

Rack-mounted DCS Signal Conditioners 18K-RACK

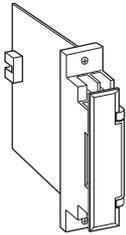
CURRENT LOOP SUPPLY

Functions & Features

- Powering a 4 – 20 mA DC current loop
- Shortcircuit protection
- Applicable to smart transmitters
- Usable as Isolator for 4 – 20 mA DC signals
- Module can be retracted without removing wiring for an insulation test
- Power switch optional

Typical Applications

- Various 2-wire transmitters



MODEL: 18KDY-A6[1]-R[2]

ORDERING INFORMATION

- Code number: 18KDY-A6[1]-R[2]
- Specify a code from below for each of [1] and [2].
(e.g. 18KDY-A66-R/SL)

INPUT

Current

A: 4 – 20 mA DC (Input resistance 276 Ω)

OUTPUT 1

Voltage

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

[1] 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 ±10 %, ripple 10 %p-p max.)

[2] OPTIONS

Power Switch

blank: None

/S: With power switch

/SL: With power switch (with green LED)

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)

SUPPLY OUTPUT

Output voltage: 24 – 28 V DC with no load

Current rating: ≤ 22 mA DC

- **Shortcircuit Protection**

Current limited: 35 mA max.

Protected time duration: No limit

INPUT SPECIFICATIONS

- **DC Current:** Input resistor incorporated

OUTPUT SPECIFICATIONS

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

INSTALLATION

Current consumption:

Approx. 65 mA with voltage output

(approx. 70 mA with /SL)

Approx. 95 mA with current output

(approx. 100 mA with /SL)

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

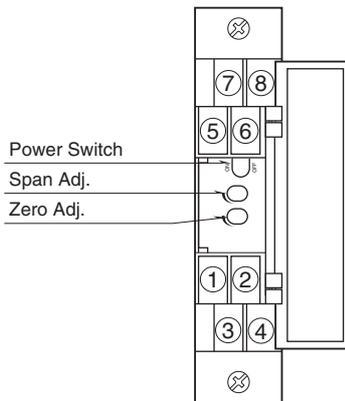
Output signal: $\pm 0.1\%$ over voltage range

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

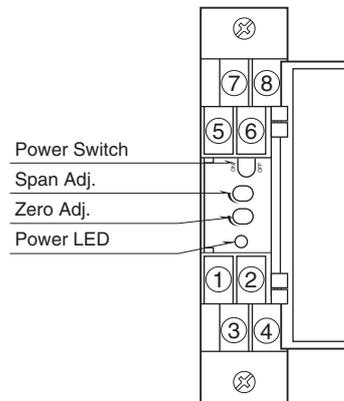
Dielectric strength: 500 V AC @ 1 minute (input to output 1 to output 2 to power to ground)

EXTERNAL VIEW

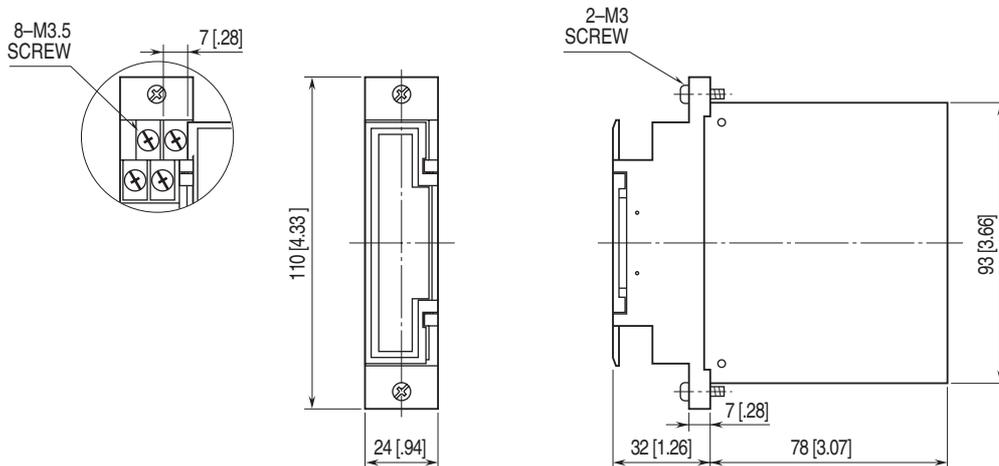
■ WITH POWER SWITCH



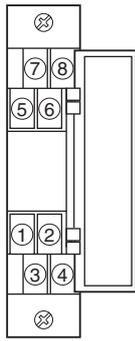
■ WITH POWER SWITCH (WITH GREEN LED)



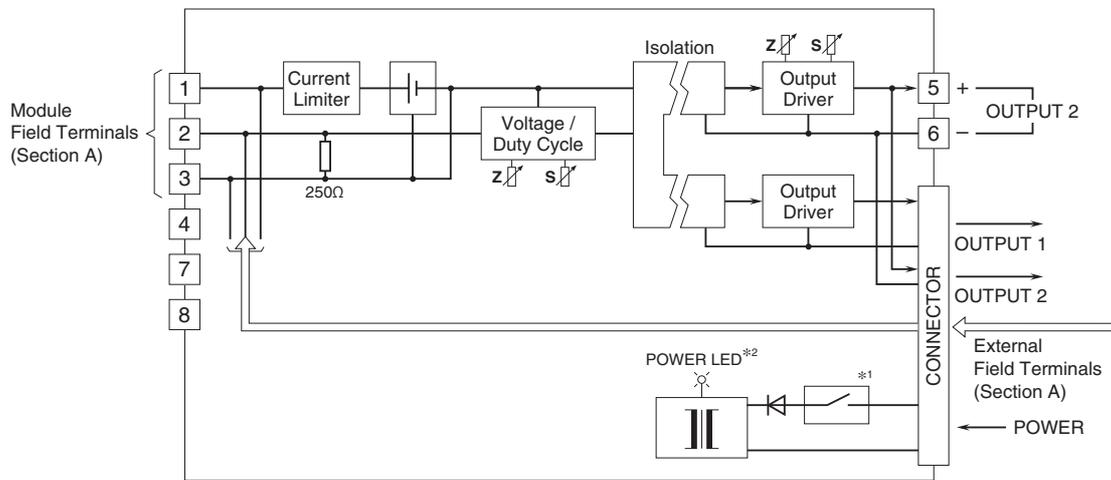
EXTERNAL DIMENSIONS unit: mm [inch]



TERMINAL ASSIGNMENTS



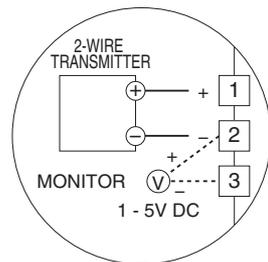
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



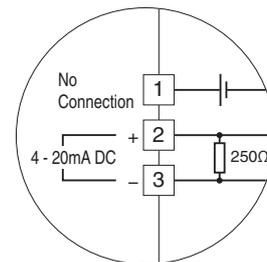
- *1. Power switch option
- *2. Option code /SL
- Note 1: Use either of module or external field terminals.
- Note 2: For OUTPUT 2 with current output, use either of terminals on the front or connector on the rear.

Section A. Field Terminals

■ When Used as Current Loop Supply



■ When Used as Isolator



Specifications are subject to change without notice.