Model Number	IN-LINE CHARGE CONVERTER	Revision: C
422E54		ECN #: 37900

Performance	**ENGLISH**	**SI**	
Sensitivity(± 2.5 %)(Charge Conversion)	0.1 mV/pC	0.1 mV/pC	
Input Range	± 50,000 pC	± 50,000 pC	
Overrange	± 8 V	± 8 V	
Low Frequency Response(-5 %)	5 Hz	5 Hz	
High Frequency Response(4 mA)	12 kHz	12 kHz	[3]
High Frequency Response(20 mA)	50 kHz	50 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/s² pk	
Maximum Vibration(5 to 2000 Hz)	100 g pk	981 m/s² 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 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)	33 µV	-90 dB	[1]
Spectral Noise(1 Hz)	9.8 µV/√Hz	-100 dB	[1]
Spectral Noise(10 Hz)	3 µV/√Hz	-110 dB	[1]
Spectral Noise(100 Hz)	0.8 µV/√Hz	-122 dB	[1]
Spectral Noise(1 kHz)	0.4 µV/√Hz	-128 dB	[1]
Spectral Noise(10 kHz)	0.2 µV/√Hz	-134 dB	[1]
Capacitance(Feedback)	10,000 pF	10,000 pF	
Overload Recovery Time	10 µsec	10 µsec	
Discharge Time Constant	>0.1 sec	>0.1 sec	
Resistance(Feedback)	$6x10^7$ ohm	$6x10^7$ 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	

CE [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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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 impendance connection from case to earth ground is required to maintain CE compliance.

Entered: DMW	Engineer: KL	Sales: JJM	Approved: BAM	Spec Number:
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