# ProcessAutomatic EZ-Mag® THE EZ-CHOICE



### **Robust Design:**

The highly robust and compact EZ-Mag is designed to be able to cope with tough environments. Whether installed in-house or on a vehicle, you can be assured that it is up to the task. The all new design has a solid interior; allowing for industrial flanged adapters to be bolted directly onto the flow tube body - providing unmatched flexibility.



#### EZ-Mag has been designed with the flow tube as a focus point.

- The flow tube comprises a polymer liner with 2 electrodes. It has three connecting points; two for the connecting flanges and one for a connecting electronics unit.
- The electronics unit is available in three main enclosures: (CLASSIC) A metal enclosure
   - offering a more robust construction with an aluminium or stainless steel alternative.
   (PREMIUM) A Flow Computer with a back-lit LCD, also in a metal enclosure and an
   aluminium or stainless steel alternative, finally (BASIC) A polymer enclosure offering
   a compact and light weight alternative.
- The metal enclosure is attached to the flow tube by an adapter. This adapter is available in various materials, depending on the needs of the application.

### EZ-Mag provides Four different outputs:

**The Pulse Output:** Provides a measure of the volume passing through the flow tube. Each pulse represents a pre-set quantity; i.e. 1 pulse for every litre.

**The Current Output:** Can be set to 4-20mA or 0-20mA. It is directly proportional to the volumetric flow rate. It can also be used as an output for the optional temperature sensor.

**The multifunctional Output:** Offers 3 alternative indicators. It can be used as a second pulse output, as a bidirectional flow indicator - showing the flow direction, or as a high/low alarm indicator for EZ-Monitor.

The Voltage Output: can be used to power the other outputs or external circuits. As shown, the digital display can be mounted at 0, 90, 180 or 270 degrees. Also, though not shown,



the entire enclosure can also be mounted at optional 90 degree angles. This allows the EZ-Mag LCD to be clearly visible, regardless of the installed position of the flow tube.



**EZ-Design** helps to provide tailored solutions that meet the needs of the user. EZ-Magis easy to adapt. This means that you only put in what you need. EZ-Mag is capable of being customized on functions and material choices. So give us a call and let us help you choose your EZ-Mag.

**EZ-Adapt** - allows for connecting flanges in a multitudinal variety; including threaded BSM connections for wine, TC connections for hygienic applications or ANSI-300 flanges for waste water etc. The EZ-Adapt system also offers the option of built-in flow reducers/ expanders to cut down on installation costs.

**EZ-Liner** is a unique system, allowing for a large variety of different liner materials. This provides the flexibility of choosing a liner material that is the most suitable for the application. So, whether you need a non-stick liner for hygienic applications or a tough liner for abrasive applications, EZ-Mag is "The EZ-choice".

**EZ-Temp** will save you the need of a separate temperature sensor. The optional and built-in temperature sensor will provide accurate temperature readings on the optional LCD and the (0)4-20mA Output.

**EZ-ACT** is an "Actively Compensating Thermometer". It actively compensates for fluid thermal expansion. With this option, you will know that EZ-Mag will stay accurate, even when the temperature varies.

No moving parts - Means low maintenance and zero to minimal pressure drop.

PROGRAM  $\bigcirc$ 

ENTER

K

RESET

0

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PROCESSAUTOMATIC

Vagnhärad. Sweden.

OUT

Type No. 20/2

Serial No. 4249

separates the junk from best.

**EZ-Monitor** is a High/Low Alarm monitoring system. If any set flow or temperature parameters are exceeded, this optional function will send an alarm signal to any suitable receiver via the Multifunctional Output. This means that EZ-Mag can be used to monitor both flow and temperature conditions - providing an alarm signal that can be used to call a qualified operator.

**EZ-2US** is an integrated and easy to use flow computer with a large 16 x 2 back-lit LCD. The fully programmable EZ-2US has a user friendly and self explanatory display.

**EZ-Touch:** The EZ-2US Flow Computer is equipped with thru glass programming. The glass is engraved with ceramic paint - with "non-fade lifetime guarantee".

**EZeCure** is a dual safety system. It prevents unauthorized access to the EZ-2US and protects the stored data in the flow computer in the event of a sudden power outage.

**Suitability** for most applications, including: food & beverage, waste water, pharmaceutical, marine, municipal water & water management, batching ... etc. The compact design allows for easy placement.

EZ-Mag "The intelligent solution". Simultaneous Flow & Temperature Monitoring - Highly Accurate - Variable Design - Optional End-Connections - User Friendly - Durable & Robust - Suitability & Adaptability.

