# Flous



# A1 SERIES COMMERCIAL GRADE METERS

**FLOMEC® A1 Series Meters** are designed as self-contained, battery powered units. Select the A1 Series when you need an accurate, meter for petroleum products, water or non-aggressive chemical applications.

- Available in Aluminum or Nylon
- · Aluminum model is available in three sizes
- · Use the Aluminum model for petroleum products
- Nylon meter for use in water or non-aggressive chemical applications

### **FEATURES / BENEFITS**

- Unique package combines Turbine and LCD into a selfcontained, compact, economical meter
- Local Display Computer features: 2 Totals (Batch Total = Resettable, Total = Non-resettable) and Rate of Flow. Includes non-volatile totals.
- Output capabilities available to communicate with process control equipment
- · Lightweight, compact design allows for easy installation
- · AAA Alkaline battery life: 2 years
- Factory calibration in gallons or litres (can also be field calibrated to other fluids)

## APPLICATIONS

• Fuel Products (Aluminum model)

Water / Non-Aggressive

Chemicals (Nylon model)

- Fuel Transfer
- Plant Process Water (Nylon model)
- Batching / Blending
- Ag Chemicals
- Solvents / Glycol
- Chemical Feed Lines

## **PRODUCT CONFIGURATION**

#### **1** PRODUCT IDENTIFIER:

A1 = Commercial Grade Electronic Digital Meter

#### 2 ELECTRONIC CHOICE:

Computer Display, Meter Mounted **Q9** = Q9 2-Button Computer

Computer 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 (Unscaled) 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

\*All Electronics Approvals Void

#### **3** CALIBRATION:

**GM** = GPM & L/min (Gallons Default) **LM** = GPM & L/min (Litres Default) **XX** = No Computer

#### **4** TURBINE SIZE:

A025 = Aluminum - Low Flow A100 = Aluminum - 1 inch A200 = Aluminum - 2 inch N025 = Nylon - Low Flow N100 = Nylon - 1 inch X### = No Turbine\*\*

\*\*When ordering Display Only, the ### should be the turbine size.

#### 5 FITTING TYPE:

- N = NPT (Female)
- I = ISO (Female) BSPT
- **B** = BSPP Female available on A025 and A100 turbines only
- **X** = No Turbine

#### 6 PACKAGING:

APPROVED

- With FM, ATEX & IEC Approval for HAZARDOUS AREA
- A1 = Standard or Low Flow, 1 inch (w/Q9 & R9 Electronics Choice)
- A2 = Standard, 2 inch (w/Q9 & R9 Electronics Choice)
- B1 = Standard or Low Flow, 1 inch Turbine Only
- **B2** = Standard, 2 inch Turbine Only
- **B3** = Display Only

#### Non-Approved Version - SAFE AREA ONLY

**C2** = Low Flow through 2 inch Turbines (w/P9, 42, & PO Electronics Choice)



<sup>†</sup>All A1 Series Q9 Displays have the CE, NEMA 4, and IP65 approval.

APPROVED

## **SPECIFICATIONS**

Meter Sizes Available:		A025 (Low Flow), A100 (1 inch), A200 (2 inch), N025 (Low Flow), N100 (1 inch)		
Design Type:	A025	Paddlewheel		
	A100	Turbine		
	A200	Turbine		
	N025	Paddlewheel		
	N100	Turbine		
Fitting Size / Fitting Type:	A025	1 inch / NPT, ISO⁺ or BSPP (Female)		
	A100	1 inch / NPT, ISO <sup>+</sup> or BSPP (Female)		
	A200	2 inch / NPT, ISO⁺		
	N025	1 inch / NPT, ISO⁺ (Female)		
	N100	1 inch / NPT, ISO $^{+}$ (Female)		
Flow Range:	A025	0.3 - 3 GPM	1 - 11 L/min	
	A100	3 - 50 GPM	11 - 190 L/min	
	A200	30 - 300 GPM	114 - 1,135 L/min	
	N025	0.3 - 3 GPM	1 - 11 L/min	
	N100	3 - 50 GPM	11 - 190 L/min	
Accuracy (% of Reading):		A025 & N025: Application Dependent <sup>1</sup>		
		A100, A200 & N100: ± 1.5%		
Repeatability:		A025	± 1.0%	
		A100	± 0.2%	
		A200	± 0.2%	
		N025	± 1.0%	
		N100	± 0.2%	

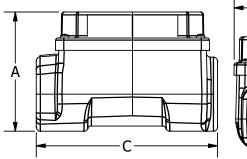
+ISO 7 Designation is RC.

