Model Number 482C54	4-CHANNEL ICP® SENSOR SIGNAL CONDITIONER	Revision: E ECN #: 40512

Performance	ENGLISH	SI	
Channels	4	4	
Sensor Input Type(s)	ICP®, Voltage, Charge	ICP®, Voltage, Charge	
Voltage Gain	x0 to x200	x0 to x200	
Voltage Gain Increment	0.1	0.1	
Accuracy(Gain, x0.1 to x0.4)	± 5 %	± 5 %	
Accuracy(Gain, x0.5 to x200)	± 1 %	± 1 %	
Sensitivity(± 1 %)(Charge Input @ 100 Hz)	0.1 / 1.0 / 10.0 mV/pC	0.1 / 1.0 / 10.0 mV/pC	
Insulation Resistance at Input(Minimum Required)(0.1 mV/pC)	10 kohm	10 kohm	
Insulation Resistance at Input(1.0 mV/pC)	100 kohm	100 kohm	
Insulation Resistance at Input(10.0 mV/pC)	1 MOhm	1 MOhm	
Input Range(Charge Input, Nominal)	± 100,000 pC	± 100,000 pC	
Output Range(Minimum)	± 10 Vpk	± 10 Vpk	
Frequency Range(-5 %)(x0.1 to x99.9 Gain)	0.05 to 100,000 Hz	0.05 to 100,000 Hz	
Frequency Range(-5 %)(x100 to x200 Gain)	0.05 to 75,000 Hz	0.05 to 75,000 Hz	
Low Frequency Response(-5 %)(Charge Input)	0.5 Hz	0.5 Hz	[3]
Filter Type(Fourth-order Butterworth)	Low Pass	Low Pass	
Electrical Filter Roll-off	24 dB/octave	24 dB/octave	
Electrical Filter Corner Frequency(-3 dB)	10 kHz	10 kHz	[4][5]
Electrical Filter Roll-off	80 dB/decade	80 dB/decade	
Electrical Filter Pass Band Amplitude Accuracy	1 %	1 %	
Electrical Filter Stop Band Attenuation(Minimum)	96 dB	96 dB	
Phase Response(at 1 kHz)	± 1 °	± 1 °	
Non-Linearity(Charge Input)	≤ 1 % FS	≤ 1 % FS	
Cross Talk(maximum)	-72 dB	-72 dB	
TEDS Sensor Support	Yes	Yes	
Fault/Bias Monitor/Meter(LED)	Open/Short/Overload	Open/Short/Overload	
Control Interface			
Human Interface	Keypad	Keypad	
Display	2 rows, 16 columns	2 rows, 16 columns	
Digital Control Interface	RS-232	RS-232	
Digital Control: Data Rate	19,200 bps	19,200 bps	
Digital Control: Start, Data, Stop, Parity	1, 8, 1, No	1, 8, 1, No	
Digital Control: Handshaking	RTS/CTS	RTS/CTS	
Digital Control: Cable Length(Maximum)	50 ft	15.2 m	
Environmental			
Temperature Range(Operating)	+32 to +120 °F	0 to +50 °C	
Electrical			
Power Required(for supplied AC power adaptor)	AC Power	AC Power	
Power Required(direct input to unit)	DC power	DC power	
AC Power(50 to 60 Hz)	100 to 240 VAC	100 to 240 VAC	
AC Power	≤ 1.6 Amps	≤ 1.6 Amps	
Excitation Voltage(To Sensor)	≥ +24 VDC	≥ +24 VDC	
DC Offset	≤ 50 mV	≤ 50 mV	
DC Power	+9 to +18 VDC	+9 to +18 VDC	
DC Power	≤ 2.5 Amps	≤ 2.5 Amps	
Constant Current Excitation(To Sensor)	0 to 20 mA	0 to 20 mA	[1]
Output Impedance	≤ 50 Ohm	≤ 50 Ohm	
Overload Threshold(± 0.2 Vpk)	+10 Vpk	+10 Vpk	
Broadband Electrical Noise(1 to 10,000 Hz)(Gain x1)	50 µV rms	50 µV rms	[2]
Spectral Noise(1 Hz)(Gain x1)	8.0 µV/√Hz	8.0 µV/√Hz	[2]
Spectral Noise(10 Hz)(Gain x1)	1.5 µV/√Hz	1.5 µV/√Hz	[2]
Spectral Noise(100 Hz)(Gain x1)	1.0 µV/√Hz	1.0 µV/√Hz	[2]
Spectral Noise(1 kHz)(Gain x1)	1.0 µV/√Hz	1.0 µV/√Hz	[2]
Spectral Noise(10 kHz)(Gain x1)	1.0 µV/√Hz	1.0 µV/√Hz	[2]
Broadband Electrical Noise(1 to 10,000 Hz)(Gain x10)	75 µV rms	75 µV rms	[2]
Spectral Noise(1 Hz)(Gain x10)	20 µV/√Hz	20 µV/√Hz	[2]
Spectral Noise(10 Hz)(Gain x10)	1.5 µV/√Hz	1.5 µV/√Hz	[2]
Spectral Noise(100 Hz)(Gain x10)	1.0 µV/√Hz	1.0 µV/√Hz	[2]
Spectral Noise(1 kHz)(Gain x10)	1.0 µV/√Hz	1.0 µV/√Hz	[2]
Spectral Noise(10 kHz)(Gain x10)	1.0 µV/√Hz	1.0 µV/√Hz	[2]
