

# 2260 Ultrasonic Level Transmitters with Ex Approval **+GF+**



The type 2260 is a rugged, high performance ultrasonic level measurement transmitter, having transducer and processing electronics and a display/programming unit incorporated in one single housing.

All type 2260 Level Transmitters are using established high end pulse echo transducers, which provide narrow beam angles and reliable measurement ranges up to a distance of 15 meters (49.2 ft).

For small, stand alone tanks the transmitter provides a simple 2-wire 4 to 20 mA output, with additional power relay contacts. It can be programmed using push buttons and the large, graphic display. For large and/or multiple tank applications versions with HART interface are recommended, communicating directly with a panel mount controller or PLC. The HART protocol can easily be used for programming these versions.

For hazardous areas the type 2260 Level Transmitters are available with explosion proof approvals.

## Features

- 2-wire compact transmitters
- Non-contact level metering
- Narrow 5° beam angle
- Level, volume and open channel flow
- Fully temperature compensated electronics
- Outstanding signal processing software providing highly accurate measuring results
- PP or PVDF sensor body provides best chemical resistance
- Quick-set menu for efficient installation
- Plug-in keypad and display
- 4 to 20 mA / HART interface (Optional)
- Secondary lightning protection
- Intrinsically safe (Option)
- 32-point linearization



