

Configuring 4-20mA Device For Hallett 500, 750 and 1000 Systems

4-20mA loop Installation

Two 4-20mA output loops are available on the Hallett 500, 750 and 1000 series of units. The 4-20mA option is normally purchased at the time of order of the UV unit. The hardware consisting of an Analog-Modbus (AM) module circuit board will be installed onto J4 connector of the Power Circuit Board – See Figure 1 below. Also included is the strain relief kit GD21 that will be installed into the front panel.

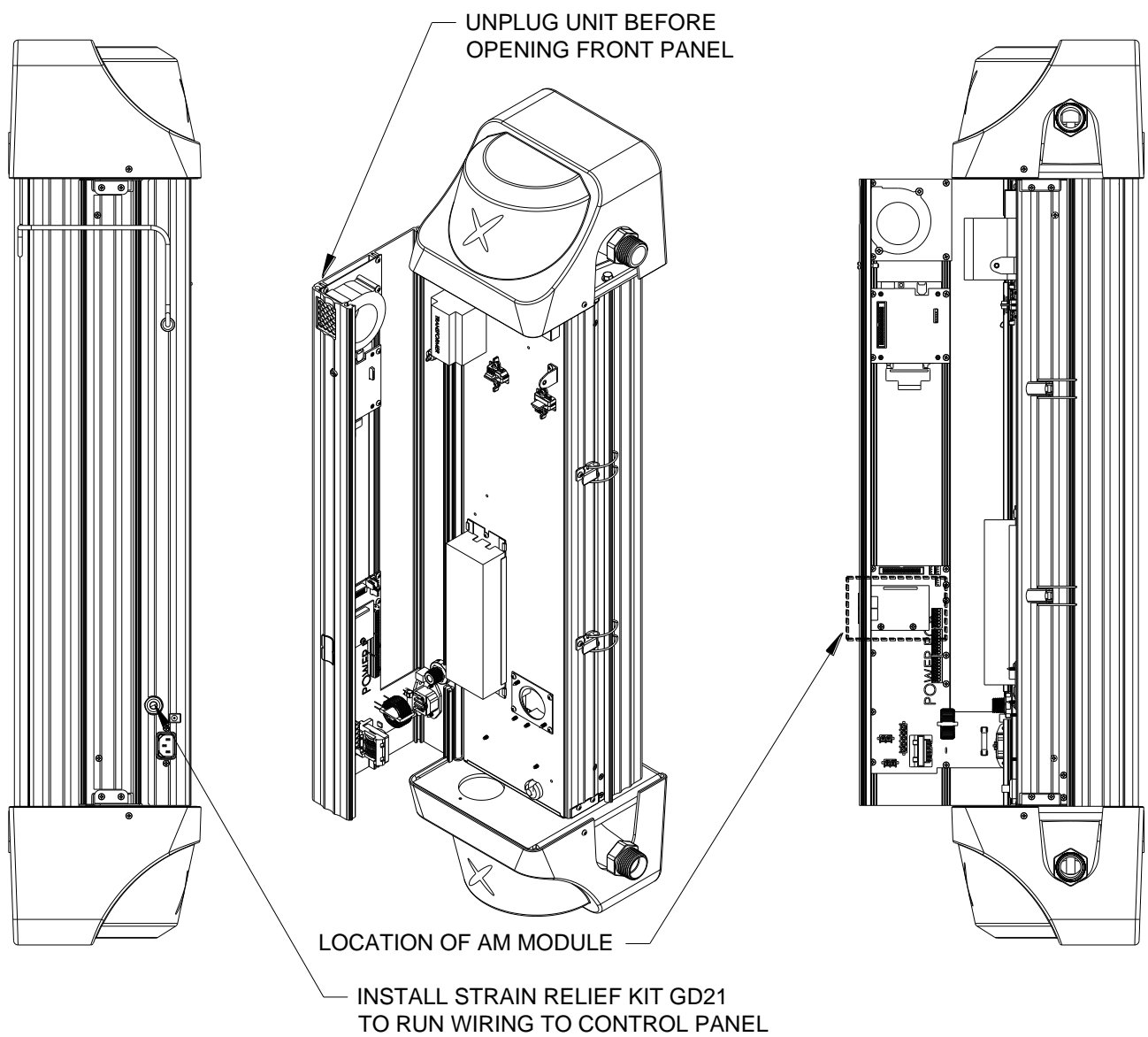


Figure 1

Wiring to the AM module can be 16-20 awg but it is recommended to use shielded pair with a drain wire (drain wire to be grounded in customer panel). Loop voltage (by customer) can be 5-24Vdc – the loops are isolated so one power supply can be shared between loops. Highlighted in the orange box in Figure 2 is where the 4-20 mA output spring cage terminals are located.

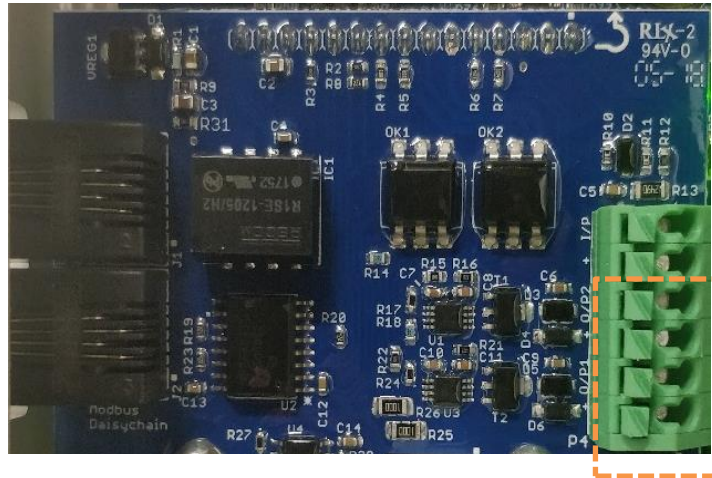


Figure 2

