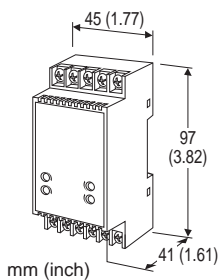


Terminal Block Dual Output Signal Conditioners W5-UNIT

POTENTIOMETER TRANSMITTER

Functions & Features

- Provides two isolated DC outputs proportional to a potentiometer or slidewire position input
- Constant voltage excitation
- Two independent output ranges
- Four-way isolation (input to output 1 to output 2 to power)
- Fast response type available
- High-density mounting
- CE marking for 24 V DC power



MODEL: W5MS-[1][2]-[3][4]

ORDERING INFORMATION

Specify a code from below for each [1] through [4].
When only one output is needed, select code Y for Output 2, [2].

- Code number: W5MS-[1][2]-[3][4]
(e.g. W5MS-A6-R/K/Q)

Specify variables.

- Special output range (For codes Z & 0)
- Specify the specification for option code /Q
(e.g. /C01)

INPUT

Total resistance 100 Ω - 10 k Ω

[1] OUTPUT 1

Current

- A: 4 - 20 mA DC (Load resistance 550 Ω max.)
- B: 2 - 10 mA DC (Load resistance 1100 Ω max.)
- C: 1 - 5 mA DC (Load resistance 2200 Ω max.)
- D: 0 - 20 mA DC (Load resistance 550 Ω max.)
- E: 0 - 16 mA DC (Load resistance 685 Ω max.)
- F: 0 - 10 mA DC (Load resistance 1100 Ω max.)
- G: 0 - 1 mA DC (Load resistance 11 k Ω max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 1: 0 - 10 mV DC (Load resistance 10 k Ω min.)
- 2: 0 - 100 mV DC (Load resistance 100 k Ω 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.)
- 4W: -10 - +10 V DC (Load resistance 2000 Ω min.)
- 5W: -5 - +5 V DC (Load resistance 1000 Ω min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

[2] OUTPUT 2

Same range availability as Output 1

Y: None

[3] POWER INPUT

AC Power

M: 85 - 264 V AC (Operational voltage range 85 - 264 V, 47 - 66 Hz)

(CE not available)

DC Power

R: 24 V DC

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

R2: 11 - 27 V DC

(Operational voltage range 11 - 27 V, ripple 10 %p-p max.)

(CE not available)

P: 110 V DC

(Operational voltage range 85 - 150 V, ripple 10 %p-p max.)

(CE not available)

[4] OPTIONS (multiple selections)

Response Time (0 - 90 %)

blank: Standard (\leq 0.5 sec.)

/K: Fast Response (Approx. 25 msec.)

Other Options

blank: none

/Q: Option other than the above (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: Terminal block

Connection

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

Output & power: M3 screw terminals (torque 0.8 N·m)

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 (front)

Output 1: 0 - 30 % of the total resistance (Zero for the input potentiometer can be adjusted with the Zero Adj. for the Output 1)

Output 2: -2 to +2 %

Span adjustment (front)

Output 1: 70 - 100 % of the total resistance (Span for the input potentiometer can be adjusted with the Span Adj. for the Output 1)

Output 2: ± 98 to 102 %

STANDARDS & APPROVALS

CE conformity:

EMC Directive (2004/108/EC)

EMI EN 61000-6-4: 2007

EMS EN 61000-6-2: 2005

INPUT SPECIFICATIONS

Minimum span: 70 % of total resistance

Excitation: 0.5 V DC

OUTPUT SPECIFICATIONS

■ **DC Current:** 0 - 20 mA DC

Minimum span: 1 mA

Offset: Max. 1.5 times span

Load resistance: Output drive 11 V max.

