



Fuel Gauge Transmitter

Clamp-Clamp Mounted



The AUTOFLUG clamp-clamp mounted active capacitance type Fuel Gauge Transmitter (FGT) is a fuel height gauge for installation inside fuel tanks. Typical applications are wing, external and auxiliary fuel tanks.

The fuel gauging length can be adapted in accordance with customer requirements.

Fuel Gauge Transmitter Functionality

The clamp-clamp mounted sensor is an active capacitance type sensor. The capacitor's conductive surfaces are provided by concentric tubes. The measured capacitance is dependent on the fuel height at the sensor.

Within the sensor's electronics the measured capacitance which represents the actual fuel height is transformed into an EMI immune output signal.

A Fuel Compensator can be integrated into the Fuel Quantity Measurement System to improve accuracy by compensation for different fuel types and fuel temperatures.

Customising

AUTOFLUG provides a wide range of Fuel Gauge Transmitters. AUTOFLUG Fuel Gauge Transmitters are based on company standardised components such as tubes, flanges, level sensors, electronics, cables and connectors.

In short time AUTOFLUG can configure, build, test and qualify sensor prototypes. Series production can start immediately thereafter.

AUTOFLUG performs fuel tank studies based on customer supplied CAD data in order to define the required quantity and position of Fuel Gauge Transmitters and the associated height vs. volume tables for fuel volume and fuel mass calculation.



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Mechanical Interface

Mounting	2 clamps, no directional limitations, (clamp e. g. 7C1-20 NSN 5340-00-817-0807)
Dimensions	62 mm by 40 mm (height, width, space envelope)
Sensing length	200 to 1,000 mm

Electrical Interface

Input Power	15 VDC, max. 20 mA
Output Signal	Pulse Width Modulated (PWM)
	amplitude: 0 to 5 VDC
	carrier frequency: 488 Hz

Temperature Range

Operational	-55 °C to +71 °C
Storage	-55 °C to +85 °C

Applicable Fluids

NATO Code MIL Type	F-40 MIL-DTL-5624, Grade JP-4 F-34 MIL-DTL-83133E, Grade JP-8 F-44 MIL-DTL-5624, Grade JP-5 F-35 MIL-DTL-83133E F-37 MIL-DTL-83133E, Grade JP8+100 F-54 F-63 JET-A/ JET-A1 ATSM D-1655 Jet B AVTAG DERD 2486
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Accuracy

± 0.5% duty cycle at empty condition (dry), linearly increasing to
± 1.6% duty cycle at full condition (fully immersed)

Weight

220 g + 200 g/m

Environmental Qualification

in accordance with MIL-STD-810

EMC/EMI Qualification

in accordance with MIL-STD-461