

BL-5308 Flow biCoder™

Installation Guide

The Baseline BL-5308 biCoder is a two-wire decoder that is designed to work with most flow sensors and flow meters that produce a pulsed output. The BL-5308 Flow biCoder transmits the pulse data between the flow device and a BaseStation controller.

A flow sensor or flow meter measures the movement of the water as it moves past a sensor, typically in pulses per gallon. Baseline BaseStation controllers convert the pulse reading into a gallons per minute value. The K-value and Offset accounts for the pipe size when calculating water usage.

Installation Instructions

1. Power off the two-wire during the installation of any two-wire device.
2. Install the BL-5308 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-5308 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. Use 3M™ DBR/Y-6 or equivalent moisture-resistant connectors for all of these connections. Leave 24 to 36 inches of slack on the two-wire to allow for easy installation and maintenance.
4. Depending on the flow device, connect the white, yellow, and blue wires from the BL-5308 Flow biCoder to the wires from the flow device. Use 3M™ DBR/Y-6 or equivalent moisture-resistant connectors for all of these connections.
 - For devices with two wires, see diagram A.
 - For devices with three wires, see diagram B.
5. Verify communications from the BaseStation to the Flow biCoder and complete configuration and setup according to the instructions in the controller's user manual.

Notes

- You must use a water meter register that provides at least 10 pulses per gallon. A Reed Switch Register does not generate enough pulses per gallon for meaningful flow measurements for many installations.
- 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.
- 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.



Diagram A: Flow Devices with Two Wires

(Data Industrial Flow and Similar Two-Wire Sensors)

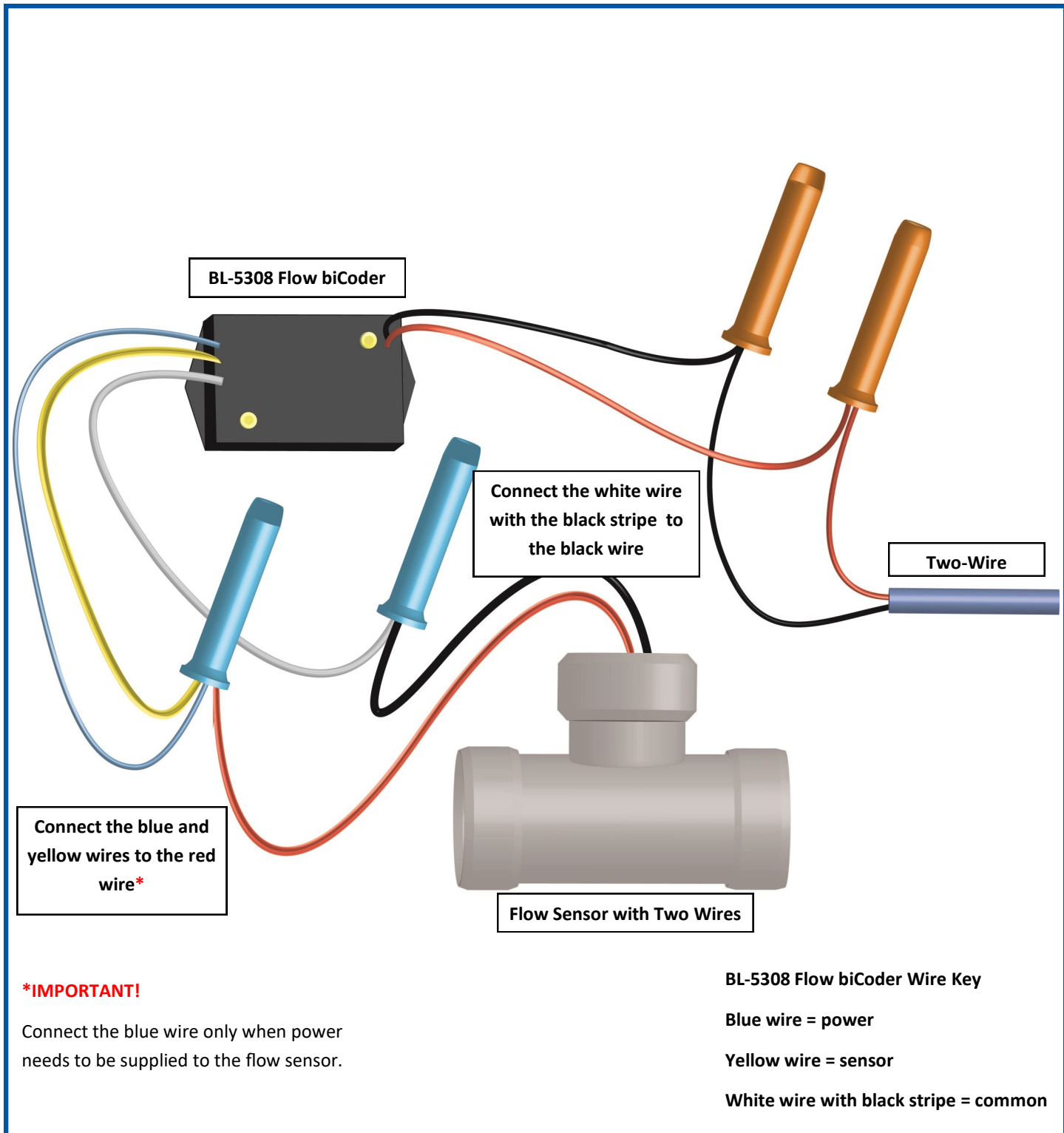
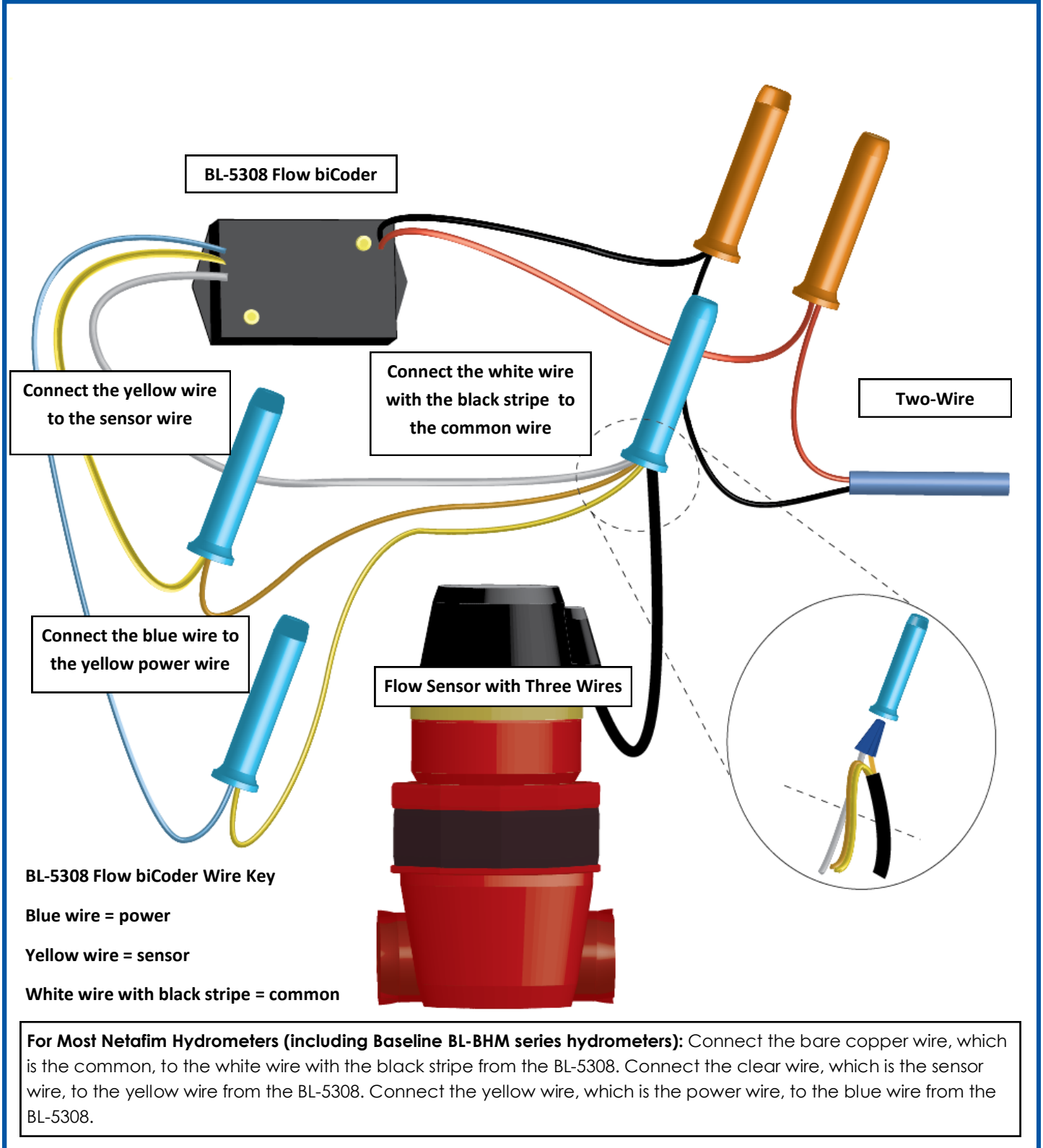