EZ-Tune - 10-point linearization on the lower 20%

**3-A Approved** 3-A Sanitary design & approved for Cleaning In Place (CIP).







The EZ-2US Flow Computer has a large 16 x 2 back-lit LCD that shows Rate, Resettable Total and Resettable Accumulated Total. If opted, the fluid temperature is also clearly visible on the LCD with temperature unit. The EZ-2US allows for full programming of EZ-Mag, with an easy to use and self explanatory touch thru glass display.

#### Technical Creatification

Linearity/Accuracy Of Flow	(Optional) +/- 0,25% Of Reading @ 20:1 Range. (Standard) +/- 0,5% Of Reading @ 20:1 Range.	Respons Time:	Max 160 ms.	
In accordance with EN 29104		Line Pressure:	Max 40 Bar.	
		Pressure Drop:	No pressure drop (7*)	
		Protection:	IP68.	
Approvals:	CE in accordance with	End connection:	Modified DIN11864-2 Form A - with adapters.	
	3-A 28-04	Available connections:	DIN; ANSI; BS, JIS & Butt-weld.etc	
Active Non-Linear Correction Abilities:		Supply Voltage:	24 Volts AC or DC +/-10%.	
	10 point Lipporization (*E)	Power Consumption:	6 Watts.	
	- Active temperature compensation (*4)	Materials:	Customer option. For availabilities,	
Temperature reading: Repeatability:	-40°C to +180°C (-40°F to 356°F)		please refer to manual.	
	+/- 0,5% of reading.	Outputs:		
	Accuracy: Class A DIN EN 60751	Pulse Output:	Open Collector, Max 2 KHz.	
	reads both °C & °F (^3) +/- 0,1% @ 20:1 Range.	Current Output:	<ul> <li>- (0)4-20 mA, source, max load 750 Ω</li> <li>- Temperature Output 4-20mA (*2)</li> </ul>	
Temperature Range:	Ambient Temperature: -25°C to +65°C. Line Temperature Min & Max (1*) -20 to +160°C (-4 to 320°F).	Multifunctional Output:	Open Collector, Max 25Hz. - Second Pulse Output, - Bidirectional Indicator, - High / Low Alarm,	
Cleanability:	CIP & SIP (*6)	Voltage Output:	19-32 Volts DC, Max 50mA.	

(\*1) Stated max temperature is limited to liner material. For details - refer to manual. (\*6) Applies to high temperature liners - such as PVDF. (\*2) The 4-20mA / 0-20mA Temperature Output has a fixed reading of 10,0 °C / mA. (7\*) No pressure drop applies for standard flanges. Built in flow reducers will result in a (\*3) Temperature readings an option feature. The digital display is capable of showing proportional pressure drop. °C or °E

(\*4) Active Temperature Compensation is available as an option - it is not a standard feature. This function utilizes a thermal coefficient of expansion and continuously monitors the temperature of the media and compensates its thermal expansion. (\*5) Linearization is an optional feature.

## **Processautomatic EZ-Mag**

Functional Principle Of An Electromagnetic Flow Meter.



The principle of operation is based on Faradays law of electromagnetic Induction. A highly accurate, bipolar pulse circuitry energizes two coils - creating a magnetic field perpendicular to the direction of the flow.

When a conductive liquid flows through the magnetic field, a voltage is induced. This voltage is proportional to the velocity of the flow and is accurately measured by two electrodes. The electrodes are mounted opposite each other on the inside of the metering tube.

The two electrodes are connected to an advanced electronic input circuitry which processes the signal. The signal is fed to the a microprocessor inside the electronics module. The microprocessor calculates the volumetric flow and controls the various outputs on the terminal board.

Flow Range								
			Liters per Minute		M3 per Hour			
Model	Size (mm)	Size (inch)	min	max	min	max		
Type 10/2	10	2/5″	2,3	47	0,138	2,82		
Type 15/2	15	1/2″	5,3	106	0,318	6,36		
Type 20/2	20	3/4"	9,4	188	0,564	11,28		
Type 25/2	25	1"	14,7	294	0,9	17,64		
Туре 32/2	32	1 1/2"	24,1	482	1,446	28,92		
Type 50/2	50	2"	58,9	1177,5	3,534	70,65		
Type 65/2	65	2 1/2"	99,5	1990	5,97	119,4		



EZ-Mag is the EZ choice when choosing an Electromagnetic Flow Meter. No need to scroll thru page after page of different alternatives. EZ-Mag is just one EZ choice away.



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