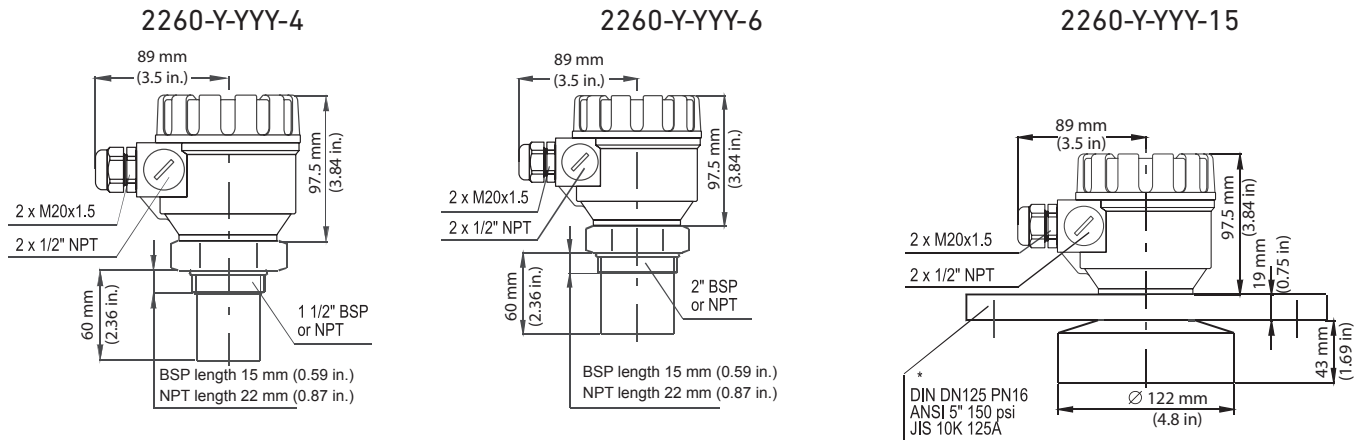
## Applications

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



## Dimensions (mm)

### 2-wire level transmitters

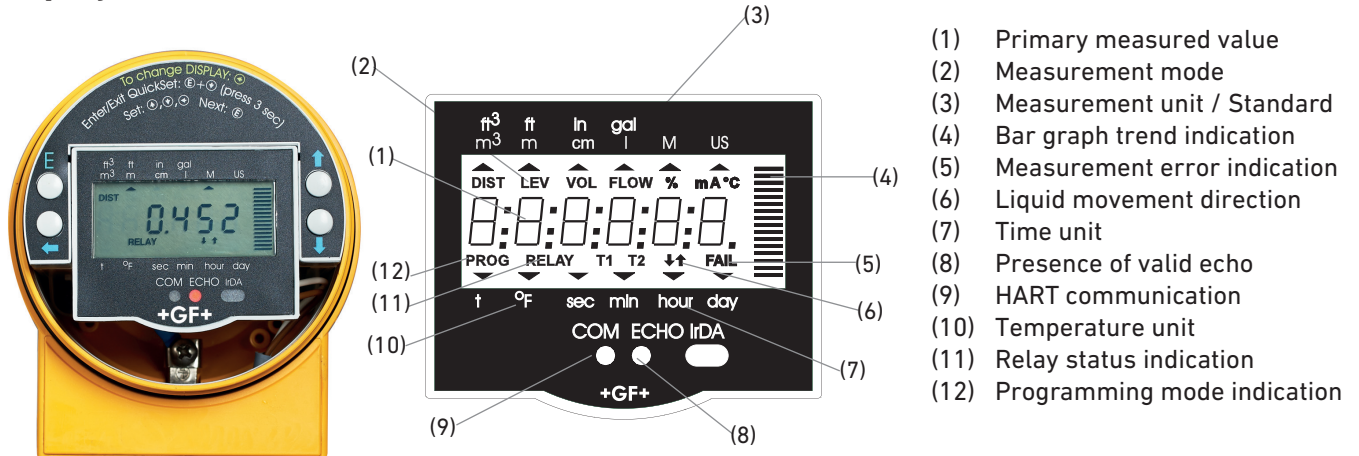


## Specifications

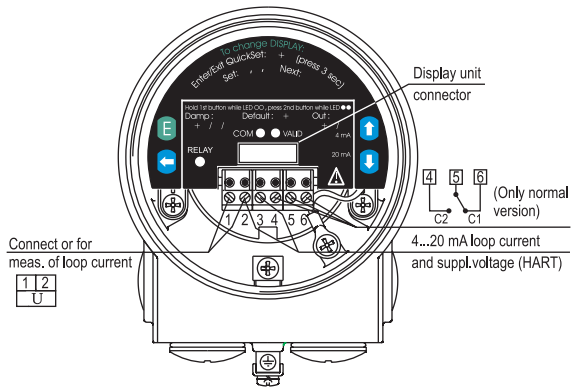
General			
Type	2260-Y-YYYX-4	2260-Y-YYYX-6	2260-Y-YYYX-15
Range	0.2 to 4 m (0.65 to 13 ft)	0.25 to 6 m (0.82 to 20 ft)	0.45 to 15 m (1.5 to 49 ft)
Measuring Frequency	80 kHz	80 kHz	40 kHz
Total Beam Angle	6°	5°	5°
Accuracy *	± (0.2 % of measured distance plus 0.05 % of range)		
Resolution	<2 m (6.6 ft): 1 mm (0.04 in.), 2 to 5 m (6.6 to 16.4 ft): 2 mm (0.08 in.), 5 to 10 m (16.4 to 32.8 ft): 5 mm (0.2 in.), >10 m (32.8 ft): 10 mm (0.39 in.)		
Environmental			
Process Temperature			
	PP sensor	-20 °C to +70 °C (-4 °F to 158 °F)	
	PVDF sensor	-20 °C to +80 °C (-4 °F to 176 °F)	
Ambient Temperature			
-20 °C to +60 °C (-4 °F to 140 °F)			
Process Pressure (absolute)			
0.03 to 0.3 MPa (0.3 to 3 bar) 4.35 psi - 43.5 psi			
Enclosure			
Enclosure Material			
	Sensor Body	PP or PVDF	
	Housing	PBT	
Ingress Protection			
	Sensor	IP68, NEMA 6P	
	Housing	IP67, NEMA 6P	
Process Connection			
	1 1/2" BSP / NPT	2" BSP / NPT	DN125 / 5 inch flange
Sealing			
	PP sensor	EPDM	
	PVDF sensor	FPM (Viton)	
Electrical			
Outputs			
2-wire 4–20 mA, HART interface, $R_t \geq 250 \Omega$			
Power Supply			
12 to 30 V DC, Note: Ex-devices must be powered by EEx ia power supplies			
Power Supply Loading			
$U_o < 30 \text{ V}$ , $I_o < 140 \text{ mA}$ , $P_o < 1 \text{ W}$ , $R_i \text{ max} = (U_s - 12 \text{ V}) / 0.02 \text{ A}$			
Intrinsically safety data			
$C_i \leq 15 \text{ nF}$ , $L_i \leq 200 \mu\text{H}$ , $U_i \leq 30\text{V}$ , $I_i \leq 140 \text{ mA}$ , $P_i \leq 1 \text{ W}$			
Connection			
2 x M20x1,5 metal cable gland: Cable: $\varnothing 7 \dots 13 \text{ mm}$			
Standards and Approvals			
General Approvals			
CE, RoHS			
ATEX Approval			
ATEX II 1 G EEx ia IIB T6, IP68, NEMA 6P			

