

## High-density Signal Conditioners 10-RACK

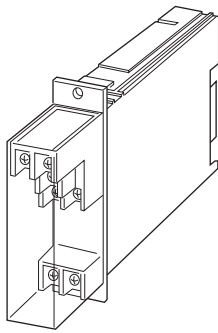
### POTENTIOMETER TRANSMITTER

#### Functions & Features

- Providing two DC outputs proportional to a potentiometer or slidewire position input
- 50 % zero/span adjustments with minimal interaction
- Optional second channel output available at the front terminals and at the Standard Rack connector

#### Typical Applications

- Tank levels
- Positions



## MODEL: 10MS-[1][2]-R[3]

### ORDERING INFORMATION

- Code number: 10MS-[1][2]-R[3]
- Specify a code from below for each [1] through [3]. (e.g. 10MS-A6-R/Q)
- Specify the specification for option code /Q (e.g. /C01)

### INPUT POTENTIOMETER

Total resistance 100  $\Omega$  - 10 k $\Omega$

#### [1] OUTPUT 1

##### Current

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

##### Voltage

- 1: 0 - 10 mV DC (Load resistance 10 k $\Omega$  min.)
- 2: 0 - 100 mV DC (Load resistance 100 k $\Omega$  min.)

- 3: 0 - 1 V DC (Load resistance 100  $\Omega$  min.)
- 4: 0 - 10 V DC (Load resistance 1000  $\Omega$  min.)
- 5: 0 - 5 V DC (Load resistance 500  $\Omega$  min.)
- 6: 1 - 5 V DC (Load resistance 500  $\Omega$  min.)

#### [2] OUTPUT 2

0: None

##### Voltage

6: 1 - 5 V DC (Load resistance 5000  $\Omega$  min.)

### POWER INPUT

#### DC Power

R: 24 V DC

(Operational voltage range 24 V  $\pm$ 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. -10 to +120 % at 1 - 5 V

**Zero adjustment:** 0 - 50 % of total resistance (front)

**Span adjustment:** 50 - 100 % of total resistance (front)

### INPUT SPECIFICATIONS

**Minimum span:** 50 % of total resistance

**Excitation:** Approx. 0.2 V DC

### INSTALLATION

**Current consumption:** Approx. 35 mA with voltage output 1  
Approx. 55 mA with current output 1

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

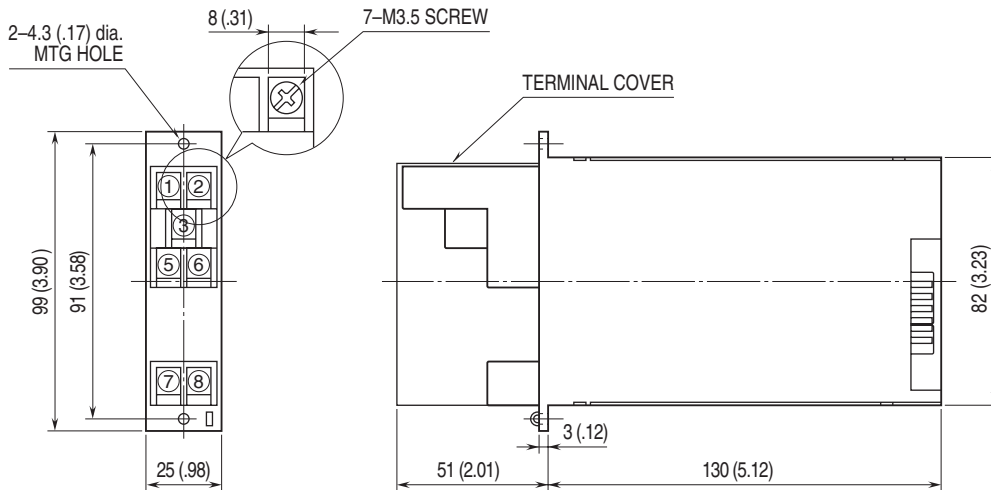


**Operating humidity:** 30 to 90 %RH (non-condensing)  
**Mounting:** Standard Rack 10BXx  
**Weight:** 200 g (0.44 lb)

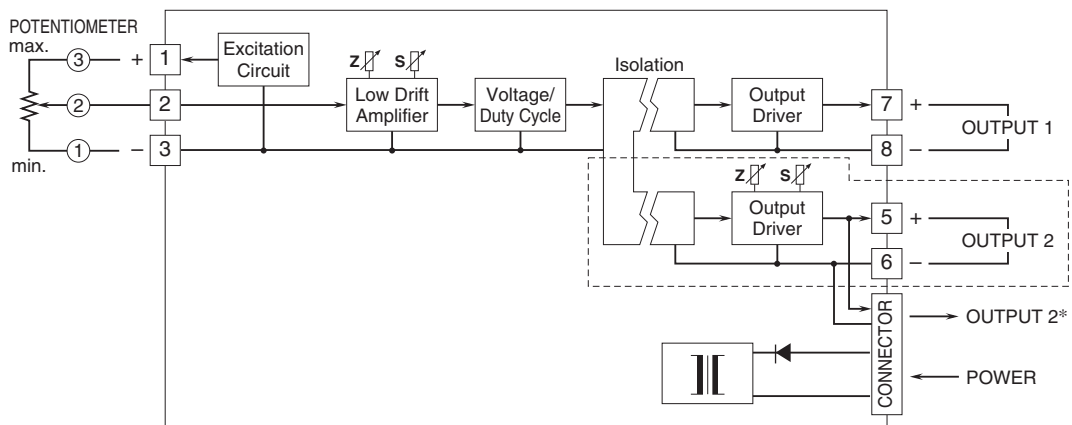
## PERFORMANCE in percentage of span

**Accuracy:**  $\pm 0.1\%$   
**Temp. coefficient:**  $\pm 0.015\%/^{\circ}\text{C}$  ( $\pm 0.008\%/^{\circ}\text{F}$ )  
**Response time:**  $\leq 0.5$  sec. (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



\*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.



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