Technical Note

PENDOTECH
Adding Value To Your Process

PendoTECH Conductivity Monitor: CMONT DIN Rail Mounting Instructions

Introduction

The PendoTECH conductivity monitor and transmitter (CMONT) is used to simultaneously read conductivity and temperature from PendoTECH Single Use Conductivity Sensors. The CMONT can operate as a standalone bench top unit or can be integrated into process skids using the PendoTECH DIN Rail Mount kit. As the CMONT was originally designed as a benchtop unit there are several differences that must be accounted for when mounting a CMONT on a DIN rail. The following technical note describes how to properly mount a PendoTECH CMONT to ensure accurate and reliable conductivity readings.

Mounting Instructions

1. Turn off sensor prompts using buttons on CMONT display
   a. Press the SELECT/PROG button to open setup menu
   b. Use the down arrow to navigate to the SENSOR PROMPTS option
   c. Press the SELECT/PROG button to access sensor menu
   d. The default setting is ON. Use the down arrow key to change setting to OFF
   e. Press SELECT/PROG to save entry and return to setup menu
   f. Refer to CMONT user guide for further instructions

2. Set k (cell constant) for *each sensor input* equal to 1 using buttons on CMONT display.
   NOTE: k =1 is default setting
   a. Press the SELECT/PROG button to open setup menu
   b. Use the down arrow to navigate to the CELL CONSTANTS option
   c. Follow instructions on CMONT display to set cell constant
   d. Refer to CMONT user guide for further instructions

3. Install PendoTECH DIN rail mount kit on CMONT (sold separately)

Figure 1 - CMONT with DIN Rail Mount Kit Installed

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4. The CMONT can now be mounted on a DIN rail with the monitor facing toward the panel wall.

5. Each PendoTECH single use conductivity sensor has a unique k value which is manually entered for each channel using the CMONT display. However, the mounting configuration of the CMONT prevents any interaction with the CMONT user interface. Therefore, when panel mounted, ***K must be set = 1 on the CMONT and the cell constant must be entered via the PLC and actual value is calculated via the PLC/control system.***

    a. Example: if a sensor has a k of 0.8 and the monitor measures 10mS, the monitor would multiply 10mS by 0.8 to arrive at the actual reading of 8mS. By keeping the monitor k=1, the PLC must perform the same multiplication to arrive at the actual reading.

6. Once the CMONT is mounted there are two options for connecting the monitor to the PendoTECH single use conductivity sensors and power.

    a. Configuration 1: The original cords with D15 terminations are used to interface with two PendoTECH Single Use Conductivity sensors while circuit boards with screw terminals are used for power and 4-20 mA analog outputs.

POWER CONNECTIONS

1: GROUND
4: +24VDC

Figure 2 - CMONT DIN Rail Mounted with Cords with D15 to Sensors

    b. Configuration 2: Circuit boards with screw terminals are used to interface with two PendoTECH Single Use Conductivity sensors as well as power and 4-20 mA analog outputs.

SENSOR CABLE CONNECTIONS

12: WHITE (Cond. Low)
9: GREEN (Cond. High)
2: RED (Temp +)
7: BLACK (Temp -)

Figure 3 – CMONT DIN Rail Mounted with Circuit Board Connection to Sensors

7. Analog Outputs:

4-20 mA Signals		
	+	-
C1	1	2
C2	3	4
T1	5	6
T2	7	8