From the bottom, the first two terminals are for Channel 1 and the two after are for Channel 2. On the side you will find text denoting the position of the terminals. O/P1 for 4-20mA Output Channel 1 and O/P2 for 4-20mA Output Channel 2.

4-20mA loop Operation

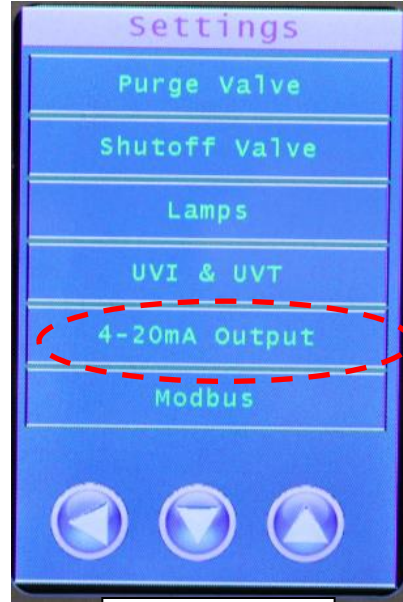
Calibration of the 2 analog 4-20mA loops has already been done by the factory. However, the 2 channels can be configured for any 2 of the 3 parameters: Ultraviolet Intensity (UVI); Ultraviolet Transmittance (UVT); UV Dose. Configuration of the channels is done in a password protected area of the Settings Menu – password available to service provides/technicians only.

Once the password has been entered, additional buttons on the menu screens are revealed – see Figure 3.

If no selections have been made for the 4-20mA loops, the channels will display the text “CH1-Not Set: N/A” and “CH2-Not Set : N/A”. Click on the channel buttons to configure or re-configure the channel. Once the channels have been configured, the parameter will be displayed on the button and the mA value will be calculated and displayed on the right – See Figure 4.

