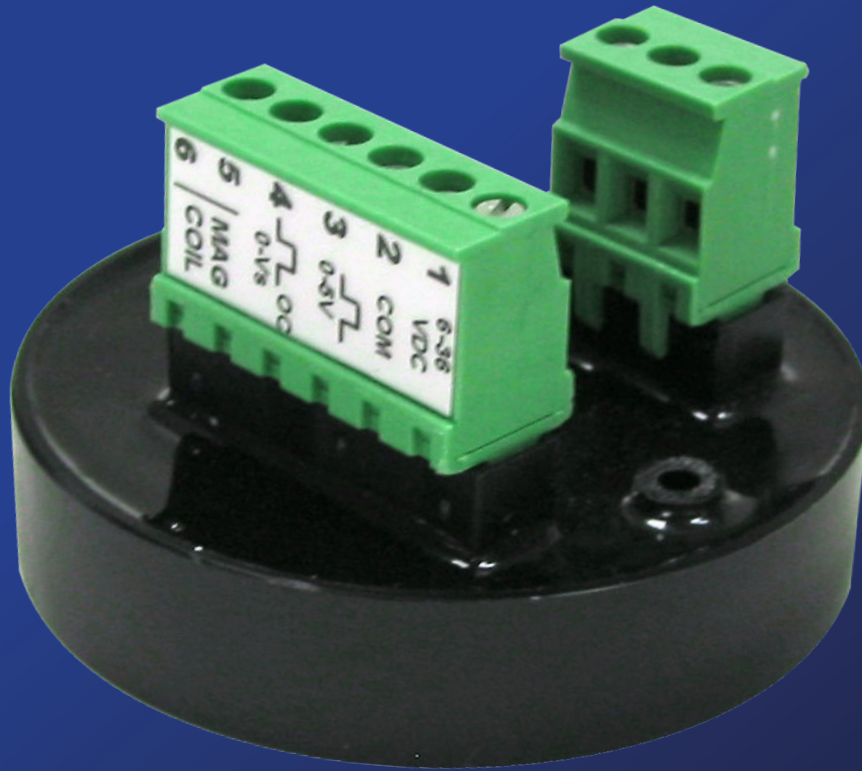


Turbine Flow Meter Preamp



Daniel® 1838 Preamplifier For Liquid and Gas Applications

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Product Description

The 1838 noise canceling amplifier is specifically designed for reliable long-term use in turbine meters, for both gas and liquid applications. This rugged amplifier is suitable for tough pipeline, offshore and severe industrial applications. On-line meter proving is easily accomplished via the optional 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.

The 1838 preamplifier is available in two options:

- Basic peamplifier I
 - Model Number 1-504-05-500
- Preamplifier and prover pulse output II
 - Model Number 1-504-05-501

Features and Benefits

The Daniel 1838 preamplifier provides superior noise rejection features and offers unmatched output configuration flexibility to readily interface with most instruments including PLCs.

Up to 3 simultaneous outputs are available:

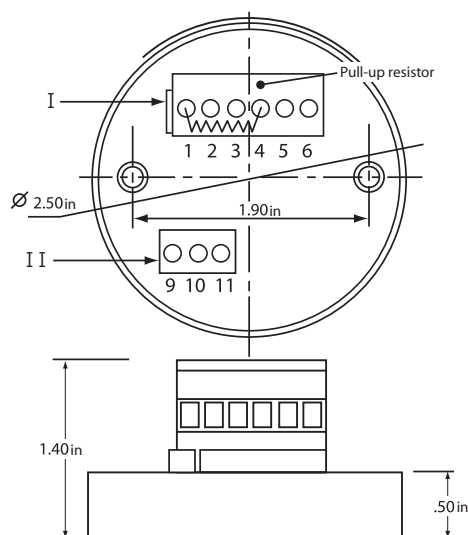
- Vo1: 0-5V TTL
- Vo2: 0-Vs Open Collector or 20mA loop
- Vo3: Non-isolated (1-504-05-501 only)

The amplifier offers normal operation from 5 to 40VDC, with load dump protection to 60VDC and reverse battery protection. Brief periods of short circuited outputs can be tolerated. With its dual outputs, the Preamp works with virtually any end device. One output swings from 0V to 5V regardless of the power supply voltage, and is suited for most inputs with thresholds of 4V or less. An open collector output swings from 0V to any available power supply voltage up to 40V sinking up to 250mA. Sensitive amplifier inputs are protected from high frequency EMI, as well as static discharge and normal operating signals up to 200Vpp. All power and output connections are protected from modest local lightning discharges.

Specifications

- Vs Supply Voltage 5 to 40VDC
- Is Supply Current <4mA @5Vdc
<8.5mA @ 12Vdc
<17 mA @ 24 Vdc
- Vo Output Vo1 0-5V NPN TTL

- Non-isolated Vo2 0-Vs NPN OC <250mA
Vo3 0-5V NPN, TTL (O-Vs)
- Input Sensitivity: 40mVpp
- Input: Single 2-wire pick-off (compatible with all Daniel pick-offs)
- Frequency Range: <10kHz
- Rise/Fall Time: <2microseconds
- Operating Temp: -40 to 85°C



Protection Features

60V Load Dump, reverse battery, output shorted to ground lightning protected, inputs protected to 200 Vpp

- Input EMI Rejection
- Thermal Shutdown
 - Terminal I Connector: 6 terminals
 - Terminal II Connector: 3 terminals (optional prover output)

Terminal Block I
Non-Isolated Output

1. Power, 5 to 40 VDC
2. Common
3. Signal Out Vo1, 0-5V
4. Signal Out Vo2, 0-Vs or OC
5. Pickoff
6. Pickoff

Terminal Block II (optional)
Mobile Prover Hook-Up

9. Common
10. Signal Out Vo3
11. Not used

Note: A pull-up resistor of 2KΩ should be used in 0-Vs powered pulse applications. (See diagram above).

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