Broadband Electrical Noise(1 to 10,000 Hz)(Gain x100)	350 µV rms	350 µV rms	[2]
Spectral Noise(1 Hz)(Gain x100)	100.0 µV/√Hz	100.0 µV/√Hz	[2]
Spectral Noise(10 Hz)(Gain x100)	10.0 µV/√Hz	10.0 µV/√Hz	[2]
Spectral Noise(100 Hz)(Gain x100)	8.0 µV/√Hz	8.0 µV/√Hz	[2]
Spectral Noise(1 kHz)(Gain x100)	6.0 µV/√Hz	6.0 µV/√Hz	[2]
Spectral Noise(10 kHz)(Gain x100)	6.0 µV/√Hz	6.0 µV/√Hz	[2]
Broadband Electrical Noise(1 to 10,000 Hz)(0.1 mV/pC & Gain x1)	52.0 µV/rms	52.0 µV/rms	[2]
Spectral Noise(1 Hz)(0.1 mV/pC & Gain x1)	10.0 µV/√Hz	10.0 µV/√Hz	[2]
Spectral Noise(10 Hz)(0.1 mV/pC & Gain x1)	1.5 µV/√Hz	1.5 µV/√Hz	[2]
Spectral Noise(100 Hz)(0.1 mV/pC & Gain x1)	0.6 µV/√Hz	0.6 µV/√Hz	[2]
Spectral Noise(1000 Hz)(0.1 mV/pC & Gain x1)	0.6 µV/√Hz	0.6 µV/√Hz	[2]
Spectral Noise(10,000 Hz)(0.1 mV/pC & Gain x1)	0.6 µV/√Hz	0.6 µV/√Hz	[2]
Broadband Electrical Noise(1 to 10,000 Hz)(1.0 mV/pC & Gain x1)	52.0 µV rms	52.0 µV rms	[2]
Spectral Noise(1 Hz)(1.0 mV/pC & Gain x1)	14.0 µV/√Hz	14.0 µV/√Hz	[2]
Spectral Noise(10 Hz)(1.0 mV/pC & Gain x1)	2.0 µV/√Hz	2.0 µV/√Hz	[2]
Spectral Noise(100 Hz)(1.0 mV/pC & Gain x1)	0.7 µV/√Hz	0.7 µV/√Hz	[2]
Spectral Noise(1000 Hz)(1.0 mV/pC & Gain x1)	0.7 µV/√Hz	0.7 µV/√Hz	[2]
Spectral Noise(10,000 Hz)(1.0 mV/pC & Gain x1)	0.7 µV/√Hz	0.7 µV/√Hz	[2]
Broadband Electrical Noise(1 to 10,000 Hz)(10.0 mV/pC & Gain x1)	56.0 µV rms	56.0 µV rms	[2]
Spectral Noise(1 Hz)(10.0 mV/pC & Gain x1)	15.0 µV/√Hz	15.0 µV/√Hz	[2]
Spectral Noise(10 Hz)(10.0 mV/pC & Gain x1)	2.0 µV/√Hz	2.0 µV/√Hz	[2]
Spectral Noise(100 Hz)(10.0 mV/pC & Gain x1)	0.6 µV/√Hz	0.6 µV/√Hz	[2]
Spectral Noise(1000 Hz)(10.0 mV/pC & Gain x1)	0.6 µV/√Hz	0.6 µV/√Hz	[2]
Spectral Noise(10,000 Hz)(10.0 mV/pC & Gain x1)	0.6 µV/√Hz	0.6 µV/√Hz	[2]
Calibration Input(± 1 %)	± 1000 pC/V	± 1000 pC/V	
Physical			
Electrical Connector(ICP® Sensor Input)	BNC Jack	BNC Jack	
Electrical Connector(Charge Sensor Input)	BNC Jack	BNC Jack	
Electrical Connector(Output)	BNC Jack	BNC Jack	
Electrical Connector(DC Power Input)	6-socket mini DIN (female)	6-socket mini DIN (female)	
Electrical Connector(Charge Calibration Input)	BNC Jack	BNC Jack	
Electrical Connector(RS-232 Digital Control)	DB-9 Connector	DB-9 Connector	
Size (Height x Width x Depth)	3.2 in x 8.0 in x 5.9 in	8.1 cm x 20 cm x 15 cm	
Weight	2.40 lb	1089 gm	

CE [6]

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.
ICP® is a registered trademark of PCB Group, Inc.

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]User adjustable, factory set at 4 mA (± 1.0 mA). One control adjusts all channels.
[2]Typical.
[3]The low frequency tolerance is accurate within ±20% of the specified frequency.
[4]Frequency tolerance is within ± 5% of the specified value.
[5]Contact factory for other available frequencies.
[6]See PCB Declaration of Conformance PS024 for details.

SUPPLIED ACCESSORIES:

Model 017AXX Power Cord (1)
Model 100-7103-50 (02711) Multi-conductor cable, 6-ft, 9-pin female to 9-pin male. (1)
Model 488B14/NC POWER CONVERTOR (1)
Model EE75 PCB MCSC Control Software. (1)

Entered: AP	Engineer: AK	Sales:	Approved: JWH	Spec Number:
Date: 2/5/2013	Date: 2/5/2013	Date:	Date: 2/5/2013	**35064**

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