

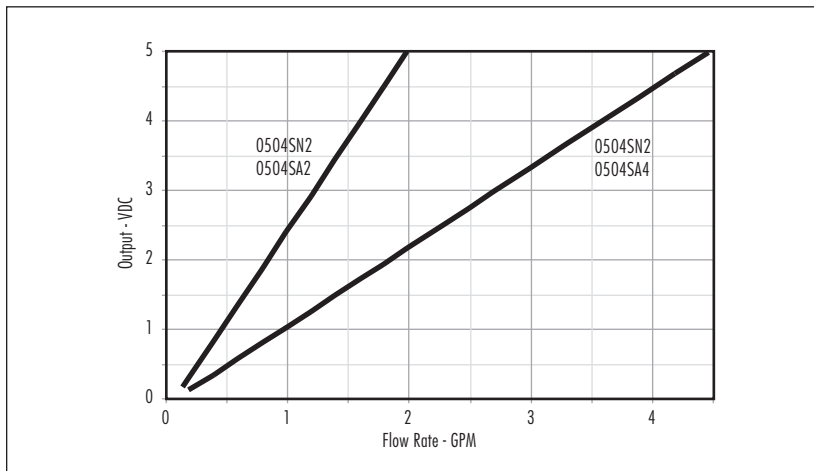
Table 1: LED color, flow rate and relay state

LED Color	Flow Rate Status	Example Trip Point 1.0 GPM	Relay State	
			NO contact	NC contact
Green	Greater than 1.15 x flow rate at selected trip point	Actual Flow > 1.15 GPM	Closed	Open
Amber	Between 1x and 1.15 x flow rate at selected trip point	1.0 < Actual Flow < 1.15 GPM	Closed	Open
Red	Less than flow rate at selected trip point	Actual Flow < 1.0 GPM	Open	Closed

Table 2: Selecting Trip Point Flow Rate with 16-position Switch Units US gallons per minute. 1 US gallon = 3.785 liters.

Model Number	Switch Position															
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0504SN2 0504SA2	0.18	0.29	0.41	0.52	0.63	0.75	0.86	0.98	1.09	1.20	1.32	1.43	1.54	1.66	1.77	1.9
0504SN4 0504SA4	0.36	0.62	0.87	1.13	1.39	1.65	1.91	2.17	2.43	2.69	2.95	3.21	3.46	3.72	3.98	4.2

Figure 1: Flow Response Curves



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Document UM-500-001

500 Series Metering Flow Switches

Installation and Operating Instructions

This document provides basic information describing the plumbing and electrical connections, and trip point adjustments to install and make operational your 500 Series Metering Flow Switch.

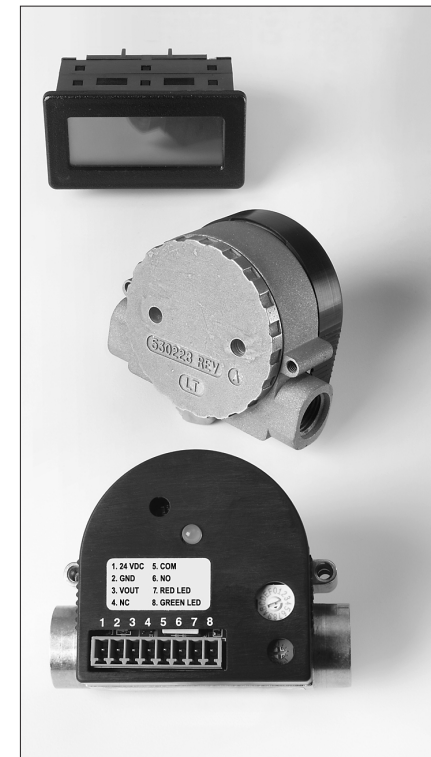
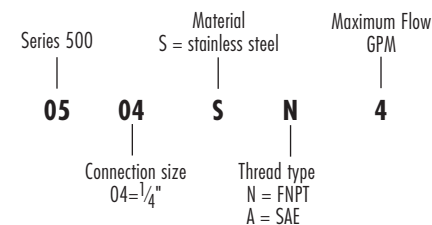
A comprehensive Technical Reference Manual for these devices can be downloaded or printed from our website, www.proteusind.com.

