SIG CON Signal Conditioners

Water & Wastewater

Acromag THE LEADER IN INDUSTRIAL I/O

Application Note:

Math Modules: Flow: Dilution Percentage of Total Flow for Dosing

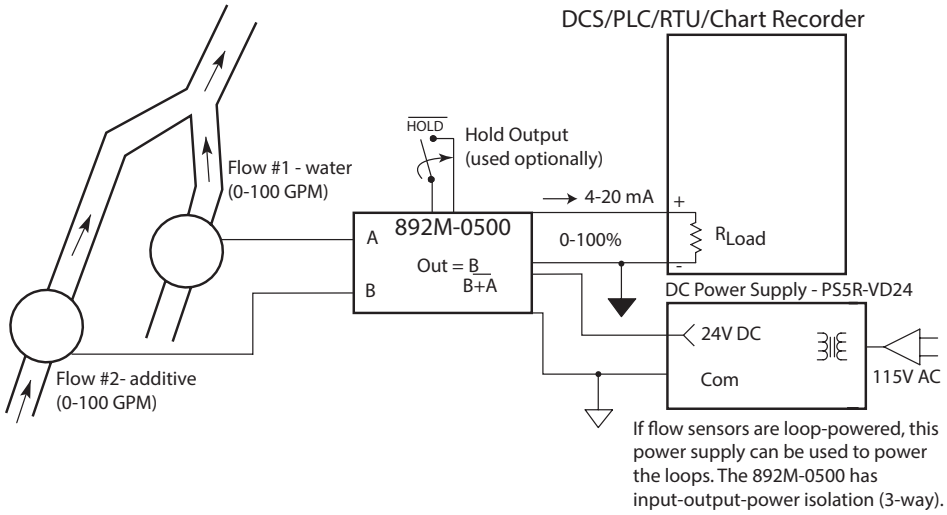
Defining the Problem:

Transmitting the dosing percentage (ratio) of an additive based upon total flow of effluent.

Solution:

Model 892M-0500 dual-input math module
Model 800C-SIP software interface package
Optional: Model PS5R-VD24 power supply

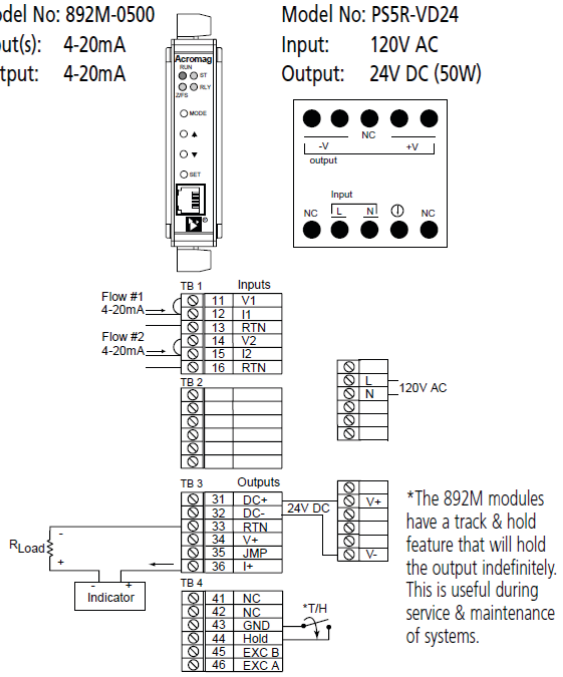
System Diagram:



Wiring Diagram:

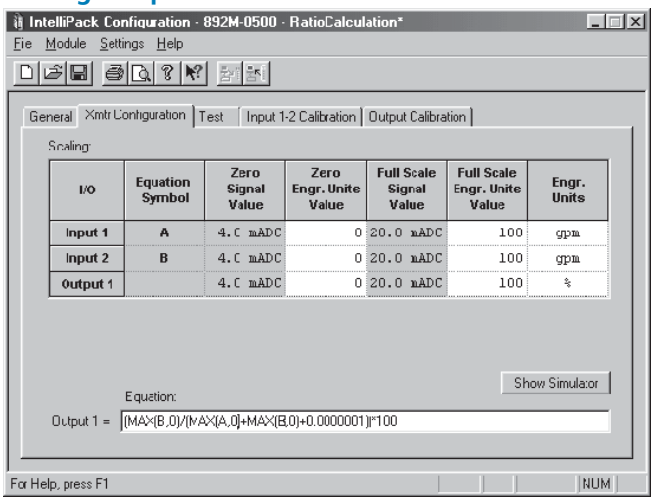
Model No: 892M-0500
Input(s): 4-20mA
Output: 4-20mA

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



*The 892M 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(B,0)/(MAX(A,0)+MAX(B,0)+0.0000001))*100

Using the "MAX" function guarantees that 0 GPM will be used for calculation purposes in the event of an open/shorted input fault (0 mA). The use of .0000001 in the denominator protects against a "divide by zero" condition.

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