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

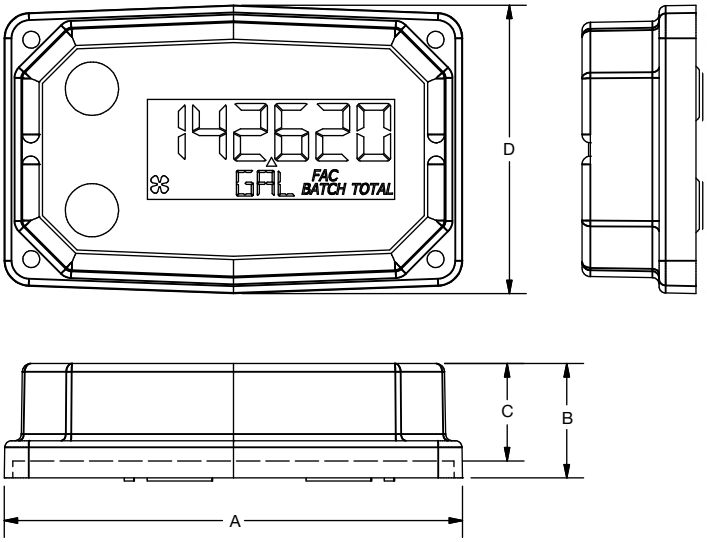
PO = Pulse Output Module installed in place of the display (blind meter)
- Provides an Unscaled NPN Open Collector Pulse

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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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

CE

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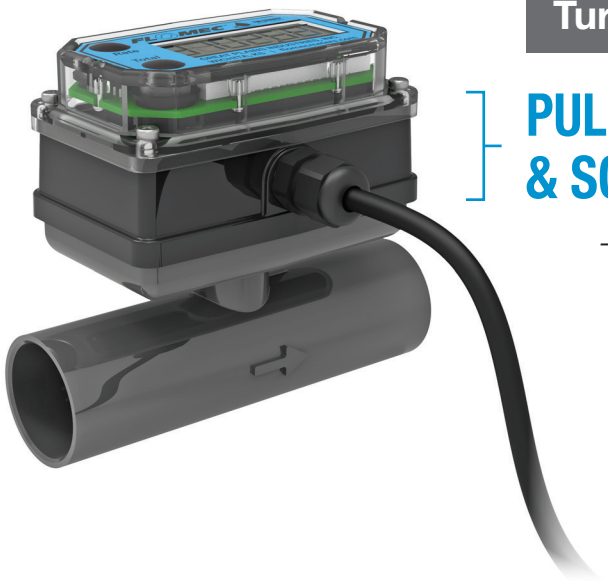

Turbine Meter MODULE

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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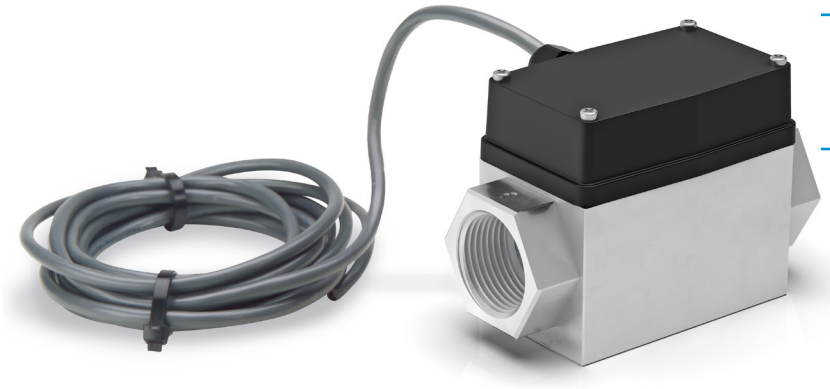
Turbine Meter MODULE

PART NO. 113435-10



CONDITIONED SIGNAL OUTPUT MODULE

– Shown on a G2 Series Meter

This module provides an unscaled, amplified, digital signal capable of transmission up to 5,000 feet (1.5 kilometers). There is no need for additional signal conditioning or amplification devices to achieve the desired digital signal. Use on a blind (no display) G2, A1 or TM series meter.