\* Under optimal circumstances of reflection and stabilized transducer temperature

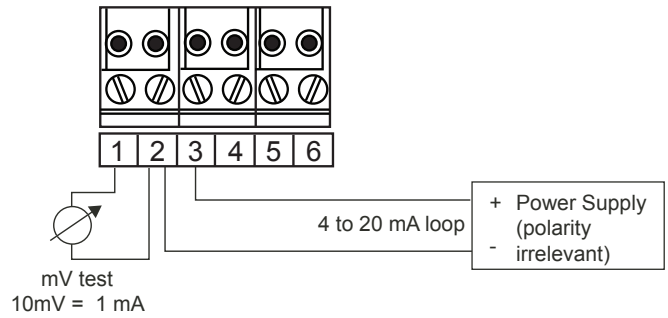
## Display Unit



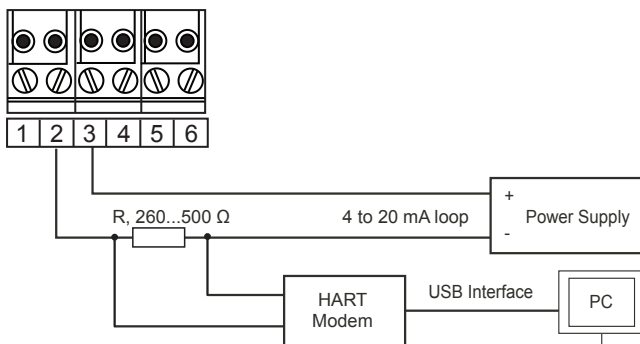
## 2260 Transmitter Terminals



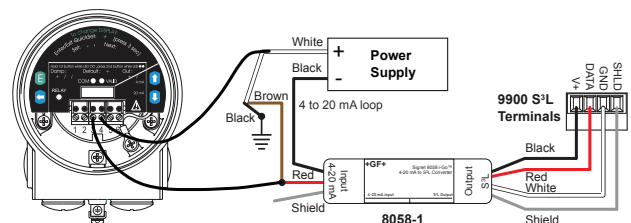
## 4 to 20 mA Loop Wiring



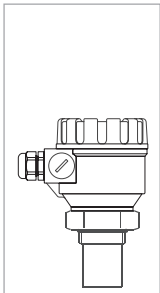
## HART Interface Wiring



## Wiring to 9900 Universal Transmitter



## Ordering Information



Mfr. Part No	Code	Description
2260-P-0DN-4	<b>159 300 120</b>	Range 4 m (13.1 ft), PP body, 4..20 mA 2-wire, NPT thread
2260-P-2DN-4	<b>159 300 121</b>	Range 4 m (13.1 ft), PP body, 4..20 mA 2-wire/relay/HART, NPT thread
2260-P-0DN-6	<b>159 300 122</b>	Range 6 m (19.7 ft), PP body, 4..20 mA 2-wire, NPT thread
2260-P-2DN-6	<b>159 300 123</b>	Range 6 m (19.7 ft), PP body, 4..20 mA 2-wire/relay/HART, NPT thread
2260-P-0DA-15	<b>159 300 124</b>	Range 15 m (49.2 ft), PP body, 4..20 mA 2-wire, ANSI Flange 5 inch
2260-P-2DA-15	<b>159 300 125</b>	Range 15 m (49.2 ft), PP body, 4..20 mA 2-wire/relay/HART, ANSI Flange 5 in.
2260-V-0DN-4	<b>159 300 131</b>	Range 4 m (13.1 ft), PVDF body, 4..20 mA 2-wire, NPT thread
2260-V-2DN-4	<b>159 300 132</b>	Range 4 m (13.1 ft), PVDF body, 4..20 mA 2-wire/relay/HART, NPT thread
2260-V-0DN-6	<b>159 300 133</b>	Range 6 m (19.7 ft), PVDF body, 4..20 mA 2-wire, NPT thread
2260-V-2DN-6	<b>159 300 134</b>	Range 6 m (19.7 ft), PVDF body, 4..20 mA 2-wire/relay/HART, NPT thread
2260-V-0DA-15	<b>159 300 135</b>	Range 15 m (49.2 ft), PVDF body, 4..20 mA 2-wire, ANSI Flange 5 inch
2260-V-2DA-15	<b>159 300 136</b>	Range 15 m (49.2 ft), PVDF body, 4..20 mA 2-wire/relay/HART, ANSI Flange 5 in.
<b>Versions with NPT thread / ANSI flange</b>		
2260-V-1DNX-4	<b>159 300 142</b>	Range 4 m (13.1 ft), PVDF body, 4..20 mA 2-wire/HART, ATEX, NPT thread
2260-V-1DNX-6	<b>159 300 143</b>	Range 6 m (19.7 ft), PVDF body, 4..20 mA 2-wire/HART, ATEX, NPT thread
2260-V-1DAX-15	<b>159 300 144</b>	Range 15 m (49.2 ft), PVDF body, 4..20 mA 2-wire/HART, ATEX, ANSI Flange 5 in.
