

High-density Signal Conditioners 10-RACK

6: 1 - 5 V DC (Load resistance 500 Ω min.)

CURRENT LOOP SUPPLY

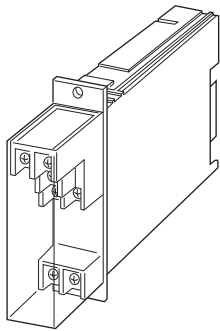
(with square root extractor)

Functions & Features

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

Typical Applications

- Various 2-wire transmitters



[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

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)

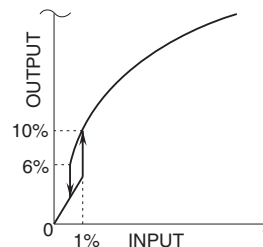
Isolation: Input to output 1 to output 2 to power

Overrange output: Approx. 0 to 120 % at 1 - 5V

Zero adjustment: -2 to +2 % (front)

Span adjustment: 95 to 105 % (front)

Low-end cutout: Approx. 10 % (output); curve characteristics shown in the figure below



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

ORDERING INFORMATION

- Code number: 10DNY-A[1][2]-R[3]

Specify a code from below for each [1] through [3].
(e.g. 10DNY-A66-R/Q)

- Specify the specification for option code /Q
(e.g. /C01)

INPUT

Current

A: 4 - 20 mA DC (Input resistance 340Ω)

[1] OUTPUT 1

Current

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

D: 0 - 20 mA DC (Load resistance 600 Ω max.)

G: 0 - 1 mA DC (Load resistance 12 kΩ max.)

Voltage

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.)



SUPPLY OUTPUT

Output voltage: 24 - 28 V DC with no load
 Current rating: ≤ 22 mA DC
 • Shortcircuit Protection
 Current limited: 30 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.

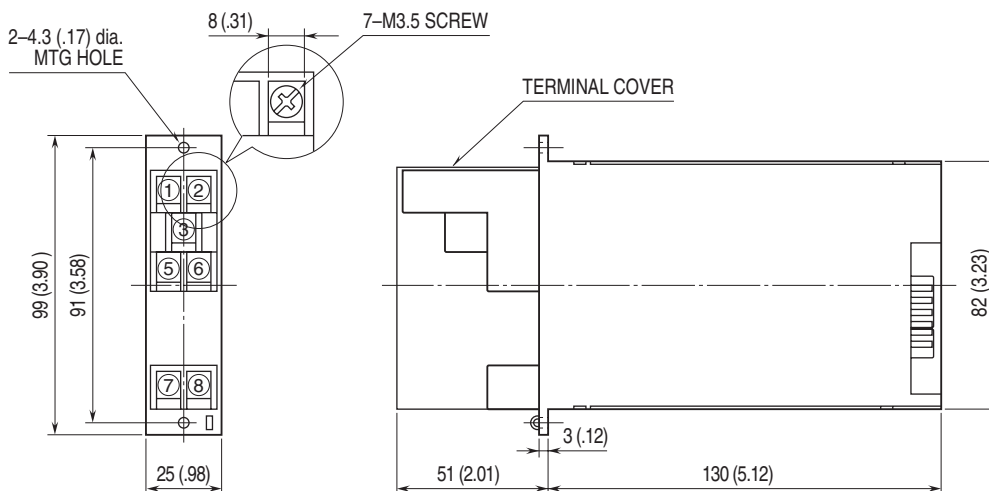
INSTALLATION

Current consumption: Approx. 60 mA with voltage output 1
 Approx. 90 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)

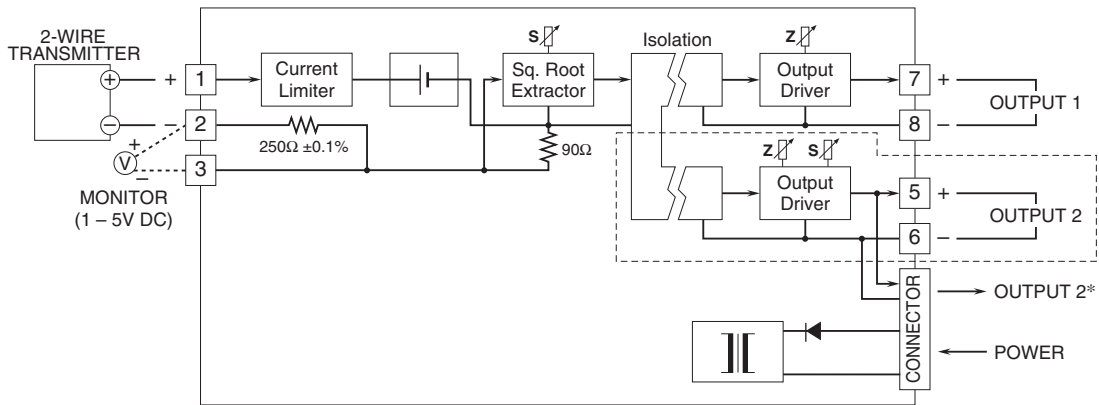
PERFORMANCE in percentage of span

Accuracy: ± 0.25 % (input 1 - 100 %)
 Temp. coefficient: ± 0.03 %/°C (± 0.02 %/°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 M Ω 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



*1 output type has the output 1 connected to the card-edge connector in parallel.
 Remark 1) The section enclosed by broken line is only for 2nd output channel.



Specifications are subject to change without notice.

