

## Rack-mounted Power Transducers 17-RACK

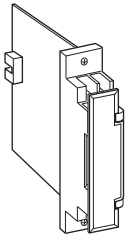
### VAR TRANSDUCER

#### Functions & Features

- Providing a DC output signal in proportion to AC reactive power
- DC output containing little ripple is ideal for computer input
- "Time division multiplication" method accepts distorted waveforms

#### Typical Applications

- Centralized monitoring and control of power management system in a manufacturing facility or building



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

#### ORDERING INFORMATION

- Code number: 17RP-1[1][2]6-R
- Specify a code from below for each [1] and [2]. (e.g. 17RP-11P6-R)
- Var range (e.g. LAG 1000 - LEAD 1000 var)

#### CONFIGURATION

1: 3-phase / 3-wire

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

(Voltage must be balanced.)

- 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:** Time division multiplication

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

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

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

#### INPUT SPECIFICATIONS

**Frequency:** 50 or 60 Hz

##### • Voltage Input

**Operational range:** 0 - 120 % of rating

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

##### • Current Input

**Operational range:** 0 - 120 % of rating

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

##### ■ How To Determine Var Range

Calibration Range [var] = (Measuring Range) ÷ ((VT Ratio) × (CT Ratio))

Check that the required calibration range is within the available range in the table.

[example]

3-phase / 3-wire, measuring range 75 kvar,

VT 220 / 110 V, CT 250 / 5 A

$(75 \times 10^3 \text{ [var]}) \div ((220 / 110) \times (250 / 5)) = 750 \text{ [var]}$

##### ■ INPUT RANGE

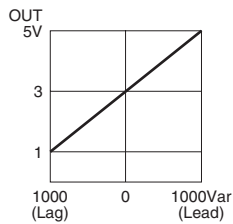
##### • 3-phase / 3-wire

INPUT	STD.RANGE	AVAILABLE RANGE	BURDEN (VA)	
			VOLT.	CURR.
110V/1A	200 var	100 - 240 var	0.2	0.1/ph
110V/5A	1000 var	500 - 1200 var	/phase	0.5/ph
220V/1A	400 var	200 - 480 var	0.4	0.1/ph
220V/5A	2000 var	1000 - 2400 var	/phase	0.5/ph

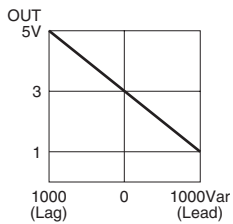
## OUTPUT SPECIFICATIONS

### ■ OPERATION DIAGRAM (example)

- Negative in lag, positive in lead



- Negative in lead, positive in lag



## 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:**  $\pm 0.5\%$  (at  $23^{\circ}\text{C} \pm 10^{\circ}\text{C}$  or  $73.4^{\circ}\text{F} \pm 18^{\circ}\text{F}$ , 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)

