

## Rack-mounted DCS Signal Conditioners 18-RACK

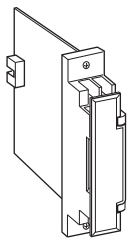
### AC CONVERTER

#### 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 span: Input Resistance**

- 50 mV - 3 V : 10 k (Ω minimum)
- ≥ 3V : 200 k



## INSTALLATION

### Power consumption

•DC: 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 lbs)

## 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:**  $\leq 0.5$  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)

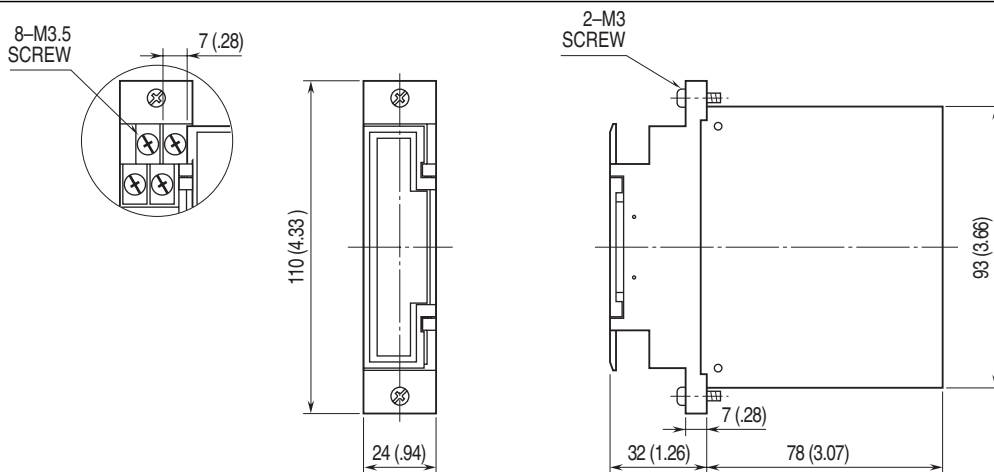
500 V AC @ 1 minute

(output 1 to output 2 to power)

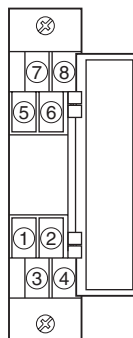
1500 V AC @ 1 minute

(input or output or power to ground)

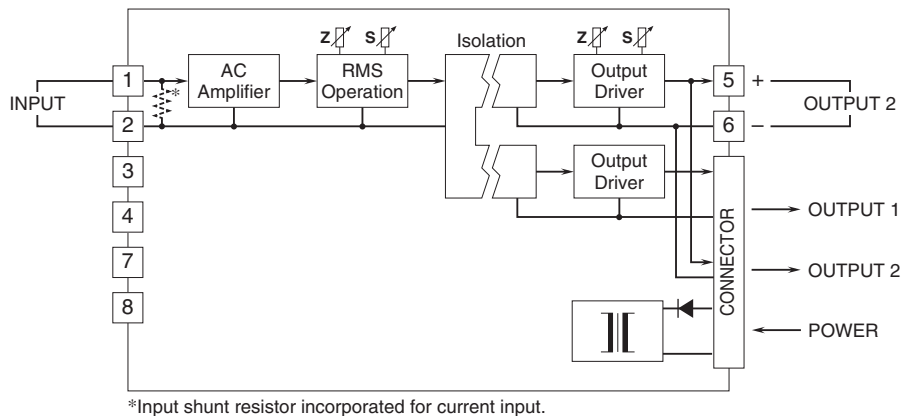
## DIMENSIONS unit: mm (inch)



## TERMINAL ASSIGNMENTS



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.

