TM SERIES (WATER METERS)

FLOMEC® TM Series Water Meters are accurate, economical and designed to last. Choose TM Water Meters for water processing and irrigation applications:

- Meets Schedule 80 PVC specifications
- Standard low-profile display
- Seven sizes with three fitting types available
- Flow rates from 1 to 600 gallons per minute (3.8 to 2271 L/min)

FEATURES / BENEFITS

- Easy to install
- Displays in gallons, litres and cubic feet
- Indicates Batch, Cumulative Totals and Rate of Flow
- Available in Spigot, NPT, BSP (1 in., 1-½ in. and 2 in. only), 150# ANSI Flange (3 in. and 4 in. only) and DIN Flange (3 in. and 4 in. only) fittings
- Non-volatile totals means amounts are retained when batteries are replaced or power is lost
- Alkaline battery life: 2 years

APPLICATIONS

- OEM water treatment equipment / skids
- Sub-metering of facility water usage
- Waste water treatment equipment
- Irrigation
- Batching
- Plant process water
- Water based cooling systems
- Chemical feed systems
- Monitoring clean fluids
- Cooling towers
- Blending

FLOMEC®

PRODUCT CONFIGURATION

1 PRODUCT IDENTIFIER:

TM = TM Series Water Meters

2 TURBINE SIZE:

05 = ½ in.
07 = ¾ in.
10 = 1 in.
15 = 1-½ in.
20 = 2 in.
30 = 3 in.
40 = 4 in.

3 METER PORT CHOICE:

N = NPT, Female (Available In All Sizes)
B = BSP, Female (1 in., 1-1/2 in., 2 in. Only)
F = Flange, ANSI (3 in., 4 in. Only)
D = Flange, DIN (3 in., 4 in. Only)
S = Spigot (Available In All Sizes)
X = No Turbine Body - Electronics Only

4 ELECTRONIC CHOICE:

Local Computer w/Display, Meter Mounted
Q9 = Q9 2-Button Computer
Q1 = Q9 2-Button Computer, Vertical Mount (90° Adapter)

Local Computer w/Display & Module, Meter Mounted
P9 = Q9 2-Button Computer w/Pulse Out Module, includes External Power and 10 ft. of Cable
42 = Q9 2-Button Computer w/4-20mA Module and 10 ft. of Cable

Module, Meter Mounted (No Display)
PO = Pulse Out Conditioned Signal Module w/Cable

Retrofit Computer Kit (Display Only)
R9 = Q9 2-Button Computer Retrofit Kit (Replaces 09 Display)

No Electronics - Turbine Only
XX = No Electronics - Turbine Only

5 CALIBRATION OF COMPUTER / DISPLAY:

GM = Gallons Per Minute (For Use With Q9, P9, 42, R9 Electronics Only)

LM = Liters Per Minute (For Use With Q9, P9, 42, R9 Electronics Only)

XX = No Calibration (Use With PO & XX Electronics Only)

6 PACKAGING:

A = 05 Thru 10 Turbine Only
05 Thru 10 Turbine w/Q9 Electronics
Q9 & R9 Electronics Kit (Replacement Computer)

B = 15 Thru 20 Turbine Only
15 Thru 20 Turbine w/Q9 Electronics
P9 and 42 Electronics Kit (Replacement Electronics)

C = 05 Thru 20 Turbine w/Q1, P9, 42, PO Electronics

D = 30N, 30S Turbine Only
30N, 30S Turbine w/Q9, Q1, P9, 42, PO Electronics
40S Turbine Only
40S Turbine w/Q9, Q1, P9, 42, PO Electronics

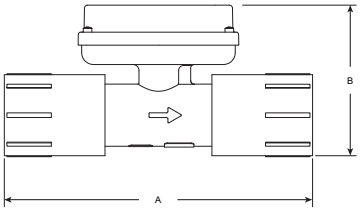
E = 30F, 30D Turbine Only
30F, 30D, Turbine w/Q9, Q1, P9, 42, PO Electronics
40N, 40F, 40D Turbine Only
40N, 40F, 40D Turbine w/Q9, Q1, P9, 42, PO Electronics

