



The type 2270 is a rugged, high performance ultrasonic level measurement sensor, having transducer and processing electronics incorporated in one single housing. It provides all the sophisticated echo detection features of the well accepted 2260 Ultrasonic Level Transmitters.

For single and multiple tank applications 2-wire sensors are recommended using either HART protocol or 4 to 20 mA for the direct communication with a panel mount controller or a PLC.

Either for liquid level measurement in sumps or tanks, for tank contents measurement, or open channel flow measurement, the 2270 Level Sensors provide the answer. Sensing ranges up to 6 m (19.7 ft) are available. PP and PVDF sensor bodies provide best chemical resistance in applications where concentrated chemical shall be detected.

Features

- 2 wire compact sensor
- Non-contact level measuring
- Narrow 5° beam angle
- Level, volume and open channel flow
- Compact housing
- 32 points of linearization
- Fully temperature compensated electronics
- Outstanding signal processing software providing highly accurate measuring results
- PP or PVDF sensor body provides best chemical resistance
- Secondary lightning protection
- 4 to 20 mA / HART interface



Applications

- River water
- Seawater
- Potable water
- Demineralized water
- Treated water

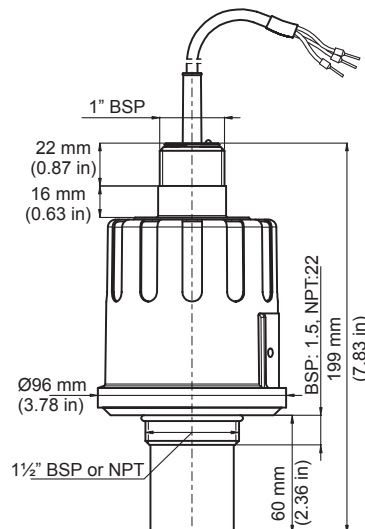


Specifications (Type 2270-X-XX-4)

General		
Range		0.2 to 4 m / 0.65 to 13 ft
Total Beam Angle		6°
Measuring Frequency		80 kHz
Accuracy *		± (0.2 % of measured distance plus 0.05 % of range)
Resolution		<2 m (6.6 ft): 1 mm (0.04 in.), 2 to 4 m (6.6 to 13.1 ft): 2 mm (0.08 in.)
Environmental		
Process Temperature		−30 °C to +90 °C (−22 °F to +194°F)
Ambient Temperature		−30 °C to +80 °C (−22 °F to +176°F)
Process Pressure (absolute)		0.05 to 0.3 MPa (0.5 to 3 bar) 7.25 psi to 43.5 psi
Enclosure		
Enclosure and Sensor Material		PP or PVDF
Cable Material		Cable sealing: EPDM, cable isolation: PVC
Ingress Protection		IP68 / NEMA 6P
Process Connection		1½" BSP / NPT
Sealing		
	PP sensor	EPDM
	PVDF sensor	FPM (Viton)
Electrical		
Outputs		2-wire 4–20 mA , max. 600 Ohm; HART interface, Rt >= 250 Ohm
Power Supply		DC 12 to 36 V
Power Consumption		max. 720 mW, overload protected
Connecting		6 x 0,5 mm² shielded cable; Ø 6 mm x 5 m (30 m max.)
Electric shock protection		Class III, low voltage
Standard and Approvals		
General Approvals		CE

* Under optimal circumstances of reflection and stabilized transducer temperature

Dimensions

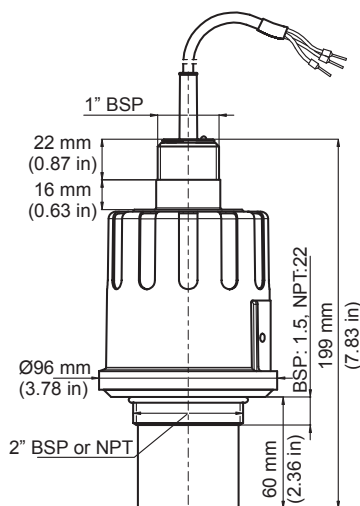


Specifications (Type 2270-X-XX-6)

