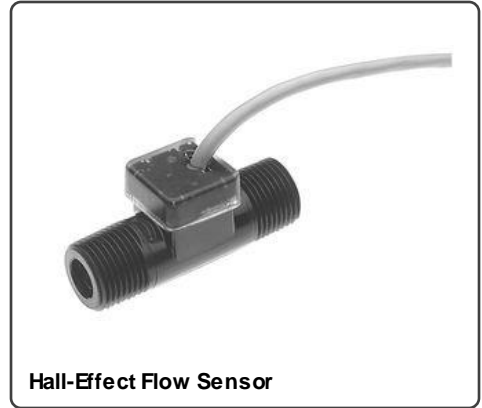


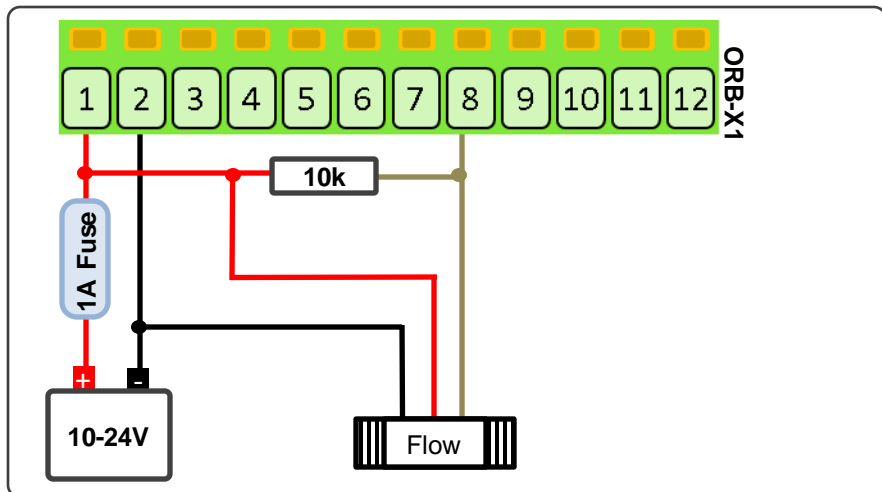
TT004: Hall-Effect Flow Sensor

This technical tip shows how to connect a hall-effect turbine flow sensor to the ORB-X1. This sensor is ideal for low flow rate monitoring where high repeatability and high reliability are required. The sensor will be connected to one of the frequency inputs on the ORB-X1. It is assumed in this tech tip that flow rate and total flow are required.

Sensor Parameters	
Part Number	173931-C
Type	FT-110 Series – TurboFlow® Economical Flow -Rate Sensors
Range	0.5 - 5l/m (other flow rates available in same series)
Output	NPN Sinking Open Collector @ 20mA Maximum
Calibration	58-575Hz = 0.5 – 5l/m
Cable Length	3ft
Supply Voltage	5 – 24V DC
Supplied by	www.element14.com



Hall-Effect Flow Sensor



ORB-X1

Setting (Input 1)	Value	Comment
Name	Tank 1	A meaningful name for the sensor data
Interval	1	1 means the sensor is sampled on every base interval
Mode	Frequency	The sensors output is a square wave of varying frequency
Warning	Disabled	Warnings are disabled in this example
Alarm	Disabled	Alarms are disabled in this example
Alarm/Warning Hysteresis	1	The amount by which the flow needs to change to exit a warning or alarm
Calibration Low In	58	The datasheets specifies that 58Hz represents 0.5l/m
Calibration High In	575	The datasheets specifies that 575Hz represents 5l/m
Calibration Low Out	0.5	The datasheets specifies that 58Hz represents 0.5l/m
Calibration High Out	5	The datasheets specifies that 575Hz represents 5l/m
Calibration Unit	l/m	The unit of measure for the calibration; litres per minute
Pulse Counting	Enabled	We will count the pulses to calculate total volume
Pulse Scaling	0.0001437	58Hz for 1m (3480 pulses) represents 0.5l so 1 pulse is 0.5/3480 litres
Scaling Unit	l	In this case the unit will be litres
Reset Value	1000	The counter resets after each kilolitre