	1	2	3	4	5	6
--->>>>	TM	10	N	Q9	GM	A

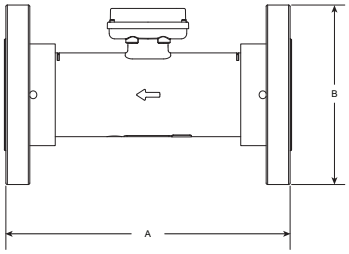
DIMENSIONS

Meter Size & Fitting	Length	Height	Width
05 Spigot	4.3 in. (109 mm)	2.5 in. (63 mm)	2.1 in. (53 mm)
05 NPT	6.0 in. (152 mm)	2.7 in. (68 mm)	2.1 in. (53 mm)
07 Spigot	4.4 in. (112 mm)	2.7 in. (68 mm)	2.1 in. (53 mm)
07 NPT	6.1 in. (155 mm)	2.9 in. (73 mm)	2.1 in. (53 mm)
10 Spigot	4.5 in. (114 mm)	2.9 in. (73 mm)	2.1 in. (53 mm)
10 NPT / BSP	6.5 in. (165 mm)	3.1 in. (79 mm)	2.1 in. (53 mm)
15 Spigot	5.4 in. (137 mm)	3.6 in. (91 mm)	2.1 in. (53 mm)
15 NPT / BSP	7.6 in. (193 mm)	3.8 in. (96 mm)	2.3 in. (58 mm)
20 Spigot	5.5 in. (140 mm)	4.1 in. (104 mm)	2.4 in. (61 mm)
20 NPT / BSP	7.9 in. (200 mm)	4.4 in. (112 mm)	3.5 in. (89 mm)
30 Spigot	11.5 in. (292 mm)	5.34 in. (136 mm)	3.5 in. (89 mm)
40 Spigot	13.5 in. (343 mm)	6.34 in. (161 mm)	4.5 in. (114 mm)
30 NPT	14.7 in. (373 mm)	5.78 in. (147 mm)	4.37 in. (111 mm)
40 NPT	17.0 in. (432 mm)	6.7 in. (170 mm)	5.87 in. (149 mm)
30 ANSI Flange	12.0 in. (305 mm)	7.5 in. (190 mm)	7.5 in. (190 mm)
40 ANSI Flange	14.0 in. (356 mm)	9.0 in. (229 mm)	9.0 in. (229 mm)

Length guidelines are estimates; actual length can vary up to ± ½ in.(13 mm).
P9 & 42 Electronics adds 0.90 in. (23 mm) to height.



½ in. thru 2 in.



3 in. & 4 in.

SPECIFICATIONS

Fitting Type:	Schedule 80 Spigot (Pipe) End		
	NPT (Female)		
	BSP (Female) (1 in., 1-1/2 in., & 2 in. meters only)		
	150# ANSI Flange or DIN 100 Flange (3 in. & 4 in. meters only)		
Meter Sizes Available:	½ in., ¾ in., 1 in., 1-½ in., 2 in., 3 in., 4 in.		
Flow Range:	½ in. (05)	1 - 10 GPM	(3.8 - 38 L/min)
	¾ in. (07)	2 - 20 GPM	(7.6 - 76 L/min)
	1 in. (10)	5 - 50 GPM	(19 - 190 L/min)
	1-½ in. (15)	10 - 100 GPM	(38 - 380 L/min)
	2 in. (20)	20 - 200 GPM	(76 - 760 L/min)
	3 in. (30)	40 - 400 GPM	(151 - 1514 L/min)
	4 in. (40)	60 - 600 GPM	(227 - 2271 L/min)
Accuracy (% of Reading):	± 3.0%		
Pressure Rating (½ - 2 in.):	225 psi (15.3 bar) @ 73° F (23° C)		
BSP	150 psi (10.3 bar) @ 73° F (23° C)		
Pressure Rating (3 - 4 in.):	225 psi (15.3 bar) @ 73° F (23° C)		
DIN	135 psi (9.1 bar) @ 73° F (23° C)		
For CE Applications	135 psi (9.1 bar) @ 73° F (23° C)		
Operating Temperature Range:	+32° F to +140° F (0° C to +60° C)**		

