

8200 Current Output Transmitter

Signal transmission for accurate level measurement in storage tanks



Applications

The 8200 Current Output Transmitter is a precision analogue instrument designed to mount directly to the 2500 Automatic Tank Gauge (ATG) and 2592 Cover Position Indicator. With the use of an elbow drive adapter the 8200 can also be adapted to the 6700 Liquid Level Indicator. Changes in liquid level are output to a 4-20 mA or 10-50 mA signal.

Features

- Mounts directly to the 2500 ATG and 2592 Cover Position Indicator
- Mounting adapters available for other standard float gauges
- Two wire, industry standard 4-20 mA output
- 115 or 230 V_{ac} on-board power supply available
- 0.25% accuracy over full range
- FM approved Class I, Division 1, Groups C&D
- NEMA Type 4 enclosure rating
- CSA and CENELEC configurations available

Measuring System

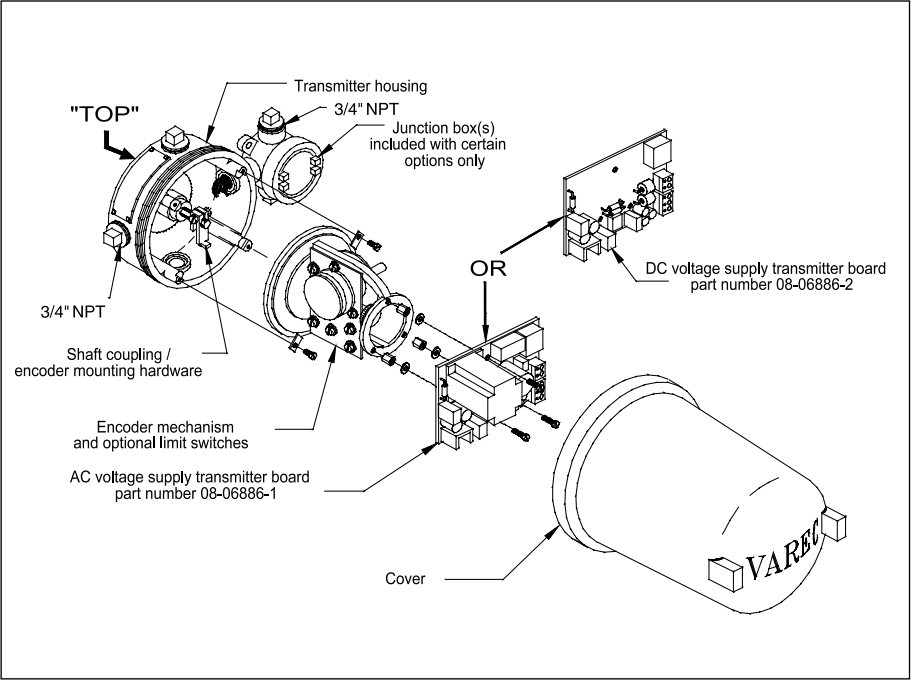
The 8200 is designed to connect to most standard float gauges and then transmit the changes in level via a junction box to a local display or control room.

Operation

The mechanical level gauge Sprocket Drive Sheave rotates in response to changes in liquid level, this motion turns the transmitter drive shaft. The drive shaft is coupled to a worm gear that in turn drives the shaft of a potentiometer which causes the current in the instrumentation output loop of the transmitter to vary. As standard configuration, an increase in current output with a rising level (innage), but the transmitter may be configured for a "reverse" (outage) reading output. The current loop variations are carried across a two-wire local bus to a central receiver or local display.

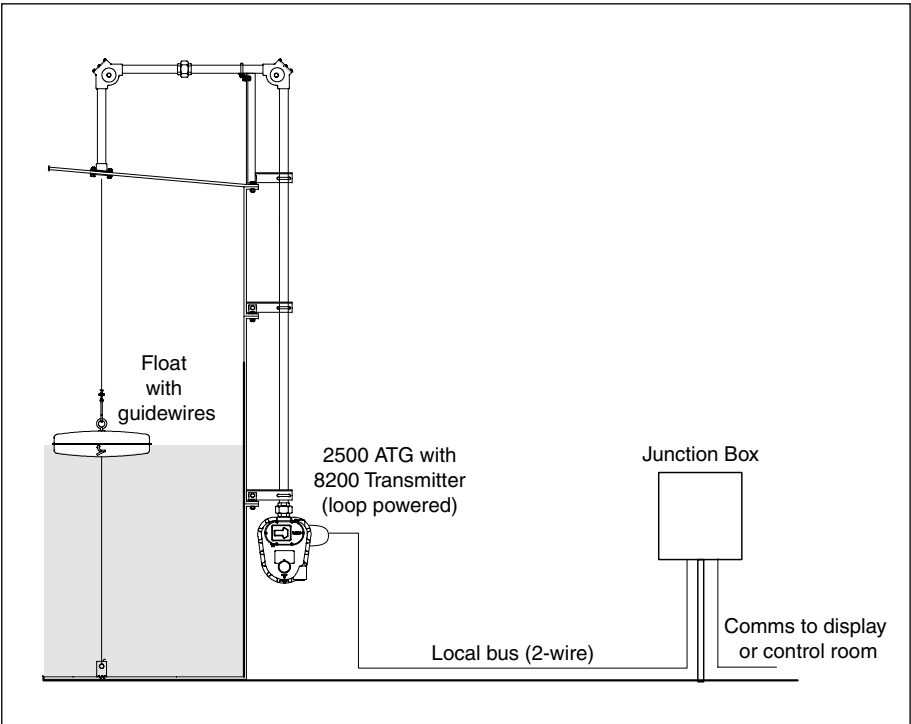
The 30 volts DC required for operation may be supplied by the user or through a 115 or 230 V_{ac} on-board power supply. Nine (9) different factory calibrated level ranges (fractional or Metric reference dials) are available with a range adjustment of 50 to 100% of the specified range.

