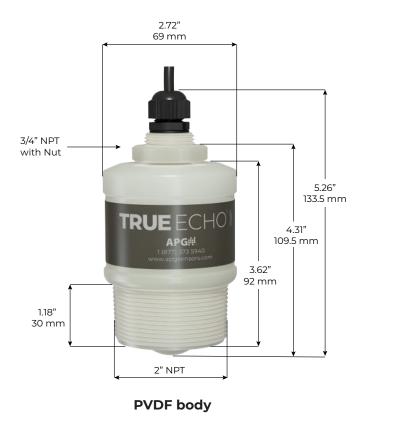
# TRUE ECHO® 🕱

General Purpose CR-L Radar Liquid Level Sensor

# Datasheet





PE body

The TRUE ECHO® CR-L brings the accurate level readings of radar sensors to industrial liquid measurements. It can accurately measure in many environments, including varying temperatures, steam, dust, smoke, and foam. The radar's narrow beam can detect small targets and achieve precise positioning with high resolution. It has a maximum measuring range of 49.2 feet (15 m) and a minimum blind zone of 7.87 inches (0.2 m). All TRUE ECHO CR-L sensors can be field calibrated and programmed via the TRUE ECHO Bluetooth app.

#### **Features**

- Simple to install
- 4-20mA and RS-485 Outputs
- Bluetooth compatible for on-site maintenance
- Chemical resistant
- · Accurate level measurements in adverse environmental conditions



Doc # 9006835 Part # 201121 Rev A, 06/2024

# **GENERAL PURPOSE SPECIFICATIONS**

#### Performance

Range	7.87" to 49.21 ft (	(0.2 to 15 m)		
Measuring Frequency	W Band, 76 to 81GHz, 5GHz FMCW bandwidth			
Update Rate	4-20mA: RS-485:	Automatic adjustment 1 to 3Hz 3Hz		
Power on to 1st reading*	4-20mA: RS-485:	≥22 seconds ≥12 seconds		
Accuracy	±3mm			
Beam Angle	8° (4° half angle)			
Environmental				
Process Temperature	-40° to 158°F (-4	0° to 70°C)		
Process Pressure	-14.5 to 43.51 psi			
Dielectric Constant of Measured Medium	≥2			
Protection Rating	IP67			
Electrical				
Operating Voltage	4-20mA: RS-485:	16-30 VDC 12-30 VDC(<10mA @ 24 VDC)		
Reverse Voltage Protection	≤30V			
Spike Protection	<3kW			
Cable	Polyurethane ja	cket with shielded 18awg wires		
Connectivity				
Output signal	4-20mA: RS-485:	2 wire + shield 4 wire + shield		
Bluetooth Version	5			
Fault Output (4-20 only)	3.6mA, 22mA, o	r Last Value		
Physical				
Housing	PVDF or PE			
Process fitting	2" NPT			
Diameter	2.72" (69mm)			
Height	5.39" (137 mm)			
Weight	18.87 oz (535 g)			

#### Certifications

- FCC
- ISED
- CE

\*Time to first reading is determined by the Damping setting, as explained in the User Manual.



# MODEL NUMBER CONFIGURATOR

Part N	umber: CR -	- <u>_</u> A	<u>GP</u> <b>B</b>	<u>49</u> <b>C</b>		_ <u>E5</u> <b>F</b>	_ <u>16</u> <b>G</b>	<u>B0</u> H
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<mark>B. Pu</mark> l □ <b>GP</b>	r <mark>pose</mark> General Pui	rpose			F. Co □ E5	o <mark>nnec</mark> Pigt		n cable
C. Rar - 49	<b>nge</b> 49 ft (15 m)				<mark>G. Ca</mark> □ <b>16</b>		<mark>ength</mark> eet (5m	
	<mark>tput</mark> 4-20 mA RS-485 Moo	dbus RTl	J		<mark>Н. С</mark> и □ <b>В0</b>	ustom APC	ner Lal	bel

### **COMMON MODEL CONFIGURATIONS**

Model Number	Model Description
CR-L-GP-49-L1-P-E5-16-B0	Liquid, general purpose, 49 ft range, <b>4-20 mA</b> , <b>PE</b> , pigtail, 16 ft cable
CR-L-GP-49-L1-K-E5-16-B0	Liquid, general purpose, 49 ft range, <b>4-20 mA</b> , <b>PVDF</b> , pigtail, 16 ft cable
CR-L-GP-49-L31-P-E5-16-B0	Liquid, general purpose, 49 ft range, <b>RS-485</b> , <b>PE</b> , pigtail, 16 ft cable
CR-L-GP-49-L31-K-E5-16-B0	Liquid, general purpose, 49 ft range, <b>RS-485</b> , <b>PVDF</b> , pigtail, 16 ft cable



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