Model Number	EIGHT-CHANNEL ICP®/VOLTAGE/CHARGE SENSOR SIGNAL CONDITIONER	Revision: E
483C41		ECN #: 49172

Performance	**ENGLISH**	**SI**	
Channels	8	8	
Sensor Input Type(s)	ICP®, Voltage, Charge	ICP®, Voltage, Charge	
Gain(ICP®/ Voltage Input)	0.1 to 200	0.1 to 200	
Gain(mV/pC)(Charge Input)	0.01 to 2000	0.01 to 2000	
Gain Increment(minimum)(ICP®/ Voltage Input)	0.1	0.1	
Gain Increment(minimum)(Charge Input)	0.01	0.01	
Accuracy(ICP®/ Voltage Input)(Gain, 0.1 to 0.4)	± 5 %	± 5 %	
Accuracy(ICP®/ Voltage Input)(Gain, 0.5 to 200)	± 1 %	± 1 %	
Accuracy(Charge Input)(Gain, 0.01 to 0.04)	± 6 %	± 6 %	
Accuracy(Charge Input)(Gain, 0.05 to 2000)	± 1 %	± 1 %	
Input Range(maximum)(Charge Input)	100,000 pC pk	100,000 pC pk	
Input Range(maximum)(ICP® Input)	10 Vpk	10 Vpk	[4]
Input Range(maximum)(Voltage Input)	5 Vpk	5 Vpk	
Low Frequency Response(-5 %)(ICP®/ Voltage Input)	≤ 0.05 Hz	≤ 0.05 Hz	
Low Frequency Response(-5 %)(Charge Input)	0.5 Hz	0.5 Hz	[5]
Electrical Filter Roll-off	160 dB/decade	160 dB/decade	
Filter Type(8-pole Butterworth)	Low Pass	Low Pass	
High Frequency Response(-3 dB)(Gain from 0.01 to 99.9)	>100 kHz	>100 kHz	
High Frequency Response(-3 dB)(Gain from 100 to 2000)	>80 kHz	>80 kHz	
Electrical Filter Corner Frequency(-10 %)	0.1-0.3-1-3-10-30 kHz	0.1-0.3-1-3-10-30 kHz	[6]
Electrical Filter Pass Band Amplitude Accuracy	1 %	1 %	
Phase Response(at 1 kHz)	± 2 °	± 2 °	
Non-Linearity	1 %	1 %	
Cross Talk	<-72 dB	<-72 dB	
TEDS Sensor Support	Yes	Yes	
Fault/Bias Monitor LEDS	Open/Short/Overload	Open/Short/Overload	
Control Interface			
Digital Control Interface	Ethernet	Ethernet	
Human Interface	Keypad	Keypad	
Display	2 rows, 16 columns	2 rows, 16 columns	
Environmental			
Temperature Range(Operating)	+32 to +120 °F	0 to +50 °C	
Electrical			
Power Required(direct input to unit)	AC Power	AC Power	
AC Power(47 to 63 Hz)	100 to 240 VAC	100 to 240 VAC	
AC Power	≤ 0.7 Amps	≤ 0.7 Amps	[1]
Excitation Voltage(To Sensor)	>24 VDC	>24 VDC	
DC Offset	<50 mV	<50 mV	
Constant Current Excitation(To Sensor)	2 to 20 mA	2 to 20 mA	[2]
Output Voltage(minimum)	10 V	10 V	
Output Current(minimum)	10 mA	10 mA	
Output Impedance	<50 Ohm	<50 Ohm	
Broadband Electrical Noise(1 to 10,000 Hz)(Gain x1)	50 µV/rms	50 µV/rms	[3]
Spectral Noise(1 Hz)	8 µV/√Hz	8 µV/√Hz	[3]
Spectral Noise(10 Hz)	2 µV/√Hz	2 µV/√Hz	[3]
Spectral Noise(100 Hz)	0.7 µV/√Hz	0.7 µV/√Hz	[3]
Spectral Noise(1 kHz)	0.7 µV/√Hz	0.7 µV/√Hz	[3]
Spectral Noise(10 kHz)	0.6 µV/√Hz	0.6 µV/√Hz	[3]
Broadband Electrical Noise(1 to 10,000 kHz)(Gain x10)	75 µV rms	75 µV rms	[3]
Spectral Noise(1 Hz)	18 µV/√Hz	18 µV/√Hz	[3]
Spectral Noise(10 Hz)	1.5 µV/√Hz	1.5 µV/√Hz	[3]
Spectral Noise(100 Hz)	1.0 µV/√Hz	1.0 µV/√Hz	[3]
