

# Rosemount™ 520 Level Transmitter

## HART® Revision 7 Protocol

**BOLD** = Required Value

**★** = Default

Select only one of the items provided

One or more of the listed items can be selected

Customer information	
Customer: _____	Contact name: _____
Phone no: _____	Fax No./email: _____
P.O./Reference no.: _____	P.O. line item: _____
Quote no.: _____	Model no.: _____
Customer signoff: _____	

Tagging
Software tag: _____ (8 characters)
Long software tag: _____ (32 characters)

Output information				
Pressure units:	<input type="radio"/> inH <sub>2</sub> O at 20 °C (68 °F)	<input type="radio"/> mmH <sub>2</sub> O at 20 °C (68 °F)	<input type="radio"/> Pa	<input type="radio"/> kg/cm <sup>2</sup>
	<input type="radio"/> inH <sub>2</sub> O at 15.5 °C (60 °F)	<input type="radio"/> mmH <sub>2</sub> O at 4 °C (39 °F)	<input type="radio"/> hPa	<input type="radio"/> g/cm <sup>2</sup>
	<input type="radio"/> inH <sub>2</sub> O at 4 °C (39 °F)	<input type="radio"/> cmH <sub>2</sub> O at 4 °C (39 °F)	<input type="radio"/> kPa	<input type="radio"/> Torr
	<input type="radio"/> inHg at 0 °C (32 °F)	<input type="radio"/> mH <sub>2</sub> O at 4 °C (39 °F)	<input type="radio"/> MPa	<input type="radio"/> Atm
	<input type="radio"/> ftH <sub>2</sub> O at 20 °C (68 °F)	<input type="radio"/> mmHg at 0 °C (32 °F)	<input type="radio"/> Bar	<input type="radio"/> Psi
	<input type="radio"/> ftH <sub>2</sub> O at 15.5 °C (60 °F)	<input type="radio"/> cmHg at 0 °C (32 °F)	<input type="radio"/> mbar	<input type="radio"/> Psf
	<input type="radio"/> ftH <sub>2</sub> O at 4 °C (39 °F)	<input type="radio"/> mHg at 0 °C (32 °F)	<input type="radio"/> kg/m <sup>2</sup>	
Range Points: 4 mA = _____ (0★)    20 mA = _____ (URL★)				

**Note**

Custom configuration below this note requires C1 option code.

Output information	
Sensor temperature units:	<input type="radio"/> °C★ <input type="radio"/> °F      Damping (0-60 sec): _____ (0.4 sec.★)



Transmitter information	
Descriptor:	_____ (16 characters)
Message:	_____ (32 characters)
Date:	_____ (Date of Calibration*)

Signal selection	
<input type="radio"/> 4 -20 mA with simultaneous digital signal based on HART protocol*	
<input type="radio"/> Multi-drop communication	Transmitter address (1-63): _____ (default = 0)

Process variable output assignments			
Primary variable:	<input type="radio"/> Measured pressure*	<input type="radio"/> Scaled variable	
Secondary variable:	<input type="radio"/> Measured pressure	<input type="radio"/> Scaled variable	<input type="radio"/> Sensor temperature*
Tertiary variable:	<input type="radio"/> Measured pressure	<input type="radio"/> Scaled variable	<input type="radio"/> Sensor temperature*
Fourth variable:	<input type="radio"/> Measured pressure	<input type="radio"/> Scaled variable	<input type="radio"/> Sensor temperature *

Scaled variable information	
Scaled units = _____	(5 characters max - spaces consume 0-9, A-Z, /, %, -, and * character positions)
Linear scaled variable	
Low pressure value = _____	(Eng. units)
High pressure value = _____	(Eng. units)
Low scaled value = _____	(Scaled units)
High scaled value = _____	(Scaled units)
Linear offset = _____	(Eng. units)
Range values - both categories must be completed. (used when scaled variable is set to primary variable)	
4 mA = _____	(Scaled Unit) (maximum of 7 digits)
20 mA = _____	(Scaled Unit) (maximum of 7 digits)

Security information	
HART lock:	<input type="radio"/> Enable <input type="radio"/> Disabled*

Process alert setpoints	
Process alert setpoints are values set by the user where the transmitter outputs a HART message when the applied pressure or temperature goes outside the designated range. The pressure values are limited to the range of the transmitter.	
Pressure process alert <input type="radio"/> On <input type="radio"/> Off* <input type="checkbox"/> Low alert _____ (Eng. unit) (LRL = Low alert ≤ High alert ≤ URL) <input type="checkbox"/> High alert _____ (Eng. unit)	Temperature process alert <sup>(1)</sup> <input type="radio"/> On <input type="radio"/> Off* <input type="checkbox"/> Low alert _____ (Temperature unit -40 °C, -40 °F) (-4 °C = Low alert ≤ High alerts 1-10 ≤ 85 °C) <input type="checkbox"/> High alert _____ (Temperature unit 85 °C, 185 °F)




1. Temperature process alert applicable only for submerged use of transmitter.

Custom alarm and saturation signal levels		
Alarm: Values (mA) the transmitter outputs if it detects a gross malfunction condition.		
Saturation: Values (mA) the transmitter outputs if applied pressure goes outside the 4–20 mA range values. If option C6 or C7 is ordered, fill out the respective custom alarm and saturation values.		
Alarm and saturation levels are defined by option codes:	Alarm value:	Saturation value:
No option = Standard, High	≥ 21.75 mA	= 20.80 mA
C8 = Standard, Low	≤ 3.75 mA	= 3.90 mA
C4 = NAMUR, High	≥ 22.50 mA	= 20.50 mA
C5 = NAMUR, Low	≤ 3.60 mA	= 3.80 mA
C6 = Custom, High	Enter Value (20.20 to 23.00) _____ (mA) <sup>(1)</sup>	(20.10 to 22.9) _____ (mA) <sup>(1)</sup>
C7 = Custom, Low	Enter Value (3.40 to 3.80) _____ (mA) <sup>(2)</sup>	(3.50 to 3.90) _____ (mA) <sup>(2)</sup>




1. High alarm must be 0.1 mA greater than high saturation value.

2. Low alarm must be 0.1 mA less than low saturation value.




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