

ADM-F Modbus interface RTU and Ascii

Additional communication modules for Energy-meter, Network analyzer and Power-meters

Application

The product is intended to be placed side by side to an energy meter of its family, equipped with an Infra-Red port on the side, to the aim to collect the measurements data from the instrument and to transmit them through an RS-485 serial line to a remote collection station using Modbus protocol. The communication module automatically recognizes the instrument connected to its Infra-Red port and is in the position to transmit all the data provided by the instrument itself.



Function

Configuration

The interface is provided with a software tool for Windows, for configuring installation parameters (such as Modbus address and baudrate) and general settings.

Plug and play

The interface is enabled to recognize automatically the instrument connected to its Infra-Red port. This is an advantage in terms of flexibility, because the same interface can be connected, for instance, to single-phase or three-phase energy meters

Measurements

The interface acts as a Modbus slave, so that the transmitted measurements can be collected and displayed using one of the Software tools available on the market enabled to act as a Modbus Master.

Baudrate

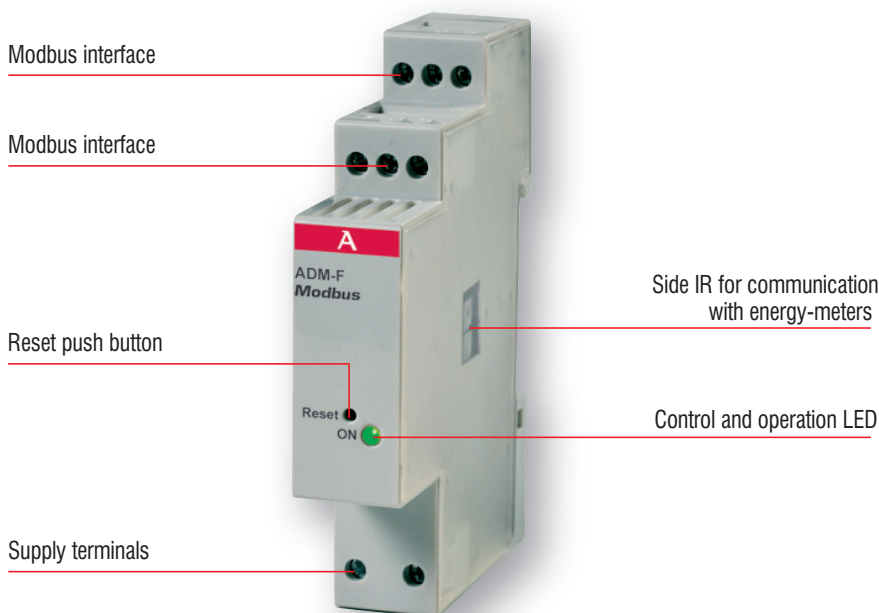
The interface is enabled to operate with a number of baudrates, up to 115200 baud.

Example



1 standard module housing (17,5 (18) mm wide), suitable for DIN rail mounting 35 mm

► Modbus RTU and Ascii interface





Overview

- Models available:
 - type BASIC - LITTLE ENDIAN: for energy and power measurements
 - type BASIC - BIG ENDIAN: for energy and power measurements
 - type FULL - LITTLE ENDIAN: for energy, power, V, I, $\cos\phi$ freq.
 - type FULL - BIG ENDIAN: for energy, power, V, I, $\cos\phi$ freq.
- Protocols Modbus Ascii - Modbus RTU
- Suitable for both single-phase and three-phase energy meters
- 1 DIN module wide (18 mm)



Technical data

Data in compliance with IEC 60950, EN 61000-6-2, EN 61000-6-3 and EN 61000-4-2

			261201-261111-261241-261161
General characteristics			
• Housing	DIN 43880	DIN	1 module
• Mounting	EN 60715	35 mm	DIN rail
• Depth		mm	70
Power supply			
• Auxiliary voltage rating U_n		VAC	230
• Auxiliary power rating		VA	≤ 10
• Auxiliary voltage range		VAC	0.80 ... 1.20 x U_n
• Frequency rating		Hz	50/60
• Frequency range		Hz	45 ... 65
Operating features			
• Models available:	type BASIC - LITTLE ENDIAN: for energy and power measurements code 261201 type BASIC - BIG ENDIAN: for energy and power measurements code 261111 type FULL - LITTLE ENDIAN for energy, power, V, I, $\cos\phi$, freq. - code 261241 type FULL - BIG ENDIAN for energy, power, V, I, $\cos\phi$, freq. - code 261161 selectable by software		
• Protocol			Modbus RTU or Ascii
• Suitable for both single-phase and three-phase energy meters			yes
Modbus interface			
• HW interface	RS-485	terminals n°	3 (+/-, cable shield)
• Input resistance		U (k Ω)	1 (12)
• Termination resistance		Ω	180
• SW protocol	SW selectable		Modbus Ascii - Modbus RTU
• Data transfer speed	SW selectable	baud	≤ 38.400 - default 19200
• Parity			none/even - default: none
• Addressing			1 to 247
Interface to measuring instrument			
• HW interface	optical IR	n°	2 (Tx, Rx)
• SW protocol			proprietary
Safety acc. to IEC 60950			
• Degree pollution		-	2
• Overvoltage category		-	II
• Working voltage		V	300
• Clearance		mm	≥ 4
• Creepage distance		mm	≥ 4
• Test voltage	impulse (1,2/50 μ s) peak value on AC power supply on telecommunication network	kV	2.5
		kV	1.5
	50 Hz 1 min	kV	2.5
	UL 94	class	V0
• Housing material flame resistance			
Connection terminals			
• Type cage	screw head Z +/-	POZIDRIV	PZ0
• Terminal capacity	solid wire min. (max)	mm ²	0.15 (2.5)
	stranded wire with sleeve min. (max)	mm ²	0.15 (4)
Environmental conditions			
• Operating temperature		°C	0 ... +55
• Limit temperature of storage		°C	-25 ... +70
• Relative humidity		%	≤ 80
• Vibrations	sinusoidal vibration amplitude at 50 Hz	mm	± 0.25
• Protection class	acc.to IEC 60950	-	II
• Degree of protection	housing when mounted in front	-	IP20

Selection and ordering data

Modbus RTU and Ascii interface - 1 DIN module

Code	Model	Description	Type
261201	Basic LITTLE ENDIAN	addit. module for Modbus RTU and Ascii connec.	for energy and power measurements
261111	Basic BIG ENDIAN	addit. module for Modbus RTU and Ascii connec.	for energy and power measurements
261241	Full LITTLE ENDIAN	addit. module for Modbus RTU and Ascii connec.	for energy, power, V, I, $\cos\phi$, freq.
261161	Full BIG ENDIAN	addit. module for Modbus RTU and Ascii connec.	for energy, power, V, I, $\cos\phi$, freq.

Overall dimensions

