

High-density Signal Conditioners 10-RACK

CURRENT LOOP SUPPLY

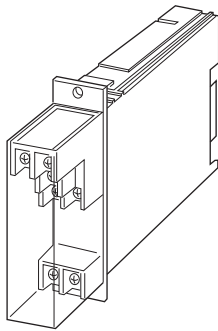
(isolated)

Functions & Features

- Powering a 4 - 20 mA DC current loop
- Shortcircuit protection
- Optional second channel output available at the front terminals and at the Standard Rack connector
- Applicable to smart transmitters
- With power switch selectable

Typical Applications

- Various 2-wire transmitters



MODEL: 10DY-A[1][2]-R[3]

ORDERING INFORMATION

- Code number: 10DY-A[1][2]-R[3]
- Specify a code from below for each [1] through [3]. (e.g. 10DY-A66-R/S/Q)
- Specify the specification for option code /Q (e.g. /C01)

INPUT

Current

A: 4 - 20 mA DC (Input resistance 300Ω)

[1] 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.)

[2] 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.)

[3] OPTIONS (multiple selections)

Power Switch

blank: None

/S: With power switch

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: M3.5 screw terminals (torque 0.8 N·m)

Output: Card-edge connector and 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)

With power switch (front, factory setting: ON)



SUPPLY OUTPUT

Output voltage: 24 - 28 V DC with no load
 16 V DC at 20 mA
Current rating: ≤ 22 mA DC
 •Shortcircuit Protection
Current limited: Approx. 35 mA
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. 55 mA with voltage output 1
 Approx. 80 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)

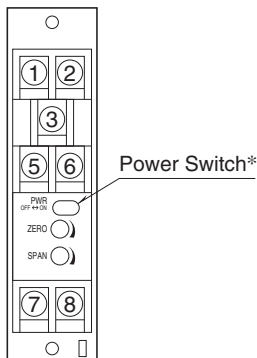
PERFORMANCE in percentage of span

Accuracy: ±0.1 %
Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)
Response time: ≤ 0.5 sec. (0 - 90 %)
Line voltage effect
Supply output: ±0.5 % over voltage range
Output signal: ±0.1 % over voltage range
Insulation resistance: ≥ 100 MΩ 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 VIEW

■ POWER SWITCH

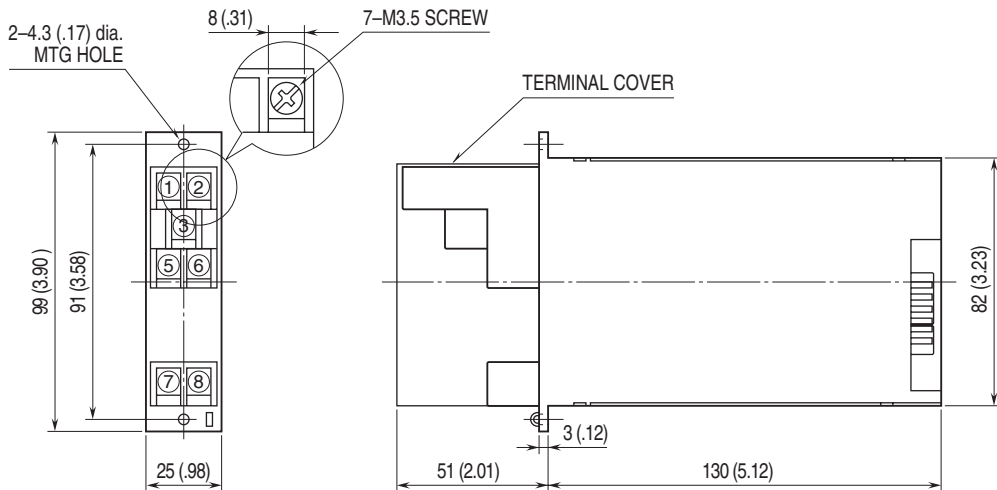
Power supply can be turned off.
 Right: ON, left: OFF



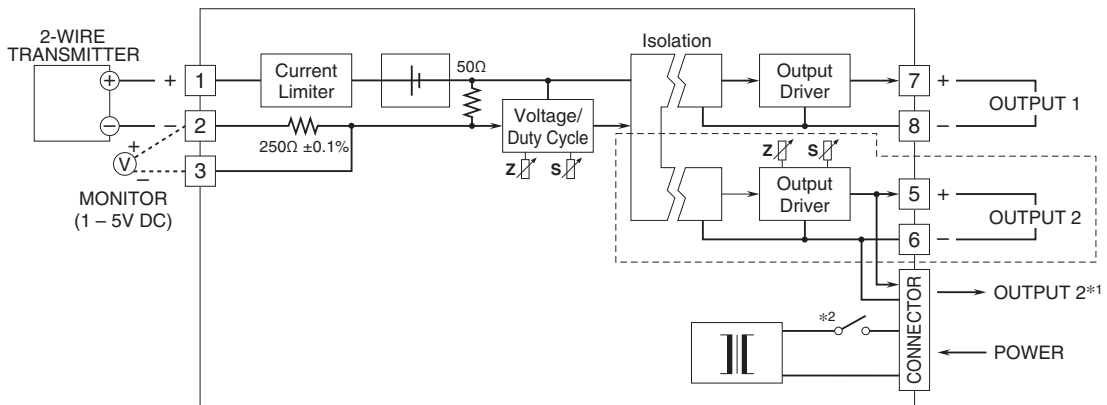
*Only for option /S



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*1 Output type has the output 1 connected to the card-edge connector in parallel.

*2 Only with power switch.

Remark 1) The section enclosed by broken line is only for 2nd output channel.



Specifications are subject to change without notice.