Typical K-Factor:	½ in. (05)	2,500 PPG (660 Pulses/L)
	¾ in. (07)	1,100 PPG (291 Pulses/L)
	1 in. (10)	565 PPG (149 Pulses/L)
	1-½ in. (15)	215 PPG (57 Pulses/L)
	2 in. (20)	100 PPG (26 Pulses/L)
	3 in. (30)	43 PPG (11 Pulses/L)
	4 in. (40)	17 PPG (4.5 Pulses/L)
Wetted Materials (½ - 2 in.):	Housing:	PVC
	Bearings:	96% Alumina Ceramic
	Shaft:	Tungsten Carbide
	Rotor:	PVDF
	Rings:	316 Stainless Steel
Wetted Materials (3 - 4 in.):	Housing:	PVC
	Bearings:	PEEK
	Shaft & Thrust Washers:	Stainless Steel
	Rotor & Nose Cone:	Acetal
	Signal Generator:	Ferrite
Calibration Certificate:	N.I.S.T. – Certification available	

**PVC pressure rating will incrementally decrease above 73° F (23° C).

ELECTRONICS OPTIONS

Q9 = Standard Local Display with 2 Totals and Rate of Flow

Q1 = The Standard Q9 Display, turned 90° for a vertically installed meter body

P9 = Pulse Output Module installed between the local display and the meter body
- Provides a Scaled NPN Open Collector Pulse
- Can provide External Power to the local display
- Comes with 10 ft. of installed cable

42 = 4-20 mA Module installed between the local display and the meter body
- Provides a 4–20 mA signal
- Provides a Scaled NPN Open Collector Pulse
- Comes with 10 feet of installed cable

PO = Pulse Output Module installed in place of the display (blind meter)
- Provides an Unscaled NPN Open Collector Pulse

R9 = Replacement Q9 Computer Display for a meter body that has an old 09 display
- Come with the extra parts required to retrofit a Q9 display in place of a 09 display

ACCESSORIES

Part No.	Description
113275-10	FM Approved Remote Kit – Q9 Display (will not make meter FM Approved)
125260-02	90° Display Adapter Kit – Q9 Display

CERTIFICATIONS

NSF certification for 3 & 4 in. sizes only

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Outside North or South America: **+61 2 9540 4433 / FLOMECmeters.com**

IND-1043-TM Rev C 04/2021

SPECIFICATIONS

Standard Factory Configuration:	2 Totals (1 Resettable, 1 Cumulative); Factory Calibration in gallons or litres; User Calibration and Rate of Flow Indication
Display Electronics:	Q9 Electronics can be used on G2, TM, A1, and QSE Series Meters
Totalizing Registers:	Cumulative and Batch
K-Factor Limits:	Min: 0.001 pulses/unit; Max: 999,999 pulses/unit
Field Calibration:	Field calibrate by user methods: • K-factor entry • Correction Factor (% Adjust) • Dispense Display
Readout Totals:	LCD with floating decimal: Minimum Display = 0.001 units; Maximum Display = 999,999 x 100 units (6 digits)
Input Pulse Rate:	Frequency Range is 0.25 Hz - 3 kHz
Turbine Display:	
Internal Power Supply:	2 Alkaline AAA batteries at 1.5 volts each
Alkaline Battery Life:	Typically 2 Years
Temperatures:	
Operating Temperature (FM/ATEX Approved Meters):	0° F to +129° F (-18° C to +54° C)
Operating Temperature (Non-Approved Meters):	0° F to +140° F (-18° C to +60° C)
Storage Temperature:	-40° F to +158° F (-40° C to +70° C)

APPROVALS**

Select A1 & G2 models*

FM APPROVED · FM C US APPROVED · CE · ATEX · IEC · IECEx

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Q9 DISPLAY

The Q9 is the latest version of the popular FLOMEC computer display. It incorporates many of the most requested features over the years including low battery indication and the ability to display custom units with a name label. Optional plug-in daughterboards for 4-20mA, scaled pulse, and external power supply are easily added as original equipment or as a retrofit in the field. All of the daughterboard parameters are addressable through the two buttons on the Q9 display. An additional new feature is the ability to display velocity as well as rate and totals. Packaged in the same form as the familiar FLOMEC display, the Q9 operates on two AAA batteries with approximately 2 years of operation and maintains all of the same intrinsically safe approvals of past products.

