

Model PAC Frequency Scaler & Pulse Isolator



The PAC series signal conditioners are two wire frequency to analog converters that convert a pulse rate input into a 4-20 mA output signal proportional to frequency or rate.

PAC-L (Low Range):

The PAC-L is intended for use with lower full scale input frequencies. Full scale frequencies of 15 Hz to 2000 Hz are possible. The unit includes both a contact closure input and an opto-isolated input. Output response time is selectable 1 or 10 seconds.

PAC-H (High Range):

The PAC-H is intended for high full scale frequencies. Full scale frequencies of 75 to 10,000 Hz are possible. This version includes a magnetic pickup compatible input and an opto-isolated input. Output response time is selectable 0.1 to 1 seconds.

The amplified frequency signal is then converted to an analog signal using a precision frequency to analog converter.

The output stage derives its power from the output current loop. The output stage converts the input signal into the desired output range. Multi-turn potentiometers provide for the necessary trimming of span and zero.

Specifications

Operating Temperature:

- 32° F (0°C) to 158°F (70°C)

Contact Closure Input (Low Range Models Only):

- Sensor Compatibility- Requires an isolated, contact closure
- Maximum Contact Voltage- 5 V
- Maximum Contact Current- 0.12 mA
- Nominal Pullup Resistance - 47 Kohm to 5 Vdc
- Frequency Range - 0-100 Hz

High Level Pulse Input (Low & High Range Models):

- Type: Opto-Isolated
- Logic 1: 4-30 VDC
- Logic 0: 0-1 VDC
- Frequency Range: 0-10 kHz
- Fault Protection:
- Reverse Polarity Protection
- Over Voltage Protection
- Isolation Voltage: 500 V
- Fast Transient Immunity: 500 V
- Maximum Rise Time: No Limit
- Maximum Fall Time: No Limit

Frequency to Current Conversion:

PAC-L:

- Range Selection: DIP Switch Selectable
- Available Ranges: 30 Hz, 60 Hz, 120 Hz, 240 Hz, 480 Hz, 960 Hz, 1920 Hz

Analog Output:

- Accuracy: $\pm 0.1\%$ Span (@ 20° C)
- Output Type: Two Wire, Loop Powered
- Range: 4-20 mA (10 - 50 mA optional)
- Compliance Voltage: 10 to 40 VDC
- Loop Burden: < 10 VDC (less than 500 μ)
- Trim Controls: Zero & Span, non-interacting
- Span (20 mA) Trim Range: 50% to 100% of full scale
- Linearity: < $\pm 0.1\%$ Span
- Output Voltage Effect: < $\pm 0.002\%$ Span/Volt
- Temperature Effect: < 200 PPM/C°
- Reverse Polarity Protected
- Noise Content: < 0.2% Span
- Response Time: 0.1, 1, 10 seconds (switch selectable)
- Over-current Limiting: 35 mA
- Output Loop Indicator:

LED illuminates when output loop is powered by proper polarity and blinks proportionally to the input frequency.

Mounting Styles:

- DIN Rail Mount:
Plastic enclosure with a snap fastener for fitting to DIN 46 277 and DIN EN 50 022 assembly rails.
- NEMA 4X: 4.92" x 4.92" NEMA 4X Enclosure for wall mounting.
- Explosion Proof:
Aluminum enclosure for:
Class I, Division 1, Groups B, C & D
Class II, Division I, Groups E, F & G.

Dimensions (inches)

DIN Rail Mount

NEMA 4X Enclosure

Options

Example: PAC L D ET DR-4

Series _____
PAC= Pulse to Analog

Range _____
L = Low Range
H = High Range

Mounting _____
B= Nema 4X
C= Explosion Proof
D= DIN Rail

Options _____
ET= Extended Temp (-20° to 85° C)
50 = 10-50 mA output

Accessories: (add to end of part number) _____
DR-4= 4" DIN Rail

NEMA 7/4 Enclosure



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