Diagram B: Flow Devices with Three Wires

(Netafim or Similar Three-Wire Water Meters)



Common K-Values and Offsets

Data Industrial — Calibration Table for Series 228PV

Model	Apparent ID for Series 1000, 900	K Value	Offset	Suggested Operating Range (GPM)
228PV15xx-xxx	1.5	1.699	-0.316	5-100
228PV20xx-xxx	1.94	2.8429	0.1435	10-200
228PV30xx-xxx	4.02	8.309	0.227	20-300
228PV40xx-xxx	5.15	13.74283	0.23707	40-500

Data Industrial — Calibration Table for Series 228BR, 228CB, 250BR, 228CS, 228SS

Model	Apparent ID for Series 1000, 900	K Value	Offset	Suggested Operating Range (GPM)
228BR20xx-xxxx	1.99	2.747	0	10-100
228BR25xx-xxxx	2.52	3.741	0.386	16-160
228CR20xx-xxxx	2.07	2.809	0.276	12-120
150 PSI Tee	2.07			
400 PSI Tee	2.1	2.604	0.25	12-120
228BR20xx-xxxx	2.51	3.74	0.277	16-160
228BR20xx-xxxx	2.07	2.809	0.276	12-120
228BR20xx-xxxx	1.99	2.747	0	10-100
250BR05xx-xxxx				
Sch40 PVC	None	0.337379	0.097041	0.8-8
Sch80 PVC	None	0.338073	0.134854	0.8-8
Sch40 steel	None	0.356212	0.075729	0.8-8
Type L	None	0.350899	-0.321666	0.8-8
250BR07xx-xxxx				
Sch40 PVC	None	0.436827	0.567915	1-10
Sch80 PVC	None	0.43983	0.692372	1-10
Sch40 steel	None	0.434836	0.766196	1-10
Type L	None	0.432127	0.619813	1-10
250BR10xx-xxxx	1.05	0.397368	0.261768	2-40
250BR12xx-xxxx	1.38	0.76447	0.16489	3-60
250BR15xx-xxxx	1.61	1.06526	0.0892	4-80