FEATURES / BENEFITS

- Highly Visible LCD characters against a yellow-tinted background
- Many Field Configurable options for ease of operation including diagnostic mode and custom unit name
- Easily retrofit to most existing FLOMEC turbines
- Maximum versatility with optional pre-configured plug-in daughterboards to supply 4-20mA and Scaled Pulse
- Convenient Battery Power Level indication with automatic low battery warning
- Safety first design with FM Class 1, Div 1; ATEX; IECex; cFM; CE approvals on select A1 and G2 models
- Providing operator consistency for all of your meters, the Q9 can be used with G2, TM, A1, and QSE Series Meters
- Ultimate ease of operation with permanent pre-programmed 5 point factory calibration
- Accommodates a wide range of technical expertise with 3 Field calibration methods (K-Factor, Correction Factor or Dispense Display)
- For simple Plug and Play installation, the Q9 is factory calibrated set to display Cumulative Total, Re-Settable Batch Total and Rate

USER CONFIGURATION

- PIN Protected, four-digit user selectable
- 11 pre-programed engineering units and one user-configurable custom unit
- Alphanumeric information line for on-screen instructions and custom unit name
- Four pre-programmed, user-selectable time bases (Day, Hour, Min., Sec.)
- Configurable screen update frequency
- A user-selectable low-frequency filter
- Field Calibration is retained when switched to Factory Cal so you can have two accessible calibrations available
- Three field calibration methods available (1 point Dispense Display, 5 point Correction Factor, 5 point K-Factor)
- Diagnostic mode shows % battery life remaining

**See A1 & G2 Data Sheets for models that qualify for approvals.*
***All Q9 Displays have the CE approval.*

OTHER ELECTRONICS OPTIONS†

P9 = Pulse Output Module installed between the local display and the meter body
- Provides a Scaled NPN Open Collector Pulse
- Can provide External Power to the local display
- Comes with 10 ft. of installed cable

42 = 4-20 mA Module installed between the local display and the meter body
- Provides a 4–20 mA signal
- Provides a Scaled NPN Open Collector Pulse
- Can provide External Power to the local display
- Comes with 10 feet of installed cable

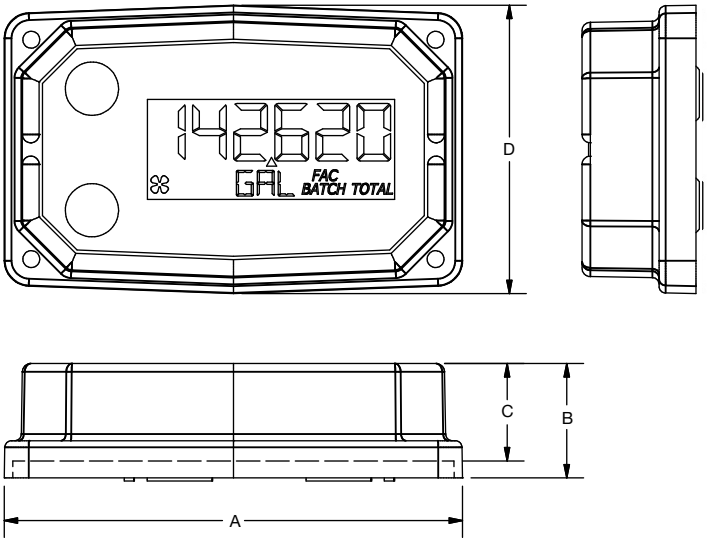
PO = Pulse Output Module installed in place of the display (blind meter)
- Provides an Unscaled NPN Open Collector Pulse

R9 = Replacement Q9 Computer Display for a meter body that has an old 09 display[1]
- Comes with the extra parts required to retrofit a Q9 display in place of an 09 display

