

4/20 FLO SYSTEM

Hersey® Meters

I. OVERVIEW

The Hersey Meters FLO System consisting of either an FT1, FT2, or FT3 frequency transmitter and a corresponding FLO Unit allows meter flow rates to be electronically transmitted to any device that can utilize a 4-20 mA control signal.

II. ENVIRONMENTAL SPECIFICATIONS

Power requirements	10 — 35 VDC
Consumption	50 mA MAX
Operating temperature	-40° — 140°F
Accuracy	+/- 1% of full scale registered flow ¹
Dimensions (FLO Unit)	3.8" L X 2.2" W X 1.8" H

III. INSTALLATION INSTRUCTIONS

1. Connecting the FT to the Meter

FT1 With the register installed in the register box², place the FT1 with the label facing up (shown in Figure 1) directly beneath the register. Slide the FT1 until it lies flat against the bottom of the register. The wire extending from the FT1 should be routed in the slot provided in the base of the register box.

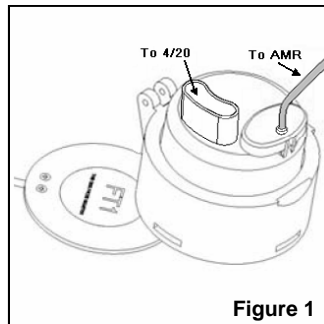


Figure 1

NOTE: In most cases, the FT1 should arrive pre-assembled within the register box.

Place the tabs of the register box insert into the four corresponding tabs of the register box. Make sure the meter locking tabs are on the bottom and the locking pin holes of the insert and register box are aligned. The aluminum clamp on the underside of the FT1 should be exposed as shown in Figure 2. Connect the register to the meter and install the locking pin.

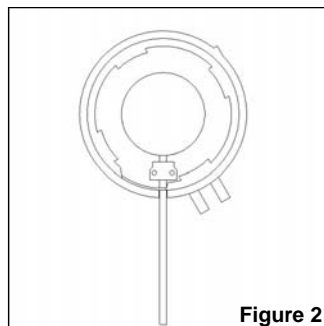


Figure 2

FT2 & FT3 The FT2 & FT3 are factory installed within the sealed Translator® register. Simply connect the register to the meter using the existing Translator® clamp band³ or register box.

2. Mounting the 4/20 mA FLO Unit

The FLO Unit comes standard with opposing flanges equipped with four 0.20"Ø mounting holes to allow for a wide variation of wall, panel, or box mount configurations. The hole locations are shown above in Figure 3.

NOTE: The 4/20 FLO Unit is a live voltage, electronic device with exposed terminals. Therefore it is not submersible or splash-proof and must be mounted in a dry environment or water tight enclosure. Ideally the FLO Unit should be mounted in a locked control box to prevent health hazards.

3. Wiring the 4/20 mA FLO Unit

Connecting to the Meter Connection to the FLO Unit from the frequency transmitter (FT) at the meter is made via the three pole screw terminal in the lower left labeled "METER". The red wire from the FT is the positive wire, the black or blue wire is the negative wire, and the third wire is the signal wire. For the FT1, the FT wire extends from the underside of the

register housing. For the FT2/FT3, the FT wire extends from the black well on the upper left of the register face.

NOTE: One FLO Unit is required for every measuring element (i.e. every register) on a meter. Each FLO Unit is factory programmed for a specific measuring element and register type. Please check the label on the bottom of the FLO Unit to insure that each Unit is connected to the proper FT.

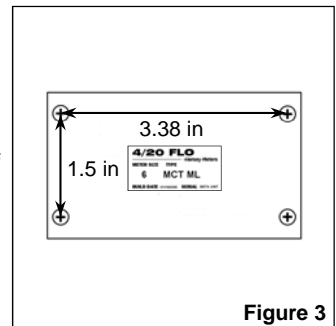


Figure 3

Connecting to the Control System

Connection to your control system is made via the four pole screw terminal in the upper right labeled "SYSTEM" (shown in Figure 4). The outer terminals connect to 10 — 35 VDC supply. The inner terminals transmit the 4-20 mA current loop. As there are several connection methods, always check with your system's

