

# TDC Collaborative LLC

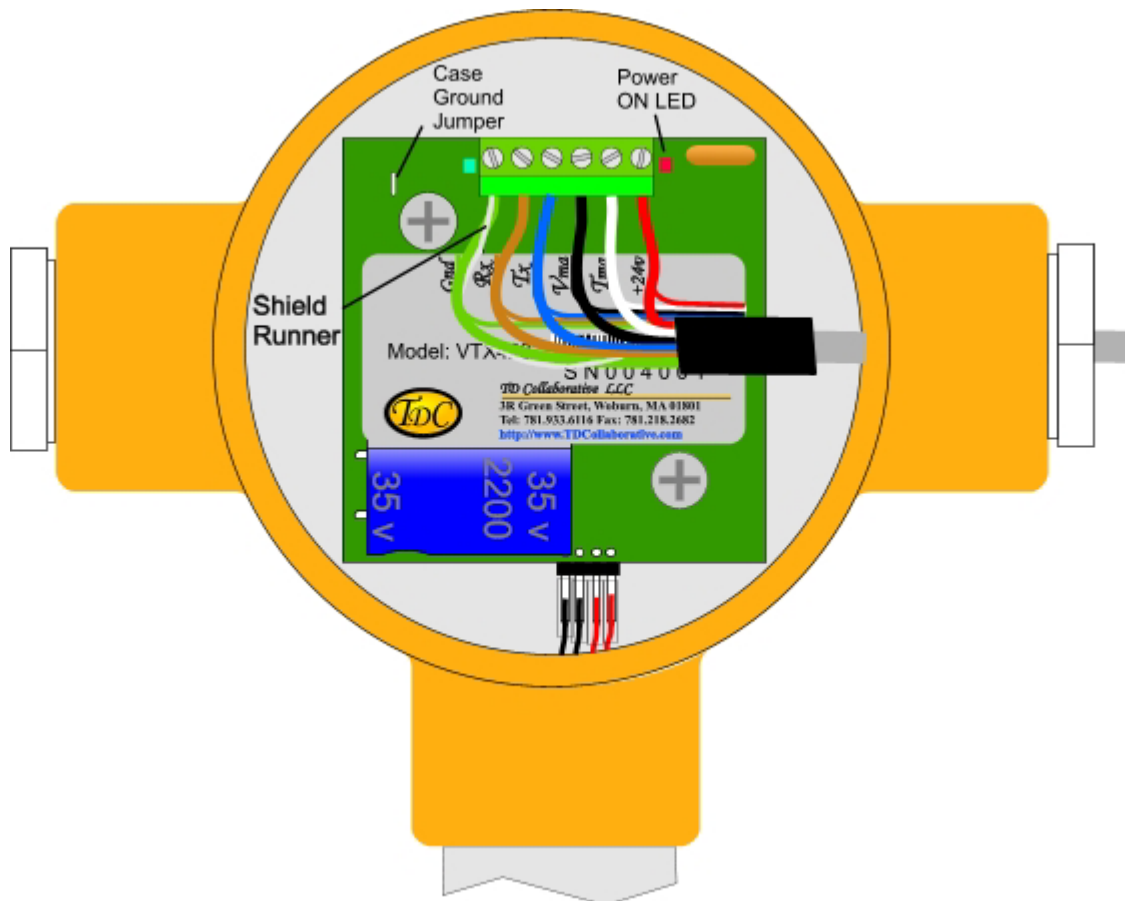
TN11123: VTX423 and D422 Wiring

## Overview

The D422 display has a universal mains powered converter that provides 24Vdc for both the display and the VTX423 sensor. It also has a DB9 serial port connector, a ground lug and a ten pin header for interconnect to the sensor and for output of the two sourced 4-20ma signals, one for viscosity and one for temperature. The following describes a typical wiring configuration

## Wiring the VTX423 of VTX423T Sensor

Inside the protective enclosure there is a circuit card with a 1 x 6 header. The pins on this header, left to right are 1) Ground, 2) RS232 Receive [Rx], 3) RS232 Transmit [Tx], 4) Viscosity 4-20ma [Vma], 5) Temperature 4-20ma [Tma], and 6) 24Vdc power. In the illustration we have chosen green, brown, blue, black, white, and red for these pins respectively. It is recommended that a shielded cable be used and the shield runner be connected to the ground port, pin1. As shipped the case and sensor body are connected to the system ground provided by pin1. To isolate the case from ground cut the wire jumper immediately above and to the left of the upper left hand mounting screw.



## Wiring the D422 Display

The D422 display has a ten pin header of the back. The first six pins replicate the sensor pinout and should be connected in the same sequence, as shown. Pins 7-8 are the Viscosity 4-20 milliamp output and 9-10 are the temperature 4-20ma output. These are sourced outputs with a max loop impedance of 300 ohms. The system ground is floating. If there is a reliable ground, connect it to the ground lug on the back, which can also be used for cable strain relief as shown. System and sensor power is provided by the 24Vdc 300ma converter that plugs into the 2.5mm power jack, labeled “24Vdc”. To monitor data or change configurations, connect a computer to the serial port as described in technical Note 10354: VTX423 Serial Port Communication.

