

TANK LEVEL GAUGES

INS-08/RIS-08/TLGS-08



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
- + **Multiple** sensor input

INS-08 types of Tank Level Gauges are designed to display liquid's volume at an accuracy of 1/8 of the tank level using ultra-bright LEDs. The transducer measures the column of the liquid in the tank above the sensor process input and provides a signal that is proportional to the tank high. The unit standardly uses a pressure transducer with output 0.5-4.5 V. The sensor input is widely configurable and it can also be used for 0-10 V transducers, 4-20 mA transmitters or even resistive 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, transients, reverse polarity, load dump

INTERFACES

CAN	1 x CAN
CAN termination	120 ohm, DIP switch

I/O

Sensor input	0.5-4.5 V, 0-5V, 0-10V, 4-20 mA, resistive probe
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-Hysteresis xx/xx%)
OUT3-OUT4	positive switching (high-side), max. 2 A
OUT5	negative switching (low-side), max. 0.5 A
Loads	Inductive, capacitive, resistive

ENVIRONMENT

IP Class (IEC529)	front panel IP67, back IP20
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

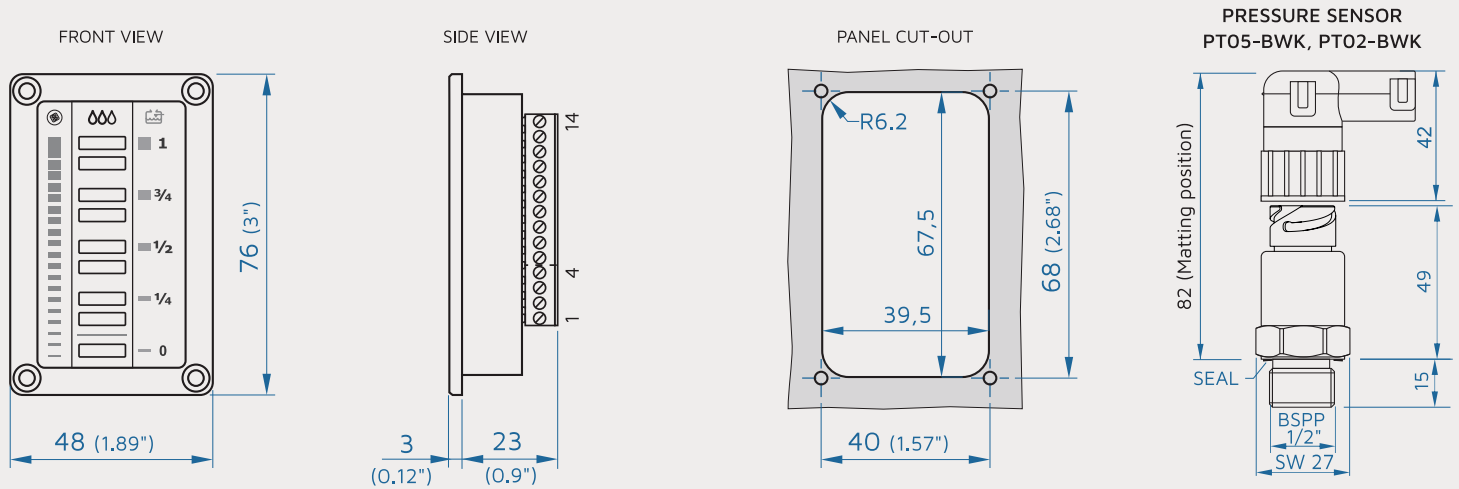
MISCELLANEOUS

Indicator increments	1/8 Standardly, 1/4 Optional
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

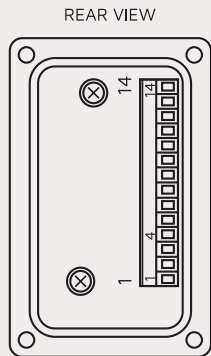
W x H x D	48 x 76 x 26 mm (1.9" x 3" x 1") with connector
Weight	0.10 kg (0.55 lbs)

DIMENSIONS

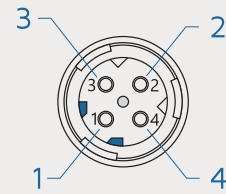


CONNECTIONS

CONNECTION TERMINAL BLOCK 4 OR 14-WAY	
PIN	Description / wire colour
1	BATTERY + ("15")
2	BATTERY - / GND
3	CAN L
4	CAN H
5	SENSOR [V]/[MA] VCC+
6	SENSOR [V]/[MA] SIGNAL
7	SENSOR [V] GND
8	DIGITAL IN1
9	OUT1 HIGH SIDE 2 A (LOW W/F)
10	OUT2 HIGH SIDE 2 A (HYST.)
11	OUT3 HIGH SIDE 2 A
12	OUT4 HIGH SIDE 2 A
13	OUT5 LOW SIDE 0.5 A
14	CONFIG/MUTE



TRANSDUCER OEM



CONNECTION TWIST LOCK (ISO 15170)

PIN	VOLTAGE SENSOR	CURRENT SENSOR
1	BATTERY +	BATTERY +
2	GND	SIGNAL 4-20 MA
3	SIGNAL 0.5-4.5V	N/C
4	N/C	N/C

PRODUCT CODE

SET of main indicator small INS, sensor PT05-U4

Ordering code example:

T	L	G	S	-	0	8	W	-	R	H	L	M				
					08 DISPLAY INCREM.1/8 04 DISPLAY INCREM.1/4		W: WATER F: FOAM		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	

Remote Indicator - Small - For use with main indicators featuring a U1 (0-10 V) sensor input.

R	I	S	-	0	8	W	-	R	H	L	M
08 DISPLAY INCREM.1/8 04 DISPLAY INCREM.1/4		W: WATER F: FOAM		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	

***NOTE:** Selection of all three options R, H and L for the same indicator is standardly not possible. Options that are available are R, H, L and the combination RH

Main Indicator - Small - Automatically operates as main or remote indicator, depending on the sensor input and connection

I	N	S	-	0	8	W	U	4	R	H	L	M
				08 DISPLAY INCREM.1/8 04 DISPLAY INCREM.1/4		W: WATER F: FOAM	SENSOR INPUT / PROBE U4: 0.5-4.5V U1: 0-10 V I2: 4-20 MA		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