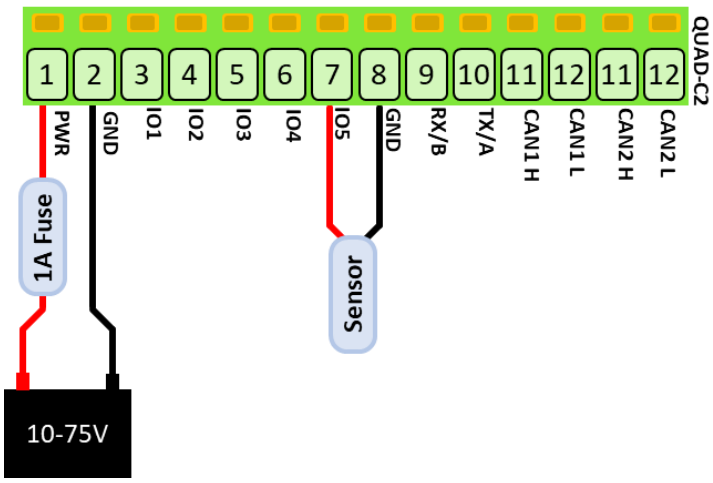
QUAD-C2 Tech Tip

TT013: 4-20mA Loop Powered Level Sensor

This technical tip shows how to connect a 4-20mA level sensor to the QUAD-C2. The QUAD has five 4-20mA channels that can source or sink current. When sourcing, a variable voltage source (VSET) or the input voltage (VIN) can be used to power the sensor. VSET can be used even when external supply is lost.

Sensor Parameters	
Part Number	SBLT2-10M-18M
Type	Submersible Level Transmitter
Output	4-20mA
Calibration	4mA = 0m, 20mA = 10m
Cable Length	18m
Supplied by	Macquarrie Corporation

4-20mA Level Sensor



QUAD-C2

Setting (General IO)	Value	Comment
VSET Voltage	15	The internal booster will generate 15V even when no supply is available

Setting (IO5)	Value	Comment
Name	Water Tank 1	A meaningful name for the sensor data
Interval	1	1 means the sensor is sampled on every base interval
Default State	OFF	Keep the output off when not in a measurement state
Measurement State	VSET	Apply VSET to the sensor during measurement. This could also have been VIN.
Measurement Time	2 sec	Sensor will be measured 2 sec after power is applied to allow sensor stabilisation.
Measure Voltage	Enabled	Not necessary but may as well keep an eye on the voltage applied to the sensor.
Measure Current	Enabled	Measure current that flows to the sensor (+ve into the sensor, -ve into the QUAD)
Current – Calibrated Units	m	The unit of measure for the calibration; typically meters or litres
Current - Calibration Low In	4	Lowest current that will flow into sensor
Current - Calibration High In	20	Highest current that will flow into the sensor
Current - Calibration Low Out	0	The datasheets specifies that 4mA represents 0m
Current - Calibration High Out	10	The datasheets specifies that 20mA represents 10m
Current - Alerts	Optional	Set if required.