

## Rack-mounted Power Transducers 17-RACK

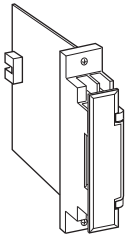
### PHASE ANGLE TRANSDUCER

#### Functions & Features

- Providing a DC output signal in proportion to phase angle
- DC output containing little ripple is ideal for computer input

#### Typical Applications

- Centralized monitoring and control of power management system in a manufacturing facility or building
- Measuring phase angle for a motor



### MODEL: 17PA-1[1][2]6-R

#### ORDERING INFORMATION

- Code number: 17PA-1[1][2]6-R
- Specify a code from below for each of [1] and [2].  
(e.g. 17PA-11P6-R)

#### CONFIGURATION

1: 3-phase / 3-wire

#### [1] INPUT (balanced load)

- 1: 110 V / 5 A AC
- 2: 110 V / 1 A AC
- 3: 220 V / 1 A AC
- 4: 220 V / 5 A AC

#### [2] OUTPUT SIGNAL POLARITY

- P: Negative in lag, positive in lead
- M: Negative in lead, positive in lag

#### OUTPUT

Voltage

- 6: 1 - 5 V DC (Load resistance 5000 Ω min.)

### AUXILIARY POWER SUPPLY

DC Power

R: 24 V DC

(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

#### GENERAL SPECIFICATIONS

**Construction:** Rack-mounted; terminal access via screw terminals on the front and connector on the rear; terminal cover provided

#### Connection

**Input:** M3.5 screw terminals (torque 0.8 N·m)

**Output:** Connector

**Auxiliary power:** Supplied from connector

**Screw terminal:** Nickel-plated steel

**Isolation:** Voltage input to current input to output to auxiliary power

**Computation:** Phase angle detection

**Ovrange output:** Approx. -10 to +120 %

**Zero adjustment:** -5 to +5 % (front)

**Span adjustment:** 95 to 105 % (front)

#### INPUT SPECIFICATIONS

##### ■ INPUT

**Frequency:** 50 or 60 Hz

##### • Voltage Input

**Input burden:** 0.5 VA

**Operational range:** 85 - 120 % of rating

**Overload capacity:** 150 % of rating for 10 sec., 120 % continuous

##### • Current Input

**Input burden:** 0.1 VA (input 1 A)

0.5 VA (input 5 A)

**Operational range:** 10 - 120 % of rating

**Overload capacity:** 1000 % of rating for 3 sec., 200 % for 10 sec., 120 % continuous

##### ■ Input range:

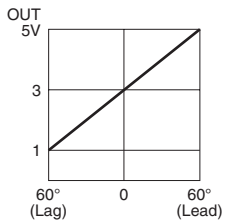
Lag 60° - 0 - lead 60°

Lead 60° - 0 - lag 60°

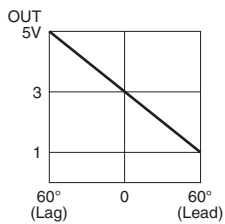
## OUTPUT SPECIFICATIONS

### ■ OPERATION DIAGRAM (example)

- Negative in lag, positive in lead



- Negative in lead, positive in lag



Note: When there is no input voltage or 5% or less of rated input current, the output may become unstable (hunting).

## INSTALLATION

### Auxiliary power supply

**Current consumption:** Approx. 40 mA

**Operating temperature:** -5 to +55°C (23 to 131°F)

**Operating humidity:** 40 to 85 % RH (non-condensing)

**Mounting:** Standard Rack 17BXE

**Weight:** 200 g (0.44 lb)

## PERFORMANCE in percentage of span

**Accuracy:**  $\pm 2\%$  with balanced load

(at 23°C  $\pm 10^\circ\text{C}$  or 73.4°F  $\pm 18^\circ\text{F}$ , 45 - 65 Hz)

**Response time:**  $\leq 2$  sec. (0 - 100 %  $\pm 1\%$ )

**Ripple:** 1 %p-p max.

**Line voltage effect:**  $\pm 0.1\%$  over voltage range

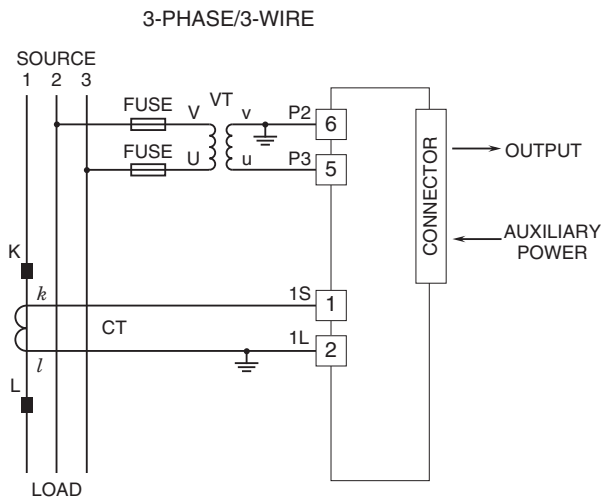
**Insulation resistance:**  $\geq 100\ \text{M}\Omega$  with 500 V DC

**Dielectric strength:** 500 V AC @ 1 minute (output to auxiliary power)

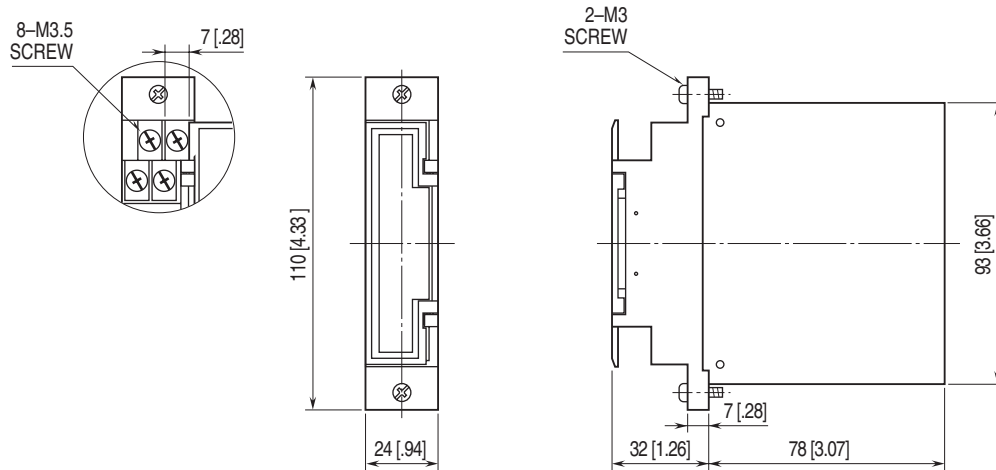
2000 V AC @ 1 minute (voltage input to current input to output or auxiliary power)

1500 V AC @ 1 minute (voltage input or current input or output or auxiliary power to ground)

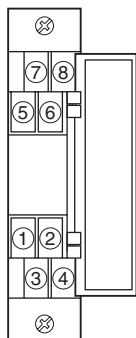
## CONNECTION DIAGRAM



## DIMENSIONS unit: mm (inch)



## TERMINAL ASSIGNMENTS



Specifications are subject to change without notice.