■ **DC Voltage:** -10 - +12 V DC

Spans: Min. 5 mV, max. 20 V

Offset: Max. 1.5 times span

Load resistance: Output drive 10 mA max.; 5 mA for negative voltage output; at ≥ 0.5 V

INSTALLATION

Power Consumption

• **AC Power input:**

Approx. 4 VA at 100 V

Approx. 5 VA at 200 V

Approx. 6 VA at 264 V

• **DC power input:** Approx. 3 W

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

Operating humidity: 0 to 90 %RH (non-condensing)

Mounting: DIN rail

Weight: 130 g (0.29 lbs)

PERFORMANCE in percentage of span

Accuracy: ± 0.1 %

Temp. coefficient: ± 0.015 %/°C (± 0.008 %/°F)

Line voltage effect: ± 0.1 % over voltage range

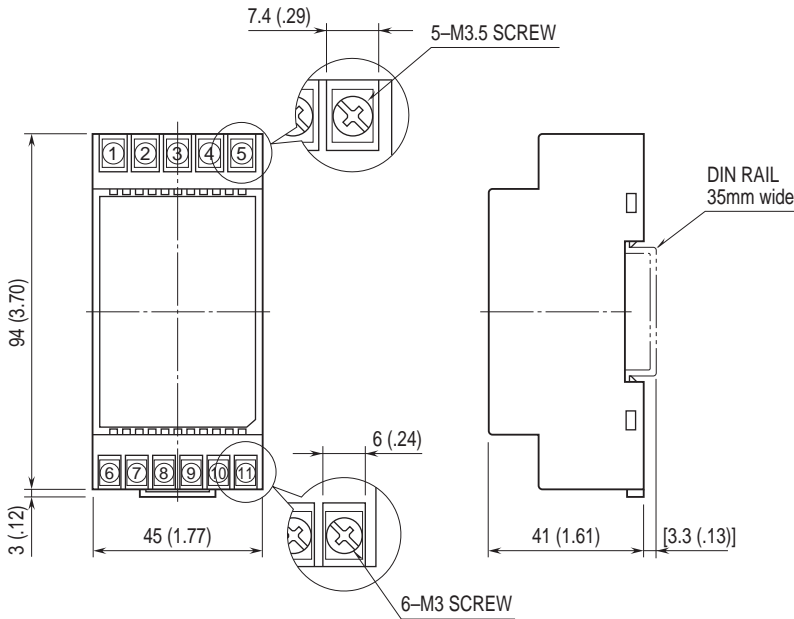
Insulation resistance: ≥ 100 M Ω with 500 V DC

Dielectric strength:

2000 V AC @1 minute (input to output 1 or output 2 to power to ground)

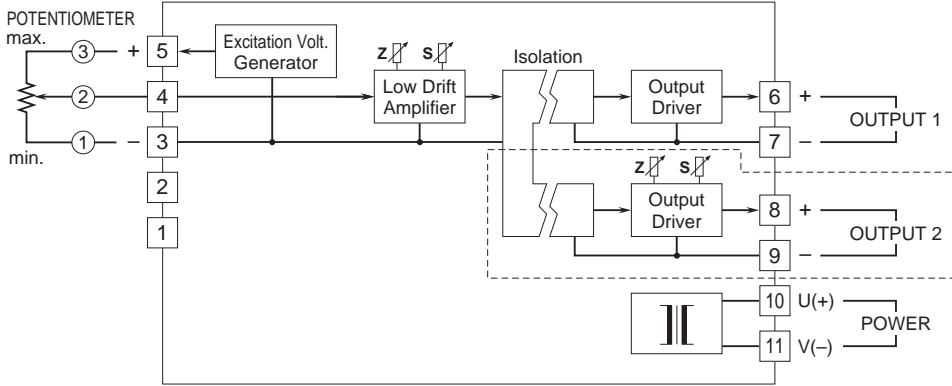
1000 V AC @1 minute (output 1 to output 2)

DIMENSIONS unit: mm (inch)



• When mounting, no extra space is needed between units.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Remark 1: The section enclosed by broken line is only with 2nd output option.
 Remark 2: DO NOT connect to the terminals 1 - 2.

 Specifications are subject to change without notice.