

1. OBJECTIVE

Details the installation & operation of Part# **NCCS-10K**, Loop powered, non-contact, conductivity sensor & sensor entry, Part# **Hdr_CN**.

2. SPECIFICATIONS

Parameter	Value	Notes
Range	0 – 10,000 uS = 4-20mA	Fixed range.
Loop Power	11-24 VDC	Controller supplies 11VDC @ 20mA
Loop Load	600 ohm max @ 24VDC	Controller terminates loop with 50 ohms
Pressure	145 psi @ 75F 10 Bar @ 25C	Rated for in-line and immersion, cooling tower applications
Temperature	120F, 50C Max	Conductivity, thermally compensated, RTD Pt100
Cable	2 x AWG22, overall shield.	

3. INSTALLATION

Install the sensor, as shown on page 3 in the sample stream piping header.

NOTES:

1. Removing the 1 1/2" inlet & outlet reducers allows installs in line sizes from 1" to 1 1/2"
2. Flow rate reduction and possible solids drop-out occurs on any increase in line size; vertical installation is therefore strongly recommended.
3. Sensor cabling may be extended in AWG22, single pair overall shield.
4. Any unused 4-20mA input 'G' though 'N' may be used for sensr measurement. Typical connection for controller input 'G' shown in the following table.

Controller Terminal	Sensor Wire Color	Function
GP	White	4-20mA Loop Power, 12VDC
G+	Black	4-20mA Loop Return
G-	Clear/Shield	Shield, controller and electrical ground

4. CONTROLLER CONFIGURATION

The following details configuration on controller input 'G'.
Any unused analog input 'G' through 'N' may be configured for the non-contact sensor.

Verify Controller Software Version

1. Connect to the controller using Tackster at the 'configure' level password.
2. Right click on the controller icon in your active view & select **View Configuration**.
3. Verify the the controller is running Version 4 operating software.

Prior to Version 4, Trackster Terminal is required to configure an analog input for a new sensor.

Controller Software Version 4 Instructions

1. Click **Views** then select Diagnostic View II
2. On the menu line at the top of the screen, select **OPTIONS / PREFERNCES / VIEWS** and verify that both Gray Out Sensors & Display Parameter Numer are both checked.
3. Right click on & **Enable** Sensor 'G' (You see the sensor letter until you **Enable**).
4. Right click on Sensor 'G', select Calibrate Sensor then select **4-20mA Auto Calibrate**
5. Enter 0 for 4mA and 10000 for 20mA. You'll see GAIN = 12.5 & OFFSET = -2500.
6. The conductivity value will update within 15 seconds.
7. Right click on 'G' and **Set Units** = 'US' and **Set Descriptor** = 'Conductivity'. Setting units to upper case allows the **4-20mA Auto Calibrate** option.

