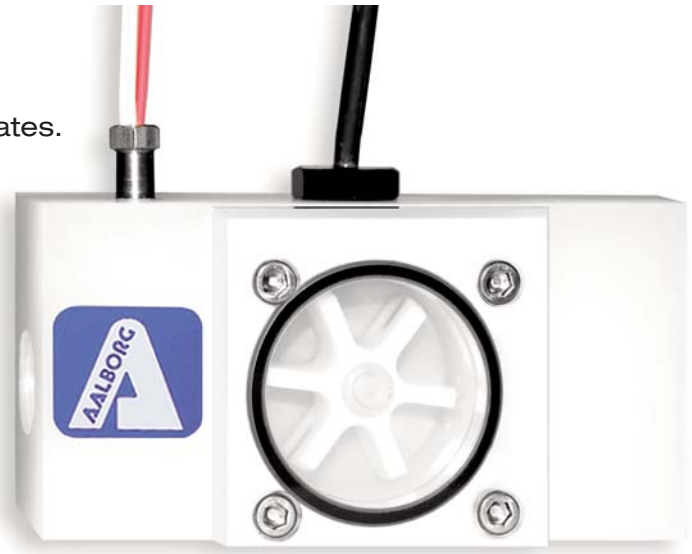


## PADDLE WHEEL FLOW METERS

### Design Features

- Flow meters for liquid flow applications.
- Jewel bearings allow for very low minimum flow rates.
- Easy to install and operate.
- Mounted horizontally or vertically.
- Only one moving part.
- Flow indication via transparent acrylic cover.
- Versatile square wave flow output signal.
- Female NPT ports.
- Multiparameter: flow and temperature \*outputs. Four wires platinum RTD option.
- Polypropylene and chemically resistant PVDF models.

\* PWM provides only raw pulse output signals. In order to get actual flow and temperature readings, user has to implement additional signal processing.



**FOR LIQUIDS ONLY**

### Principles of Operation

Fluid flowing through the unit causes the paddle wheel to spin. As the magnets embedded in the paddle spin past the sensor, electrical pulses are produced in which frequency is proportional to the flow rate. The number of pulses per desired time interval and the K-factor (number of pulses/gallon) make it possible to calculate the flow rate and volume passing through the unit.

**TABLE 31 - FLOW RATE FOR PWM**

METER SIZES	FLOW RATE H <sub>2</sub> O		Inlet/Outlet Ports Female NPT	Max Pressure Drop	
	[L/min]	[gal/min]		Bar	PSI
PWM4	0.15-18.9	0.04-5	3/8"	1	15
PWM6	0.3-37.6	0.08-10	1/2"	1.4	20
PWM8	0.6-64.4	0.15-17	3/4"	1.4	20
PWM10	1.3-132.5	0.35-35	1"	1.4	20

**TABLE 33 - PADDLE WHEEL MODEL NUMBERS**

POLYPROPYLENE	POLYPROPYLENE with RTD	PVDF	PVDF with RTD
PWM4P	PWM4PR	PWM4T	PWM4TR
PWM6P	PWM6PR	PWM6T	PWM6TR
PWM8P	PWM8PR	PWM8T	PWM8TR
PWM10P	PWM10PR	PWM10T	PWM10TR

**TABLE 32 - SPECIFICATIONS**

ACCURACY	±1% FS.
MAX TEMPERATURE	60 °C (140 °F).
MAX PRESSURE	10 barg (150 psig).
POWER	5 to 24 Vdc @ 2 mA.
OUTPUT SIGNAL	NPN open collector (load 30 mA max).
DIMENSIONS	56H x 108L x 53D [mm] (2.2 x 4.25 x 2.2") Without RTD and flow sensors.
CABLE	Flow signal 1.8 m (6') or optional 3.7m (12') [ft.] RTD 12 [in.] long cable.
RTD	Platinum 0.00385 TCR, meets EN 60751, Class B.

**TABLE 34 - WETTED MATERIALS**

	POLYPROPYLENE MODELS	PVDF UNITS MODELS
BODY	Polypropylene	PVDF
LID	Acrylic	PVDF
PADDLE WHEEL	PVDF	PVDF
SHAFT	Nickel Tungsten Carbide	Zirconia Ceramic
BEARINGS	Sapphire Jewels	Sapphire Jewels
O-RINGS	EPDM	PTFE
PLATINUM RTD	316 ss casing	316 ss casing