

Rack-mounted DCS Signal Conditioners 18-RACK

SIGNAL CONVERTER

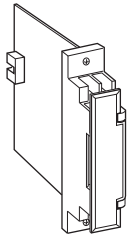
(fast response)

Functions & Features

- Converting a DC input into two standard process signals
- Second channel output available at the front terminals and at the Standard Rack connector
- Fast response type

Typical Applications

- Isolation between control room and field instrumentation



MODEL: 18VK-[1]6[2]-R

ORDERING INFORMATION

- Code number: 18VK-[1]6[2]-R

Specify a code from below for each of [1] and [2].

- (e.g. 18VK-166-R)
- Special input range (For code 0)

[1] INPUT

Current

A: 4 - 20 mA DC (Input resistance 250 Ω)

D: 0 - 20 mA DC (Input resistance 50 Ω)

G: 0 - 1 mA DC (Input resistance 1000 Ω)

H: 10 - 50 mA DC (Input resistance 100 Ω)

Voltage

1: 0 - 10 mV DC (Input resistance 10 k Ω min.)

2: 0 - 100 mV DC (Input resistance 100 k Ω min.)

3: 0 - 1 V DC (Input resistance 1 M Ω min.)

4: 0 - 10 V DC (Input resistance 1 M Ω min.)

5: 0 - 5 V DC (Input resistance 1 M Ω min.)

6: 1 - 5 V DC (Input resistance 1 M Ω min.)

0: Specify voltage (See INPUT SPECIFICATIONS)

OUTPUT 1

Voltage

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

[2] OUTPUT 2

Current

A: 4 - 20 mA DC (Load resistance 600 Ω max.)

Voltage

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

POWER INPUT

DC Power

R: 24 V DC

(Operational voltage range 24 V \pm 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

Overrange output: Approx. -10 to +120 % at 1 - 5 V

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

Span adjustment: 95 to 105 % (front)

INPUT SPECIFICATIONS

■ **DC Current:** Input resistor incorporated

■ **DC Voltage:** 0 - 300 V DC

Minimum span: 3 mV

Offset: Max. 1.5 times span

Input Resistance

Span 3 - 10 mV : \geq 10 k Ω

Span 10 - 100 mV : \geq 10 k Ω

Span 0.1 - 1 V : \geq 100 k Ω

Span \geq 1 V : \geq 1 M Ω

OUTPUT SPECIFICATIONS

With the input voltage code 3, 4, 5, 6 and current, the output goes below 0 % when the input is open.

INSTALLATION

Current consumption: Approx. 35 mA with voltage output

Approx. 65 mA with current output

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: ±0.1 %

Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)

Response time: Approx. 25 msec. (0 - 90 %)

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 1 or output 2 or power)

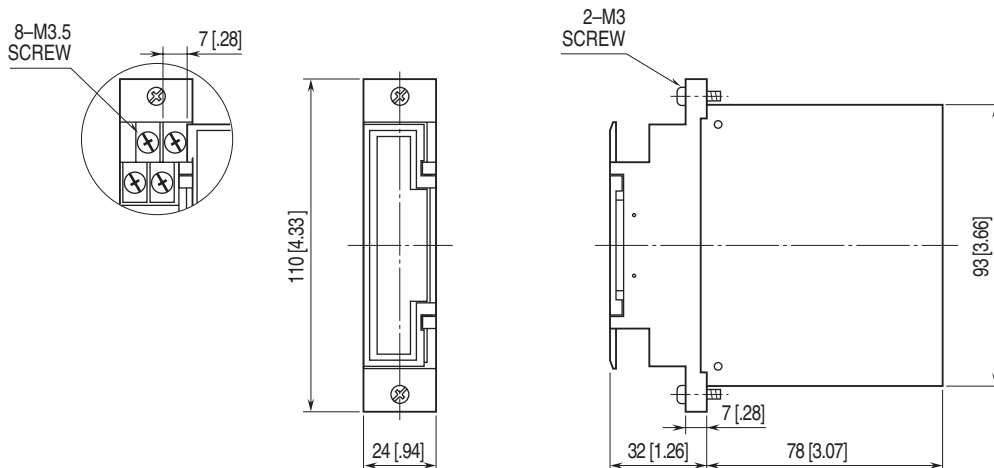
500 V AC @ 1 minute

(output 1 to output 2 to power)

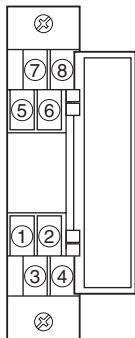
1500 V AC @ 1 minute

(input or output or power to ground)

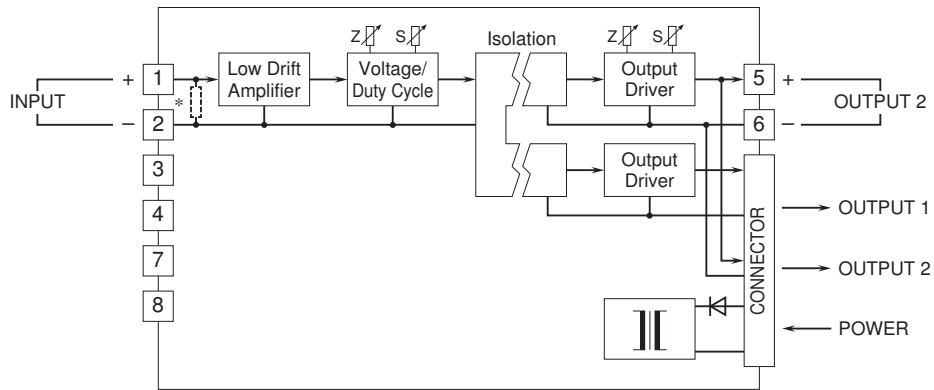
EXTERNAL DIMENSIONS unit: mm [inch]



TERMINAL ASSIGNMENTS



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Input shunt resistor incorporated for current input
 For output 2 with current output, use either of terminals on the front or connector on the rear.



Specifications are subject to change without notice.