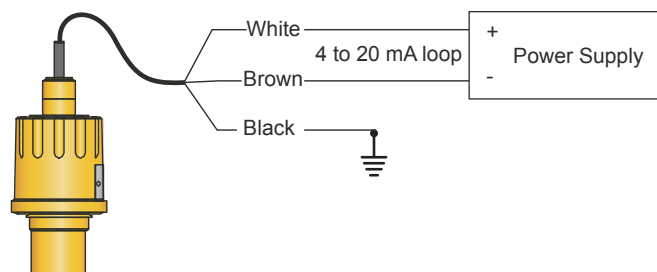
General		
Range		0.25 to 6 m / 0.82 to 20 ft
Total Beam Angle		5°
Measuring Frequency		80 kHz
Accuracy *		± (0.2 % of measured distance plus 0.05 % of range)
Resolution		<2 m (6.6 ft): 1 mm (0.04 in.); 2 to 5 m (6.6 to 16.4 ft): 2 mm (0.08 in.); 6 m (19.7): 5 mm (0.2 in.)
Environmental		
Process Temperature		−30 °C to +90 °C (−22 °F to +194 °F)
Ambient Temperature		−30 °C to +80 °C (−22 °F to +176 °F)
Process Pressure (absolute)		0.05 to 0.3 MPa (0.5 to 3 bar) 7.25 psi to 43.5 psi
Enclosure		
Enclosure and Sensor Material		PP or PVDF
Cable Material		Cable sealing: EPDM, cable isolation: PVC
Ingress Protection		IP68 / NEMA 6P
Process Connection		2" BSP / NPT
Sealing		
	PP sensor	EPDM
	PVDF sensor	FPM (Viton)
Electrical		
Outputs		2-wire 4–20 mA , max. 600 Ohm; HART interface, Rt >= 250 Ohm
Power Supply		DC 12 to 36 V
Power Consumption		max. 720 mW, overload protected
Connecting		6 x 0,5 mm ² shielded cable; Ø 6 mm x 5 m (30 m max.)
Electric shock protection		Class III, low voltage
Standard and Approvals		
General Approvals		CE

* Under optimal circumstances of reflection and stabilized transducer temperature

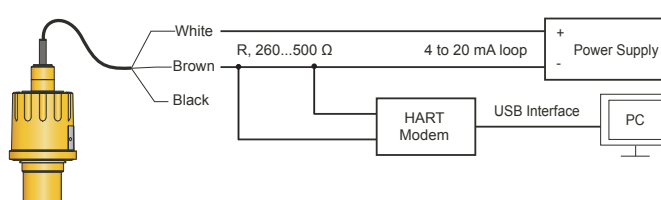
Dimensions



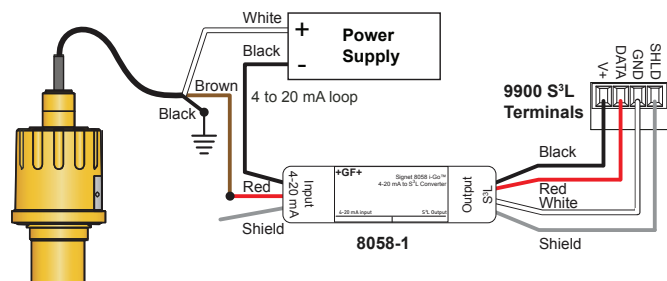
4 to 20 mA Loop Wiring



HART Interface Wiring



Wiring to 9900 Universal Transmitter



Ordering Information



Mfr. Part No.	Code	Description
Versions with NPT thread		
2270-P-1N-4	159 300 169	Range 4 m (13.1 ft), PP body, 4 to 20 mA 2-wire/HART, NPT thread
2270-P-1N-6	159 300 170	Range 6 m (19.7 ft), PP body, 4 to 20 mA 2-wire/HART, NPT thread
2270-V-1N-4	159 300 176	Range 4 m (13.1 ft), PVDF body, 4 to 20 mA 2-wire/HART, NPT thread
2270-V-1N-6	159 300 177	Range 6 m (19.7 ft), PVDF body, 4 to 20 mA 2-wire/HART, NPT thread
Versions with BSP thread		
2270-P-1B-4	159 300 155	Range 4 m (13.1 ft), PP body, 4 to 20 mA 2-wire/HART, BSP thread
2270-P-1B-6	159 300 156	Range 6 m (19.7 ft), PP body, 4 to 20 mA 2-wire/HART, BSP thread
2270-V-1B-4	159 300 162	Range 4 m (13.1 ft), PVDF body, 4 to 20 mA 2-wire/HART, BSP thread
2270-V-1B-6	159 300 163	Range 6 m (19.7 ft), PVDF body, 4 to 20 mA 2-wire/HART, BSP thread

Accessories

Code	Description
159 300 181	HART - USB Modem
159 300 182	HART - USB Modem, DIN Rail
159 300 183	HART - USB Modem, DIN Rail, ATEX