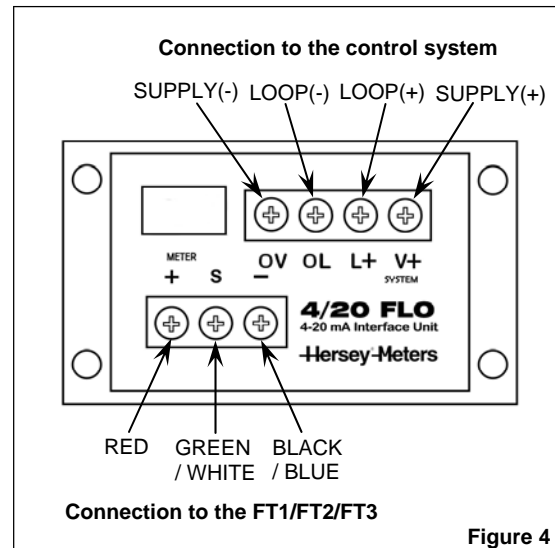


Figure 4

manufacturer for proper connection.

Example Connection: To measure the "low" side of the current loop (Figure 5), "jump" the positive loop terminal to the positive supply terminal. Connect the negative loop terminal to the positive side of the system's current measurement device, with the device's negative side connected to the negative supply. Connect the positive and negative supply terminals to their respective power supply outputs.

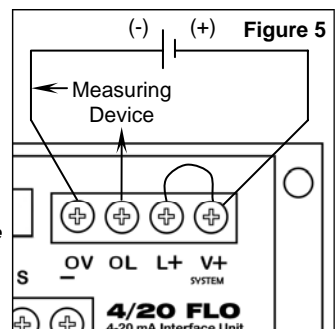


Figure 5

IV. PROGRAMMING PARAMETERS

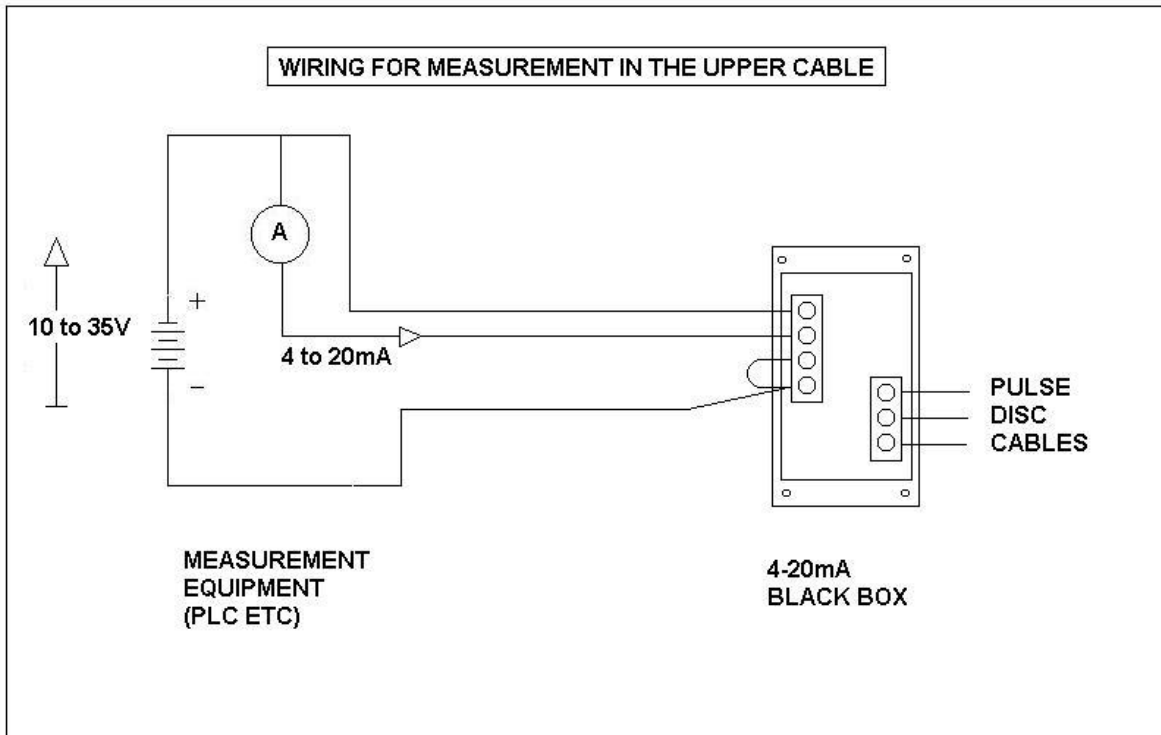
4 mA corresponds to	0 gpm
20 mA corresponds to	Meter's maximum intermittent flow ⁴ gpm

