

	<u>ENGLISH</u>	<u>SI</u>	
Performance			
Sensor Input Type(s)	ICP®, Charge	ICP®, Charge	
Voltage Gain Increment	0.1-1000	0.1-1000	
Accuracy(ICP®/ Voltage Input)	± 0.5 %	± 0.5 %	
Accuracy(Charge Input)	± 0.5 %	± 0.5 %	
Sensitivity(ICP®/Voltage)	.001 to 9.999 mV/unit	.001 to 9.999 mV/unit	[8]
Sensitivity(Charge Input)	0.0001 to 10 V/pC	0.0001 to 10 V/pC	
Input Range(maximum)(Charge Input)	100,000 pC	100,000 pC	[9]
Low Frequency Response(-10 %)	2.0 Hz ±20 %	2.0 Hz ±20 %	
Low Frequency Response(-10 %)	0.2 Hz ±20 %	0.2 Hz ±20 %	
Low Frequency Response(10 %)(Velocity)	1.0 HZ ±5 %	1.0 HZ ±5 %	
Low Frequency Response(10 %)(Velocity)	10 Hz ±5 %	10 Hz ±5 %	
Low Frequency Response(10 %)(Displacement)	1.0 Hz ±5 %	1.0 Hz ±5 %	
Low Frequency Response(10 %)(Displacement)	10 Hz ±5 %	10 Hz ±5 %	
High Frequency Response(-10 %)	200 kHz ±5 %	200 kHz ±5 %	
Filter Type(4-pole Butterworth)	Low Pass	Low Pass	
Electrical Filter Roll-off	80 dB/decade	80 dB/decade	
High Frequency Response(-10 %)	0.1 kHz ±5 %	0.1 kHz ±5 %	
High Frequency Response(-10 %)	1.0 kHz ±5 %	1.0 kHz ±5 %	
High Frequency Response(-10 %)	3.0 kHz ±5 %	3.0 kHz ±5 %	
High Frequency Response(-10 %)	10 kHz ±5 %	10 kHz ±5 %	
High Frequency Response(-10 %)	30 kHz ±5 %	30 kHz ±5 %	
High Frequency Response(-10 %)	100 kHz ±5 %	100 kHz ±5 %	
Fault/Bias Monitor LEDES	Fault/Overload	Fault/Overload	
Control Interface			
Human Interface	Keypad	Keypad	
Display	2 rows, 16 columns	2 rows, 16 columns	[1]
Digital Control Interface	RS-485	RS-485	
Digital Control: Data Rate	9600 bps	9600 bps	
Digital Control: Start, Data, Stop, Parity	1, 8, 1, No	1, 8, 1, No	
Environmental			
Temperature Range(Operating)	32 to 120 °F	0 to +50 °C	
Electrical			
Power Required(VDC)	+15 at 230 mA	+15 at 230 mA	
Power Required(VDC)	-15 at 140 mA	-15 at 140 mA	
Power Required(Watts)	6.25	6.25	[2]
Power Required(VDC)	+28 at 5 mA + Sensor	+28 at 5 mA + Sensor	
	Current	Current	
Excitation Voltage(To Sensor)	24 ±1 VDC	24 ±1 VDC	
DC Offset	<50 mV	<50 mV	
Constant Current Excitation(to Sensor, Selectable)	0 to 20 mA	0 to 20 mA	[3]
Output Voltage	>±10 V	>±10 V	
Output Impedance	<1 Ohm	<1 Ohm	
Broadband Electrical Noise(1 Hz to 10 kHz)(ICP® INPUT)	9 µV	-101 dB	[4][5]
Broadband Electrical Noise(2 to 22.4 kHz)(ICP® INPUT)	<3 µV	<-110 dB	[4][5]
Spectral Noise(1 Hz)	1 µV/√Hz	-120 dB	[5]
Spectral Noise(10 Hz)	0.22 µV/√Hz	-133 dB	[5]
Spectral Noise(100 Hz)	0.08 µV/√Hz	-142 dB	[5]
Spectral Noise(1 kHz)	0.08 µV/√Hz	-142 dB	[5]
Spectral Noise(10 kHz)	0.07 µV/√Hz	-143 dB	[5]
Broadband Electrical Noise(1 Hz to 10 kHz)(Charge Input)	9 µV	-101 dB	[6][7]
Broadband Electrical Noise(2 Hz to 22.4 kHz)(Charge Input)	<5 fC	<5 fC	[6][7]
Spectral Noise(1 kHz)	0.8 µV/√Hz	-122 dB	[6]
Spectral Noise(10 kHz)	0.20 µV/√Hz	-134 dB	[6]
Spectral Noise(100 kHz)	0.08 µV/√Hz	-142 dB	[6]
Spectral Noise(1 kHz)	0.08 µV/√Hz	-142 dB	[6]
Spectral Noise(10 kHz)	0.07 µV/√Hz	-143 dB	[6]
Oscillator(pC RMS)	100±1%	100±1%	
Oscillator(V RMS)	±1%	±1%	
Oscillator(Hz)	159.2±1%	159.2±1%	
Overload Threshold	± 10 V to ±1 V	± 10 V to ±1 V	
Physical			
Electrical Connector(Input, sensor)	BNC	BNC	
Electrical Connector(Output)	BNC	BNC	
Size (Height)	5.05 x 3.6 in	128 x 92 mm	[10]
Weight	1.45 lb	0.66 kg	

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] Must be used with PCB 440 series mainframe chassis with computer control (RS-232).
 - [2] Maximum number of 443B101 Dual Mode Signal Conditioners that can be powered by (1) 441A101 is (4). Other modules must be calculated not to exceed total power of 30 watts.
 - [3] Discrete mA settings (0, 2, 4, 8, 12, or 20).
 - [4] Measured at gain of 1,000 (60 dB), input referred.
 - [5] Measured at gain of 1 with low noise ICP® simulator.
 - [6] Measured at gain of 1 mV/pC with 1 nF source capacitance.
 - [7] Measured at gain of 10V/pC (80 dB) with 1 nF source capacitance, input referred.
 - [8] 4 Digit - Selectable
 - [9] Can be increased using optional external 472B series charge attenuator.
 - [10] Double width unit.

SUPPLIED ACCESSORIES:

Model 070A02 Scope input adaptor (10-32 jack to BNC plug)
 Model EE-79 443B Control Software (1 CD ROM)

Entered: LK	Engineer: CPH	Sales: WDC	Approved: DY	Spec Number:
Date: 1/29/2018	Date: 1/29/2018	Date: 1/29/2018	Date: 1/29/2018	14470

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.