

1" Water Meter - Stainless Steel, Pulse Output Spec Sheet



I. Functions and characteristics

- 1.) Model: EKM-SPWM-100
- 2.) 1.0" water flow meter for measuring water flow in cubic meters.
- 3.) With pulse-output communication for remote reading.
- 4.) No power source required.

II. Technical specifications

- 1.) ISO4064 Standard Class B
- 2.) Approx. Dimensions: 14.5" long x 4" Wide x 5.5" tall
- 3.) Weight: 5 lbs., 7 oz.
- 4.) Casing: Stainless Steel 304
- 5.) Pulse rate: 1 pulse / 0.01 m³; 1 pulse = approx. 2.64 gal.
- 6.) Accuracy: ±5% from Q_{min} to Q_t, ±2% from Q_t to Q_s
- 7.) Maximum reading before zeroing: 99,999 m³ (Approx. 26,416,900 gal.)
- 8.) Maximum operating pressure: ≤1MPa (PN:1.6MPa/16bar)
ΔP≤0.1MPa
- 9.) Minimum flow (Q_{min}): 0.05 m³/hr
- 10.) Overload flow (Q_s): 7.0 m³/hr
- 11.) Nominal flow (Q_p): 3.5 m³/hr
- 12.) Transitional Flow (Q_t): 0.2 m³/hr
- 13.) Temperature range: 0-50°C / 32-122°F
- 14.) 1.0 Inch NPT male threads

III. Operation

This meter can be used as a traditional water meter where the water consumption is read off of the face of the meter. It also has the added functionality of being able to connect the pulse-output wires to a pulse counting device. This meter produces a pulse for every 0.01 cubic meters (approx 2.64 gallons, or 10 liters) that flows by the meter. This pulse-output water meter can be connected to our EKM-Omnimeter Pulse v.4 (Fig 1). The pulse counting devices can then be connected to a computer, either locally or over the internet.

IV. Installation

- 1.) We recommend that this meter be installed by a qualified plumber.
- 2.) Install horizontally with the dials facing upwards. (Fig 2)
- 3.) Place gaskets between the mating surfaces of the meter body and the male threaded adapter.
- 4.) Tighten the threaded adapter onto the meter body using the nut.
- 5.) Use teflon tape or pipe dope when connecting other pipe fittings to the meter's NPT pipe threads.

**Note: You do not need to use dielectric unions when connecting dissimilar metal fittings to the stainless fittings provided with the meter.*

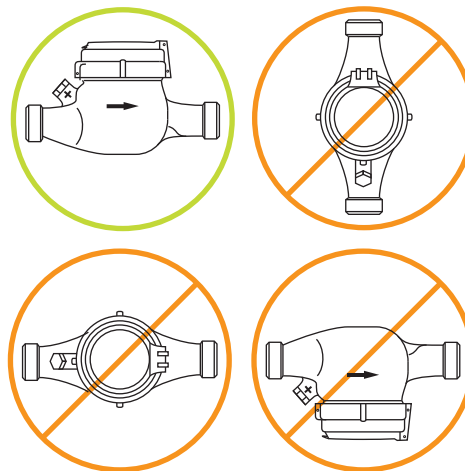
V. Pulse Output

- 1.) Use in conjunction with our pulse counter to see a digital display of the total pulse counts.
- 2.) Use in conjunction with our EKM-Omnimeter Pulse v.4 for remote metering applications.
- 3.) The EKM-Omnimeter Pulse v.4 has ports for three separate pulse inputs (ports 11, 12 and 13). All of the pulse input devices share a common ground wire (Port 14). These wires can be up to 200 feet long.
- 4.) Connect the red wire from the water meter to either port 11, 12, or 13. Connect the white wire to port 14 (See Fig. 1). Disregard the blue wire.
- 5.) The easiest way to power the EKM-Omnimeter Pulse v.4 is with 110v AC. Connect a hot leg into port 7 and the neutral into port 10.
- 6.) For more information on how to read this meter remotely, please refer to the various communication devices that we offer on our website.



(Fig. 1)

Install Horizontally with the Dial Facing Up



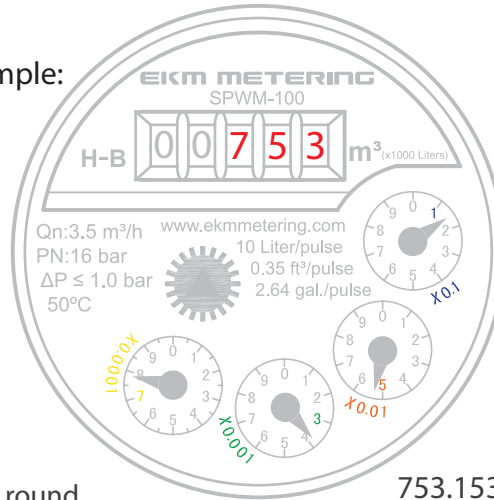
(Fig. 2)

VI. Reading Your Meter

Conversion Multipliers:

- Cubic Meters: x1
- Pulses: x100
- Gallons: x264.172
- Cubic Feet: x35.3147
- Liters: x1000

Example:

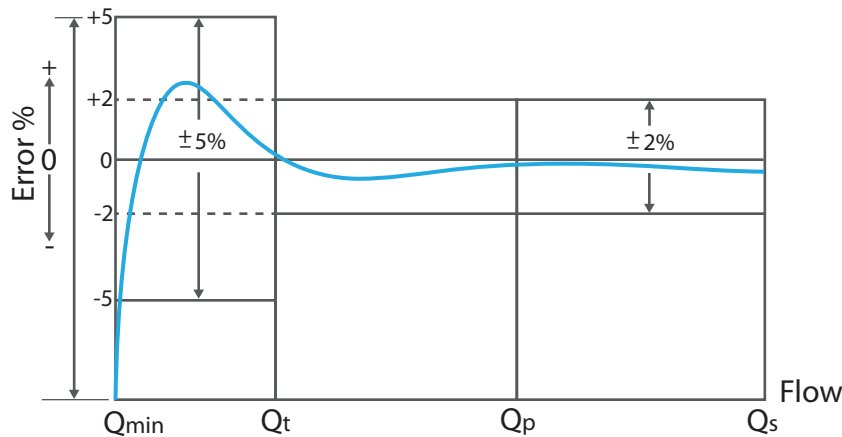


$$\begin{aligned}
 & (753) \\
 & + (1 \times 0.1) \\
 & + (5 \times 0.01) \\
 & + (3 \times 0.001) \\
 & + (7 \times 0.0001) \\
 & \hline
 & = 753.1537\text{m}^3
 \end{aligned}$$

* **Note:** Most Utilities in the United States round to the nearest 100 cubic feet. So in this case, you would only need to multiply the red numbers by the conversion factor(35.3147) and round to the nearest 100.

- $753.1537 \times 1 = 753.1537$ cubic meters
- $753.1537 \times 1000 = 753,153.70$ Liters
- $753.1537 \times 10 = 75,315.37$ Pulses
- $753.1537 \times 35.3147 = 26,597.40$ cubic feet
- $753.1537 \times 264.172 = 198,962.119$ gallons

VII. Error Curve:



VIII. Head Loss Curve:

