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ERM-7
004804064

Separating module



Purpose

The ERM-7 module serves as a signal amplifier for Modbus RTU transmission and as a galvanic separator for RS-485 networks. It amplifies the signal to extend the bus range and connect more devices. It can also be used for branching out lines and protecting them against electromagnetic interference.

Functioning

Power on is indicated by the green U LED.

Red LEDs P1 and P2 indicate bidirectional (Rx/Tx) data transmission of the corresponding port of the module. P1 for port 4-6, P2 for port 10-12.

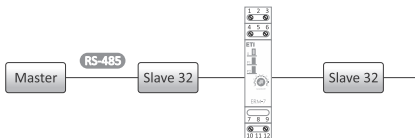
The module amplifies the signal in both directions. Galvanic separation is between port 10-12 and port 4-6 with 1-3 power. For proper operation of the module, the data transmission rate in the supported RS-485 network must be set.

The setting is made with a potentiometer on the front of the module by selecting one of the markings for a given baud rate.

Markings and baud rates assigned to them:

A	1200	F	19200
B	2400	G	28800
C	4800	H	38400
D	9600	I	56000
E	14400	K	115200

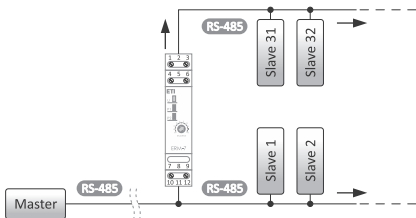
Schematic application



Extension

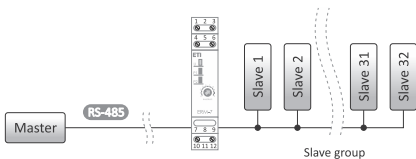
To extend the bus by another group of 32 receivers.

Extendable up to 4 groups for baud rate of 9600.



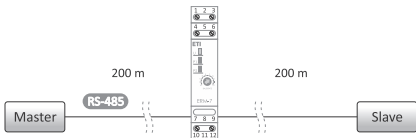
Branch

To reduce the impact of interference caused by branching long signal lines.



Separation

To protect a group of receivers against interference generated on the long communication networks.



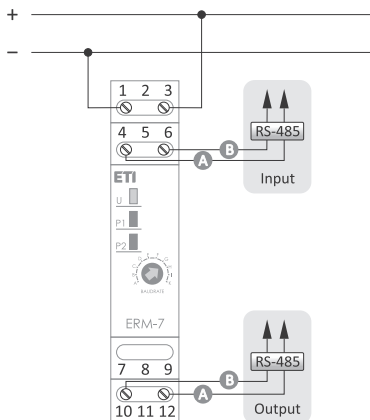
Amplification

For signal amplification in long communication networks.

Mounting

1. Turn off the power supply.
2. Mount the module on a rail in the distribution box at the point of separation or signal amplification.
3. Connect the RS-485 network cable according to the diagram.
4. Set the desired baud rate for the given RS-485 network.

Wiring diagram



Technical data

power supply	9÷30 V DC
baud rate	1200÷115200 bps
system current	<25 mA
separation	
RS-485 (input) <-> RS-485 (output)	galvanic 1 kV
supply <-> RS-485 (input)	resistive
supply <-> RS-485 (output)	galvanic 1 kV
working temperature	-25÷50°C
terminal	2.5 mm ² screw terminals
tightening torque	0.4 Nm
dimensions	1 module (18 mm)
mounting	on TH-35 rail
protection level	IP20

Warranty

ETI products are covered by a 24-month warranty from the date of purchase. The warranty is only valid with proof of purchase. Contact your dealer or contact us directly.

CE declaration

ETI declares that the device is in conformity with the essential requirements of The Low Voltage Directive (LVD) 2014/35/EU and the Electromagnetic Compatibility (EMC) Directive 2014/30/UE.

The CE Declaration of Conformity, along with the references to the standards in relation to which conformity is declared, can be found: www.etipolam.com.pl on the product subpage.

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