

Model Number 422E51	IN-LINE CHARGE CONVERTER	Revision: E ECN #: 37900
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	ENGLISH	SI	
Performance			
Sensitivity(± 5.0 %)(Charge Conversion)	100 mV/pC	100 mV/pC	
Input Range	± 50 pC	± 50 pC	
Overrange	± 8 V	± 8 V	
Low Frequency Response(-5 %)	5 Hz	5 Hz	
High Frequency Response(-5 %)	100 kHz	100 kHz	[3]
Non-Linearity	≤ 1.0 % FS	≤ 1.0 % FS	
Environmental			
Temperature Range(Operating)	-65 to +250 °F	-54 to +121 °C	
Maximum Shock	5000 g pk	49,050 m/s ² pk	
Maximum Vibration(5 to 2000 Hz)	100 g pk	981 m/s ² pk	
Electrical			
Excitation Voltage	18 to 28 VDC	18 to 28 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Voltage	± 5.0 V	± 5.0 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	40 V	40 V	
Broadband Electrical Noise(1 to 10,000 Hz)	49 µV	-86 dB	[1]
Spectral Noise(1 Hz)	19 µV/√Hz	-94 dB	[1]
Spectral Noise(10 Hz)	5.1 µV/√Hz	-106 dB	[1]
Spectral Noise(100 Hz)	1.5 µV/√Hz	-116 dB	[1]
Spectral Noise(1 kHz)	0.6 µV/√Hz	-124 dB	[1]
Spectral Noise(10 kHz)	0.2 µV/√Hz	-134 dB	[1]
Capacitance(Feedback)	10 pF	10 pF	
Overload Recovery Time	10 µsec	10 µsec	
Discharge Time Constant	>0.1 sec	>0.1 sec	
Resistance(Feedback)	1.2x10 ¹⁰ ohm	1.2x10 ¹⁰ ohm	[2]
Source Capacitance Loading	0.0005 %/pF	0.0005 %/pF	
Physical			
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] Tested using voltage source and input capacitor equal to the feedback capacitor, to simulate a charge output sensor.

[2] Effective feedback resistance for time constant is 3 times tested value due to circuitry (i.e 1x10E9 = 3x10E9 ohm)

[3] High frequency response may be limited by supply current and output cable length.

[4] 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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[4]

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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