Model Number	BATTERY-POWERED SIGNAL CONDITIONER	Revision: R
480E09		ECN #: 38626

Performance	ENGLISH	SI	
Channels	1	1	
Frequency Range(-5 %)(x1, x10 Gain)	0.15 to 100,000 Hz	0.15 to 100,000 Hz	[5]
(-10 %)(x100 Gain)	0.15 to 50,000 Hz	0.15 to 50,000 Hz	[6]
Voltage Gain(± 2 %)	1:1	1:1	
(± 2 %)	1:10	1:10	
(± 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]
DC Offset(Maximum)	<30 mV	<30 mV	[3]
Spectral Noise(1 Hz)(Gain 1)	.25 µV/√Hz	-132 dB	
(10 Hz)(Gain 1)	.07 µV/√Hz	-143 dB	
(100 Hz)(Gain 1)	.05 µV/√Hz	-146 dB	
(1 kHz)(Gain 1)	.04 µV/√Hz	-148 dB	
(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	
(10 Hz)(Gain 10)	2.0 µV/√Hz	-114 dB	
(100 Hz)(Gain 10)	1.1 µV/√Hz	-119 dB	
(1 kHz)(Gain 10)	.55 µV/√Hz	-125 dB	
(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	
(10 Hz)(Gain 100)	19 µV/√Hz	-94 dB	
(100 Hz)(Gain 100)	12 µV/√Hz	-98 dB	
(1 kHz)(Gain 100)	5.5 µV/√Hz	-105 dB	
(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	[4]
Internal Battery(Quantity)	3	3	
DC Power	18 to 30 VDC	18 to 30 VDC	[4][1]
Physical			
Electrical Connector(Input, sensor)	BNC Jack	BNC Jack	
(Output, scope)	BNC Jack	BNC Jack	
(External Power, DC)	3.5 mm Diameter Miniature Jack	3.5 mm Diameter Miniature Jack	
(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	

CE [7]

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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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.

R - Rechargeable option, includes rechargable batteries and charger.

Internal Battery(Quantity)	3	3
Internal Battery(Type)	9V	9V
Battery Life(Rechargeable Ni MH)	20 hours	20 hours

NOTES:

[1] Excitation voltage to sensor limited by optional DC power voltage.
[2] Through internal current limiting regulator.
[3] With 1M ohm load.
[4] Provided by optional external DC power supply.
[5] Low frequency response specified into 1M ohm load.
[6] After Serial Number 24699, previously HFR was 100kHz.
[7] See PCB Declaration of Conformance PS024 for details.

OPTIONAL ACCESSORIES:

Model 400A81 (3) 9 V ultralife lithium batteries
Model 488A02 Tabletop battery charger, selectable input voltage, 110 & 220 VAC (for Series 480 battery signal conditioners)
Model 488A03 AC power source (for Series 480 battery signal conditioners - based on Model 488A02)

Entered: LH	Engineer: AJP	Sales: JM	Approved: BM	Spec Number:
Date: 5-15-12	Date: 3-27-12	Date: 3-29-12	Date: 3-27-12	480-5090-80

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