WALCHEM
IWAKI America Inc.

Wiring two EW Metering Pumps so they operate from the same signal (slave).

Connecting two EW pumps together is simple with the built in outputs in the EW-Y and EW-F pumps.

EW-Y Pump driving an EW-Y or EW-F:

If using an EW-Y pump as the primary pump, connect the signal from the water meter (contacting, paddlewheel, or analog signal) or other external control device to the input terminals (Pins 2 & 5) of connector 1 on the EW-Y control module. In the image below, a contacting water meter is shown as the external signal source. The appropriate external control method to be used should be selected in the EXT Program Menu – select ANA.V for Analog control (set as default from factory), DIV for dividing down high frequency pulses, or MULT to enable the pump to operate several strokes for every incoming pulse. Once selected, set the pump to EXT control mode. See instruction manual for more detail about wiring and programming an external input.
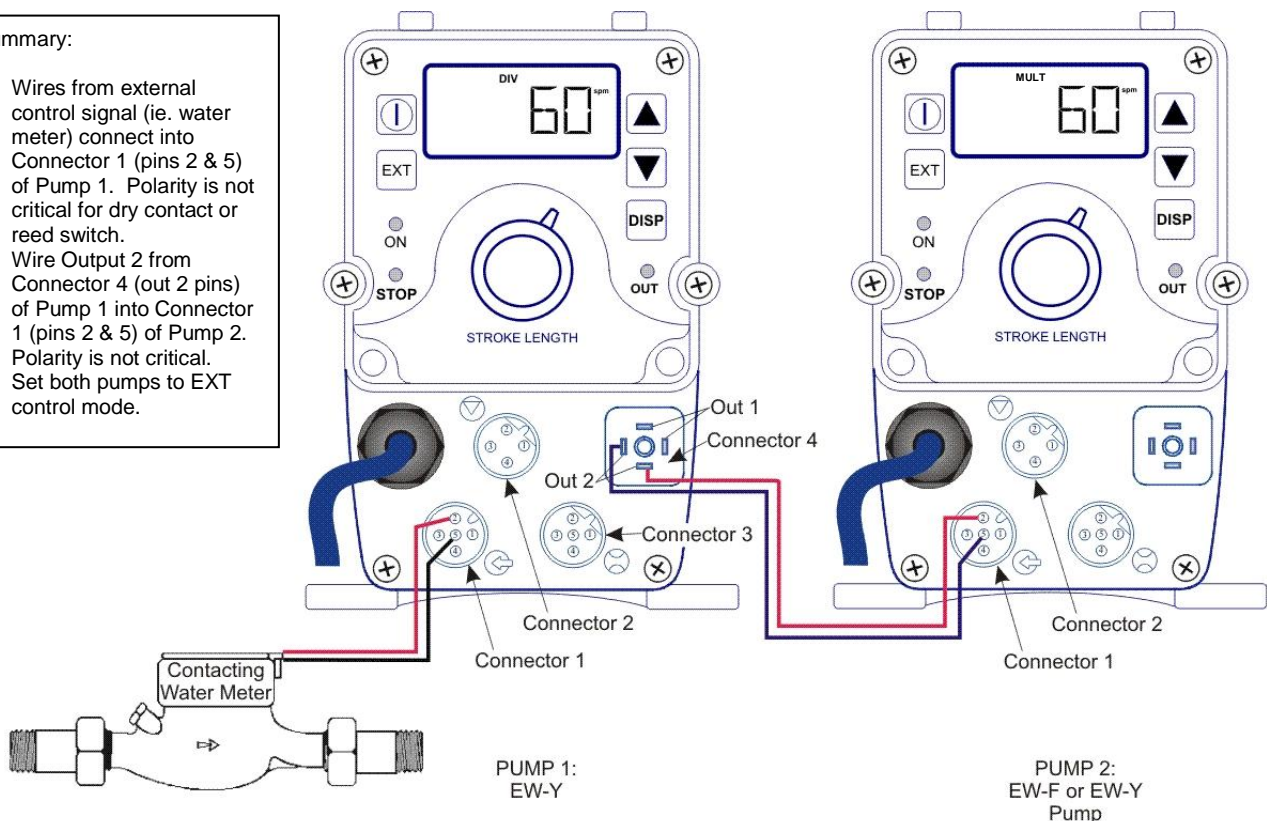
The square output terminal contains both Output 1 and Output 2 in the EW-Y control module. Wire the two OUT 2 Terminals to the digital input terminals (Pins 2 & 5) in Connector 1 of the 2nd pump (polarity is not critical in this connection). Any two-wire cable (18AWG or lower) can be used.

The 2nd pump can be either an EW-Y or EW-F pump as the input terminals of Connector 1 are the same on both (Pins 2 & 5). An EW-Y pump is shown below for this example. The programming of the 2nd pump will have to be set for EXT control mode. If using an EW-Y pump as the 2nd pump, program the EXT mode for MULT (for a 1:1 ratio or higher) or DIV (if it is to be run at a fraction of the first pump's speed).

Summary:

1. Wires from external control signal (ie. water meter) connect into Connector 1 (pins 2 & 5) of Pump 1. Polarity is not critical for dry contact or reed switch.
2. Wire Output 2 from Connector 4 (out 2 pins) of Pump 1 into Connector 1 (pins 2 & 5) of Pump 2. Polarity is not critical.
3. Set both pumps to EXT control mode.

