

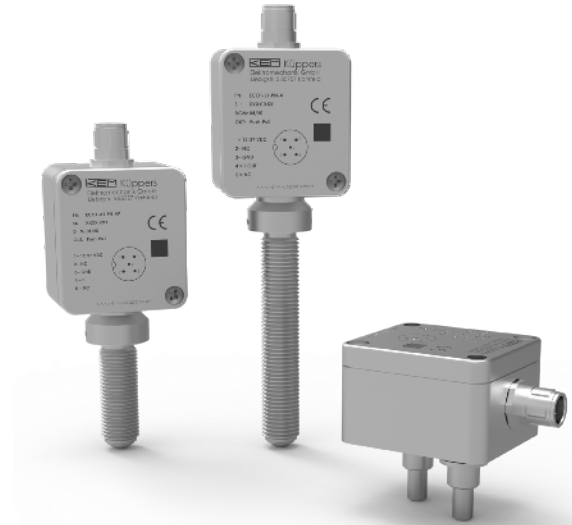
# ECO Series Pulse Amplifier – Intrinsically Safe

## Common Uses

The ECO flow sensor is a versatile flow conditioner that pairs with AW-Lake positive displacement gear meters and HM turbine meters. The sensor is also backwards compatible with previous gear meter models. The ECO sensor is unique as it can linearize both a pulse and analog output to improve accuracy over the full range of the meter. It also has the option to be Intrinsically Safe for Ex applications.

### Key Features:

- Three mounting options for flexibility
- High temperature option (up to 302°F)
- Intrinsically safe units for hazardous environments



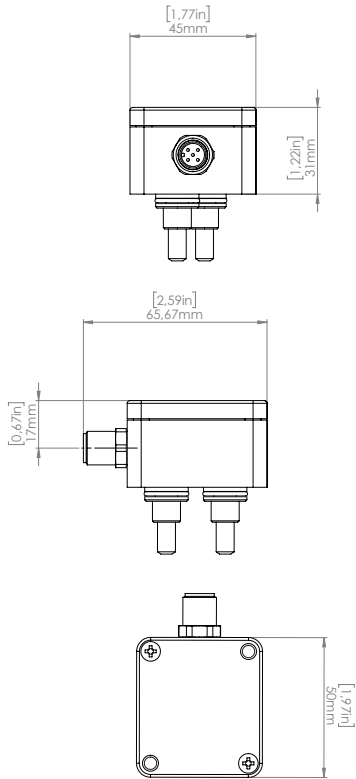
## Technical Specifications

General Meter Data	
Mounting	Flush Mount (1- or 2-Channel)   Screw-In M14x1.5 (1-Channel)
Power Supply	12-28 VDC, regulated
Current Consumption	< 25 mA
Frequency Range	1-5,000 Hz; suitable for all AWL volumetric counters
Output Stages	Push-Pull active, PNP, NPN NAMUR 4-20 mA passive + Freq/Pulse (NPN) 0-20 mA active + Freq/Pulse (PP, NPN, PNP) 0-10 V active + Freq/Pulse (PP, NPN, PNP)
Output Signal	1:1 Frequency or direction signal and doubled Frequency scaled output values LED indicator for status display
Temperature Measurement	±1°C ±0.5%
Ambient Temperature Range	-40°F to 140°F (-40°C to 60°C)
Fluid Temperature Range	Flush Mount: -40°F up to 176°F (-40°C to 80°C) Screw In M14x1.5 (short sensor neck): -40°F up to 248°F (-40°C to 120°C) Screw In M14x1.5 (long sensor neck): -40°F up to 302°F (-40°C to 150°C)
Housing Material	Aluminum die casting alloy 231 or Stainless Steel
Sensor Probe Material	316L Stainless Steel (1.4404)
Protection Class	Aluminum IP65   Stainless Steel IP68 with closed electrical connection
Weight	Approx. 200g

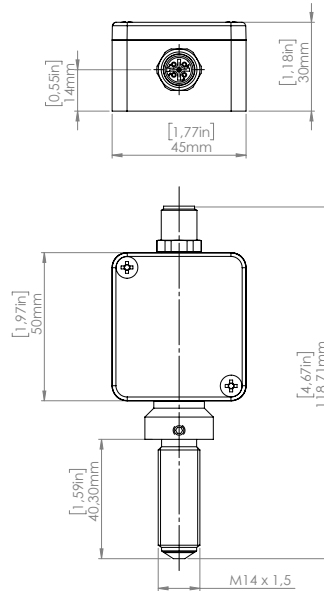
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## Sensor Dimensions