8200 Current Output Transmitter



Installation

Typical 8200 tank installation



Technical Data

Environmental

Operating Temperature	-25 °C to +85 °C (-13 °F to +185 °F)
Operating Humidity	0 to 95% r.h. non-condensing
Enclosure	Explosion proof cast aluminum suitable for installation in Class I, Division 1, Groups C&D hazardous areas Epoxy painted water tight enclosure: FM – NEMA Type 4 enclosure rating CSA – Type 4 enclosure rating CENELEC – Designed to meet IP65
Safety Approvals	Factory Mutual (FM) J.I. File No. 1K3A6.AE, 1K3A7, AE, 1T749.AF Class I, Division 1, Groups C&D NEMA Type 4 Canadian Standards Assoc. (CSA) File No. LR40894-24 Class I, Division 1, Groups C&D Type 4 ISSeP (Iniex) File No. 85.103.422 Eex d IIB T5

Physical

Dimensions & Weight	203 mm Ø x 336 mm L (8.0" Ø x 13.25" L) 7.3 kg (16 lb)
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Functional

Power Requirements	15 to 48 V _{dc} 115 V _{ac} +/- 10% 50/60 Hz (on board 30 V _{dc} power supply) 230 V _{ac} +/- 10% 50/60 Hz (on board 30 V _{dc} power supply)
Operating Voltage	15 V _{dc} – minimum 48 V _{dc} – maximum
Output	4-20 mA or 10-50 mA, jumper selectable
Accuracy	0.25% at 100% span, 0.35% at 45% span
Available Ranges	Meters: 0-3.75 m, 0-7.5 m, 0-15 m, 0-24 m Feet: 0-5.0 ft, 0-12.5 ft, 0-25 ft, 0-50 ft, 0-100 ft
Range Adjustment	50-100% range
Span Adjustment	45-105%
Allowable Loop Resistance (Loop Plus Line)	8200 with 48 V _{dc} by user: 1500 Ohms (max) 8200 with integral DC supply: 500 Ohms (max)
Conduit Entries	3/4" NPT
Signal Wires	Two (2) conductors
Options/Accessories	Two or four SPDT N.O. cam operated limit switches "Reverse" reading output Condulet junction box (standard with CSA & CENELEC models)

Product Structure

8200	4-20 mA Current Output Transmitter				
	Power Input				
	0	48 V _{dc} – by user			
	1	115 V _{ac} – integral DC supply			
	2	230 V _{ac} – integral DC supply			
	Level Ranges				
	0	0 to 5 ft			
	1	0 to 12.5 ft			
	2	0 to 25 ft			
	3	0 to 50 ft			
	4	0 to 100 ft			
	5	0 to 3.75 m			
	6	0 to 7.5 m			
	7	0 to 15 m			
	8	0 to 24 m			
	Approvals				
	0	Factory Mutual (FM)			
	1	Canadian Standards Association CSA			
	2	INIE/CENELEC			
	Options				
	0	None			
	1	Two SPDT switches (normally open)			
	2	Four SPDT switches (normally open)			
	3	“Reverse” reading			
8200					Product designation

Note!

Units supplied with one (1) junction box if 48 V_{dc} by user. Supplied with two (2) junction boxes if 115 or 230 V_{ac} option is selected.

Transmitter Adapter Kits

Part Number	Description
13-05956-102	Adapter kit for mounting to GPE 92514, 92020 and 92030 gauges
13-05956-202	Adapter kit for mounting to GPE 92006, 2006 gauges
13-07231	Adapter kit for mounting to Sakura LT-1110 gauge (Metric only)

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