FEATURES / BENEFITS

- Provides a NPN Open Collector pulse that can communicate with most process control devices
- Operating temperature range of -40°F to +185°F (-40°C to +85°C)
- Provides a blind, pulse out only, option

SPECIFICATIONS

Connector:	Hubble PG7
Signal Type:	Open Collector (NPN)
Power:	External 9 to 35 V (dc), approximately 1mA
Connection:	Three wire
Cable:	10 ft. (3 m) Belden #9363

APPROVALS

CE

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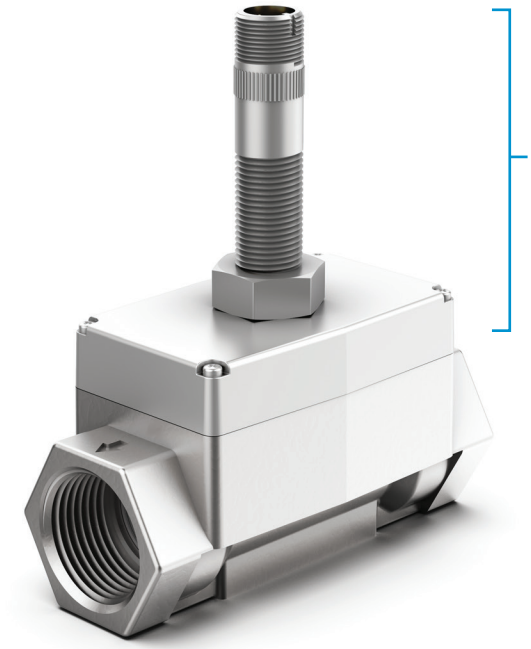

G2 Series MODULE

FM PART NO. 120077-01
ATEX PART NO. 120077-02

FM AND ATEX APPROVED SENSOR KIT

– Shown on a G2 Series Meter

The **Factory Mutual (FM and ATEX) Approved Sensor** is designed for use with any G2 Turbine Meter when rotor pulse data is required and the meter is located in a hazardous location. The output signal is compatible with existing FLOMEC® remote electronics. Use on the G2 "Turbine Only" model.

This kit includes pickup, screws, coverplate, and jam nut. Connection Kit sold separately (Part No. 113524-01).

FEATURES / BENEFITS

- Mounts to any G2 meter housing via the coverplate
- Ideal for indoor or outdoor applications
- Factory Mutal (Intrinsic Safe) Class 1, Div 1, Groups ABCDEFG
- ATEX II1 G Ex ia IIC, FM08ATEX0066x

SPECIFICATIONS

Signal Type:	Open Collector (NPN)
Power Source:	5.8 to 30 V (dc)
Supply Current:	≤ 15 mA
Frequency:	5 to 10K Hz
Cable:	None provided - 3 conductor for use
Temperature (Non-Hazardous):	Sensor is capable of operating in the range of -40° F to +248° F (-40° C to +120° C)
Temperature (Hazardous):	For Class I, II, III, Division 1: Group ABCDEFG and CSA: Class 1, Div. 1, Group ABCD, the following temperature codes apply: T6 +185° F (+85° C) at +149° F (+65° C) Ambient Temperature T5 +212° F (+100° C) at +186° F (+85° C) Ambient Temperature

APPROVALS

ATEX FM APPROVED CE

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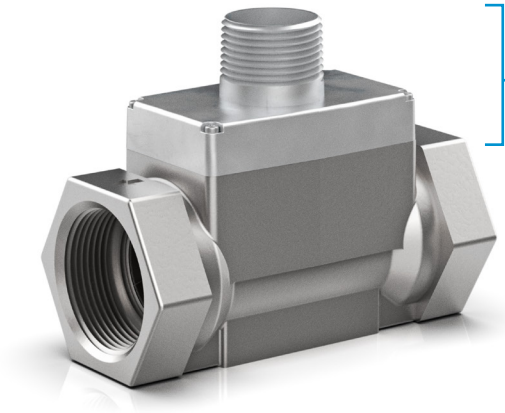
Turbine Meter ACCESSORIES

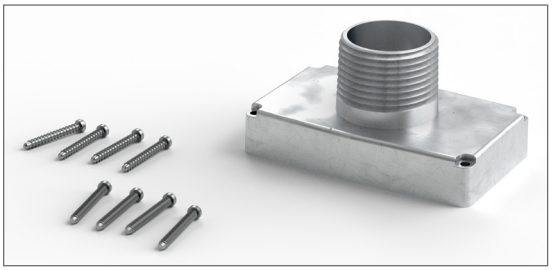


CONDUIT ADAPTER KIT

PART NO. 113437-01

– Shown on a G2 Series Meter

The **Conduit Adapter** allows you to enclose wiring from the FM Approved Sensor or the ATEX Approved Sensor. The kit includes a turbine meter cover with a 1 inch male NPT conduit fitting and screws for plastic or metal installation.



