

Fuel Level Transmitters

E2703/04

EIA232

EIA485



Features

- Accurate, reliable, temperature compensated design
- EIA232 or EIA485 serial interfaces, Omnicomm protocol
- Easy installation, stem cuttable to length
- High performance at competitive price

Description

Digital sensors with serial interfaces

Evikon E2700 family of level transmitters with digital interfaces is specially designed for precision fuel level measurement in vehicle and stationary tanks. Applications include vehicle tracking, AVL and fleet management systems. Highly sensitive capacitive technology, robust construction and full digital signal processing ensure stable, accurate and reliable measurements.

High accuracy and linearity

The resolution is better than 0.1% of the range, typically 0.07 mm. Thus high accuracy is provided even in low profile tanks. Thanks to two adjustable digital integrating filters short term fuel level fluctuations do not affect the sensor output. The internal 8-point calibration system enables highly linear output in user defined volume units.

Stable construction

E2700 series transmitters are carefully engineered for best performance and reliability. The sensor stem is made of special light metal alloy for corrosion resistance and stiffness. The vertical slot in the stem reduces its clogging by residues in the fuel, facilitates cleaning and maintenance and improves the reaction time compared to closed tube geometry. The electronics box is completely sealed, providing protection from mechanical and corrosive impact.

Adjustable stem length

The stem can be easily cut directly at the installation place up to 20% of initial length to fit into the tank. Two standard lengths that suit the majority of fuel tanks are L800 mm and L1600 mm, which may be cut to 100 mm. The maximum stem length is limited to L2400 mm.

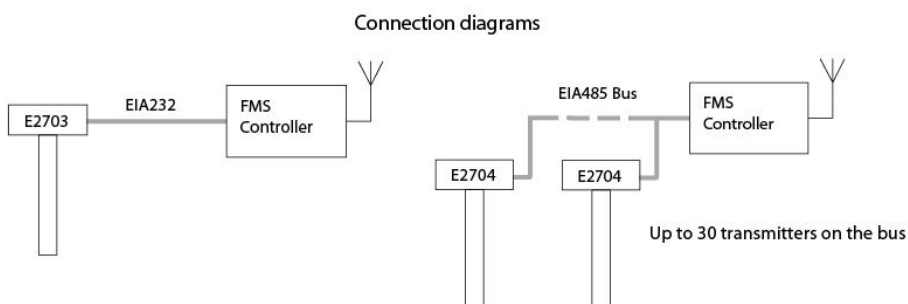
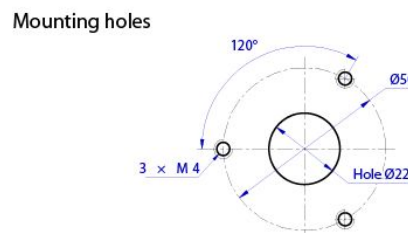
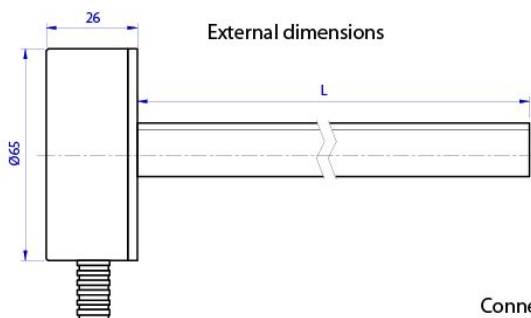


Specifications

Level sensitivity	> 2 units per mm, typically 15 units per mm
Resolution	< 0.1% of the range, typically 0.07 mm
Ambient temperature effect	< 0.03%, typically $\pm 0.01\%$ of the range per °C
Non-linearity	< 1%, typically <0.1% of the range
Internal calibration system	Up to 8 calibration points with linear interpolation
Output range and format	16-bit resolution, 00000 ... 65535 customer specified units
Digital averaging filter	Adjustable integrating factor, time constant from 1 to 255 s
Digital slew-rate limiting filter	Adjustable limiting factor, output change rate 15...240 mm/min
Digital interfaces	Model E2703: 3-wire non-addressable serial EIA232 Model E2704: 3-wire addressable serial EIA485
Baud rate	Selectable 4800, 9600, 19200, 38400, 57600, 115200 bps
Protocol	Omnicompatible
Supply voltage	10 to 48 VDC (12 VDC and 24 VDC nominal board voltages) transient overvoltage, reverse polarity, cross-wire, short circuit protections provided
Operating conditions	-40 to +85 °C, 0 to 100 %RH, IP67 protection
Fuel types	Petro-diesel, biodiesel fuels with flash point higher than +60 °C

Construction

Measurement system	Cylinder capacitor Ø20 mm with slot, light metal alloy EN-AW-6063-T6
Insulating seals	PTFE
Stem length	800mm / 1600mm as standard, up to 2400 mm on request
Electronics enclosure	Hard Polypropylene, Ø65 × H25 mm, protection class IP68
Bottom flange	Light metal alloy, NBR rubber gasket 3 mm
Mounting	3 screws M4 × 40
Connection cable	7 + 1 m cable with open wire ends, plastic protection armour Ø10 mm



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