BL-5309 Flow biCoder™
Installation Guide

The Baseline BL-5309 Flow biCoder is a two-wire decoder that is designed to work with electromagnetic type flow sensors and flow meters.

- The BL-5309 Flow biCoder can supply up to 50mA of current to the purple wire. The voltage on the purple wire is approximately 12v.

- The flow meter output wires of the BL-5309 Flow biCoder are powered by a DC-DC converter that has up to 1000 volts of isolation. This isolation provides the following benefits:

    – Prevents high voltages from affecting the system that is receiving the signal

    – Prevents electrical paths from crossing when multiple flow meter devices are connected

- You must use a water meter register that provides at least 10 pulses per gallon. A "Pulse-Reed Switch" type register does not generate enough pulses per gallon for meaningful flow measurements for many installations. Netafim three-wire, optically-coupled, register-based water meters will operate across a large range of flow rates and are a good choice where extended range is important. More information at http://www.netafim.com or contact your local distributor.

- You must have a water meter and register (pipe size and flow rate) that will generate at least 100 pulses per minute to have reasonable flow readings, and 200 pulses per minute is better .

How to install a BL-5309 Flow biCoder

1. Power off the two-wire during the installation of any two-wire device.

2. Install the BL-5309 Flow biCoder as close to the flow device as possible. Follow the flow meter manufacturer's specifications for required straight pipe before and after the flow meter for accurate readings.

3. Connect the red and black wires from the BL-5309 Flow biCoder to the red and black wires from the two-wire field. Be sure to maintain polarity by connecting red to red and black to black. All connections on the two-wire must use 3M™ DBR/Y-6 or equivalent moisture-resistant connectors.

4. Depending on the flow device, connect the white/black, yellow, and purple wires from the BL-5309 Flow biCoder to the wires from the flow device. All device side connections must use 3M™ DBR/Y-6 or equivalent moisture connectors.

    – For flow devices with two wires, see diagram A.

    – For flow devices with three wires, see diagram B.

5. Follow the instructions in the controller's user manual to verify communication and configure the flow device.
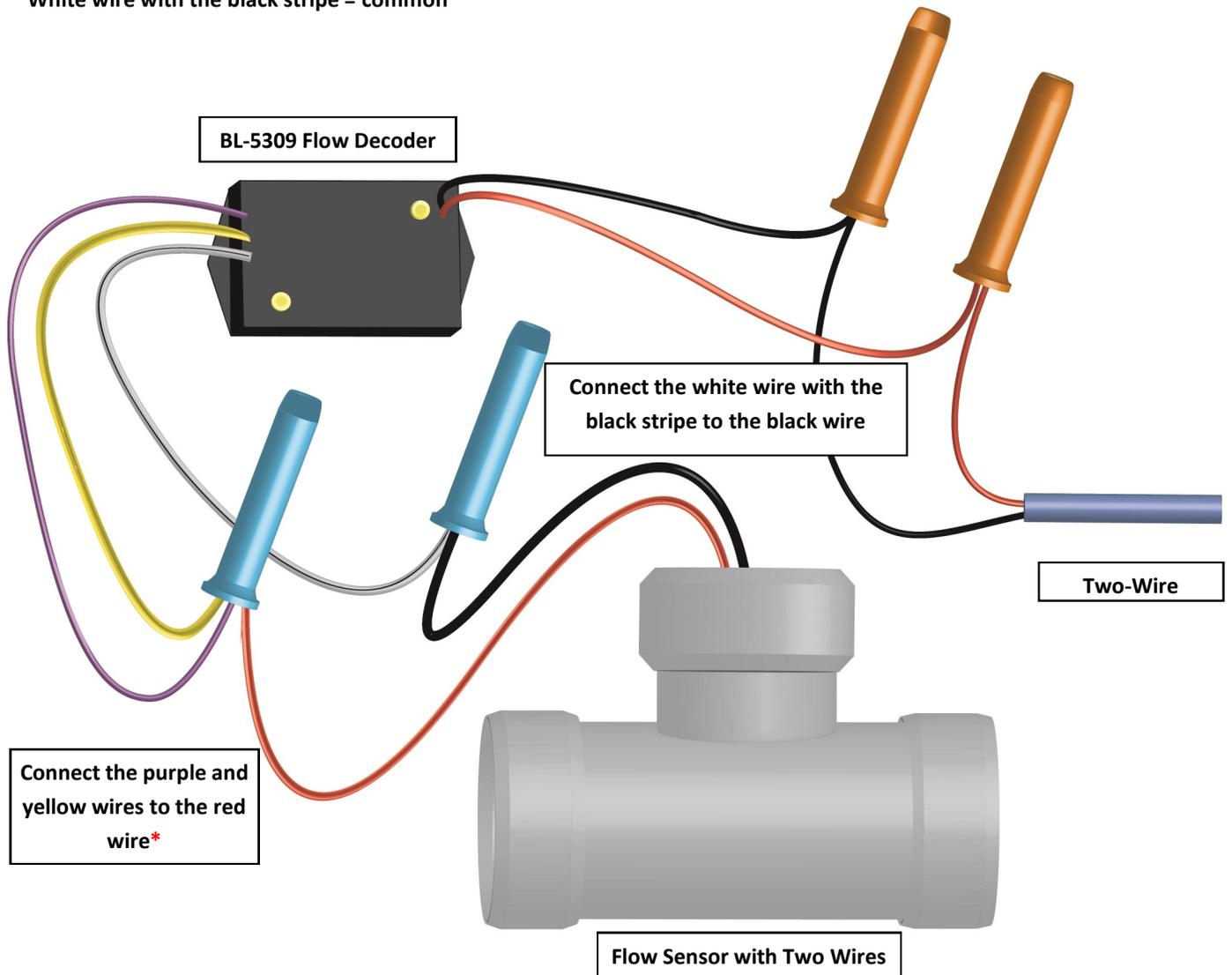
Diagram A: Flow Devices with Two Wires

Purple wire = power

Yellow wire = sensor

White wire with the black stripe = common

BL-5309 Flow Decoder

Connect the white wire with the
black stripe to the black wire

Two-Wire

Connect the purple and
yellow wires to the red
wire*

Flow Sensor with Two Wires

*IMPORTANT!

Connect the purple wire only when power
needs to be supplied to the flow sensor.

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Diagram B: Flow Devices with Three Wires

Purple wire = power

Yellow wire = sensor

White wire with the black stripe = common

BL-5309 Flow Decoder

Two-Wire

Connect the yellow wire to the sensor wire

Connect the purple wire to the power wire

Flow Sensor with Three Wires

Connect the white wire with the black stripe to the common wire