

Model Number <b>422E55</b>	<b>IN-LINE CHARGE AMPLIFIER</b>	Revision: B ECN #: 37900
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	ENGLISH	SI	
<b>Performance</b>			
Sensitivity( $\pm 2.5\%$ )(Charge Conversion)	0.5 mV/pC	0.5 mV/pC	
Ovrrange	$\pm 8\text{ V}$	$\pm 8\text{ V}$	
Low Frequency Response(-5 %)	0.5 Hz	0.5 Hz	
High Frequency Response(-5 %)	100 kHz	100 kHz	[2]
Non-Linearity	$\leq 1.0\%$ FS	$\leq 1.0\%$ FS	
<b>Environmental</b>			
Temperature Range(Operating)	-65 to +250 °F	-54 to +121 °C	
Maximum Shock	5000 g pk	49,050 m/s <sup>2</sup> pk	
Maximum Vibration(5 to 2000 Hz)	100 g pk	981 m/s <sup>2</sup> pk	
<b>Electrical</b>			
Excitation Voltage	+18 to 28 VDC	+18 to 28 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Voltage	$\pm 5.0\text{ V}$	$\pm 5.0\text{ V}$	
Output Polarity	Inverted	Inverted	
Output Impedance	100 ohm	100 ohm	
Output Bias Voltage	+9 to 13 VDC	+9 to 13 VDC	
Maximum Input Voltage	+30 V	+30 V	
Broadband Electrical Noise(1 to 10,000 Hz)	33 $\mu\text{V}$	-90 dB	
Spectral Noise(1 Hz)	9.8 $\mu\text{V}/\sqrt{\text{Hz}}$	-100 dB	[1]
Spectral Noise(10 Hz)	3 $\mu\text{V}/\sqrt{\text{Hz}}$	-110 dB	[1]
Spectral Noise(100 Hz)	0.8 $\mu\text{V}/\sqrt{\text{Hz}}$	-122 dB	[1]
Spectral Noise(1 kHz)	0.4 $\mu\text{V}/\sqrt{\text{Hz}}$	-128 dB	[1]
Spectral Noise(10 kHz)	0.2 $\mu\text{V}/\sqrt{\text{Hz}}$	-134 dB	[1]
Capacitance(Feedback)	2000 pF	2000 pF	
Overload Recovery Time	10 $\mu\text{sec}$	10 $\mu\text{sec}$	
Discharge Time Constant	>1 sec	>1 sec	
Resistance(Feedback)	$1.5 \times 10^9$ ohm	$1.5 \times 10^9$ ohm	
Source Capacitance Loading(at input)	-0.0005 %/pF	-0.0005 %/pF	
<b>Physical</b>			
Housing Material	Stainless Steel	Stainless Steel	
Sealing	Epoxy	Epoxy	
Electrical Connector(Input)	10-32 Coaxial Jack	10-32 Coaxial Jack	
Electrical Connector(Output)	BNC Jack	BNC Jack	
Size (Diameter x Length)	0.52 in x 3.4 in	13 mm x 86 mm	
Weight	1.15 oz	32.7 gm	

**OPTIONAL VERSIONS**

Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

**NOTES:**

[1] Typical.  
 [2] High frequency response may be limited by supply current and output cable length.  
 [3] See PCB Declaration of Conformance PS024 for details. A low impedance connection from case to earth ground is required to maintain CE compliance.

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All specifications are at room temperature unless otherwise specified.  
 In the interest of constant product improvement, we reserve the right to change specifications without notice.  
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