

Model Number 482C54	4-CHANNEL ICP® SENSOR SIGNAL CONDITIONER		Revision: G ECN #: 56455	
Performance	ENGLISH	SI	OPTIONAL VERSIONS	
Channels	4	4	Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.	
Sensor Input Type(s)	ICP®, Voltage, Charge x0 to x20	ICP®, Voltage, Charge x0 to x20		
Voltage Gain	0.1	0.1		
Voltage Gain Increment	± 5 %	± 5 %		
Accuracy(Gain, x0.1 to x0.4)	± 1 %	± 1 %		
Accuracy(Gain, x0.5 to x200)	0.1 / 1.0 / 10.0	0.1 / 1.0 / 10.0		
Sensitivity(± 1 %)(Charge Input @ 100 Hz)	mV/pC	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		
Input Range (Voltage)	± 5 V	± 5		
Output Range(Minimum)	± 10 Vpk	± 10 Vpk		
Frequency Range(-5 %)(x0.1 to x99.9 Gain)	0.1 to 100,000 Hz	0.1 to 100,000 Hz		
Frequency Range(-5 %)(x100 to x200 Gain)	0.1 to 50,000 Hz	0.1 to 50,000 Hz	[3]	
Low Frequency Response(-5 %)(Charge Input)	0.5 Hz	0.5 Hz		
Filter Type(Fourth-order Butterworth)	Low Pass	Low Pass	[4][5]	
Electrical Filter Roll-off	24 dB/octave	24 dB/octave		
Electrical Filter Corner Frequency(-3 dB)	10 kHz	10 kHz		
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	[1]	
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
				
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.				
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: NAD	Engineer: CPH	Sales:AH	Approved: JWH	Spec Number:
Date: 8/6/2026	Date: 8/6/2026	Date: 8/6/2026	Date: 8/6/2026	35064
 AN AMPHENOL COMPANY		Phone: 716-684-0001 Fax: 716-684-0987 E-Mail: info@pcb.com		
3425 Walden Avenue, Depew, NY 14043				