 $^{\rm I}{\rm Accuracy \ can}$  vary up to  $\pm$  5% depending on installation and fluid type. Field calibration is recommended for best accuracy.

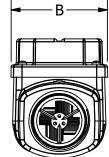
## **DIMENSIONS**

	A025, 1 in. Low Flow	A100, 1 in.	A200, 2 in.	N025, 1 in. Low Flow	N100, 1 in.
A =	2.5 in.	2.5 in.	4.25 in.	2.5 in.	2.5 in.
Height*	(6.3 cm)	(6.3 cm)	(11.4 cm)	(6.3 cm)	(6.3 cm)
B =	2.0 in.	2.0 in.	3.0 in.	2.0 in.	2.0 in.
Width	(5.1 cm)	(5.1 cm)	(7.6 cm)	(5.1 cm)	(5.1 cm)
C =	4.0 in.	4.0 in.	6.0 in.	4.0 in.	4.0 in.
Length	(10.1 cm)	(10.1 cm)	(15.2 cm)	(10.1 cm)	(10.1 cm)

\*Height includes 0.7 in. (1.8 cm) for the computer electronics.



Flows



Pressure Rating (Aluminum):		300 psi (21 bar)		
Pressure Rating (Nylon):		150 psi (10.3 bar)		
Operating Temperature Range:		-40° F to 250° F (-40° C to 121° C)		
with Safe Area Only Display:		0° F to 140° F (-18° C to 60° C)		
with Intrinsically Safe Display:		0° F to 129° F (-18° C to 54° C)		
Typical K-Factor:	A025	2,200 PPG (581 Pulses/L)		
	A100	730 PPG (193 Pulses/L)		
	A200	72 PPG (19 Pulses/L)		
	N025	2200 PPG (581 Pulses/L)		
	N100	730 PPG (193 Pulses/L)		
Frequency Range:	A025	11-110 Hz @ 0.3-3 GPM (1-11 L/min)		
	A100	36.5-608.3 Hz @ 3-50 GPM (11-190 L/min)		
	A200	36-360 Hz @ 30-300 GPM (114-1135 L/min)		
	N025	11-110 Hz @ 0.3-3 GPM (1-11 L/min)		
	N100	36.5-608.3 Hz @ 3-50 G (11-190 L/min)		
Recommended Strainer Size:		A025	55 mesh (275 μm)	
		A100	28 mesh (700 μm)	
			28 mesh (700 μm)	
		N025	55 mesh (275 μm)	
		N100	28 mesh (700 μm)	
Wetted	Housing:	Aluminum		
Materials (Aluminum):	Bearings:	Ceramic (96% Alumina)		
	Shaft:	Tungsten Carbide		
	Rotor:	Nylon		
	Rings:	316 Stainless Steel		
Wetted Materials (Nylon:	Housing:	Nylon		
	Bearings:	Ceramic (96% Alumina)		
	Shaft:	Tungsten Carbide		
	Rotor:	Nylon		
	Rings:	316 Stainless Steel		
Calibration	Comes standard with A1 Series meters.			
Report:	Comes standard		lieters.	

## **ACCESSORIES**

Part No.	Description	
113275-10	FM Approved Remote Kit Assembly <sup>‡</sup>	
113435-10	Conditioned Signal Output Module	
125260-02	90° Display Adapter Kit	
120077-01	FM Approved Sensor Kit <sup>‡</sup>	
120077-02	ATEX Approved Sensor Kit	
113524-01	Connector Kit for FM or ATEX Approved Sensor <sup>‡</sup>	
125060-10	Pulse Out, External Power, Scaled Pulse Module	
125100-10	4-20 mA Module	

<sup>‡</sup>Does not make Non-FM Approved meters FM Approved.

