

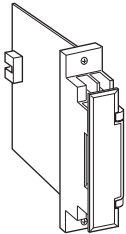
Rack-mounted DCS Signal Conditioners 18K-RACK

CURRENT LOOP SUPPLY

(10 - 50 mA / 4 - 20 mA loop)

Functions & Features

- 2-wire transmitter circuit with short-circuit protection
- Reposition the shorting pin to switch input signals between 10 - 50 mA DC and 4 - 20mA DC
- Applicable to smart transmitters
- Can also be used as a 10 - 50 mA DC / 4 - 20 mA DC isolator
- Module can be retracted without removing wiring for an insulation test
- Optional power switch



MODEL: 18KDU-66-R[1]

ORDERING INFORMATION

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

INPUT

Current
10 - 50 mA DC or 4 - 20 mA DC

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.)

[1] OPTIONS

Power Switch
blank: None
/S: With power switch

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) and connector

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 range selector: Jumper pin on the PCB

The input is factory set to 10 - 50 mA DC. Specify when 4 - 20 mA is required.

SUPPLY OUTPUT

Output voltage: 24 - 28 V DC with no load

Current rating: ≤ 60mA DC

- **Shortcircuit Protection**

Current limited: Approx. 65 mA

Protected time duration: No limit

INPUT SPECIFICATIONS

■ DC Current:

Input resistor incorporated

110 Ω ±1 % with 10 - 50 mA

260 Ω ±1 % with 4 - 20 mA

OUTPUT SPECIFICATIONS

The output goes below 0 % when the input is open.

INSTALLATION

Current consumption: Approx. 105 mA

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

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Standard Rack 18KBXx

Weight: 150 g (0.33 lb)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$

Temp. coefficient: $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)

Response time: ≤ 0.5 sec. (0 - 90 %)

Line voltage effect

Supply output: $\pm 3\%$ over voltage range

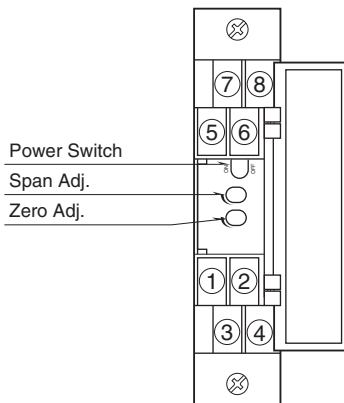
Output signal: $\pm 0.1\%$ over voltage range

Insulation resistance: $\geq 100\ \text{M}\Omega$ with 500 V DC

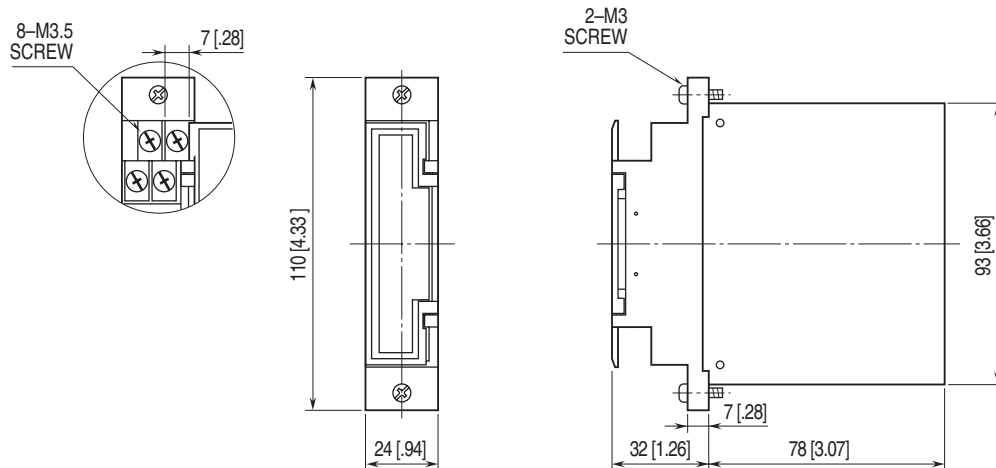
Dielectric strength: 500 V AC @ 1 minute (input to output 1 to output 2 to power to ground)

EXTERNAL VIEW

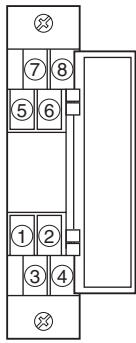
■ WITH POWER SWITCH



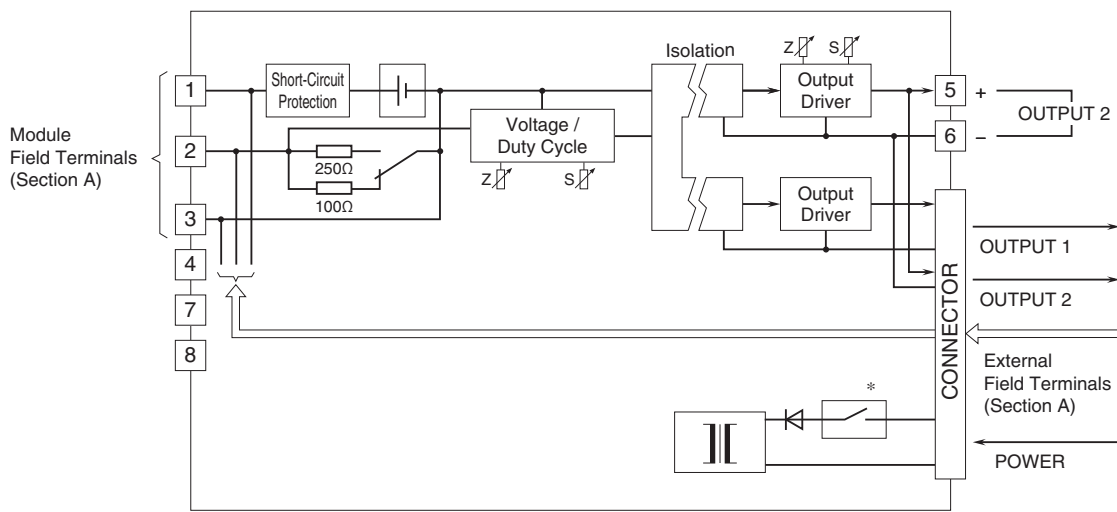
EXTERNAL DIMENSIONS unit: mm [inch]



TERMINAL ASSIGNMENTS



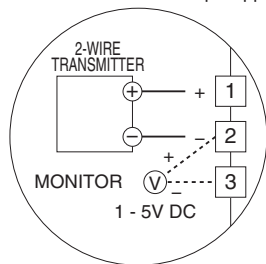
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



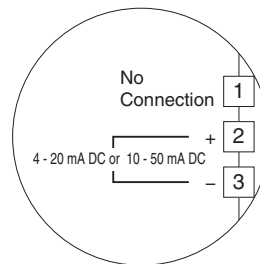
* With power switch only
Use either of module or external field terminals.

Section A. Field Terminals

■ When Used as Current Loop Supply



■ When Used as Isolator



Specifications are subject to change without notice.