†*Separate data sheets available.*
[1] *FM/ATEX Approved when replacing a FM/ATEX Approved 09 display on a FM/ATEX Approved A1 or G2 meter.*

DIMENSIONS

Length "A"	Height "B"	Height (Mounted) "C"	Width (Widest Point) "D"
3.40 in. (8.6 cm)	0.85 in. (2.1 cm)	0.72 in. (1.8 cm)	2.14 in. (5.4 cm)



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Service & Warranty: For technical assistance, warranty replacement or repair contact your **FLOMEC®** or **GPI®** distributor: In North or South America: **888-996-3837 / FLOMECmeters.com**
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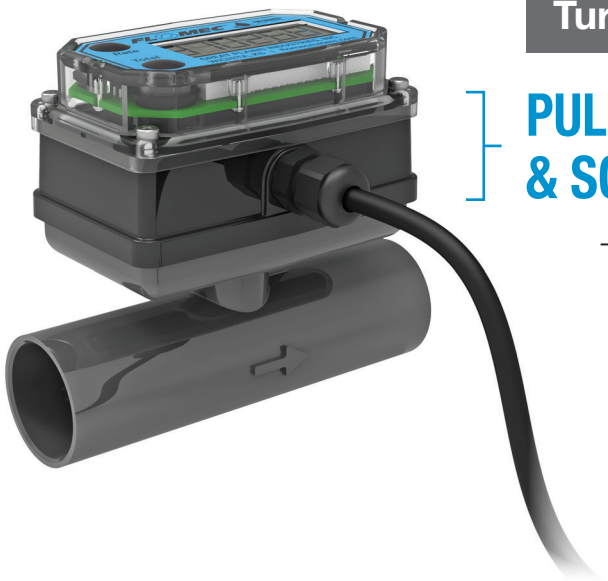

Turbine Meter MODULE

PART NO. 125060-10

PULSE ACCESS, EXTERNAL POWER, & SCALED PULSE MODULE

– Shown on a TM Series Water Meter with Q9 Display

The **FLOMEC® Pulse Access, External Power, and Scaled Pulse Module** provide a scaled digital signal from your FLOMEC® meter by accessing circuitry from the onboard display readout.

This kit comes complete, ready to install between the display and meter body. It also has 10 feet (3 meters) of preinstalled cable. The module requires both a FLOMEC® turbine meter and a Q9 display electronics.

FEATURES / BENEFITS

- Provides a digital Open Collector signal
- Operating temperature range of 0°F to +140°F (-18°C to +60°C)
- Can transmit signal up to 5,000 ft. (1.5 km)
- Communicates with most digital process control devices and its easy to install

SPECIFICATIONS

Signal Type:	Open Collector (NPN)
Voltage:	0.5 - 26 V (dc)
Strain Relief:	Hubble PG7
Cable:	10 ft. (3 m) Belden #9363

APPROVALS

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Turbine Meter MODULE

PART NO. 125100-10

4-20 mA MODULE

– Shown on an A1 Series Meter with Q9 Display

Combine the **FLOMEC® 4-20 mA Module** with a turbine meter and display electronics to provide an industry standard analog signal for connection to a wide variety of chart recorders, display equipment and process control equipment.

This module outputs an analog signal which is directly proportional to the frequency of the digital output. With some simple adjustments, you can scale the module to represent whatever range is desired. The kit come with circuit assembly, enclosure, screws, and 10 feet of cable.

FEATURES / BENEFITS

- Communicates with most analog process devices
- Also provides a scaled or unscaled pulse output
- Operating temperature range of 0°F to +140°F (-18°C to +60°C)
- Module installs between Turbine and Q9 Display
- Provides external power to display electronics

SPECIFICATIONS

Signal Type:	4-20 mA / Open Collector (NPN)
Power:	4-20 mA is Loop Powered (8 - 36 V (dc)) Open Collector (NPN) 8 - 26 V (dc)
Strain Relief:	Hubble PG7
Cable:	10 ft. (3 m) Belden #9363

APPROVALS

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