Out 1
Connector 4
Out 2
Connector 3
Connector 2
Connector 1
Contacting Water Meter

PUMP 1:
EW-Y

Connector 2
Connector 1

PUMP 2:
EW-F or EW-Y Pump
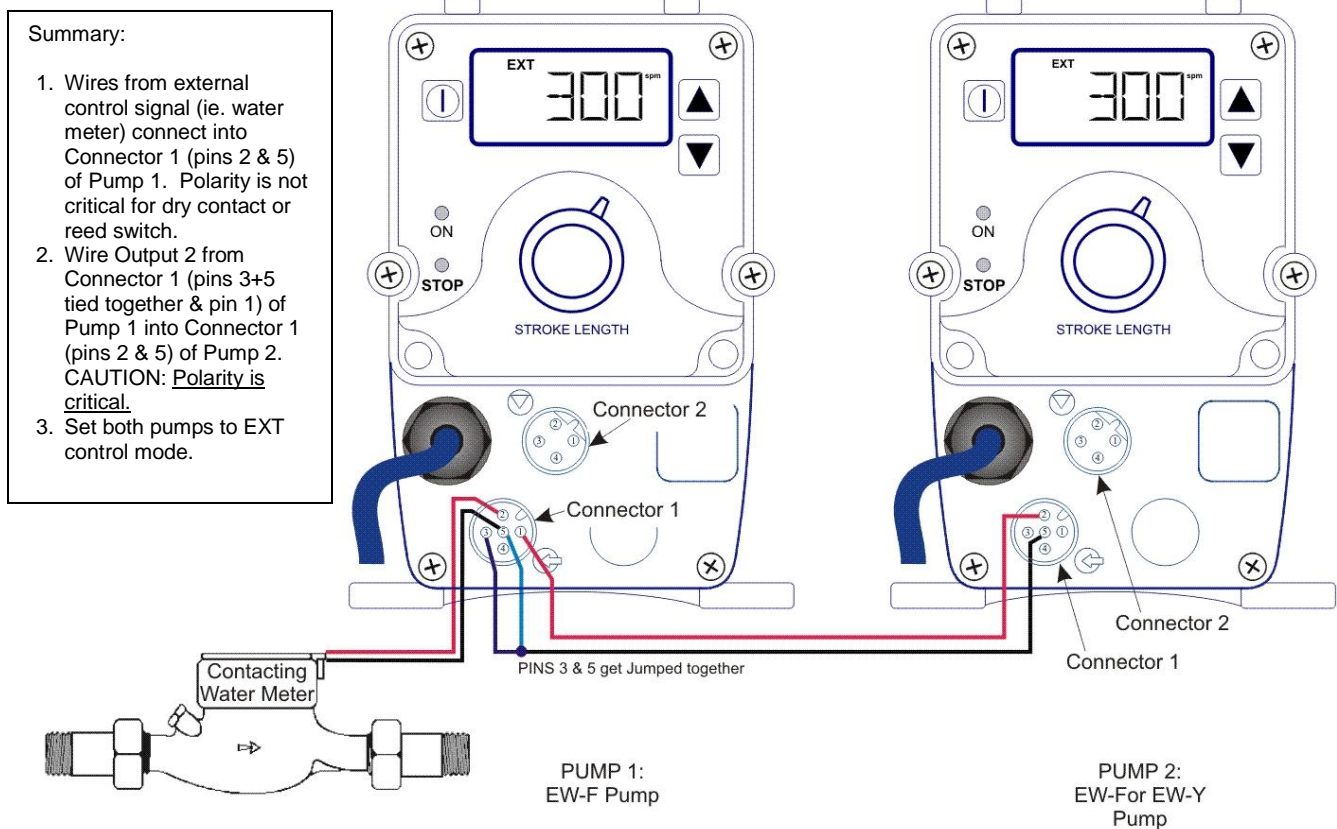
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EW-F Pump driving an EW-F or EW-Y:

If using an EW-F pump as the primary pump, connect the signal from the contacting water meter or other external control device to the input terminals (Pins 2 & 5) of connector 1 on the EW-F control module. EXT should be selected to operate the primary pump from the external signal. See instruction manual for more detail about wiring and programming an external input.

In the EW-F control unit, the same Connector 1 contains both the Digital Input and the synchronous Output relay. The output terminals (pins 3 & 5) have to be jumped together to form the negative input into pump 2. The positive output terminal (Pin 1) is used as the positive input in pump 2.

The 2nd pump can be either an EW-F pump or an EW-Y pump as the input terminals (Pins 2 & 5) of Connector 1 are the same on both. An EW-F pump is shown below for this example. The programming of the 2nd pump will have to be set for EXT control mode. If using an EW-Y pump as the 2nd pump, program the EXT mode for MULT (for a 1:1 ratio or higher) or DIV (if it is to be run at a fraction of the first pump's speed). An EW-F will follow 1:1 and does not need any further programming.

Summary:

1. Wires from external control signal (ie. water meter) connect into Connector 1 (pins 2 & 5) of Pump 1. Polarity is not critical for dry contact or reed switch.
2. Wire Output 2 from Connector 1 (pins 3+5 tied together & pin 1) of Pump 1 into Connector 1 (pins 2 & 5) of Pump 2. CAUTION: Polarity is critical.
3. Set both pumps to EXT control mode.

Connector 2

Connector 1

PINS 3 & 5 get Jumped together

Contacting Water Meter

Connector 2

Connector 1

PUMP 1:
EW-F Pump

PUMP 2:
EW-For EW-Y Pump

ADITIONAL NOTES:
In both examples, the first pump can also be run in MAN mode instead of an external control signal. An EW-F 2nd pump will be a straight forward 1:1 follower, or an EW-Y 2nd pump can be programmed to run faster or slower than the first by multiplying or dividing the signals.

REFERENCE:
Connector 1: P/N E90495 (Digital and Analog Input + Outputs for EW-F)
Connector 2: P/N E90494 (Stop and Pre-Stop Inputs)
Connector 3: P/N E90496 (PosiFlow Input)
Connector 4: P/N E90497 (Outputs on EW-Y)