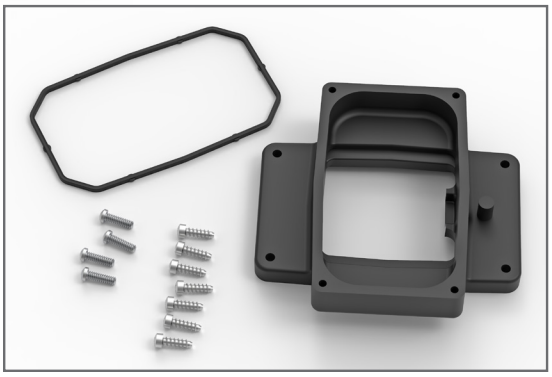
90° DISPLAY ADAPTER KIT

PART NO. 125260-02

– Shown on a TM Series Meter wtih Q9 Display

The **90° Display Adapter** allows for horizontal readout of vertical meters. Includes adapter, O-ring, and screws required for installation.

Can be ordered with a meter. Specify Q1 option with meter order.



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EB11 'EasyBatch' CONTROLLER

The FLOMEC EB11 "EasyBatch" is a dual stage batch controller designed to create an efficient and accurate dispensing experience. Mountable either directly onto a FLOMEC® flow meter or remotely, and compatible with multiple types of industry signals, the EB11 allows the user to control the volume of fluid dispensed into their process, while the large 7-digit display with back light enables easy reading of the batch status in either light or dark conditions. Housed in an IP66/67-NEMA4X rated Glass Reinforced Nylon enclosure for increased impact and corrosion resistance, particularly in washdown environments. The EB11 contains 2 digital NPN outputs with a current rating of up to 300mA for direct control of solenoid valves, or to connect to relays to allow for the control of large valves and pumps.

FEATURES

- Easy to use 2 button controller
- Weather resistant and durable IP66/67 - NEMA4X enclosure
- Easy to read backlit 7-digit display
- Retained settings after power loss

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

EB11 = EasyBatch dc powered dual stage batch controller

ELECTRICAL ACCESS 2

1 = M20 x 1.5 mm female threaded conduit entry ports (sealed ports remain IP66/67 when not used)

2 = 1/2 in. NPT female threaded conduit entry ports

FLOW INPUT TYPE 3

D = Digital (pulse or frequency)

POWER SUPPLY 4

0 = Self-powered (battery) or regulated 8-24v (dc)

HOUSING TYPE 5

FM = Universal mount (field or panel) - GRN housing

MM = Integral meter mount - GRN housing*

**MM when retrofitting an instrument to OM series pulse meters*

	1	2	3	4	5
→	EB11	1	D	0	FM

ACCESSORIES (for above series)

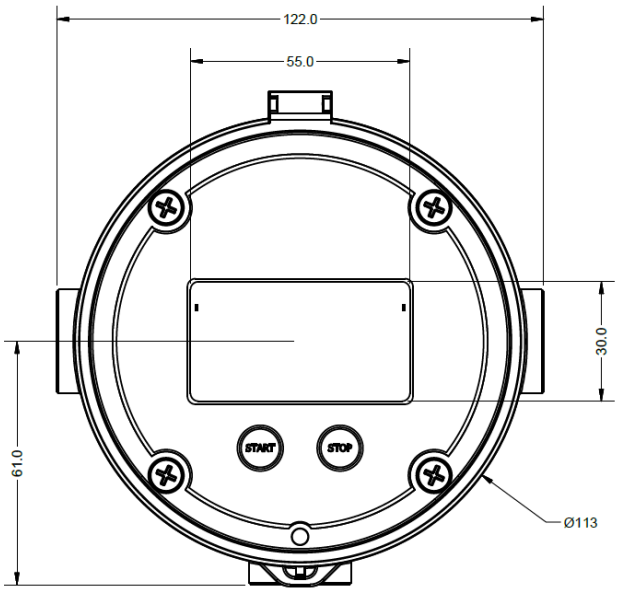
1522001	Stainless steel wall mount kit
1522002	Stainless steel 2 in. pipe mount kit
1502015	Cooling fin kit for flow meters with integral instruments (for operating between 60°C [140°F] and 100°c [212°F]
1322039	ADM M20-M16 metric adapter
1319006	M16 cable gland
1511002	6-core screened instrument cable

