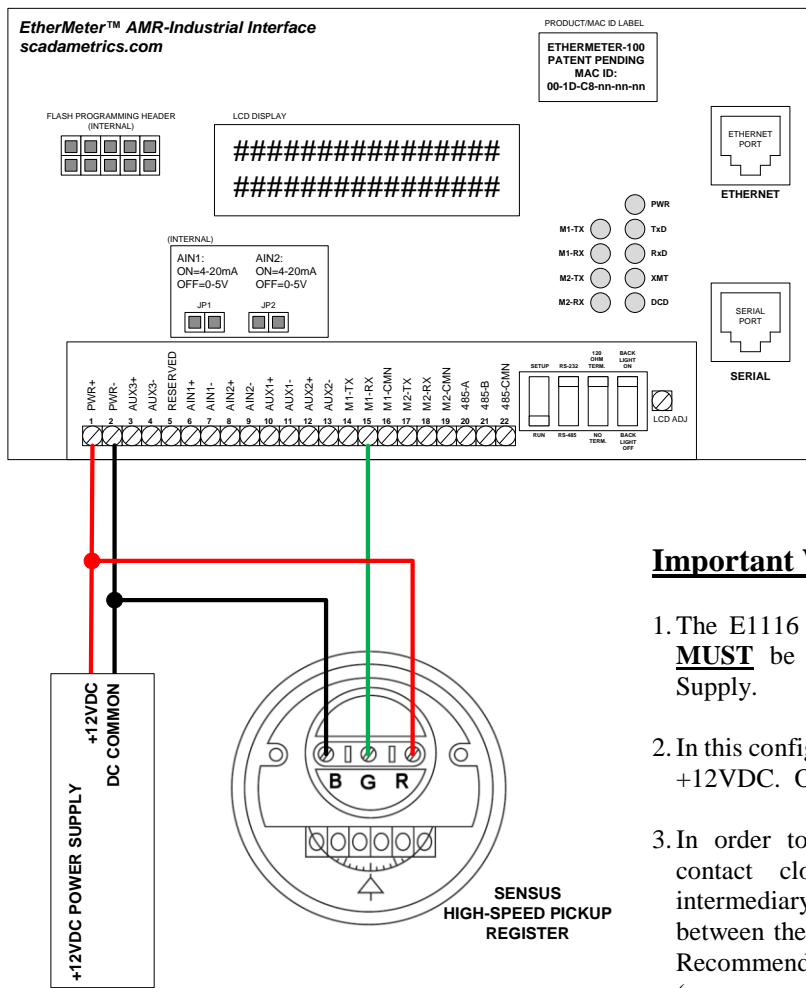


Application Note 014
Version 001
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Connecting A Sensus E-1116 High-Speed Pickup Register (Pulse-Based Register) To The EtherMeter.

This document describes the wiring procedures and EtherMeter settings required when connecting to a Sensus E-1116 High-Speed Pickup Register.

Wiring A Sensus E1116 High-Speed Pickup To EtherMeter Meter Channel #1:



Important Wiring Notes:

1. The E1116 High-Speed Pickup and the EtherMeter **MUST** be powered from the **SAME** DC Power Supply.
2. In this configuration, the DC Power Supply **MUST** be +12VDC. Other DC voltages are **NOT** allowed.
3. In order to achieve a sufficiently low-impedance contact closure input to the EtherMeter, an intermediary solid-state relay may be required between the High-Speed Pickup and the EtherMeter. Recommended Part No. IO.ODC.60.LL. (see www.power-io.com).

Figure 1. Sensus High-Speed Pickup Register and EtherMeter.

Using a serial setup cable (P/N EM-439), and referencing the EtherMeter User Manual, the EtherMeter should be configured for pulse input on the appropriate meter input channel. For example, a Sensus 4 Inch Turbo Meter with E1116 Register (1242 Pulses Per 1000 Gallons) connected to EtherMeter Meter Input Channel #1:

SETUP COMMAND:	PURPOSE:
SET PWR1 0	SET METER CHANNEL #1 INPUT AS PULSE-TYPE
SET DB1 1	SET DEBOUNCE TO 1 MILLISECOND
SET PS1 1000	PULSE SCALOR (1000 GALLONS)
SET PD1 1242	PULSE DIVISOR (1242 PULSES)
SET FCALC1 DTOTAL	FLOW CALCULATION METHOD: FIXED DELTA-TOTAL
SET SAMP1 5	UPDATE FLOW-RATE CALCULATION EVERY 5 SECONDS
SET TO1 5	SET FLOW-RATE TO ZERO IF NO PULSES IN PAST 5 SECONDS
SET CNT1 <CURRENT READING>	SYNC ETHERMETER WITH VISUAL METER READING

In this configuration, Meter Total 1 is digitally available in MODBUS Register 40001-2 (Allen Bradley Register N7:0-1), and Flow 1 is digitally available in MODBUS Register 40005-6 (Allen Bradley Register N7:4-5).



Figure 2. Sensus High-Speed Pickup / EtherMeter Laboratory Test Configuration. Powering The EtherMeter and High-Speed Pickup is a Meanwell MDR-40-12 (12VDC/40W Output).