

Model Number
480E09

BATTERY-POWERED SIGNAL CONDITIONER

Revision: V
ECN #: 45339

Performance	ENGLISH	SI	
Channels	1	1	
Frequency Range(-5 %)(x1, x10 Gain)	0.15 to 100,000 Hz	0.15 to 100,000 Hz	[6]
Frequency Range(-10 %)(x100 Gain)	0.15 to 50,000 Hz	0.15 to 50,000 Hz	[7]
Voltage Gain(± 2 %)	1:1	1:1	
Voltage Gain(± 2 %)	1:10	1:10	
Voltage Gain(± 2 %)	1:100	1:100	
Fault/Bias Monitor/Meter(± 1 V)(midscale)	13 VDC	13 VDC	
Environmental			
Temperature Range	32 to 120 °F	0 to 50 °C	
Electrical			
Excitation Voltage(To Sensor)	25 to 29 VDC	25 to 29 VDC	[1]
Constant Current Excitation(To Sensor)	2.0 to 3.2 mA	2.0 to 3.2 mA	[2]
Discharge Time Constant	>7 sec	>7 sec	[3][4]
DC Offset(Maximum)	<30 mV	<30 mV	[3]
Spectral Noise(1 Hz)(Gain 1)	.25 μV/√Hz	-132 dB	
Spectral Noise(10 Hz)(Gain 1)	.07 μV/√Hz	-143 dB	
Spectral Noise(100 Hz)(Gain 1)	.05 μV/√Hz	-146 dB	
Spectral Noise(1 kHz)(Gain 1)	.04 μV/√Hz	-148 dB	
Spectral Noise(10 kHz)(Gain 1)	.03 μV/√Hz	-150 dB	
Broadband Electrical Noise(1 to 10,000 Hz)(Gain x1)	3.25 μV rms	-110 dB/rms	
Spectral Noise(1 Hz)(Gain 10)	2.2 μV/√Hz	-113 dB	
Spectral Noise(10 Hz)(Gain 10)	2.0 μV/√Hz	-114 dB	
Spectral Noise(100 Hz)(Gain 10)	1.1 μV/√Hz	-119 dB	
Spectral Noise(1 kHz)(Gain 10)	.55 μV/√Hz	-125 dB	
Spectral Noise(10 kHz)(Gain 10)	.3 μV/√Hz	-130 dB	
Broadband Electrical Noise(1 to 10,000 Hz)(Gain x10)	49 μV/rms	-86 dB/rms	
Spectral Noise(1 Hz)(Gain 100)	20 μV/√Hz	-94 dB	
Spectral Noise(10 Hz)(Gain 100)	19 μV/√Hz	-94 dB	
Spectral Noise(100 Hz)(Gain 100)	12 μV/√Hz	-98 dB	
Spectral Noise(1 kHz)(Gain 100)	5.5 μV/√Hz	-105 dB	
Spectral Noise(10 kHz)(Gain 100)	2 μV/√Hz	-114 dB	
Broadband Electrical Noise(1 to 10,000 Hz)(Gain x100)	569 μV/rms	-65 dB/rms	
Power Required(Standard)	Internal Battery	Internal Battery	
Internal Battery(Type)	9V	9V	
Battery Life(Standard Alkaline)	50 hours	50 hours	
Power Required(Alternate)	DC power	DC power	
DC Power	15 mA	15 mA	[5]
Internal Battery(Quantity)	3	3	
DC Power	18 to 30 VDC	18 to 30 VDC	[5][1]
Physical			
Electrical Connector(Input, sensor)	BNC Jack	BNC Jack	
Electrical Connector(Output, scope)	BNC Jack	BNC Jack	
Electrical Connector(External Power, DC)	3.5 mm Diameter Miniature Jack	3.5 mm Diameter Miniature Jack	
Electrical Connector(Battery Charger)	#722 Switchcraft Jack	#722 Switchcraft Jack	
Size (Depth x Height x Width)	2.4 in x 4.0 in x 2.9 in	6.1 cm x 10 cm x 7.4 cm	
Weight(Including Batteries)	0.7 lb	0.3 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]Excitation voltage to sensor limited by optional DC power voltage.
- [2]Through internal current limiting regulator.
- [3]With 1M ohm load.
- [4]Un-buffered output, read out device input impedance affects discharge time constant and low frequency response of unit.
- [5]Provided by optional external DC power supply.
- [6]Low frequency response specified into 1M ohm load.
- [7]After Serial Number 24699, previously HFR was 100kHz.
- [8]See PCB Declaration of Conformance PS024 for details.

Entered: LK	Engineer: CPH	Sales: ML	Approved: JWH	Spec Number:
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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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