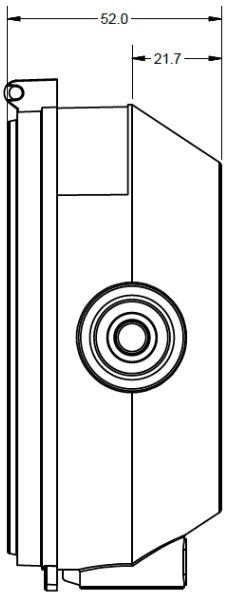
SPECIFICATIONS

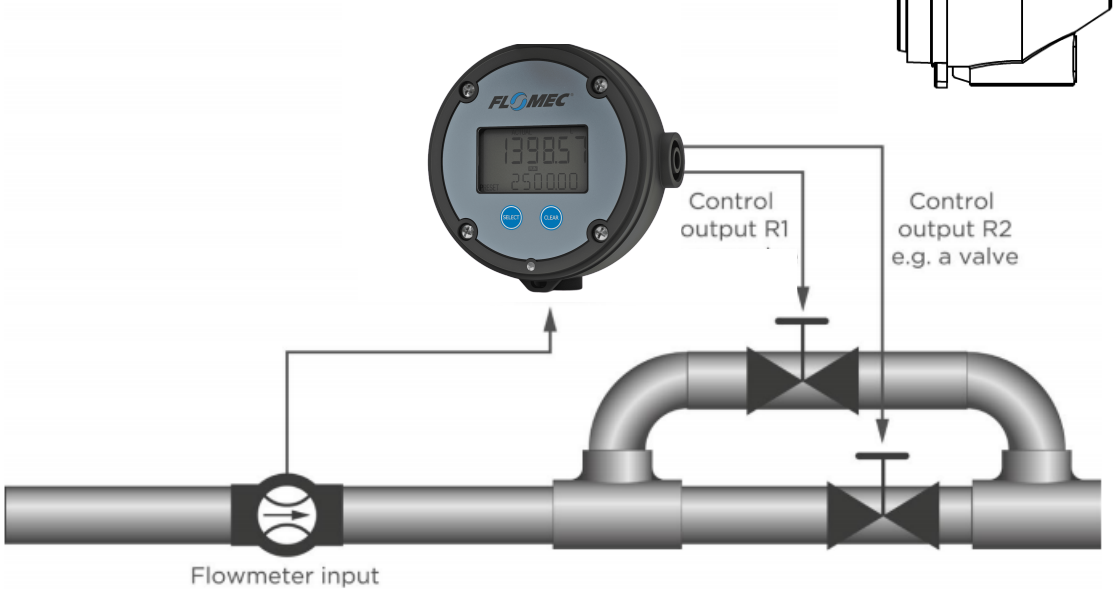
Display	12 mm 7-digit batch total and 7 mm 7-digit batch preset
Engineering Units	Liters, gallons, m³, lbs, kgs, or no engineering units
Input Types & Max Frequency	Namur (4kHz), Reed-switch (120 Hz), NPN (6kHz), PNP (6kHz) and coil.
Control Outputs	GRN housing: 2x 300mA NPN Open Collectors, 24v (dc)
Operating Temperature	Field Mount: -10°C - +60°C (14°F - +140°F)
Enclosures	Field Mount: GRN Housing, IP66 (NEMA4X)
Power Requirements	Field Mount: 10-30v (dc)
Mounting Options	Meter or stem mount, wall, surface, pipe or panel mount*

Panel mount seal kit required to maintain IP66/67 rating when seperating from rear housing for mounting when using GRN housing.

DIMENSIONS / FIELD MOUNT







RT14 FLOW RATE TOTALIZER

The RT14 is a fully programmable self-powered flow rate totaliser specifically designed for computing and displaying flow rates and totals from flow meters with pulse, sine wave or frequency outputs. The instrument displays resettable (batch) total, accumulated total and instantaneous flow rates in engineering units as programmed by the user. Flow meter inputs: suitable use with most pulse/ frequency output meters such as reed switch, coil, voltage pulse (Wiegand), NPN and PNP.

