

Rack-mounted Power Transducers 17-RACK

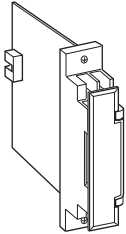
VAR TRANSDUCER

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 of [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

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

■ INPUT RANGE

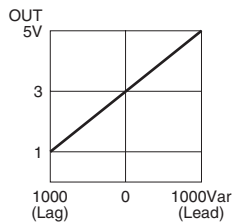
• 3-phase / 3-wire

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

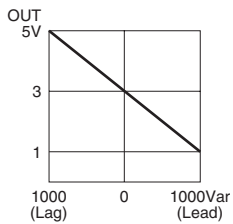
OUTPUT SPECIFICATIONS

■ 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: ≤ 2 sec. (0 - 100 % $\pm 1\%$)

Ripple: 1 %p-p max.

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

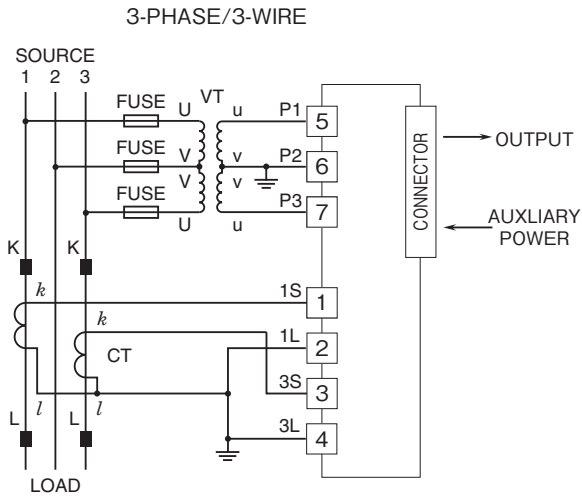
Insulation resistance: $\geq 100\ \text{M}\Omega$ with 500 V DC

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

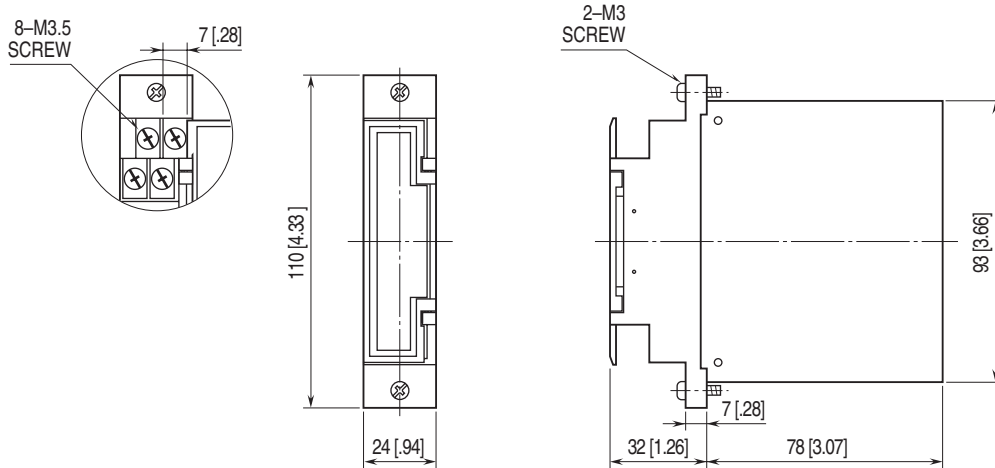
2000 V AC @ 1 minute (voltage input to current input to
output or auxiliary power)

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

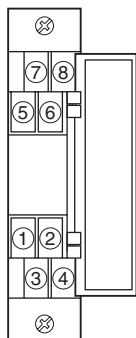
CONNECTION DIAGRAM



DIMENSIONS unit: mm (inch)



TERMINAL ASSIGNMENTS



Specifications are subject to change without notice.