Rack-mounted Power Transducers 17-RACK

AC CONVERTER

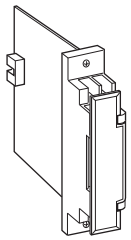
Functions & Features

• Converting an alternating current/voltage into a standard process signal

• True RMS sensing

Typical Applications

• Converting a large AC current in combination with a shunt resistor, or a narrow span AC voltage



MODEL: 17AC–[1]6-R

ORDERING INFORMATION

• Code number: 17AC-[1]6-R

Specify a code from below for [1].

(e.g. 17AC-A16-R)

• Special input range (For codes AZ & A8)

[1] INPUT

Current

AA: 0 – 10 mA AC (Input resistance 100 Ω)

AB: 0 – 50 mA AC (Input resistance 20 Ω)

AC: 0 – 100 mA AC (Input resistance 10 Ω)

AD: 0 – 500 mA AC (Input resistance 1 Ω)

AZ: Specify current (See INPUT SPECIFICATIONS)

(0 % input must be 0 mA.)

Voltage

A1: 0 – 100 mV AC (Input resistance 200 kΩ min.)

A2: 0 – 500 mV AC (Input resistance 200 kΩ min.)

A3: 0 – 1 V AC (Input resistance 200 kΩ min.)

A4: 0 – 5 V AC (Input resistance 200 kΩ min.)

A5: 0 – 10 V AC (Input resistance 200 kΩ min.)

A6: 0 – 120 V AC (Input resistance 200 kΩ min.)

A7: 0 – 150 V AC (Input resistance 200 kΩ min.)

A8: Specify voltage (See INPUT SPECIFICATIONS)

(0 % input must be 0 V.)

OUTPUT

Voltage

6: 1 – 5 V DC (Load resistance 2000 Ω min.)

POWER INPUT

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

Power input: Supplied from connector

Screw terminal: Nickel-plated steel

Isolation: Input to output to power

Input waveform: Up to 15 % of 3rd harmonic content

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

Span adjustment: 95 to 105 % (front)

INPUT SPECIFICATIONS

Frequency: 40 Hz min., 1 kHz max.

■ AC Current: 0 – 1 A AC; input resistor incorporated

Minimum span: 1 mA

Input resistance

Span 1 mA: 1 kΩ

Span ≤ 2 mA: 500 Ω

Span ≤ 5 mA: 200 Ω

Span ≤ 10 mA: 100 Ω

Span ≤ 20 mA: 50 Ω

Span ≤ 50 mA: 20 Ω

Span ≤ 100 mA: 10 Ω

Span ≤ 500 mA: 1 Ω

Span ≤ 1 A: 0.5 Ω

■ AC Voltage: 0 – 250 V AC

Minimum span: 50 mV

Input resistance: 200 kΩ min.

INSTALLATION

Current consumption: Approx. 35 mA

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

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

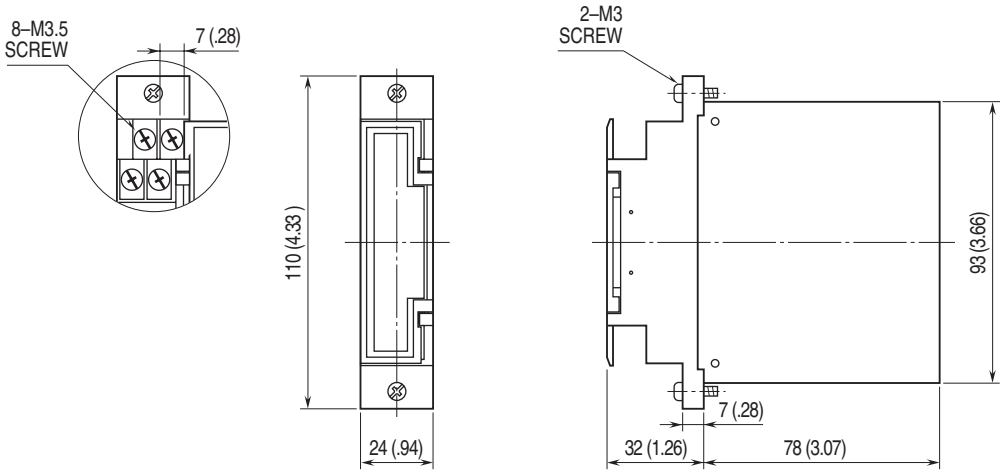
Mounting: Standard Rack 17BXE

Weight: 150 g (0.33 lb)

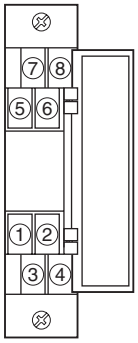
PERFORMANCE in percentage of span

Accuracy: ±0.4 %
Temp. coefficient: ±0.02 %/°C (±0.01 %/°F)
Response time: ≤ 0.5 sec. (0 – 90 %)
Ripple: 0.5 %p-p max.
Line voltage effect: ±0.1 % over voltage range
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute
(input to output or power)
500 V AC @ 1 minute (outut to power)
1500 V AC @ 1 minute (input or output or power to ground)

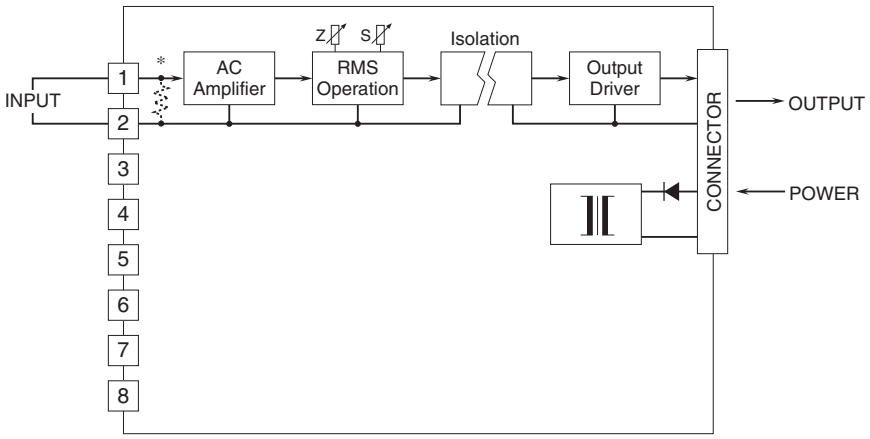
DIMENSIONS unit: mm (inch)



TERMINAL ASSIGNMENTS



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



* Input shunt resistor incorporated for current input

⚠ Specifications are subject to change without notice.