

Plug-in Signal Conditioners M-UNIT

PT TRANSMITTER

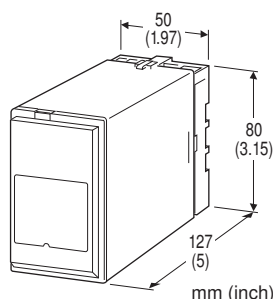
(high speed response)

Functions & Features

- Converting an alternating voltage from a potential (voltage) transformer into a standard process signal
- Minimum ripple
- Average sensing
- Isolation up to 2000 V AC
- High-density mounting

Typical Applications

- Monitoring & control of power supply system
- Quick countermeasure applicable even in failure or in sudden voltage change



MODEL: PTAF-[1][2][3]-[4][5]

ORDERING INFORMATION

- Code number: PTAF-[1][2][3]-[4][5]
- Specify a code from below for each of [1] through [5].
(e.g. PTAF-51A-B/Q)
- Special output range (For codes Z & 0)
- Specify the specification for option code /Q
(e.g. /C01/S01)

[1] INPUT (sinusoidal waveform)

Voltage

- 1: 0 - 110 V AC (used within 11 - 110 V)
- 2: 0 - 220 V AC (used within 22 - 220 V)
- 5: 0 - 150 V AC (used within 15 - 150 V)
- 6: 0 - 300 V AC (used within 30 - 300 V)

[2] FREQUENCY

- 1: 50 Hz
- 2: 60 Hz

[3] OUTPUT

Current

- A: 4 - 20 mA DC (Load resistance 600 Ω max.)
- B: 2 - 10 mA DC (Load resistance 1200 Ω max.)
- C: 1 - 5 mA DC (Load resistance 2400 Ω max.)
- D: 0 - 20 mA DC (Load resistance 600 Ω max.)
- E: 0 - 16 mA DC (Load resistance 750 Ω max.)
- F: 0 - 10 mA DC (Load resistance 1200 Ω max.)
- G: 0 - 1 mA DC (Load resistance 12 k Ω max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 1: 0 - 10 mV DC (Load resistance 10 k Ω min.)
- 2: 0 - 100 mV DC (Load resistance 100 k Ω min.)
- 3: 0 - 1 V DC (Load resistance 1000 Ω min.)
- 4: 0 - 10 V DC (Load resistance 10 k Ω min.)
- 5: 0 - 5 V DC (Load resistance 5000 Ω min.)
- 6: 1 - 5 V DC (Load resistance 5000 Ω min.)
- 4W: -10 - +10 V DC (Load resistance 10 k Ω min.)
- 5W: -5 - +5 V DC (Load resistance 5000 Ω min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

[4] POWER INPUT

AC Power

- B: 100 V AC
- C: 110 V AC
- D: 115 V AC
- F: 120 V AC
- G: 200 V AC
- H: 220 V AC
- J: 240 V AC

[5] OPTIONS

blank: none

/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to M-System's web site.)

- /C01: Silicone coating
- /C02: Polyurethane coating
- /C03: Rubber coating

TERMINAL SCREW MATERIAL

- /S01: Stainless steel

GENERAL SPECIFICATIONS

Construction: Plug-in
Connection: M3.5 screw terminals
Screw terminal: Chromated steel (standard) or stainless steel
Housing material: Flame-resistant resin (black)
Isolation: Input to output to power
Input waveform: Sine wave
Overrange output: 10 to +120 % at 1 – 5 V
Zero adjustment: -5 to +5 % (front)
Span adjustment: 95 to 105 % (front)

PERFORMANCE in percentage of span

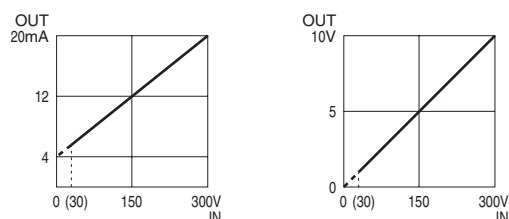
Accuracy: ± 1.0 %
Temp. coefficient: ± 0.1 %/°C (± 0.06 %/°F)
Response time: Approx. 50 msec. (0 – 90 %)
Ripple: 1 %p-p max.
Line voltage effect: ± 0.1 % over voltage range
Insulation resistance: ≥ 100 M Ω with 500 V DC
Dielectric strength: 2000 V AC @1 minute (input to output to power to ground)

INPUT SPECIFICATIONS

Frequency: Rating ± 2 Hz
Input burden: 1 VA maximum
Overload capacity: 200 % of rating for 1 minute, 120 % continuous
Operational range: 10 – 120 % of rating

OUTPUT SPECIFICATIONS

■ **DC Current:** 0 – 20 mA DC
Minimum span: 1 mA
Offset: Max. 1.5 times span
Load resistance: Output drive 12 V max.
 ■ **DC Voltage:** -10 – +12 V DC
Minimum span: 5 mV
Offset: Max. 1.5 times span
Load resistance: Output drive 1 mA max. at ≥ 0.5 V

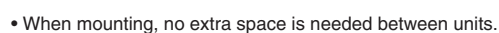
■ **OPERATION DIAGRAM (example)**

Note: The described accuracy is not assured within 0 – 10% of rated voltage (0 – 30V), though output signal exists.

INSTALLATION**Power input**

- **AC:** Operational voltage range: rating ± 10 %, 50/60 ± 2 Hz, approx. 2 VA

Operating temperature: -5 to +60°C (23 to 140°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Surface or DIN rail
Weight: 450 g (0.99 lb)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

