



SERIES 482 & 483

4 & 8-CHANNEL MULTI-PURPOSE SIGNAL CONDITIONERS

Provides sensor excitation: current or voltage

All models power ICP® sensors and in-line ICP® charge converters

Models directly compatible with charge output piezoelectric sensors

Models directly compatible with bridge/differential sensors

Models suitable for conditioning any voltage input signal

Models with TEDS sensor support (IEEE 1451.4 & IEEE P1451.4)



FOR ICP®, CHARGE OUTPUT, AND BRIDGE/DIFFERENTIAL SENSORS

The 482 series are 4-channel benchtop signal conditioners that range from units with simple stand-alone operation to more complex units with front panel keypad / display, RS-232, USB, or Ethernet control. The 483 series are 8-channel 19" rack-mounted units that are based on the same signal conditioning electronics.

Both series offer units with a wide range of features including incremental gain, AC/DC coupling, auto zero, auto balance, and constant current or DC voltage supplies. Models with computer interfaces are supplied with PCB's Multi-Channel Signal Conditioner control software for signal conditioner setup and control.

The 482 series models are DC powered, however, they are supplied with a universal voltage, AC power adapter. The 483 series models are all AC powered only.

As with all PCB® instrumentation, this equipment is complemented with toll-free applications assistance, 24-hour customer service, and is backed by a no-risk policy that guarantees satisfaction or your money back.

SPECIFICATIONS

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Model	 482C05	 482C15	482C16	482C24	482D27	482C54	482D64
Performance							
Input Sensor Type	ICP®	ICP®, Voltage			ICP®, Voltage, Bridge/ Differential	ICP®, Charge, Voltage	
Gain	—	x1, x10, x100 [1]	x0.1 to x200		x0.1 to x1000 (ICP®, Volt) x0.1 to 1000 (Brdg/Diff)	x0.1 to x200	x0.1 to x1000
Charge Conversion (selectable)	—					0.1, 1, 10 mV/pC	
Frequency Range (+/-5%) (gain <100)	0.1 Hz to 1000 kHz	0.05 Hz to 100 kHz (@gain = 1)	0.05 Hz to 100 kHz	0.05 to 100 kHz [8]	0.1 to 100 kHz [8] Bridge: DC to 225 kHz (-3db)	0.05 Hz to 100 kHz [2]	0.1 Hz to 100 kHz [2]
Frequency Range (+/-5%) (gain ≥100)	—	0.05 Hz to 17 kHz	0.05 Hz to 50 kHz	0.05 Hz to 50 kHz [8]	0.1 Hz to 50 kHz [8]	0.05 Hz to 75 kHz [2]	0.1 Hz to 50 kHz [2]
Coupling (AC or DC)	AC			AC/DC		AC	AC/DC
Input Filter [3]	—	Optional			Optional ICP®	Optional	
Output Filter [3]	—		Optional			10 kHz LPF (4th order)	
TEDS Sensor Support	—			Yes			
Electrical							
AC Power (From power adapter) [4]	100 to 240 VAC						
AC Power (From power adapter) [4]	≤0.7 amps		≤1.6 amps			≤1.6 amps	
Excitation Voltage/Excitation Current (To Bridge/Diff. Sensors)	—				-12 V to +12 V [6][7] 100mA/30 mA [9]	—	
Excitation Voltage (To ICP® Sensors)	+26 VDC		+24 VDC				
Constant Current Excitation (To ICP® Sensors) [5]	2 to 20 mA	0 to 20 mA					
DC Offset	<20 mV		<50 mV				
Broadband Electrical Noise (1 to 10000 Hz) (x1 gain)	3.5 µV rms	5.6 µV rms	50 µV rms		17 µV rms	50 µV rms	17 µV rms
Physical							
Front Panel Display/Keypad	—		Yes				
Digital Control Interface	—		RS-232		USB, Ethernet	RS-232	USB, Ethernet
Electrical Connector (Inputs)	BNC jack				BNC jack, 8-socket mini DIN	BNC jack	
Electrical Connector (Outputs)	BNC jack						
Electrical Connector (DC Power Input)	5-socket DIN		6-socket mini DIN				
Size (Height x Width x Depth) (Nominal)	3.2 x 8.0 x 5.9 in 8.1 x 20 x 15 cm						
Weight	1.25 lb 567 gm		2.00 lb 907 gm		2.50 lb 1134 gm	2.40 lb 1089 gm	2.50 lb 1134 gm
Supplied Accessories							
Power Cord	017AXX						
Universal Power Adapter	488B04/NC		488B14/NC				
Communication Cable	—		100-7103-50		100-18895-80	100-7103-50	100-18895-80
MCSC Control Software	—		EE75				
Additional Versions							
Power Button Disabled; On Whenever Powered	482M187	—	482M186	—			
Notes							
[1] Jumper selectable on internal circuit board. [2] Charge input low frequency response is 0.5 Hz (+/-20%). [3] Filters must be installed at the factory and configured before ordered. Contact factory for available filter options and part numbering. [4] Units are supplied with applicable AC to DC converter for operation from 100 to 240 VAC (50 to 60 Hz). [5] User adjustable, factory set at 4 mA. [6] Adjustable in 0.1V steps. [7] Negative excitation can be set to 0V or to track the positive excitation voltage. [8] 0 Hz low frequency response when DC coupled. [9] Bridge Excitation Channel 1 = 100mA, Channels 2 - 4 = 30mA							
Reference model specification sheet for latest performance specifications							

