8920 Loop Powered Transmitter

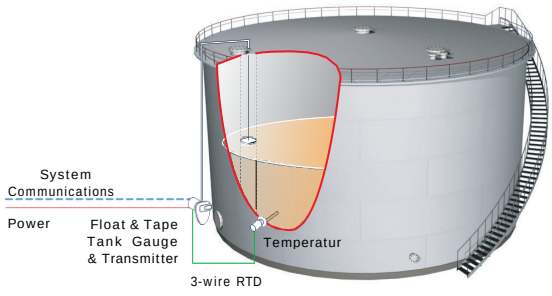
View accurate level and temperature data at the tank side and transmit it to the control room

Highlights

- 2-wire industry standard 4–20 mA output (Level only)
- Optional secondary 4–20 mA loop output for Temperature
- Features capacitive encoder for improved level measurement accuracy up to 1/16th of an inch
- Easy in-service installation - mounts directly to most mechanical tank gauges, including Varec, L&J, and GSI
- With LCD display capacitive touch control, configuration is simplified and measured inventory data is available tank side
- Activate alarms using 2 or 4 SPDT cam-operated limit switches—dwell adjustable and independently configured to switch at any desired tank level
- Approved for hazardous areas: cFMus, ATEX, IECEx, UKEx
- Designed and tested to IP66 and NEMA4
- Loop-powered (passive) or AC-powered (active)

Applications

For use in inventory management applications, the 8920 Loop Powered Transmitter (LPT) is a precision transmitter designed to relay level or level & temperature information via field communications to the control room. Changes in liquid level and tank temperature are output to a 4-20 mA signal, or via HART (pending). The 20-to-48 DC voltage required for operation may be supplied by the user or through an optional 85-to-305 VAC on-board power supply. Two or four cam-operated switches that can be utilized for indication of alarms or relays are also available as an option.



Example Tank Gauging System

The 8920 LPT is built to perform even in the most demanding of environments. All electronics are contained within explosion-proof, NEMA 4x rated enclosures. Utilizing capacitive sensors and precision direct-drive gearing, the encoder transmits the level reading accurately and consistently. This encoder can also read the absolute measurement, which eliminates the need for a battery back-up and maintains the correct level reading even after a power outage. Isolated power and communications circuits provide an extra measure of safety. The self-diagnostic circuit identifies any problems on the electronic components and isolates the unit to protect the communication loop.

Technical Specifications

Physical

Weight	Net 17 lbs. (7.7 kg)
Dimensions	13.75" W x 7.5" H x 15" D (350 mm x 190 mm x 380 mm)
Encoder	Absolute, capacitive
Gearing system	Stainless Steel, Direct Drive
Enclosure	Material: Impregnated Aluminum Base and Cover IP66, NEMA4
Conduit entries	8920 LPT Enclosure: 2 or 3 x 3/4" NPT (standard configuration uses one entry) Terminal junction box: 2 x 3/4" NPT

Environmental

Standard operating temperature	N8920FM: • -25° C to +73° C (-13 °F to +163 °F) N8920AC & N8920FC • -40 °C to +73 °C (-40 °F to +163 °F)
Operating humidity	0 to 95% relative humidity, non-condensing

Limit Switch

2 or 4 SPDT limit switches (optional)	11 amp – 125, 250, 277 VAC
	1/3 HP – 125 VAC, 250 VDC
	½ amp – 125 VDEC, ¼ amp – 250 VDC
	4 amp – 125 VAC Tungsten Filament Lamp Load

Power

Power requirements	• Operating voltage range 20 to 48 Volts DC (regulated), 2 W from external power supply OR • 85 to 305 VAC, 50/60 Hz, 4.5 W

Performance

Accuracy	± 1/16" (1.58 mm)
Repeatability	0.16% Full Range

Functional

Available ranges	0 to 120 ft; 0 to 36 m **Note!** The available limit switch range is 100 ft (30 m) max
Output	• Single 4-20 mA – Level only • Dual 4-20 mA – Level and Temperature • HART (Pending) – Level and Temperature
Temperature RTD Input	High accuracy 20-bit analog-to-digital converter. 3-wire RTD Platinum (PT100)

Analog 4-20 mA Output (2)

Output Current	3.5 to 22 mA
Accuracy	±15 µA (after linearization and calibration)

Training and Support

The 8920 LPT, its accessories, and spare parts are available to ship today. Every part is supplied with detailed user instructions via QR code web link. If you need direct support, we offer standard training and service programs That we tailor to your staff and your facility. Instructions to mount the Transmitter on a 2500 gaugehead is provided in the Operator's Manual.

Order Codes

N8920 -	Housing / Approvals	
	AC	ATEX/IECEx/UKEx (Low Temp.) II 2 G Ex db IIB T5 Gb -40 °C ≤ Ta ≤ +73 °C
	FC	cFMus (USA & Canada – Divisions & Zones, Low Temp.) Class I, Division I, Groups C&D, T5 Class I, Zone 1, IIB, T5 (USA) Zone 1 per CEC 18-100 (CAN) -40 °C ≤ Ta ≤ +73 °C
	FM	cFMus (USA & Canada – Divisions, Std Temp.) Class I, Division 1, Groups C&D, T5 -25 °C ≤ Ta ≤ +73 °C (Available with External Display only)

		Power	
		1	Loop Powered
		2	AC Powered

			Output	
			S	Single 4-20 mA Output (Level)
			D	Dual 4-20 mA Outputs (Level & Temperature)
			H	HART Output (Level & Temperature) (Pending)

				Limit Switches	
				0	No limit switches
				2	Two (2) SPDT Limit Switches (18° adjustable dwell, positive activation)[1]
				4	Four (4) SPDT Limit Switches (18° adjustable dwell, positive activation)[1]

					Limit Switch Range	
					N	N/A Range, No Limit Switches[2]
					A	0-25 ft Limit Switch Range
					B	0-50 ft Limit Switch Range
					C	0-100 ft Limit Switch Range
					D	0-7.5 m Limit Switch Range
					E	0-15 m Limit Switch Range
					F	0-30 m Limit Switch Range

						Display Option[3]	
						A	Forward Facing (standard) Display
						B	Backward Facing Display
						C	Side Facing Display
						D	Internal Display **Note!** Not available with Housing / Approvals option 'FM')

[1] Ensure a Limit Switch Range option from A to F has been selected.
[2] Applies only to Limit Switch option 0. Otherwise, select an option from A to F.
[3] Select the appropriate Display Option depending on the tank gauge used.

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