CONTROL OUTPUTS

Scaled and unscaled pulse outputs allow transmission of accumulated flow data to remote control systems. Flow alarms are available to protect flow systems from flow rates that are 'high', 'low', or both, and an analogue 4-20mA signal offers flow rate monitoring and control by accurately transmitting flow rate readings from the flowmeter to your PLC or PID control system.

FEATURES / BENEFITS

- Battery, external DC, or loop powered
- Easy to read backlit LCD display
- Robust IP66/67-NEMA4X universal mount glass reinforced nylon enclosure with rubberized buttons and polycarbonate lens
- Large selection of engineering units for flow rate and total
- Ten point linearisation
- 4-20mA analogue output according to flow rate
- Flow alarm for high, low or high/low
- Scaled pulse output according to accumulated total
- Simple flow chart touch key programming
- Non volatile memory, long battery life
- Flowmeter and pipe mount kits available
- Broad operating temperature range

PROGRAMMING

Simple PIN protected flow chart programming with English prompts guide you through the programming routine greatly reducing the need to refer to the instruction manual.

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

RT14 = Oval Gear Meter

ELECTRICAL ACCESS 2

1 = M20 x 1.5 mm female threaded conduit entry ports

2 = ½ inch NPT female threaded conduit entry ports

FLOW INPUT TYPE 3

D = Digital (pulse or frequency)

POWER SUPPLY 4

0 = Self-powered (battery) or regulated 12-30V (dc)

HOUSING TYPE 5

FM = Universal mount (field or panel) – GRN housing

MM = Integral meter mount – GRN housing*

* Only order MM when retro fitting an instrument to OM series pulse meters

ELECTRICAL OPTIONS 6

-I = Intrinsically safe IECEx/ATEX (EXia IIB T4)

	1	2	3	4	5	6
--->>>>	RT14	1	D	0	FM	-I

SPECIFICATIONS

LCD Display	8 digit alpha-numeric LCD display with 12 mm characters with backlight*
Instantaneous Flow Rate	8 digit to 3 decimal points
Engineering Units Displayed	Liter, mL, Gallon, Quart, Cubic Meter, Pounds, Kilograms or Nil
Input Types	Reed, NPN/PNP, mV sinewave (Turbine flowmeters), Weigand Sensors (voltage pulse)
Input Frequency	1.2 kHz (NPN/PNP), 2 kHz (Coil inputs), 120 kHz (Reed)
Input Scaling Range	0.0001 ~ 9999999.9999 with 4 floating points
Linearisation	10 point correction
Pulse Outputs	One selectable digital output for scaled pulse, unscaled pulse, high, low or high/low alarms
Analogue Output	12 bit 4-20mA (±0.05% FS at 25°C)
Operating Temperature	-22°F - +176°F (-30°C - +80°C)
Power Sources	AA 3.6V Lithium Thionyl Chloride Battery, external DC powered or loop powered (12 - 30V (dc))
Enclosures	High impact glass reinforced Nylon (PA6) with a Polycarbonate lens, Nitrile O-Ring seals and Polyurethane gaskets, providing an IP rating of IP66/67^
Mounting	Meter & stem mount, wall, pipe or panel mount^
Approvals	Intrinsically Safe - IECEx / ATEX (optional) Ex ia IIB T4 Gb (-30°C <Ta <+70°C)

** Backlight possible when connected to external power*
^ Panel mount seal kit required to maintain IP66/67 rating when separating front and rear housing for mounting

