2. RANGE

. Cat. N° 4 120 55: Modbus RS485 communication module;  
associable only to multifunction measuring device 4 120 53.  
. It is possible to connect only one module 4 120 55.

### Auxiliary supply:

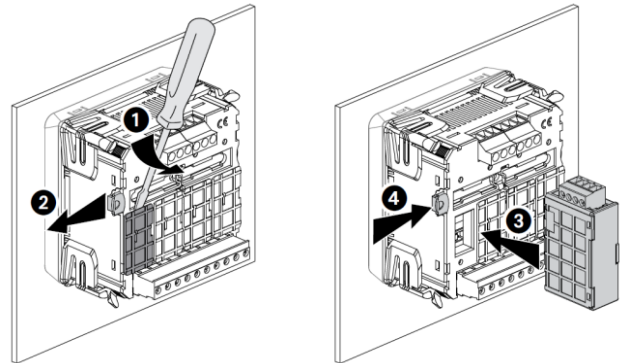
. Supplied by the multifunction measuring device 4 120 53

## 3. OVERALL DIMENSIONS



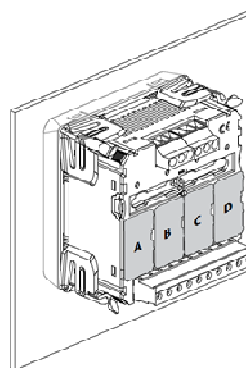
## 4. FIXING - CONNECTION

### Fixing:



**Note:** modules must be connected with the device 4 120 53 not supplied.

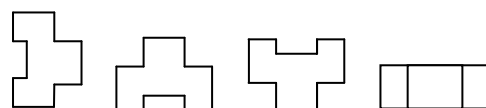
### Associability table:



	A	B	C	D	
4 120 55	✓	✗	✗	✗	max. 1
4 120 56	✓	✗	✗	✗	max. 1
4 120 57	✗	✗	✓	✓	max. 2
4 120 58	✗	✗	✗	✓	max. 1
4 120 59	✓	✓	✓	✓	max. 2
4 120 60	✗	✗	✓	✓	max. 2
4 120 61	✗	✓	✗	✗	max. 1

### Operating position:

. Vertical    Horizontal    Upside down    On the side



# Modbus RS485 communication module for 4 120 53

Cat. N°: 4 120 55

## 4. FIXING - CONNECTION *(continued)*

### Screw terminals:

- . Terminal depth: 8 mm.
- . Stripping length: 8 mm

### Screw head:

- . Screw slotted.

### Recommended tightening torque:

- . 0,6 Nm.

### Tools required:

- . For terminals: flat screwdriver 3,5 mm
- . For fixing the modules to the measuring device: flat screwdriver max. 5 mm.

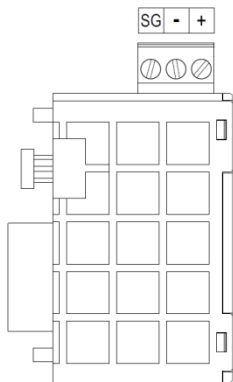
### Connectable section:

- . Copper cables.

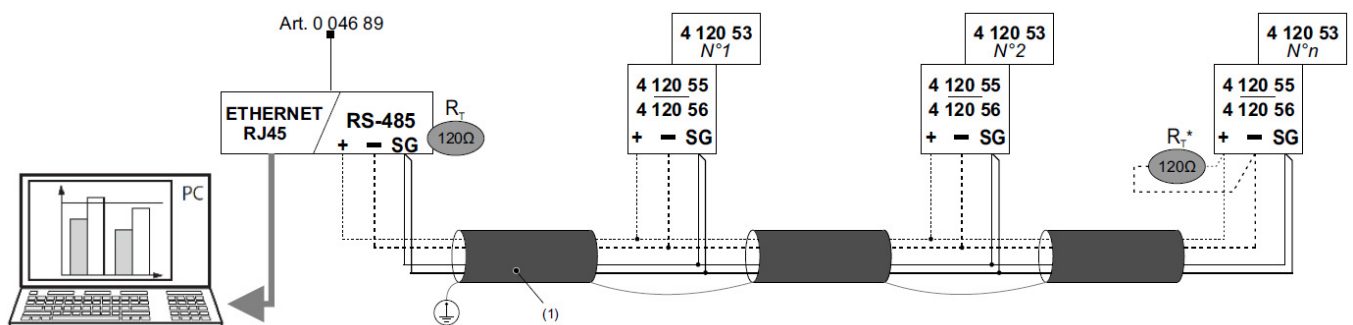
	Without ferrule	With ferrule
Rigid cable	<b>0,05 to 4,5 mm<sup>2</sup></b>	-
Flexible cable	<b>0,05 to 2,5 mm<sup>2</sup></b>	<b>0,05 to 2,5 mm<sup>2</sup></b>

### Wiring diagrams:

- . Terminals identifications



### RS485 Wiring diagram:



(1) RS485: Prescribed use of Cable Belden 9842, Belden 3106A (or equivalent) for a maximum length of 1000 m, or Category 6 cable (FTP or UTP) for a maximum length of 50 m;

(\*)Resistance not furnished

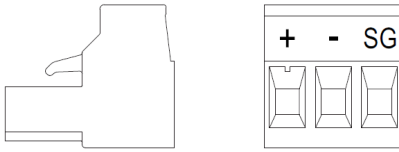
### Modbus communication tables

- . Modbus communication tables are available at [www.e-catalogue.legrandgroup.com](http://www.e-catalogue.legrandgroup.com), typing "4 120 53" in the search field

## 5. GENERAL CHARACTERISTICS

### Terminals marking:

- . By permanent ink pad printing.



### RS485 communication port's characteristics:

- . Programmable addresses: from 1 to 247
- . Baud rate: 4,8 - 9,6 - 19,2 - 38,4 kbps
- . Parity bit: none, even, odd
- . Stop bit: 1
- . Galvanically isolated respect to measuring inputs and auxiliary supply
- . Standard RS485 3 wires, half-duplex
- . Protocol Modbus® RTU
- . Response time (time out question/answer): ≤200 ms

### Plastic material:

- . Self-extinguishing polycarbonate.

### Ambient operating temperature:

- . Min. = - 5 °C Max. = + 55 °C.

### Ambient storage temperature:

- . Min. = - 25 °C Max. = + 70 °C.

### Impulse withstand voltage:

- . Supply / RS485 port:  
alternate current 50 Hz / 1 min.: 2 kV
- . Measuring inputs / RS485 port:  
alternate current 50 Hz / 1 min.: 2 kV

**Note:** values referred to combination measuring device + add-on module.

### Average weight per device:

- . 0,030 kg.

### Volume when packed:

- . 0,30 dm<sup>3</sup>

### Consumption:

- . Module 4 120 55: ≤ 1 VA
- . Measuring device 4 120 53 + 1 Module 4 120 55: ≤ 5 VA

## 6. COMPLIANCE AND APPROVALS

### Compliance to standards:

- . Compliance with Directive on electromagnetic compatibility (EMC) n° 2004/108/EC
- . Compliance with low voltage directive no. 73/23/CEE dated 19 February 1973, modified by directive no. 93/68/CEE dated 22 July 1993, modified by directive n° 2006/95/CE.