

Rack-mounted Power Transducers 17-RACK

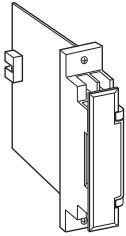
WATT TRANSDUCER

Functions & Features

- Providing a DC output signal in proportion to AC active power
- Measuring bidirectional power flow
- 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
- SCR - Silicon Controlled Rectifier



MODEL: 17WT-[1][2]6-R

ORDERING INFORMATION

- Code number: 17WT-[1][2]6-R
- Specify a code from below for each of [1] and [2].
(e.g. 17WT-116-R)
- Wattage range (e.g. 0 - 980 W)

[1] CONFIGURATION

- 1: 3-phase / 3-wire
- 2: Single-phase / 2-wire
- 3: Single-phase / 3-wire

[2] INPUT (unbalanced 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
- A: 100 V / 200 V / 1 A AC (single-phase / 3-wire)
B: 100 V / 200 V / 5 A AC (single-phase / 3-wire)

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 Wattage Range

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

Check that the required calibration range is within the available range in the table. Specify this range when ordering.

[Example]

3-phase / 3-wire, measuring wattage 750 kW,

VT 3300/110 V, CT 250/5 A

$750 \times 10^3 [W] \div ((3300 \div 110) \times (250 \div 5)) = 500 [W]$

■ INPUT RANGE

• 3-phase / 3-wire

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

• Single-phase / 2-wire

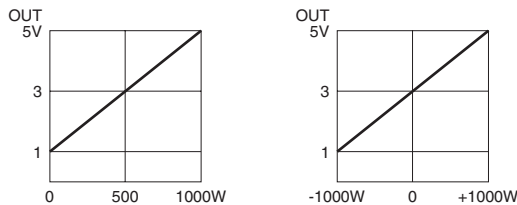
INPUT		AVAILABLE RANGE	BURDEN (VA)	
	STD.RANGE		VOLT.	CURR.
110V/1A	±100 W	±50 – ±120 W	0.2	0.1
110V/5A	±500 W	±250 – ±600 W		0.5
220V/1A	±200 W	±100 – ±240 W	0.4	0.1
220V/5A	±1000 W	±500 – ±1200 W		0.5

• Single-phase / 3-wire

INPUT		AVAILABLE RANGE	BURDEN (VA)	
	STD.RANGE		VOLT.	CURR.
200V/1A	±200 W	±100 – ±240 W	0.2	0.1/ph
200V/5A	±1000 W	±500 – ±1200 W	/phase	0.5/ph

OUTPUT SPECIFICATIONS

■ OPERATION DIAGRAM (example)



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: ±0.5 % (at 23°C ±10°C or 73.4°F ±18°F, 45 - 65 Hz)

Response time: ≤ 2 sec. (0 - 100 % ±1 %)

Ripple: 1 %p-p max.

Line voltage effect: ±0.1 % over voltage range

Insulation resistance: ≥ 100 MΩ with 500 V DC

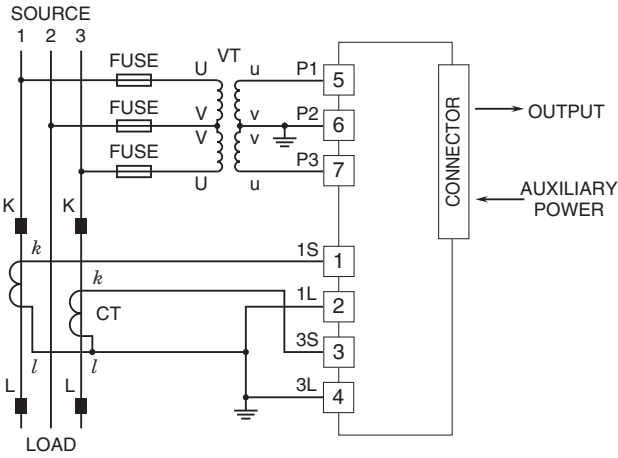
Dielectric strength: 500 V AC @ 1 minute (output to auxiliary power)