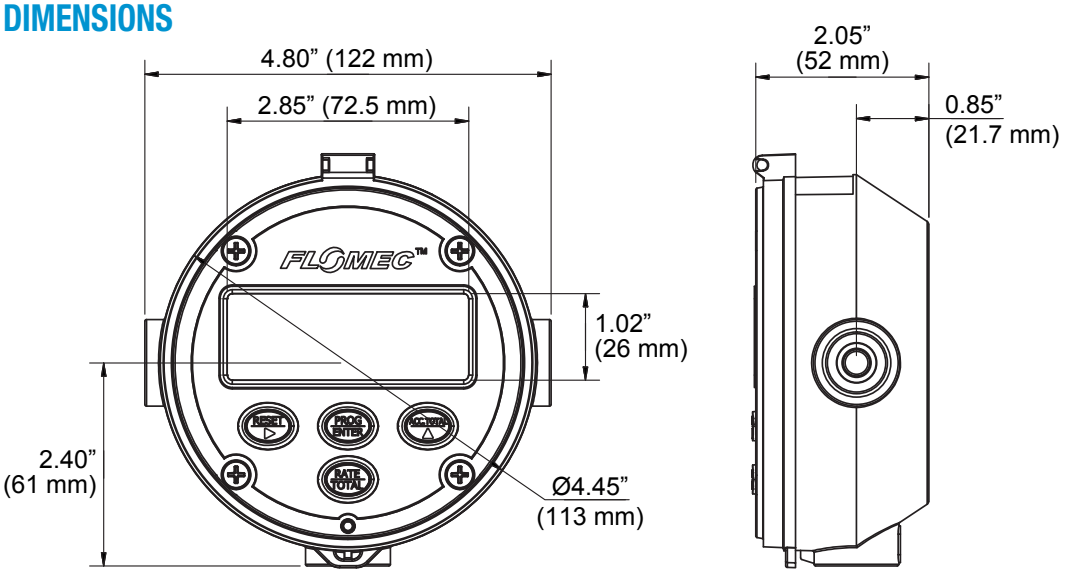
ACCESSORIES

1522001	Wall Mount Kit
1522002	2" Pipe Mount Kit
1504003	Panel Mount Seal Kit

APPROVALS

ATEX IEC IECEx CE

DIMENSIONS



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PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

RT40 = Flow Rate Totalizer with backlit large digit LCD, scalable pulse output

ELECTRICAL ACCESS 2

1 = M16 x 1.5mm for Al housing female threaded conduit entry ports (sealed ports remain IP66/67 when not used)
6 = 3 x 6mm drilled holes for GRN housing (sealed ports remain IP66/67 when not used)

FLOW INPUT TYPE 3

D = Digital (pulse or frequency)

POWER SUPPLY 4

0 = Self-powered (battery) or regulated 8-24 V (dc)

HOUSING TYPE 5

FM = Universal mount (field or panel) - GRN housing
FA = Universal mount (field or panel) - aluminum housing
MM = Integral meter mount - GRN housing*
MA = Integral meter mount - aluminum housing*
* Only order MA or MM when retro fitting an instrument to OM series pulse meters

1	2	3	4	5
---->>>> RT40	1	D	0	FA

RT40 FLOW RATE TOTALIZER

The **FLOMEC® RT40 Flow Rate Totalizer** LCD display is specifically designed for displaying flow rates and totals from flow meters with pulse, sine wave or frequency outputs. The instrument displays re-settable (batch) total, cumulative total and instantaneous flow rate in engineering units programmable by the user.