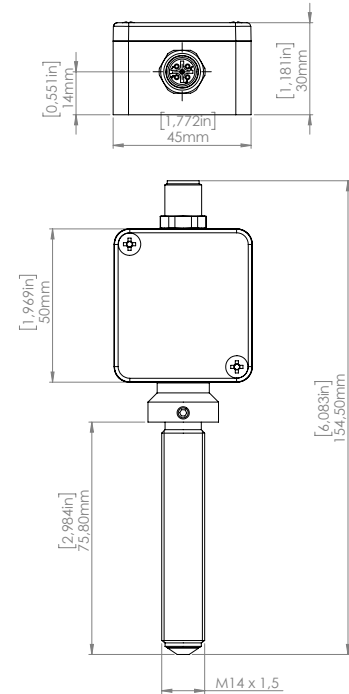
Flush Mount



Screw In Short Neck



Screw In Long Neck

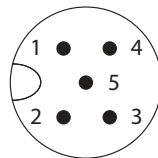


## Electrical Connection

The ECO Sensor is short circuit proof, reverse polarity protected. The M12 Connector is 5-pole, male, A-coded.

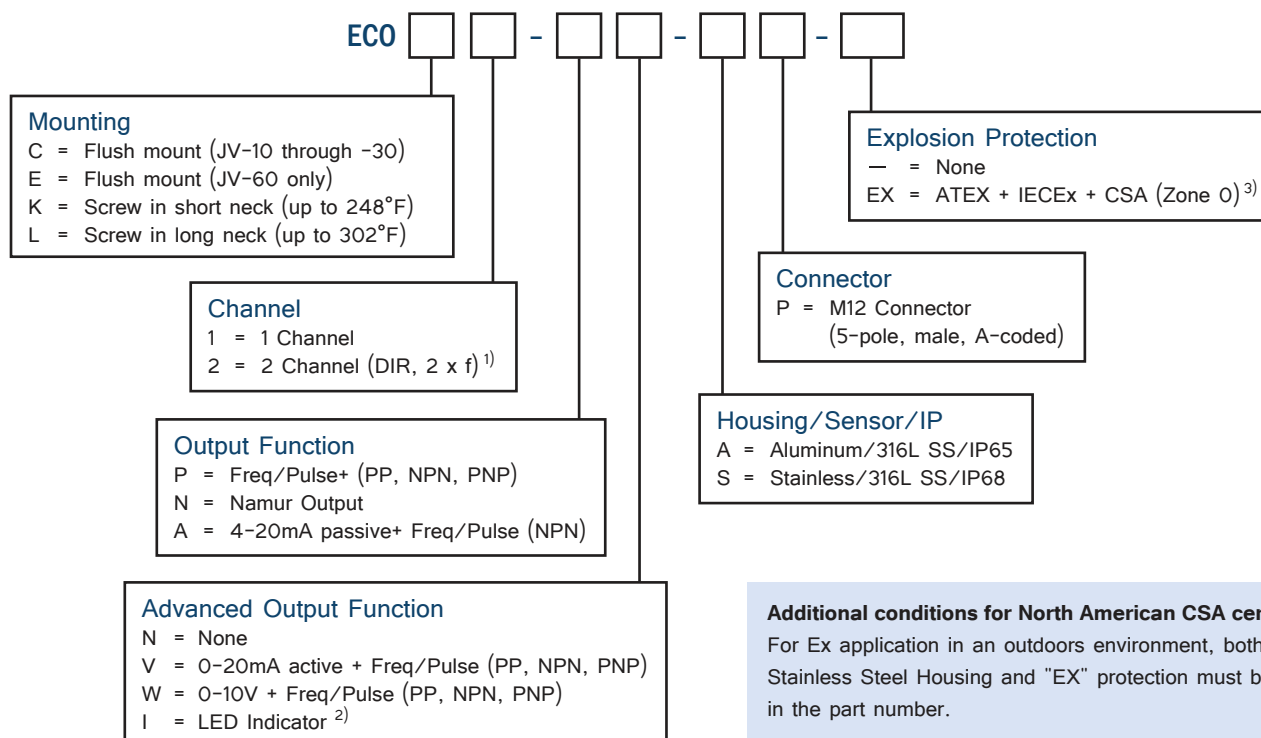
### Pin

- 1 +U<sub>b</sub> / Loop+ (24 V)
- 2 Digital Output 2 / NAMUR
- 3 GND / Loop-
- 4 Digital Output 1 / NAMUR
- 5 Active Analog Output



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## Part Number Guide



1) Not available with Screw-In mounting style.  
 2) Only in combination with output function "P" and Aluminum housing.  
 3) Not in combination with extended output function V and W.

## EX Certification

Approvals	
CSA-c	Ex ia IIC T4 Class I, Division 1, Groups A, B, C & D
cCSAus	Class I, Zone 0 AEx ia IIC T4
IECEX	Ex ia IIC T4 Ga
ATEX	II 1G Ex ia IIC T4 Ga
UKCA	II 1G Ex ia IIC T4 Ga

Products may be subject to change without notice. Contact factory for the most up-to-date product information.