

**MODEL 143NM112
ULTRA HIGH IMPEDANCE
TRANSDUCER PREAMPLIFIER**

DL Instruments

Phone: (607)539-1108

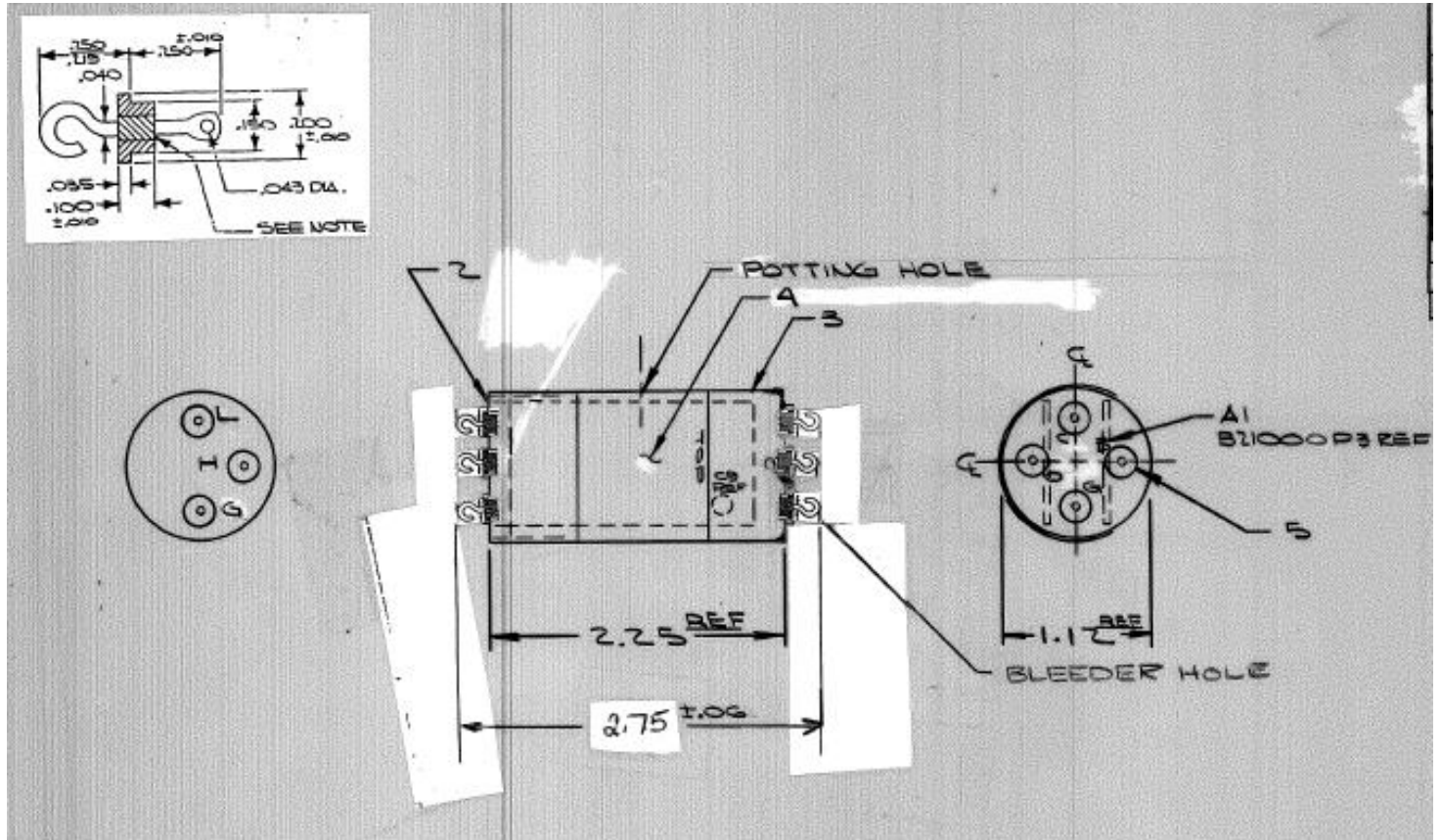
Email: info@dlinstruments.com
www.dlinstruments.com