FEATURES / BENEFITS

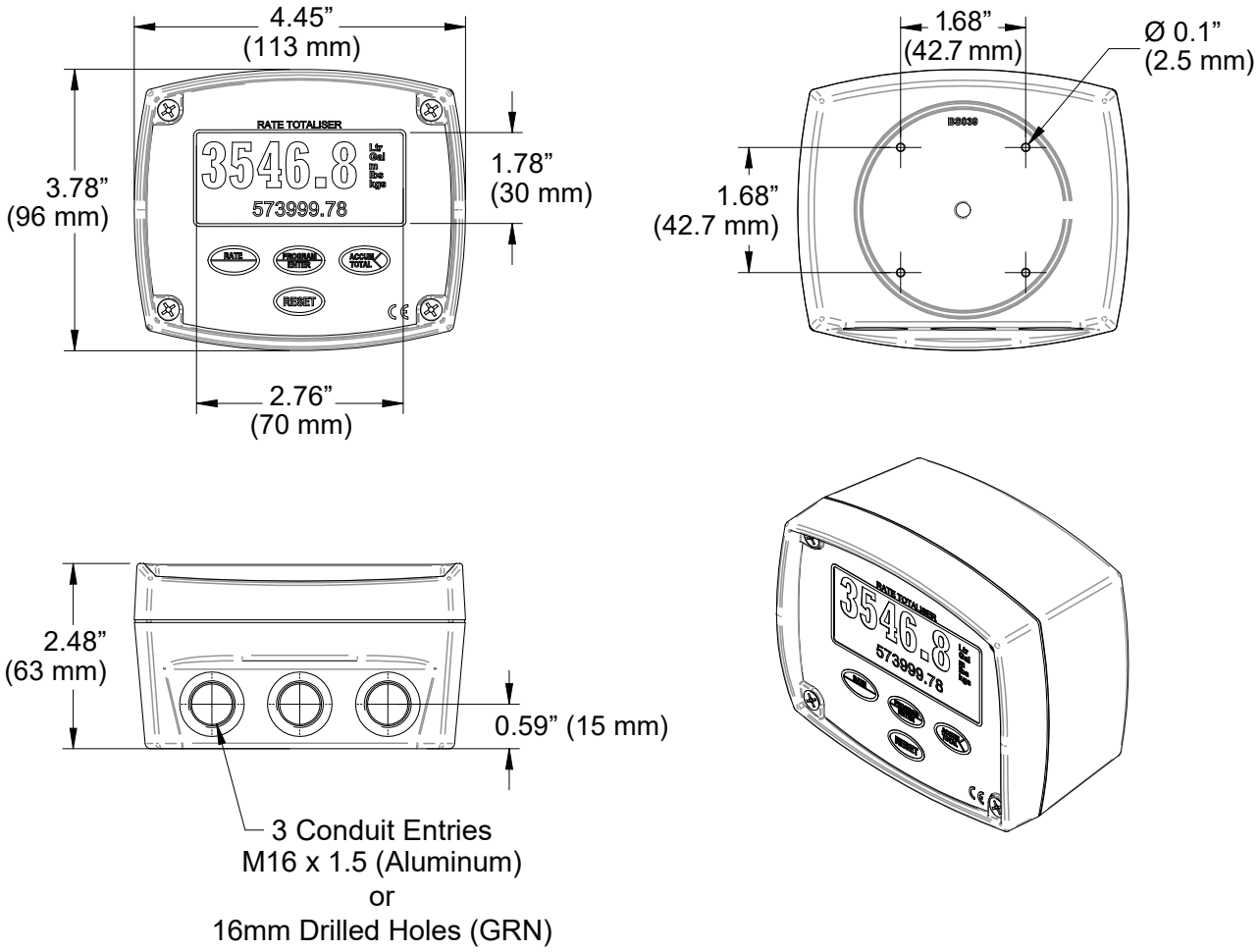
- Economic and robust LCD display in a GRN housing
- Robust LCD display suitable for mine sites and service truck installations, in an aluminum housing
- Large backlit** LCD screen displaying 5-digit flow rate, 6-digit resettable total and 8-digit cumulative total
- Battery or externally powered; battery life span is 3 years, approximately**
- Robust IP66/67 (NEMA 4) GRN housing capable of being field or panel mounted
- Robust IP65 (NEMA 4) Aluminum housing capable of being field or panel mounted
- Scaled pulse output**+
- Universal inputs
- Reverse polarity protection
- Flowmeter and pipe mount kits available
- PIN protected programming with simple programming flowchart

**External power required for back light or pulse output features.
+Max. Output Frequency 20 Hz, K-factor must be divisible by 10.

SPECIFICATIONS

Display	Large backlit LCD 6-digit display with 8-digit secondary display line
Temperature Range	-4°F - +176°F (-20°C - +80°C)
Signal Input	Reed switch, Hall effect, Namur proximity detectors, voltage, current and coil (15mV P-P min)
Max. Input Frequency	Max. input frequency 5 kHz under external power. Maximum input frequency when not externally powered is 150 Hz
Signal Output	NPN transistor, scalable
Max. Output Frequency	20 Hz
Battery Power	3.6 V (dc), approximate 3 year life span
External Power	Regulated 8-24 V (dc) x 50 mA minimum
Protection Class & Body	IP65 (NEMA 4) Aluminium housing
	IP66/67 (NEMA 4) GRN housing
Mounting	Field, meter or panel mount
Engineering Units	Selectable Ltr, gal, m^3, kgs, lbs (total). /s, /min, /hr or /day (rate)
Cable Entries	3 x M16 x 1.5, Aluminum housing
	3 x 6mm drilled, GRN housing

DIMENSIONS



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