



Badger Meter

**735 Series
Plastic Tee Type Impeller
Flow Sensor**

OVERVIEW

Used in conjunction with any Badger Meter flow monitor or transmitter, Badger Meter non-magnetic Impeller flow sensors provide an accurate reading of the rate of liquid flow as well as total accumulated flow. A number of sensor models are offered, which cover applications for a wide range of pipe sizes and pressure/temperature specifications.

The flow sensors generate a frequency which is proportional to flow rate. An internal preamplifier allows the pulse signal to travel up to 2,000 feet without further amplification. The impeller bearing assembly, shaft and o-rings are replaceable in the field.

The 735 Series Impeller flow sensors feature a four-bladed impeller design, using a proprietary, non-magnetic sensing technology. As the liquid flow turns the impeller, a low impedance signal is transmitted with a frequency proportional to the flow rate.

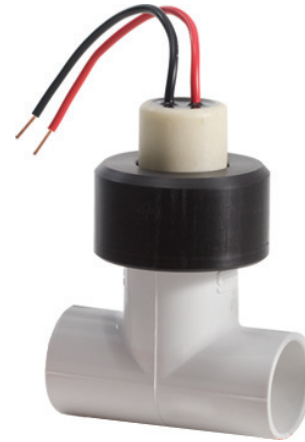
Sensors of similar type are interchangeable, so there is no need for recalibration after servicing or replacement.

Model 735PV

These models feature a modified PVC tee with solvent weld socket end connections, and a removable, PPS sensor insert. Available sizes include 1/2", 3/4", and 1". Threaded BSP adapters also available.

"IR" Sensor

Designed for below grade applications such as irrigation, municipal, and groundwater monitoring where the flow rates are between 2...20 feet/second and temperatures are below 110°F. IR sensors are supplied with two single conductor, 18 AWG solid copper wire leads.



735PV Plastic Tee Sensors Matrix (1/2" to 1")

	Example:	735	PV	05	0	6	-	1	2	0	1
STYLE	Tee Mounted Insert Sensor	0									
MATERIAL	PVC		PV								
Size	1/2"			05							
	3/4"			75							
	1"			10							
	1/2" BSP			06							
	3/4" BSP			76							
	1" BSP			11							
Electronics Housing	PPS				0						
ELECTRONICS	IR-Irrigation (not available with PVDF sensors)					6					
O-RING	EPDM							1			
SHAFT	Tungsten Carbide								2		
IMPELLER	300 SST									0	
BEARING	UHMWPE										1

SPECIFICATIONS

Wetted Materials (except tees)

See Ordering Matrix

Materials

Tee: PVC Type 1, white

Adapter: PVC Type 1, gray

BSP Fitting: PVC Type 1

Sensor Housing: PPS

Retaining Nut: Acetal copolymer, black

Locating Pin: 300SST

Impeller: 300SST

Shaft: Tungsten Carbide

Bearing: UHMWPE

O-Rings: EPDM

Wires: 18AWG Irrigation Wire (solid copper)

Pressure, Temperature Ratings

150 PSIG @ 73° F

75 PSIG @ 110° F

Recommended Design Flow Range

2...20 FPS

Accuracy

± 3.0% of full scale over recommended design flow range

Repeatability

± 1.5% of full scale over recommended design flow range

Linearity

± 1.5% of full scale over recommended design flow range

Transducer Excitation

Quiescent current 600uA@8VDC to 35VDC max.

Quiescent voltage (Vhigh)

Supply Voltage-(600uA*Supply impedance)

ON State (Vlow) Max. 1.2VDC@40mA current limit (15W+0.7VDC)

Output Frequency

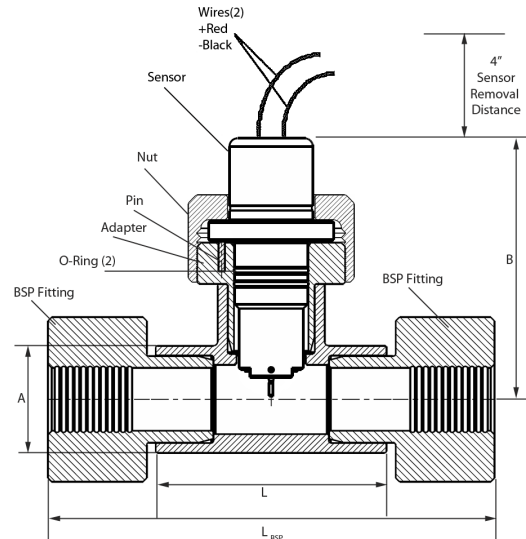
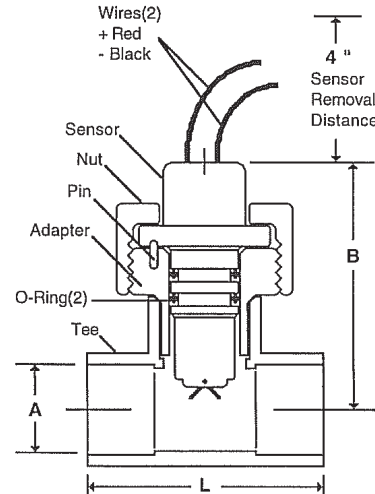
3.2...200 Hz

Output Pulse Width

5 msec ± 25%

Electrical Cable for IR Sensor Electronics

U.L. Style 116666 copper solid AWG 18 wire w/direct burial insulation. Rated to 105° C.



Dimensions

A	B	L	L _{BSP}
Soc Size, NPS	C/L to Top		
½" [Ø.840"]	3.85"	3.06"	6.086"
¾" [Ø1.050"]	3.85"	3.31"	6.775"
1" [Ø1.315"]	3.94"	3.50"	6.775"



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