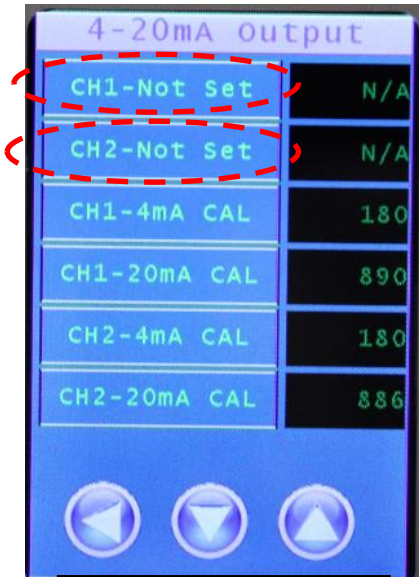


Settings Page 2

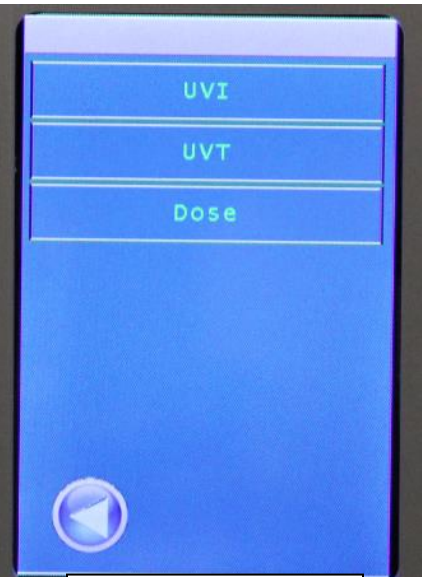


Settings Page 3

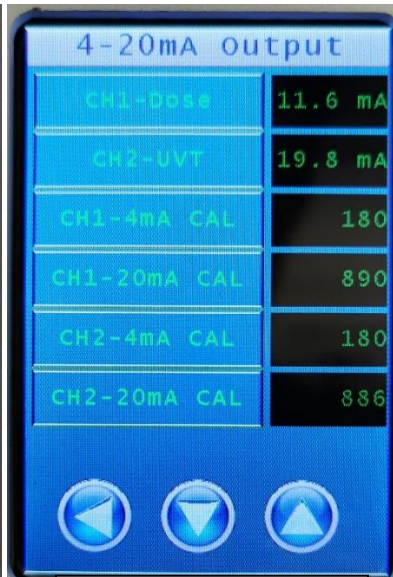
Figure 3



Configuration not made



Available parameters



Configurations made

Figure 4

The bottom 4 buttons on the page in Figure 4 is for calibration. Changing these values will alter the zero and span mA values and should only be done by trained personnel. Calibrations cannot be performed if the channels have not been configured.

Basic users can view the mA values without a password on the third information page menu – see Figure 5

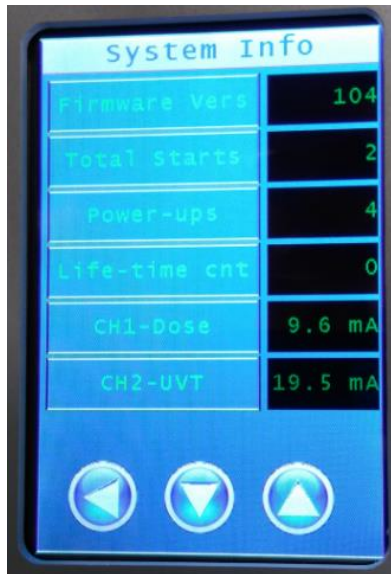


Figure 5

Basic users can also force the 4-20mA signal to 4 or 20mA in the second page in the Forced Outputs menus – see Figure 6. Forcing the channel OFF, sets the value to 4mA. Forcing the channel ON, sets the value to 20mA.



Figure 6