Spectral Noise(1 kHz)	1.0 µV/√Hz	1.0 µV/√Hz	[3]
Spectral Noise(10 kHz)	1.0 µV/√Hz	1.0 µV/√Hz	[3]
Broadband Electrical Noise(1 to 10,000 Hz)(Gain x100)	350 µV rms	350 µV rms	[3]
Spectral Noise(1 Hz)	100 µV/√Hz	100 µV/√Hz	[3]
Spectral Noise(10 Hz)	10 µV/√Hz	10 µV/√Hz	[3]
Spectral Noise(100 Hz)	6 µV/√Hz	6 µV/√Hz	[3]
Spectral Noise(1 kHz)	5 µV/√Hz	5 µV/√Hz	[3]
Broadband Electrical Noise(1 to 10,000 Hz)(0.1 mV/pC)	52.0 µV/rms	52.0 µV/rms	[3]
Spectral Noise(10 kHz)	5 µV/√Hz	5 µV/√Hz	[3]
Spectral Noise(1 Hz)	10.0 µV/√Hz	10.0 µV/√Hz	[3]
Spectral Noise(10 Hz)	1.5 µV/√Hz	1.5 µV/√Hz	[3]
Spectral Noise(100 Hz)	0.6 µV/√Hz	0.6 µV/√Hz	[3]
Spectral Noise(1 kHz)	0.6 µV/√Hz	0.6 µV/√Hz	[3]
Spectral Noise(10 kHz)	0.6 µV/√Hz	0.6 µV/√Hz	[3]
Broadband Electrical Noise(1 to 10,000 Hz)(1.0 mV/pC)	52.0 µV/rms	52.0 µV/rms	[3]
Spectral Noise(1 Hz)	14.0 µV/√Hz	14.0 µV/√Hz	[3]
Spectral Noise(10 Hz)	2.0 µV/√Hz	2.0 µV/√Hz	[3]
Spectral Noise(100 Hz)	0.7 µV/√Hz	0.7 µV/√Hz	[3]
Spectral Noise(1 kHz)	0.7 µV/√Hz	0.7 µV/√Hz	[3]
Spectral Noise(10 kHz)	0.7 µV/√Hz	0.7 µV/√Hz	[3]
Broadband Electrical Noise(1 to 10,000 Hz)(10.0 mV/pC)	56.0 µV/rms	56.0 µV/rms	[3]
Spectral Noise(1 Hz)	15.0 µV/√Hz	15.0 µV/√Hz	[3]
Spectral Noise(10 Hz)	2.0 µV/√Hz	2.0 µV/√Hz	[3]
Spectral Noise(100 Hz)	0.6 µV/√Hz	0.6 µV/√Hz	[3]
Spectral Noise(1 kHz)	0.6 µV/√Hz	0.6 µV/√Hz	[3]
Spectral Noise(10 kHz)	0.6 µV/√Hz	0.6 µV/√Hz	[3]
Oscillator(+/- 2%)(Internal Generator - ICP®/ Voltage Mode)	0.1 V pk	0.1 V pk	
Oscillator(+/- 2%)(Internal Generator - Charge Mode)	100 pC pk	100 pC pk	
Oscillator(+/- 2%)	100/1000 Hz	100/1000 Hz	
Overload Threshold(± 0.5 Vpk)	± 10 Vpk	± 10 Vpk	
Physical			
Electrical Connector(Input, sensor)	BNC Jack	BNC Jack	
Electrical Connector(Output)	BNC Jack	BNC Jack	
Electrical Connector(Ethernet)	RJ-45	RJ-45	
Size (Height x Width x Depth)(nominal)	1.75 in x 19 in x 13.7 in	44.5 mm x 482.6 mm x 348 mm	
Weight	8 lb	3.6 kg	

CE[7]

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] Use T1.6A fuse.
[2] User adjustable, factory set at 4 mA (± 1.0 mA). Each channel individually adjustable.
[3] Typical.
[4] Max input signal is dependant on sensor bias.
[5] The low frequency tolerance is accurate within ±25% of the specified frequency.
[6] The high frequency tolerance is accurate within ±5% of the specified frequency.
[7] See PCB Declaration of Conformance PS024 for details.

SUPPLIED ACCESSORIES:

Model 017AXX Power Cord (1)
Model EE75 PCB MCSC Control Software. (1)

Entered: LK	Engineer: CPH	Sales: KK	Approved: DY	Spec Number:
Date: 2/26/2019	Date: 2/26/2019	Date: 2/26/2019	Date: 2/26/2019	**46951**

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