AUTOMETERS SYSTEMS

ADM-F

Modbus module for the AD range of DIN meters.

Application

The ADM-F Modbus module has been designed to be installed next to the AD range of din rail meters and acts as the interface module which enables the transmission of data from the AD range of meters to a BMS system. The ADM-F is an RS 485 two wire Modbus module and uses Autometers V.6 protocol.

Overview

The ADM-F is a small and compact interface module which enables the data from the AD-range of din rail meters to be transmitted to a Building Management Systems. It is one module wide (18mm) and must be fitted on the left side of the meter; all output parameters for the Modbus are factory set at High word first, Board rate 9600, RTU, 2 wires.

Important: The Modbus address can only be set at the factory when ordering

Function

Plug and play

The interface automatically recognises 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.

Communication Module

Picture showing the correct position of the ADM-F modbus module

1 Standard Module Housing

Suitable for Din Rail mounting 35mm

Modbus terminals

Modbus terminals

IR port for communication with energy-meters

Reset push button

Control and operation LED

Supply terminals (230v ac)

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Technical Data

Data in compliance with EN 50470-1, EN 504470-3,and EN 62053-31

Genral characteristics			
• Housing	DIN 43880	DIN	1 module
• Mouting	EN 60715	-35mm	DIN rail
• Depth		mm	70
Power Supply			
• Auxiliary voltage rating Un		VAC	230
• Auxiliary power rating		VA	≤ 10
• Auxiliary voltage rating		VAC	0.80 ... 1.20xUn
• Frequency rating		Hz	50/60
• Frequency range		Hz	45 ... 65
Operating features			
• Model available	ADM-F		
• Protocol	Autometers protocol (v.6)	-	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		-	Modbus Ascii - Modbus RTU
• Data transfer speed	SW selectable	baud	≤ 38.400 - default 19200
• Parity	SW selectable	-	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 µs)		
	on AC power supply	kV	2.5
	on telecommunication network	kV	1.5
	50 Hz 1 min	kV	2.5
• Housing material flame resistance	UL 94	class	V0
Connection terminals			
• Type cage	screw head Z +/-	POZIDRIV	PZO
• Terminal capacity	solid wire min. (max)	mm²	0.15 (2.5)
	stranded wire with sleeve min. (max)	mm²	0.15 (4)
Enviromental 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

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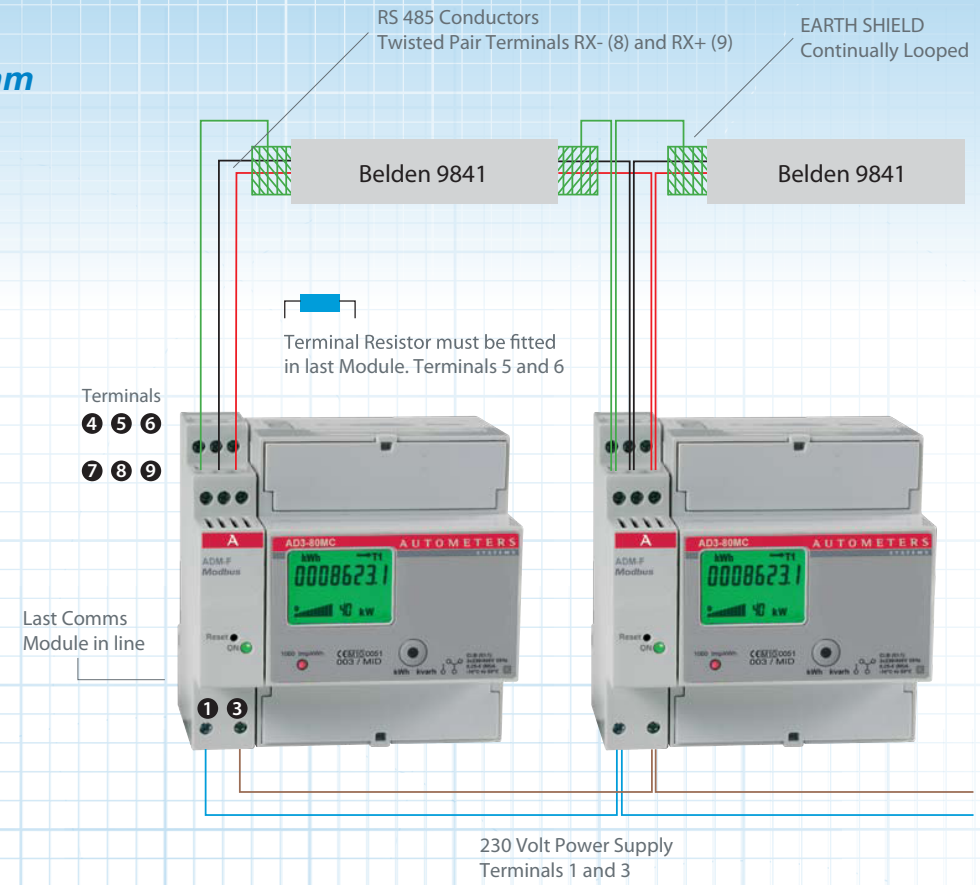
Connection Diagram



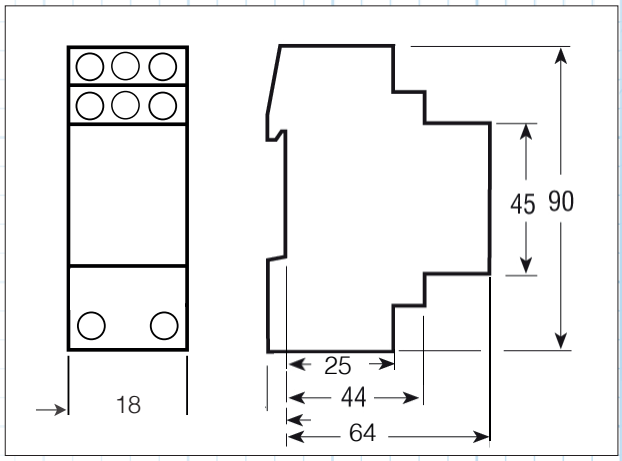
Terminals

1 - Neutral
3 - Live

5 - RT (Resistor 120 ohm)
6 - RT + (Resistor)
7 - Earth Shielf
8 - D- (RX-)
9 - D+ (RX+)

Dimensions

All dimensions are in mm



Front Panel

A green LED reports the state of the communication with the meter.
- LED Blinking: Communication not active
- LED On: Communication active.

Default Settings

Baud Rate: 9,600 BIT/S
Protocol: Autometers V6
Address: 001
Parity: Even
Stop Bits: 1
Do NOT press the Reset Button without contacting Autometers.

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