<b>Versions with BSP thread / DIN flange</b>		
2260-P-0DB-4	<b>159 300 090</b>	Range 4 m (13.1 ft), PP body, 4 to 20 mA 2-wire, BSP thread
2260-P-2DB-4	<b>159 300 091</b>	Range 4 m (13.1 ft), PP body, 4 to 20 mA 2-wire/relay/HART, BSP thread
2260-P-0DB-6	<b>159 300 092</b>	Range 6 m (19.7 ft), PP body, 4 to 20 mA 2-wire, BSP thread
2260-P-2DB-6	<b>159 300 093</b>	Range 6 m (19.7 ft), PP body, 4 to 20 mA 2-wire/relay/HART, BSP thread
2260-P-0DF-15	<b>159 300 094</b>	Range 15 m (49.2 ft), PP body, 4 to 20 mA 2-wire, DIN Flange DN125
2260-P-2DF-15	<b>159 300 095</b>	Range 15 m (49.2 ft), PP body, 4 to 20 mA 2-wire/relay/HART, DIN Flange DN125
2260-V-0DB-4	<b>159 300 101</b>	Range 4 m (13.1 ft), PVDF body, 4 to 20 mA 2-wire, BSP thread
2260-V-2DB-4	<b>159 300 102</b>	Range 4 m (13.1 ft), PVDF body, 4 to 20 mA 2-wire/relay /HART, BSP thread
2260-V-0DB-6	<b>159 300 103</b>	Range 6 m (19.7 ft), PVDF body, 4 to 20 mA 2-wire, BSP thread
2260-V-2DB-6	<b>159 300 104</b>	Range 6 m (19.7 ft), PVDF body, 4 to 20 mA 2-wire/relay /HART, BSP thread
2260-V-0DF-15	<b>159 300 105</b>	Range 15 m (49.2 ft), PVDF body, 4 to 20 mA 2-wire, DIN Flange DN125
2260-V-2DF-15	<b>159 300 106</b>	Range 15 m (49.2 ft), PVDF body, 4 to 20 mA 2-wire/relay/HART, DIN Flange DN125

## Ordering Information



Mfr. Part No	Code	Description
<b>Versions with BSP thread / DIN flange</b>		
2260-V-1DBX-4	<b>159 300 112</b>	Range 4 m (13.1 ft), PVDF body, 4 to 20 mA 2-wire/HART, ATEX, BSP thread
2260-V-1DBX-6	<b>159 300 113</b>	Range 6 m (19.7 ft), PVDF body, 4 to 20 mA 2-wire/HART, ATEX, BSP thread
2260-V-1DFX-15	<b>159 300 114</b>	Range 15 m (49.2 ft), PVDF body, 4 to 20 mA 2-wire/HART, ATEX, DIN Flange DN125

## Accessories

Code	Description
<b>159 300 181</b>	HART - USB Modem
<b>159 300 182</b>	HART - USB Modem, DIN Rail
<b>159 300 183</b>	HART - USB Modem, DIN Rail, ATEX
<b>159 300 180</b>	Display unit for type 2260 Transmitter