

MODEL 80 INSTALLATION INSTRUCTIONS

MM80 Installation(11.3).doc

March 18, 2011

POWER REQUIREMENTS

External (required if 4–20 mA) .. 10 to 30 volts (unregulated)
Internal Battery 10.8 volts (pulse and/or AMR only)

CURRENT REQUIREMENTS

Pulse 20 mA
4–20 mA 40 mA each

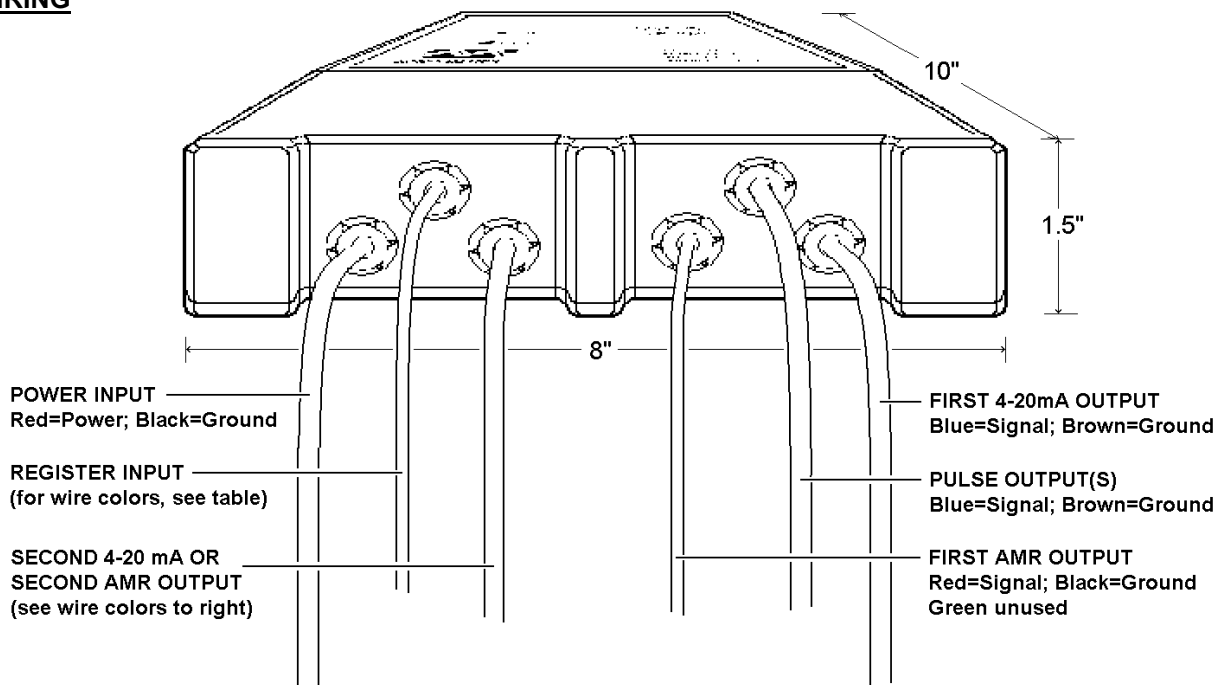
OUTPUT SPECIFICATIONS

AMR..... 2-wire only (e.g., touchpad or touchcouple; not radio read)
4-20 mA Output..... 350 Ω max load
Pulse 3–40 VDC pullup; 20mA max; open collector

REGISTER PROGRAMMING

Typically, the meter register (to which the Model 80 is attached) must be programmed to output the maximum number of wheels. For a 4-20mA output, an 8-wheel register is required, and it must be programmed to output all 8 wheels. The Model 80 AMR 2-wire output enables the touchpad or touchcouple reading to be less than 8 wheels as needed.

WIRING



Register Wiring

MM80 Wire Color	Encoder		
	Sensus / Badger / Hersey / Elster Invision	Neptune / Itron	Elster Non-Invision
Red	R (Red)	B (Black)	Green or White
Green	G (Green) or White	R (Red)	Red
Black	B (Black)	G (Green or Ground)	Black

Function
Power/ clock
Data 1
Ground

MOUNTING (LEDs flash in unison)

The two blue mounting brackets attach to the case using the small self-tapping screws. Typically, the brackets should be attached to the two unused holes at the top so that the wires hang down from the bottom of the unit after it is mounted. After the mounting brackets are attached, secure the Model 80 to the wall using the enclosed anchors and screws.

LED INDICATORS

- **SIGNAL** (upper): Blinks every 4 seconds if the MM80 is wired correctly to the register and receiving a good signal.
- **POWER** (lower): Blinks every 4 seconds when power is connected.

MAXIMUM WIRE LENGTHS (estimated)

Register input	1000'+
AMR (Touchpad) output	250'
4-20mA output	1.2 miles (with 26 gauge wire; 7.5 miles with 18 gauge)
Pulse output.....	500' (with 22 gauge or heavier shielded cable)

NOTE: Pulse output wire length can be extended with a pull-up resistor.

FAQS

- **Is the Model 80 Pulse Output A “Dry Contact”?** No; it is an open collector. However, this output can be used with all applications as long as the signal voltage supplied to the Model 80 is DC and between 3 and 40 volts.
- **Does Pulse Output Require A Pull-Up Voltage?** Yes. However, the MM80 can be ordered with internal pull-up.

TROUBLESHOOTING

- **The MM80 Performs Irregularly:** Disconnect power for one minute, then reconnect power.
- **AMR Readings Are Bad/Corrupted:** If AMR output wires are coiled together with other wires, uncoil the wires in order to avoid interference. Also, cut and remove excess cabling.
- **4-20mA Output = 0.0:** If MM80 signal light doesn't flash, check if register connected correctly. If it does flash, meter register may not be properly programmed to output all required wheels.
- **Pulse Output Seems Not To Be Working:** Confirm that equipment is able to receive pulses at the Hertz of the Model 80's output. Unless otherwise specified, unit is normally programmed to output pulses at 10 Hz.

TECHNICAL SUPPORT

Contact us at: service@meter-master.com or 1-888-388-FLOW (3569).