Model Number	IN-LINE CHARGE CONVERTER	Revision: P
422E03		ECN #: 26184

Performance	ENGLISH	SI	
Sensitivity(± 2 %)(Charge Conversion)	1 mV/pC	1 mV/pC	
Input Range(Electrical Charge)	± 2500 pC	± 2500 pC	
Overrange	± 3 V	± 3 V	
Low Frequency Response(-5 %)	0.5 Hz	0.5 Hz	
High Frequency Response(2.2 mA)	30 kHz	30 kHz	[3]
High Frequency Response(4 mA)	60 kHz	60 kHz	[3]
High Frequency Response(20 mA)	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	
Temperature Response(Sensitivity Deviation)	<1 %	<1 %	
Maximum Shock	1000 g pk	9810 m/s² pk	
Electrical			
Excitation Voltage	18 to 28 VDC	18 to 28 VDC	
Constant Current Excitation	2.2 to 20 mA	2.2 to 20 mA	
Output Voltage(at specified measurement range)	± 2.5 Vpk	± 2.5 Vpk	
Output Impedance	<20 ohm	<20 ohm	
Output Bias Voltage	12.75 to 14.25 VDC	12.75 to 14.25 VDC	
Output Polarity	Inverted	Inverted	
Maximum Input Voltage	30 V	30 V	
Broadband Electrical Noise(1 to 10,000 Hz)	4.0 µV	-108 dB	[1]
Spectral Noise(1 Hz)	1.7 µV/√Hz	-115 dB	[1]
Spectral Noise(10 Hz)	0.2 µV/√Hz	-134 dB	[1]
Spectral Noise(100 Hz)	0.1 µV/√Hz	-140 dB	[1]
Spectral Noise(1 kHz)	0.04 µV/√Hz	-148 dB	[1]
Spectral Noise(10 kHz)	0.03 µV/√Hz	-150 dB	[1]
Discharge Time Constant	1.0 sec	1.0 sec	
Resistance(Minimum required at input)	$7x10^7$ ohm	$7x10^7$ ohm	[2]
Source Capacitance Loading	0.0005 %/pF	0.0005 %/pF	
Physical			
Housing Material	Stainless Steel	Stainless Steel	
Sealing	Welded	Welded	
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.

T - TEDS Capable of Digital Memory and Communication Compliant with IEEE P1451.4

Temperature Range(Operating)	-40 to +185 °F	-40 to +85 °C
Output Bias Voltage	13.35 to 14.85 VDC	13.35 to 14.85 VDC

NOTES:

[1] Tested using voltage source and input capacitor equal to the feedback capacitor, to simulate a charge output sensor.
[2] Not to be used with low values of source resistance such as charge mode sensors at elevated temperatures or contaminated sensor cables (preventing low frequency peaking and/or output bias problems).
[3] Above stated frequency, the amplifier becomes slew rate limited.
[4] See PCB Declaration of Conformance PS024 for details.

Entered:	Engineer:	Sales:	Approved:	Spec Number:
Date: 4-30-7	Date: 4-5-07	Date: 4-5-07	Date: 4/5/07	422-5030-80

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