

TANK LEVEL GAUGES

INS-04/RIS-04/RTSS-04



KEY FEATURES

- + **180°** Viewing Angle
- + **I/O Driver** For Low Water Warning, Autofill-Hysteresis, Mute input, Etc.
- + **CAN Bus** Interface
- + **Super Bright** LEDs
- + **Ambient Light Sensor**, Backlit
- + **Low** Installation Depth
- + **Conductive** Probe Input

INS-04 types of Tank Level Gauges are designed to display liquid's volume at an accuracy of 1/4 of the tank level using 5 ultra-bright LEDs. The gauge operates on basis of the conductance of the measured liquid using the conductive probe. The electrodes are placed at each quarter length of the probe.

Optional I/O driver can be integrated for low level warning output, autofill-hysteresis output, mute input, etc.

The Tank Level Gauge can be used as a stand-alone system or as a part of MMX system connected via CAN bus to IO Controller. Several remote indicators can be connected to a main indicator to show the same value on different locations or in combination with a XL remote indicator (RIXL) for the vehicle sides.



SPECIFICATIONS

POWER

Supply Voltage	8-30 V DC
Current	0.5 A maximum, no outputs active
Electrical Protection	overvoltage, reverse polarity

INTERFACES

CAN	1 x CAN, CAN termination 120 ohm DIP switch
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I/O

Probe input	Conductive probe with max. 5 rods
Digital Input IN1	configurable active low/high levels 0..Ub with solder pad on PCB, protected
IN2	active low level, config. input
Digital Output	<i>*Only version with integrated I/O driver</i>
OUT1	positive switching (high-side), max. 2 A (Low water warning)
OUT2	positive switching (high-side), max. 2 A (Autofill-Hyst.)
OUT3-OUT4	positive switching (high-side), max. 2 A
OUT5	negative switching (low-side), max. 0.5 A
Loads	Inductive, capacitive, resistive

PROBE-OEM

Detection method	conductive
Probe length	250-2000 mm
Probe material	rods in stainless steel 316 (1.4305)

ENVIRONMENT

IP Class (IEC529)	front panel IP67, back IP20, probe IP67
EMC Conformity	EN61000-6-2 noise immunity EN61000-6-4 radiation of interference
Temperature Range	storage -40° to +85°C (-40° to 185°F) operating -40° to +85°C (-40° to 185°F)

ENCLOSURE

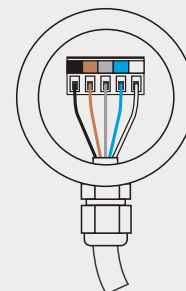
Housing Material	aluminium
Mounting	in-dash, with 4 screws M3 or 3.5 mm (#8) tapping screws
Connector	terminal block 4 or 14-way depending of options selected, probe connector M12

MISCELLANEOUS

Indicator increments	1/4
Day/Night operation	automatic – integrated ambient light sensor
Front panel	backlit, colour coded for water and foam
Detectable substances	water, fire-smothering foam, gasoline, etc

SIZE & WEIGHT

W x H x D	48 x 76 x 26 mm with connector
Weight	0.10 kg



Main interface - Smart										Ordering code example:						
I	N	S	-	0	4	W	P	R	R	H	L	M				
				04 DISPLAY INCREM. 1/4	W: WATER F: FOAM		PR: LEVEL PROBE INPUT CONDUCTIVE PROBE		OUT1 R: LOW LEVEL WARNING		OUT2 H: AUTOFILL HYST. xx/xx % R: ADD. OUTPUT		OUT3 - OUT6 L: LLD5 DRIVER OUTPUTS		INPUT IN1 M: MUTE OUT1	