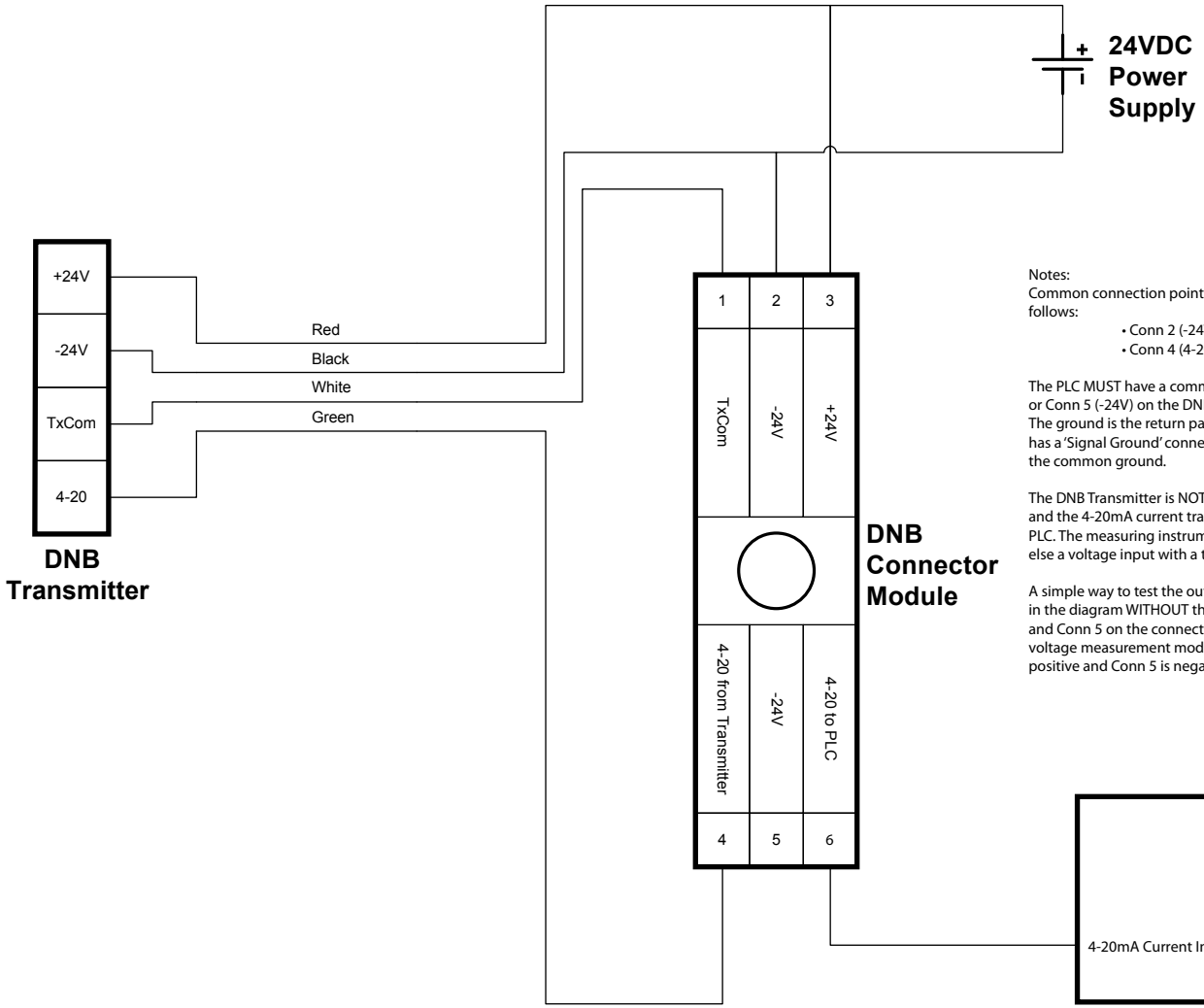

Notes:
Common connection points terminated together inside the DNB Connector Module are as follows:

- Conn 2 (-24V) is equivalent to Conn 5 (-24V)
- Conn 4 (4-20 from Transmitter) is equivalent to Conn 6 (4-20 to PLC)

The PLC MUST have a common ground with the DNB Transmitter. Use either Conn 2 (-24V) or Conn 5 (-24V) on the DNB Connector Module as the common ground connection point. The ground is the return path for the current to complete the 4-20 current loop. If the PLC has a 'Signal Ground' connection point, use this. Otherwise use the PLC power ground as the common ground.

The DNB Transmitter is NOT loop powered. A 24VDC power supply powers the Transmitter, and the 4-20mA current travels from the Transmitter to a measurement device, such as a PLC. The measuring instrument can be a 4-20 input (NOT a loop powered 4-20 type) or else a voltage input with a termination resistor (e.g. 250 = for 1 to 5 volts).

A simple way to test the output of the DNB Transmitter is to connect the system as shown in the diagram WITHOUT the 2 connections to the PLC. Put a 250 = resistor across Conn 4 and Conn 5 on the connection module. Use a handheld digital multimeter set in DC voltage measurement mode to measure the voltage across Conn 4 and Conn 5 (Conn 4 is positive and Conn 5 is negative). You should get a voltage reading between 1 and 5 volts.

DNB Transmitter Field Connection Diagram

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DNB Tank Level Transmitter
Wiring and Grounding Procedures

The DNB Tank Level Transmitter system works reliably when wiring and grounding connections are made correctly. Please ensure the following when connecting the transmitter.

- Use a two pair shielded cable to connect transmitter (Fig 1).
- Connect cable shields to earth ground at one point in the MCC Panel.
- The cable shield must not be connected to 24(-)
- Do not share the 24(-) line with other devices.
- Ensure the 24(-) to the transmitter is the only negative line back to the MCC
- Isolating the power to the transmitter will help keep the (-) line separate from other system grounds.
- Ensure tank is grounded
- At TEC Connector (Fig 2) at transmitter ensure all three shields are isolated from ground AND each other

Fig 1. Two pair shielded cable

Fig 2. Two pair shielded cable with TEC Connector

All three shields need to be isolated from **ground** and **each other.**