The Model 143NM112 is a low noise, FET input Preamplifier typically used with piezoelectric transducers such as accelerometers, hydrophones and seismometers. It also provides excellent performance with high impedance bolometer type transducers and with pyroelectric photodetectors. It may also be used as gain blocks ahead of lock-in amplifier and other instrumentation such as oscilloscopes, spectrum analyzers and analog-to-digital converters. Its rugged design allows operation in severe environments such as encountered in underwater acoustics applications.



OUTLINE DRAWING

1.141 inch diameter X 2.25 inch long hermetically sealed cylindrical module. Input on one end, all other functions on opposite end to make it convenient for applications where signal flow is in a straight line.



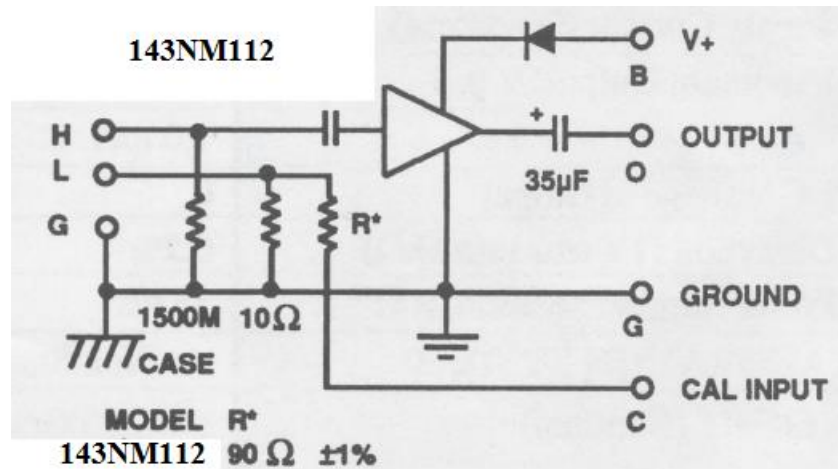
PIN CONNECTIONS

INPUT END:

- L** LOW INPUT
- H** HIGH INPUT
- G** GROUND

OUTPUT END

- C** CALIBRATION
- B** B+ (+24 V)
- O** OUTPUT
- G** GROUND



143NM112 Block diagram

SPECIFICATIONS

GAIN: 20 dB ± 0.2 dB

GAIN STABILITY: ± 0.1 dB

FREQUENCY RESPONSE: -1dB at 0.5Hz and 200Hz

INPUT R: 1000 Meg Ω // 15 pF

TYPICAL SOURCE: $R_s < 100M\Omega$ $C_s > 50$ PF

MAXIMUM SAFE INPUT: (ac+dc) ± 75 V

NOISE	Shorted Input	2.4 μ V rms	-112dB V
	100pF source	8 μ V rms	-102dB V

DISTORTION: (1 V rms into 5k Ω) 0.1%

OUTPUT TYPE: Non-inverted

OUTPUT CAPABILITY: V p-p 9V- 18V
I_p 4 mA- 10mA

DC VOLTAGE AT OUTPUT: 0

DYNAMIC OUTPUT IMPEDANCE: 35 Ω in Series with 40μF

SUPPLY VOLTAGE: 15 V to 30 V (max)

SUPPLY CURRENT: (Quiescent) 10mA to 20mA

POWER SUPPLY ISOLATION, RTI: 65 dB

OPERATING TEMPERATURE -25 ° C to +55 ° C operation
-55 ° C to +85 ° C storage

HYDROSTATIC PRESSURE available rated to 1500 psi

For more information please contact:

DL INSTRUMENTS, LLC
646 76 Road
Brooktondale, NY 14817
USA

Phone: (607)539-1108

Email: info@dlinstruments.com

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www.dlinstruments.com