

Rack-mounted DCS Signal Conditioners 18-RACK

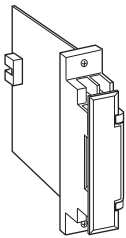
AC CONVERTER

Functions & Features

- Converting an alternating current/voltage into two standard process signals
- True RMS sensing
- Second channel output available at the front terminals and at the Standard Rack connector

Typical Applications

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



MODEL: 18AC-[1]66-R

ORDERING INFORMATION

- Code number: 18AC-[1]66-R
- Specify a code from below for [1].
(e.g. 18AC-A666-R)

[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 10 kΩ min.)
- A2:** 0 - 500 mV AC (Input resistance 10 kΩ min.)
- A3:** 0 - 1 V AC (Input resistance 10 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 1

Voltage

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

OUTPUT 2

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 1: Connector

Output 2: M3.5 screw terminals (torque 0.8 N·m) and connector

Power input: Supplied from connector

Screw terminal: Nickel-plated steel

Isolation: Input to output 1 to output 2 to power

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

Overrange output: 0 to 120 % at 1 - 5 V

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

Span 50 mV - 3 V : ≥ 10 kΩ

Span ≥ 3V : ≥ 200 kΩ

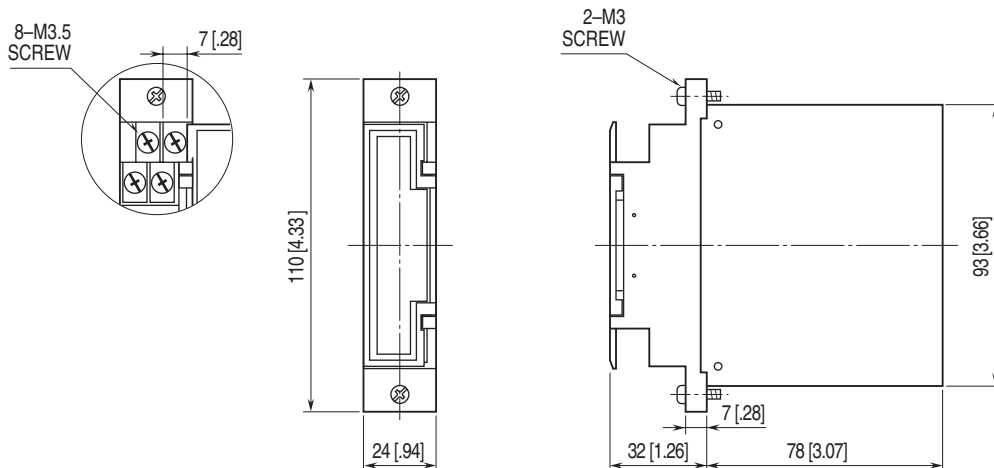
INSTALLATION

Current consumption: Approx. 35 mA
Operating temperature: -5 to +55°C (23 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Standard Rack 18BXx or 18KBXx
Weight: 150 g (0.33 lb)

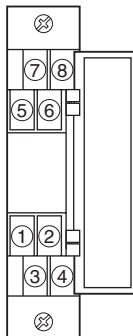
PERFORMANCE in percentage of span

Accuracy: $\pm 0.4\%$
Temp. coefficient: $\pm 0.02\%/^{\circ}\text{C}$ ($\pm 0.01\%/^{\circ}\text{F}$)
Response time: ≤ 0.5 sec. (0 - 90 %)
Ripple: 0.5 %p-p max. (100/120 Hz)
Line voltage effect: $\pm 0.1\%$ over voltage range
Insulation resistance: $\geq 100\ \text{M}\Omega$ with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute
 (input to output 1 or output 2 or power)
 500 V AC @ 1 minute
 (output 1 to output 2 to power)
 1500 V AC @ 1 minute
 (input or output or power to ground)

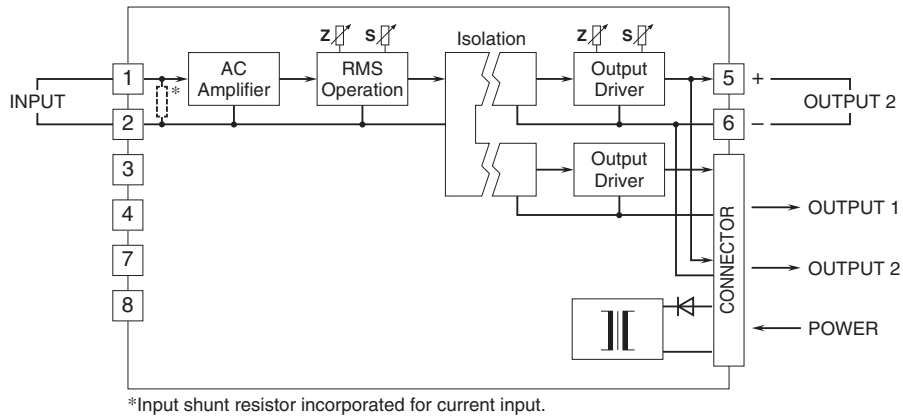
EXTERNAL DIMENSIONS unit: mm [inch]



TERMINAL ASSIGNMENTS



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.