This manual includes technical descriptions, performance specifications, dimensions, detailed drawings, trip point tables, flow response graphs and tables, maintenance instructions, product warranty and part numbers for replacement parts.

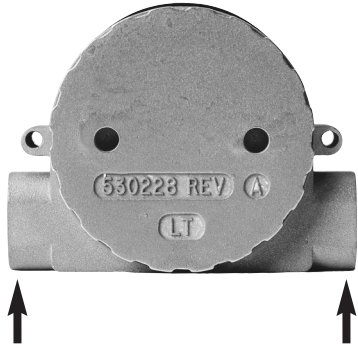
If you are unable to access the Internet to obtain this manual a printed copy can be mailed to you. Please write, call or fax us with your request.

Model Number	Flow Range GPM	Flow Range LPM
0504SN2 0504SA2	0.1 – 2.0	0.6 – 7.5
0504SN4 0504SA4	0.3 – 4.5	1.2 – 17.0

Model Number Structure

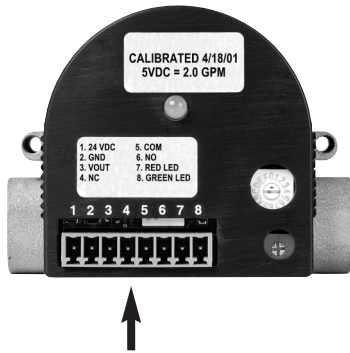


1 Connect plumbing



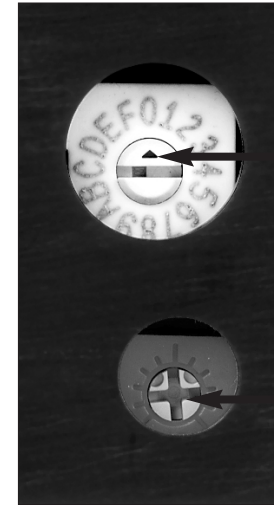
- Do NOT exceed the pressure limit of the faceplate.
 - If temperature will exceed 85°C the electronics should be isolated from the flow sensor.
1. Identify the type and size of connection from the Model Number Table found on page 1.
Do NOT exceed the flow limit of your flow sensor!
 2. Use Teflon tape or paste to lubricate and seal NPT threads. Use a high-pressure lubricant to lubricate SAE threads.
 3. Turn on your liquid flow slowly, and check for leaks at the two connections. Tighten connections as required to eliminate all leaks.

2 Make electrical connections



1. Locate the source of 24 VDC power and turn it OFF.
 2. Prepare wiring cables of up to #16 gauge to connect power and the required relay and voltage outputs.
 3. Connect the flow switch common wire in position 5.
 4. For NC relay state connect the other flow switch wire in position 4.
For NO relay state connect in position 6.
 5. Connect the power common wire to position 2.
 6. Connect the +24VDC wire to position 1.
 7. Connect to the 24 VDC source and turn it ON.
- If liquid is NOT flowing, the LED will show RED, indicating power is on and liquid flow is below the selected trip point flow.
 - If liquid is flowing, the LED may show GREEN, AMBER or RED, depending on flow rate and the selected trip point flow, as shown in table 1.

3 Select trip Point



1. From the Trip Point Table (Table 2) select the row with the Part Number of your flow sensor.
2. Look ACROSS the table to select your desired trip point.
3. Look UP the table to identify the setting of the 16-position switch for your trip point.
4. Set the 16-position switch so that the arrow points towards the setting you selected in step three.
5. Set the fine trip adjustment potentiometer to the 12 o'clock position.
Refer to the Technical Manual for use of the fine trip point adjustment feature.

4 Measure flow



1. Read the voltage between positions 2 & 3 with a voltmeter.
2. From flow response curves (Fig 1) identify the actual flow rate.