SIG CON Signal Conditioners

Water & Wastewater

Acromag THE LEADER IN INDUSTRIAL I/O

Application Note:

Math Modules: Flow Meter - Totalizing Effluent Plant Flow

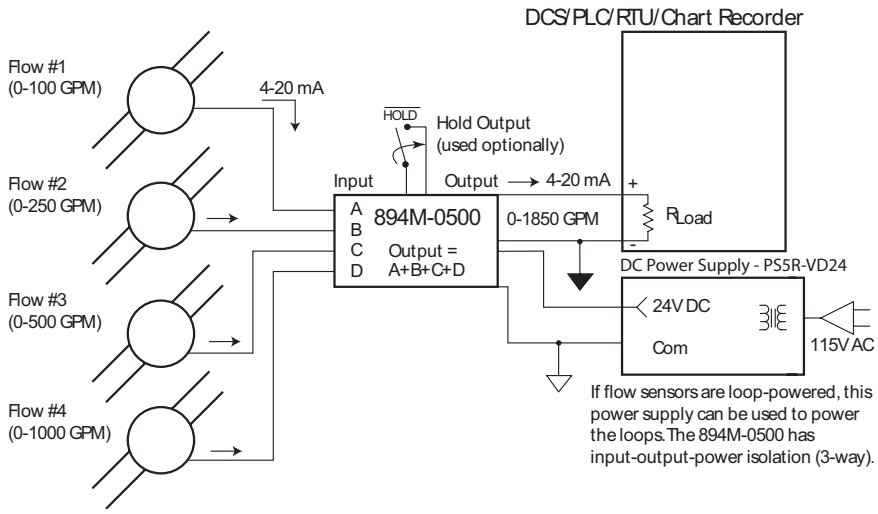
Defining the Problem:

Scaling & summing up to four 4-20mA signals from flow sensors.

Solution:

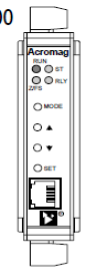
Model 894M-0500 quad-input math module
Model 800C-SIP software interface package
Optional: Model PS5R-VD24 power supply

System Diagram:

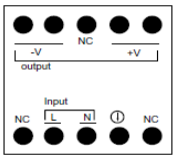


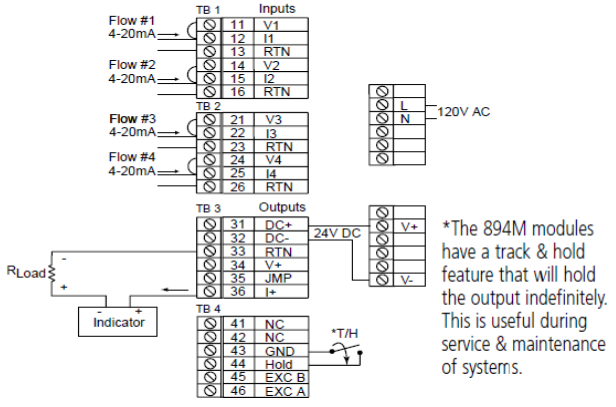
Wiring Diagram:

Model No: 894M-0500
Input(s): 4-20mA
Output: 4-20mA



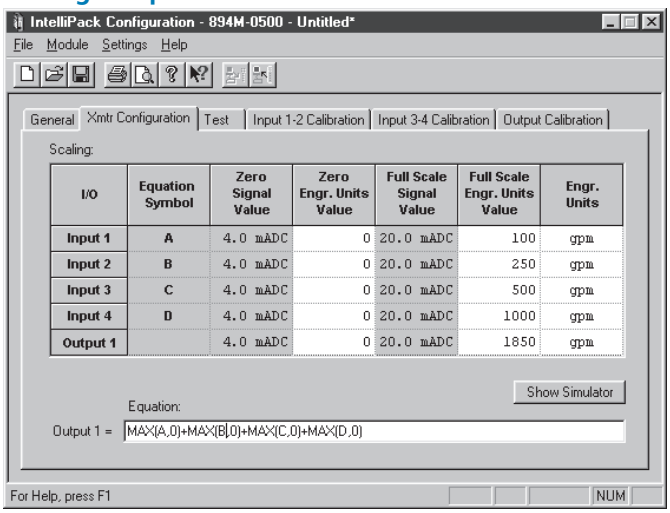
Model No: PS5R-VD24
Input: 120V AC
Output: 24V DC (50W)





*The 894M modules have a track & hold feature that will hold the output indefinitely. This is useful during service & maintenance of systems.

Scaling & Equation:



Output Equation:

MAX(A,0)+MAX(B,0)+MAX(C,0)+MAX(D,0)

When taking individual flow inputs offline (0 mA input), the "maximum" function will clamp that channel to a flow rate of zero (ie; 0 GPM), for calculation purposes.

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