SPECIFICATIONS							
Model	483C05	483C15	483C28	483C30	483C40	483C41	483C50
Performance							
Input Sensor Type	ICP®	ICP®, Voltage	ICP®, Voltage, Bridge/Differential	ICP®, Voltage, Charge			ICP®, Voltage
Gain	—	x1, x10, x100 [1]	x0.1 to x200 (ICP®, Volt) x0.1 to x2000 (Brdg/Diff)	x0.1 to x200	x0.1 to x200 (ICP®, Volt) x0.01 to x2000 mV/pC (Charge)		x0.1 to x200
Charge Conversion (selectable)	—			0.1, 1, 10 mV/pC	—		
Frequency Range (±5%) (gain <100)	0.1 Hz to 1000 kHz	0.05 Hz to 100 kHz (@gain = 1)	0.05 Hz to 100 kHz [7]	0.05 Hz to 100 kHz (-3dB) [2]			
Frequency Range (±5%) (gain ≥100)	—	0.05 Hz to 17 kHz	0.05 Hz to 50 kHz [7]	0.05 Hz to 100 kHz (-3dB) [2]			0.05 Hz to 80 kHz (-3dB)
Coupling (AC or DC)	AC		AC/DC	AC			
Input Filter [3]	—	Optional			Selectable LPF Included		Optional
Output Filter [3]	—	Optional		10 kHz LPF (4th order)	Optional		
TEDS Sensor Support	—		Yes				
Electrical							
AC Power (47 to 63 Hz)	100 to 240 VAC						
AC Power	≤0.7 amps		≤0.9 amps	≤0.85 amps	≤0.7 amps		
Excitation Voltage (To Bridge/Diff. Sensors)	—		-12 V to +12 V [5][6]	—			
Excitation Voltage (To ICP® Sensors)	+26 VDC		+24 VDC				
Constant Current Excitation (To ICP® Sensors) [4]	0 to 20 mA						
DC Offset	<20 mV		<50 mV				
Broadband Electrical Noise (1 to 10000 Hz) (x1 gain)	3.5 µV rms	5.6 µV rms	50 µV rms				
Oscillator(±2%) (Internal Generator - ICP®/ Voltage mode)	—			0.1 V pk 100/1000 Hz		—	
Oscillator(±2%) (Internal Generator - Charge mode)	—			100 pC pk 100/1000 Hz		—	
Selectable Ground Isolation	—	—	—	Yes	—	—	—
Physical							
Front Panel Display/ Keypad	—					Yes	—
Digital Control Interface	—		Ethernet				
Electrical Connector (Inputs)	BNC jack		BNC jack, 8-socket mini DIN	BNC jack			
Electrical Connector (Outputs)	BNC jack						
Electrical Connector (AC Power Input)	IEC 320						
Size (Height x Width x Depth) (Nominal)	1.75 x 19 x 13.7 in 4.5 x 48.3 x 34.8 cm						
Weight	6.25 lb 2.83 kg		7.0 lb 3.17 kg	8.0 lb 3.6 kg		7.0 lb 3.17 kg	
Supplied Accessories							
Power Cord	017AXX						
MCSC Control Software	—		EE75				
Notes							
[1] The high frequency tolerance is accurate within ±5% of the specified frequency. [2] The low frequency tolerance is accurate within ±25% of the specified frequency. [3] Filters must be installed at the factory and configured before ordered. Contact factory for available filter options and part numbering. [4] User adjustable, factory set at 4 mA. [5] Adjustable in 0.1V steps. [6] Negative excitation can be set to 0V or to track the positive excitation voltage. [7] 0 Hz low frequency response when DC coupled.							



SERIES 482 4-CHANNEL SIGNAL CONDITIONER



SERIES 483 8-CHANNEL SIGNAL CONDITIONER

All models that have an RS-232, USB, or Ethernet interface are supplied with PCB's Multi-Channel Signal Conditioner Control software. This easy to use software displays a table of the unit's current settings versus channels. Users can change any setting by simply changing values in the table. Typical settings include Input Sensor Type, Gain, Filtering, and Constant Current Excitation.

Software is available for download at:
www.pcb.com/MCSC-Software



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