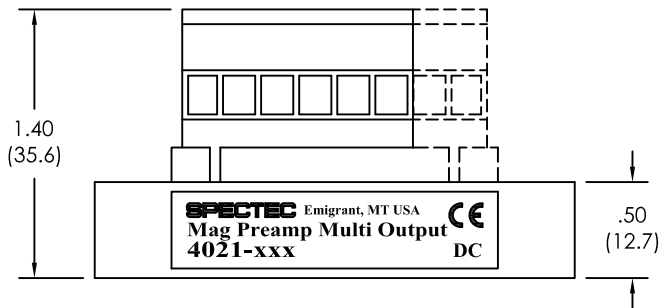
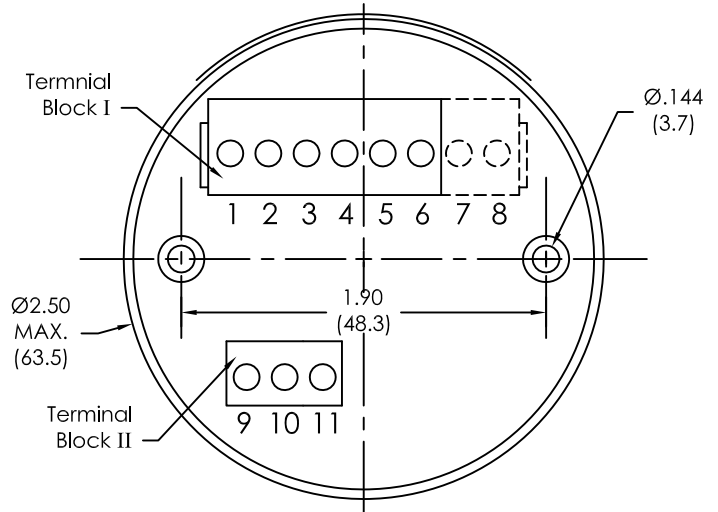


PRODUCT DESCRIPTION

The 4021 Noise Canceling Amplifier optimizes the performance of Spectec's unique Noise Canceling Pickup Coil, as well as providing superior performance with standard variable reluctance coils. This new rugged amplifier is specifically designed for tough pipeline, offshore platforms, and severe industrial applications. On-site mobile meter proving is easily accomplished via the independent terminal II connection without causing interruption or interference to the main signal transmission. Maintenance and calibration technicians can readily plug into terminal block II and connect mobile readout instruments or prover electronics.

SPECIFICATIONS

- Vs, Supply Voltage:** 6 to 36 V DC
- Is, Supply Current:** ≤ 4 mA @ 5VDC
 ≤ 8.5 mA @ 12VDC
 ≤ 17 mA @ 24VDC
 (single channel output)
- Vo1, Vo2, Vo3, Output:** 0-5V NPN TTL
 0-Vs NPN OC (Open Collector)
 0-5V NPN/PNP
 0-Vs NPN/PNP
- Vo3, Optional Opto-Isolated Output:** 0-5V NPN TTL
 0-Vs NPN OC (Open Collector)
- Input Sensitivity:** 40 mVpp (standard)
 or as noted on page 2
- Input Impedance:** 800 kΩ
- Input Option:** 2 wire Mag pickup (standard) or
 3 wire Noise Canceling pickup
- Frequency Range:** ≤ 10 kHz
- Rise/Fall Time:** < 2 μs
- Operating Temp:** -40° to 85° C (-40° to 185° F)
- Protection Features:** 60V load dump,
 reverse battery,
 output shorted to ground,
 lightning protected,
 inputs protected to 200 Vpp,
 Input EMI rejection,
 Thermal shutdown
- Terminals:** Molex Series 86 plug in (supplied)
 Terminal I - 6 or 8 terminals
 Terminal II - 3 terminals
- CE-Compliance:** **EN55011, EN50082-2**



TERMINAL SPECIFICATIONS

Terminal Block I (6 or 8 terminals)

Standard Output

1. Supply Voltage (6 to 36 VDC)
2. Common
3. Signal Out Vo1 (see page 2)
4. Signal Out Vo2 (see page 2)
5. Input (Mag Pickup)
6. Input (Mag Pickup)
7. Input (Mag Pickup Noise Calculation Lead)
8. 2 Wire Digital Current Loop
 (with jumper wire to terminal 4)

*For further noise reduction add 0.1 μF capacitor between terminals 5 & 6

Terminal Block II (3 terminals)

Standard Output (Optional)

9. Common
10. Signal Out Vo3 (see page 2)
11. Not Used

Opto-Isolated Output (Optional)

9. Common
10. Signal Out Vo3 (see page 2)
11. Supply Voltage (6 to 36 VDC)
 (Must be independent from terminal 1)

PRODUCT DETAILS

While the 4021 provides superior noise rejecting features, it also offers unmatched output configuration flexibility to readily interface with most instruments including PLCs.

Up to 3 simultaneous outputs are available via Vo1, Vo2, & Vo3. Output Vo3 is also available opto-isolated.

The optically isolated output can also be configured for a 2 wire digital current loop for long distance signal transmission.

Protection

The amplifier offers normal operation from 6 to 36VDC, with "load dump" protection to 60VDC and reverse battery protection. Brief periods of short circuited outputs can be tolerated. Normal output currents up to 250mA are possible for the 0-Vs, OC output option on output Vo2 & Vo3 (output Vo1 can withstand 25mA). Sensitive amplifier inputs are protected from high frequency EMI as well as static discharge, and normal operating signals up to 200 Vpp. All power and output connections are protected from modest local lightning discharges.

Input Configurations

Two basic configurations are offered to work with: standard 2 lead wire mag pickup, and especially with Spectec's unique Noise Canceling 3 lead wire mag pickup.

ORDER INFORMATION

4021 - 0 0 0 MAG PREAMP, MULTI OUTPUT, NOISE CANCELING

Optional
Signal
Output Vo3

Vo3
0 – WITHOUT Terminal Block II
1 – 0-5V TTL Standard Output
2 – 0-Vs, NPN OC Standard Output
5 – 0-5V TTL Opto-Isolated
6 – 0-Vs, NPN OC Opto-Isolated

Signal
Output
Vo1 & Vo2

Vo1	Vo2
1 – 0-5V TTL	0-Vs, NPN OC
2 – 0-5V TTL	0-5V TTL
3 – 0-Vs, NPN OC	0-Vs, NPN OC
4 – 0-Vs, NPN/PNP	0-Vs, NPN OC
5 – 0-5V, NPN/PNP	0-Vs, NPN OC
6 – 0-Vs, NPN/PNP	0-Vs, NPN/PNP
7 – 0-5V, NPN/PNP	0-5V, NPN/PNP

Input
Sensitivity

0 – 40 mVpp
1 – 12 mVpp
2 – 30 mVpp
3 – 5 mVpp
4 – 100 mVpp