

High-density Signal Conditioners 10-RACK**OUTPUT ISOLATOR**

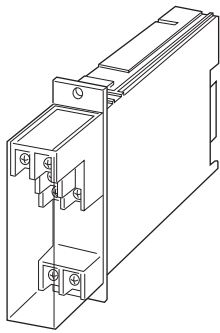
(fast response)

Functions & Features

- Converting a DC input into two isolated standard process signal
- Input from the Standard Rack connector can be monitored at the front terminals

Typical Applications

- Isolation between control room and field instrumentation

**MODEL: 10YK-[1][2][3]-R[4]****ORDERING INFORMATION**

- Code number: 10YK-[1][2][3]-R[4]
- Specify a code from below for each [1] through [4]. (e.g. 10YK-6A6-R/Q)
- Special input range (For code 0)
- Specify the specification for option code /Q (e.g. /C01)

[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 kΩ min.)
 2: 0 - 100 mV DC (Input resistance 100 kΩ min.)
 3: 0 - 1 V DC (Input resistance 1 MΩ min.)
 4: 0 - 10 V DC (Input resistance 1 MΩ min.)
 5: 0 - 5 V DC (Input resistance 1 MΩ min.)
 6: 1 - 5 V DC (Input resistance 1 MΩ min.)
 0: Specify voltage (See INPUT SPECIFICATIONS)

[2] OUTPUT 1**Current**

- A: 4 - 20 mA DC (Load resistance 600 Ω max.)
 B: 2 - 10 mA DC (Load resistance 1200 Ω max.)
 C: 1 - 5 mA DC (Load resistance 2400 Ω max.)
 D: 0 - 20 mA DC (Load resistance 600 Ω max.)
 E: 0 - 16 mA DC (Load resistance 750 Ω max.)
 F: 0 - 10 mA DC (Load resistance 1200 Ω max.)
 G: 0 - 1 mA DC (Load resistance 12 kΩ max.)

Voltage

- 1: 0 - 10 mV DC (Load resistance 10 kΩ min.)
 2: 0 - 100 mV DC (Load resistance 100 kΩ min.)
 3: 0 - 1 V DC (Load resistance 100 Ω min.)
 4: 0 - 10 V DC (Load resistance 1000 Ω min.)
 5: 0 - 5 V DC (Load resistance 500 Ω min.)
 6: 1 - 5 V DC (Load resistance 500 Ω min.)

[3] OUTPUT 2

0: None

Voltage

- 6: 1 - 5 V DC (Load resistance 5000 Ω min.)

POWER INPUT**DC Power**

R: 24 V DC

(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

[4] OPTIONS

blank: none

/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q**COATING (For the detail, refer to M-System's web site.)**

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

GENERAL SPECIFICATIONS

Construction: Rack-mounted; terminal access via screw terminals at the front and via card-edge connector at the rear; terminal cover provided

Connection**Input:** Card-edge connector**Output, input monitor:** M3.5 screw terminals (torque 0.8 N·m)**Power input:** Supplied from card-edge connector**Screw terminal:** Nickel-plated steel**Housing material:** Flame-resistant resin (black)**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 : $\geq 10 \text{ k}\Omega$
- Span 10 - 100 mV : $\geq 10 \text{ k}\Omega$
- Span 0.1 - 1 V : $\geq 100 \text{ k}\Omega$
- Span $\geq 1 \text{ V}$: $\geq 1 \text{ M}\Omega$

OUTPUT SPECIFICATIONS

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

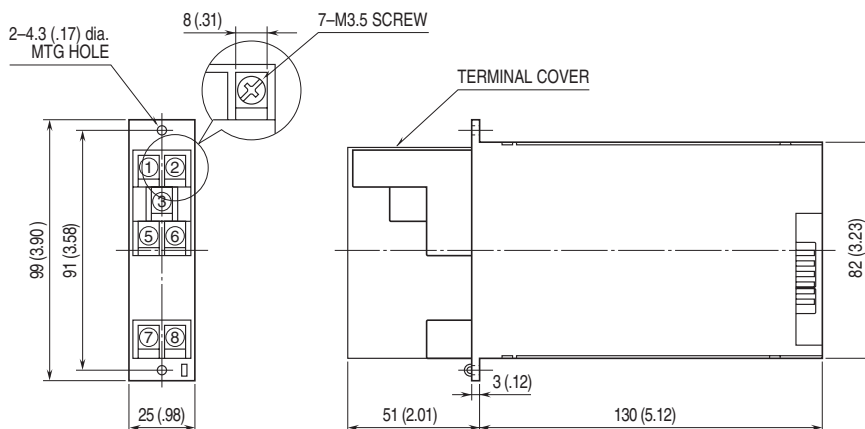
INSTALLATION

- Current consumption:** Approx. 25 mA with voltage output 1
 Approx. 45 mA with current output 1
- Operating temperature:** -5 to +55°C (23 to 131°F)
- Operating humidity:** 30 to 90 %RH (non-condensing)
- Mounting:** Standard Rack 10BXx
- Weight:** 200 g (0.44 lb)

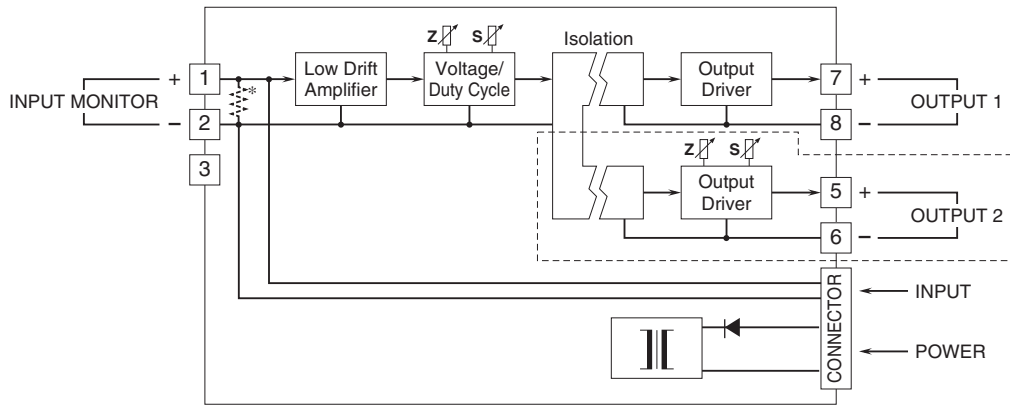
PERFORMANCE in percentage of span

- Accuracy:** $\pm 0.1 \%$
- Temp. coefficient:** $\pm 0.015 \%/^{\circ}\text{C}$ ($\pm 0.008 \%/^{\circ}\text{F}$)
- Response time:** Approx. 25 msec. (0 - 90 %)
- Line voltage effect:** $\pm 0.1 \%$ 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)
 1500 V AC @ 1 minute (input or output or power to ground)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Input shunt resistor incorporated for current input.
 Remark 1) The section enclosed by broken line is only for 2nd output channel.



Specifications are subject to change without notice.