¹ Within your meter's rated flow limits

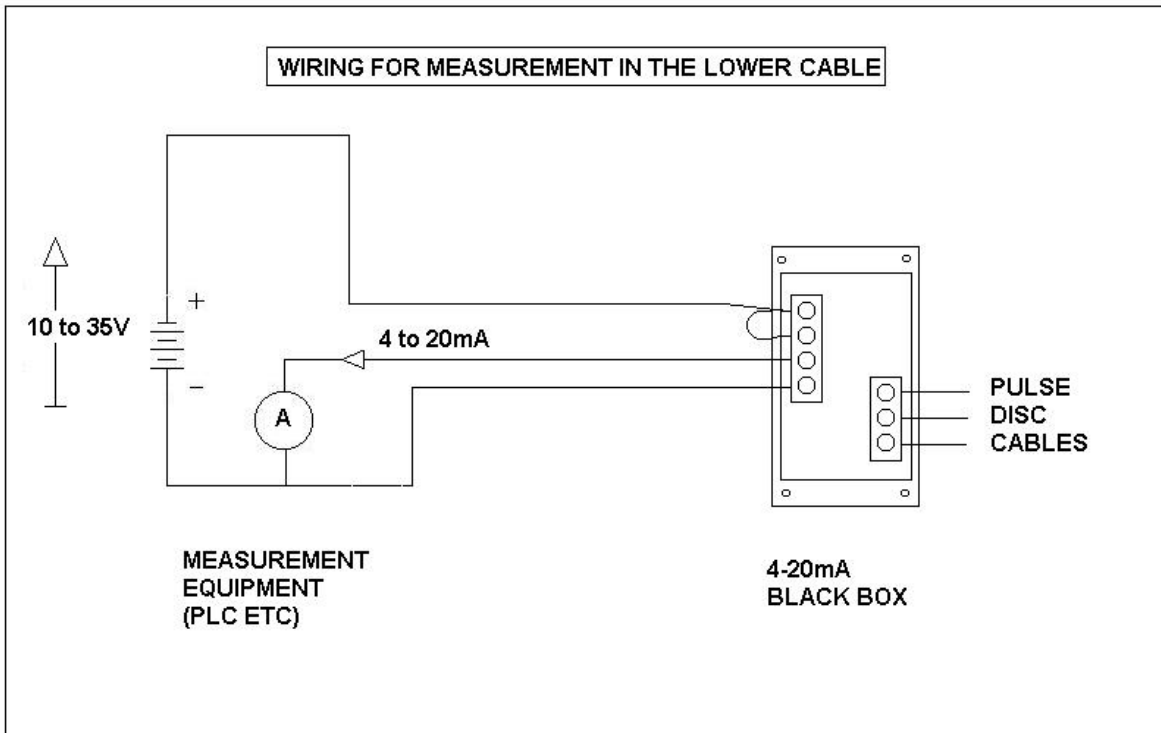
² The FT1 utilizes a non-standard register box which is not interchangeable with other Hersey register boxes and must be purchased from Hersey Meters.

³ Clamp bands for visual read MVR registers are not compatible with Translators. MVR sizes 3" and above may require conversion for use with Translators. Contact a Hersey Meters customer service representative for more information.

⁴ Contact a Hersey Meters customer service representative for information on your meter.



The diagram above shows the wiring should the 4-20mA Meter (A) is fitted into the positive (upper) measurement cable.



The diagram above shows the wiring should the 4-20mA Meter (A) is fitted into the return (lower) measurement cable.

In either case the 4-20mA Meter (A) will cause a voltage drop which is highest when the maximum current flows (20mA normally, 22mA during over-range). The cable will also drop some voltage depending on its resistance.