AMR Module

FEATURES

- Supports up to 16 meters with pulse output signal
- Pulse input up to 50 meters using 18-24 gauge signal wire
- Photo isolation for each pulse input
- LED indicator when signal is detected on each input for quick verification of pulses
- Modbus/RTU over RS85 communications for linking with a host for remote reading
- On-board LED data display for reading meter value
- DIN rail mounting makes installations quick and easy
- On-board switch and data display to set the RS485 address
- RS485 TX and RX activity LEDs
- Non-volatile memory retains configuration and pulse totals during power failures
- Software noise filters to prevent miscounts (pulse must be 30 msec or longer before it is recognized as a signal)
- Optional charger and battery for continued operation even during a power failure
- Pulse divider to scale high pulse signals
- Dry contact channel input for directly connecting to the meter pulse output and eliminating the need for an intermediate power supply
- Last gasp capacitor to insure data integrity while saving durin a power failure
  Initial counter value can be set for each input to correspond with meter reading through Modbus

APPLICATIONS

- Cos allocation for departments, tenants and third parties
- Measurement of utility costs and verification of energy savings
- Auto meter reading online or offline for electricity, water, gas, BTU and other types of flow meters
- Online process measurement
- Monitorig performance of building systems (e.g. chillers, boilers, fans, etc.)
- Benchmarking building operation performance

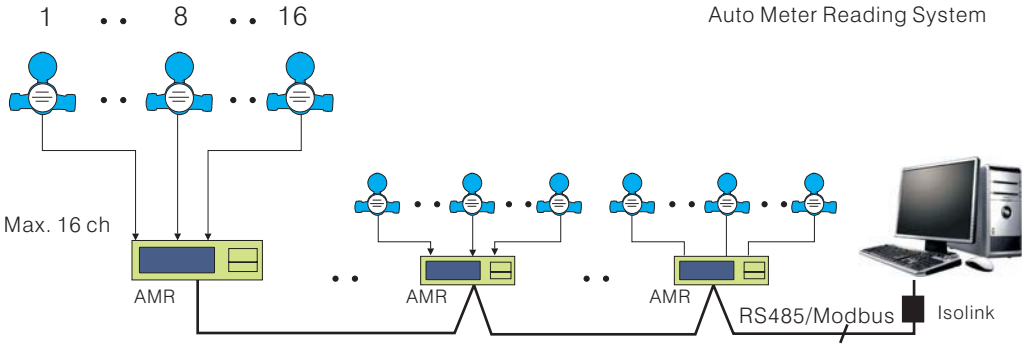
OVERVIEW

The AMR is an I/O module specially designed for applications where the pulse output of various metering devices need to be incorporated into a Modbus/RS485 network for creating cost effective data acquisition and auto metering solutions.

Up to 16 meter pulse output can be directly connected to the AMR, the running total of the pulse count is stored in non-volatile memory in case of power failure. The pulse count data can then be read using the Modbus protocol through the RS485 network.

The AMR is also available with optional charger and battery for those applications where the AMR must continue operating even during a power failure.

WIRING DIAGRAM



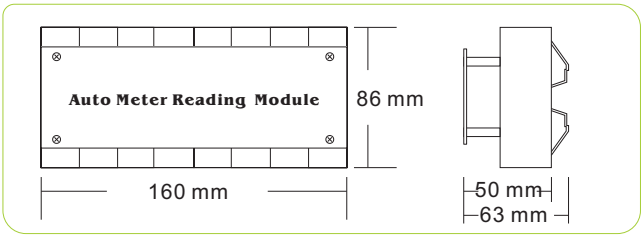
FEATURES

- Channels: 16 dry contact pulse input
- Communications: Modbus/RTU over RS485
- Max distance from input to module: 50 meters
- On-board LED data display shows meters current value
- Mounting: DIN rail
- On-board 6-digit LED display with button switch
  - to show total counts for each channel
  - for setting parameters
- RS485 address: 1 to 31
- Pulse divider rate: 1, 4, 8, 10, 16, 32, 64, 100, 160, 320, 640, 1000, 2000, 10000, 20000
- Decimal point: 0, 1 or 2
- Cycle mode: yes (display cycles through each channel), no (display fixed to current channel)
- 6 digit LED with button switch -
- LED indicators: RS485 TX and RX activity LEDs
  - RS485 TX activity
  - RS485 RX activity
  - Power (Live) status
  - Pulse input activity LED for each of 16 channels
- Non-volatile memory for storing configuration and pulse totals
- Noise filtering by software
- Data communications: RS485, 2400 bauds, 8/N/1
- Protocol: Modbus/RTU
- Counter max accumulation: 999,999
- Minimum pulse width: 30 msec (default, can be specified when ordering)
- Isolation: Pulse input, power input and RS485
- Power supply: AC 12 V or DC 15 to 18 V, 100 mA
- Battery: optional NiMH, 12 Vdc, 1 AH
- Operating time under battery power: 10 hours
- Pulse meter connection wire: twisted shield 18 to 24 gauge
- Operating temperature: 0 to 50˚C
- Operating humidity: 0 to 95% RH, non-condensing
- Dimensions (W x H x D): 15.8 x 8.6 x 6.0 cm
- Weight: 105 g

OPTIONAL ACCESSORIES

Rechargeable Battery（optional）
12 Vdc, 1 AH

DIMENSIONS



ORDERING CODE

Model	Description
AMR	AMR base module
AMR-C	AMR module with charger
BAT	Rechargeable battery for AMR