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

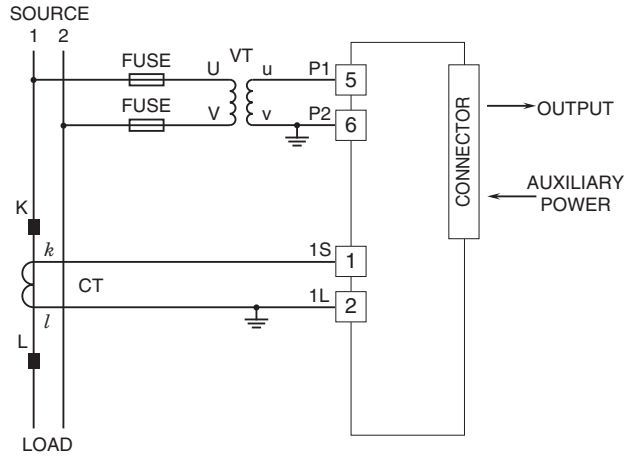
1500 V AC @1 minute (voltage input or current input or output or auxiliary power to ground)

CONNECTION DIAGRAM

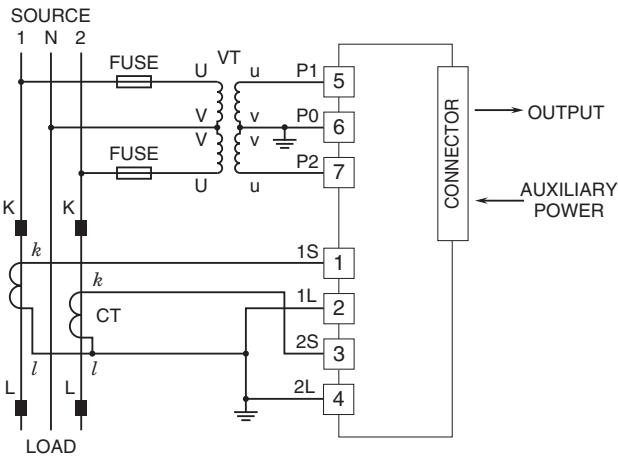
3-PHASE/3-WIRE



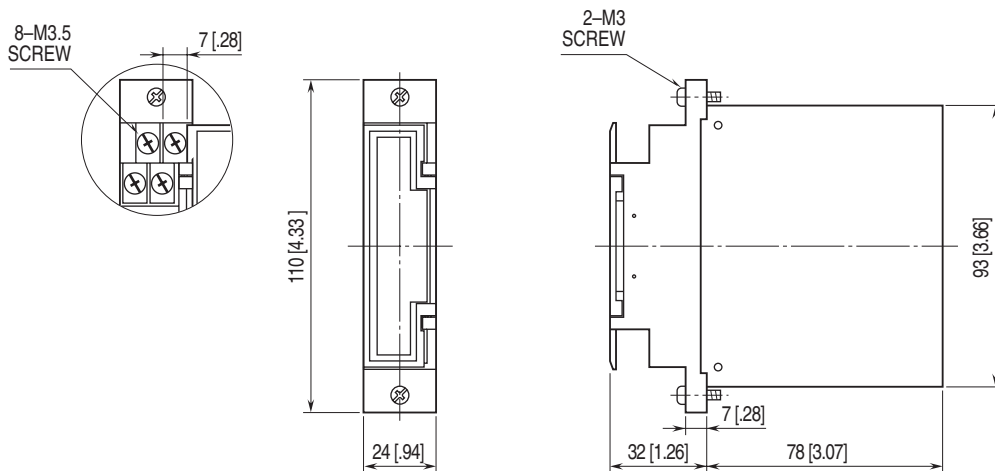
SINGLE-PHASE/2-WIRE



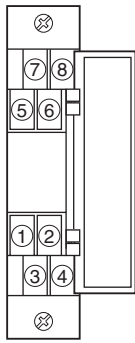
SINGLE-PHASE/3-WIRE



DIMENSIONS unit: mm (inch)



TERMINAL ASSIGNMENTS



Specifications are subject to change without notice.