



ELC-M5MS POTENTIOMETER TRANSMITTER

Super-mini Terminal Block Signal Conditioners *M5-UNIT*

POTENTIOMETER TRANSMITTER

MODEL **M5MS**

MODEL & SUFFIX CODE SELECTION

M5MS--R

MODEL _____

INPUT POTENTIOMETER
Total resistance 100Ω – 10kΩ

OUTPUT _____

Current	Voltage
A : 4 – 20mA DC	4 : 0 – 10V DC
Z : Specify current	5 : 0 – 5V DC
	6 : 1 – 5V DC
	4W : -10 – +10V DC
	5W : -5 – +5V DC
	0 : Specify voltage

POWER INPUT _____

R : 24V DC

OPTIONS _____

/K : Fast response

ORDERING INFORMATION

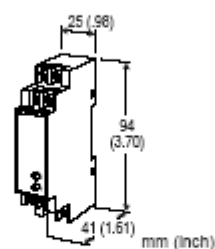
Specify code number and variables.

- Code number (e.g. M5MS-A-R/K)
- Special output range (For codes Z & 0)

GENERAL SPECIFICATIONS

Construction: Terminal block
 Connection: M3.5 screw terminals
 (nickel-plated steel; torque ≤0.8 N.m)
 Housing material: Flame-resistant resin (black)
 Isolation: Input to output to power
 Front adjustments: 0 – 30% of total resistance for zero; 70 – 100% for span

ISOLATION



CE

Functions & Features

- Providing a standard DC output proportional to a potentiometer or slidewire position input
- Constant voltage excitation
- Fast response type available
- High-density mounting
- CE marking

INPUT & OUTPUT

■ **INPUT:** Potentiometer; 100Ω – 10kΩ
 Minimum span: 70% of total resistance
 Excitation: 0.5V DC

■ **OUTPUT**
 • DC Current: 0 – 20mA DC
 Minimum span: 1mA
 Zero suppression/elevation: Max. 1.5 times span
 Load resistance: Output drive 11V maximum

Output	Load Resistance
4 – 20mA	: 550 (Ω maximum)

• DC Voltage: 0 – 10V DC
 Minimum span: 1V
 Zero suppression/elevation: Max. 1.5 times span
 Load resistance: Output drive 10mA maximum; at ≥1V

Output	Load Resistance
0 – 10V	: 1000 (Ω minimum)
0 – 5V	: 500
1 – 5V	: 500
-10 – +10V	: 8000
-5 – +5V	: 4000

INSTALLATION

Power input: 24V DC $\pm 10\%$; ripple 10% p-p max.;
approx. 30mA (50mA with a current
output)

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

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

Mounting: DIN rail

Dimensions: W25×H94×D41 mm (0.98"×3.70"×1.61")

See General Spec. Sheet Figure A-1.

Weight: 60 g (2.1 oz.)

Terminal assignment: See General Spec. Sheet Figure B-1.

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: ≤ 0.5 seconds (0 – 90%)
approx. 25 milliseconds with option /K

Line voltage effect: $\pm 0.1\%$ over voltage range

Insulation resistance: $\geq 100\text{M}\Omega$ with 500V DC

Dielectric strength: 2000V AC @1 minute

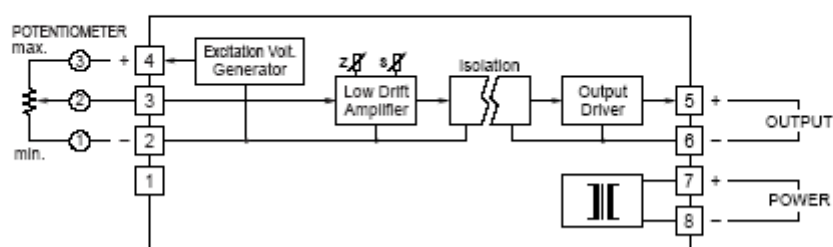
(input to output to power to ground)

STANDARDS & APPROVALS

CE conformity: EMC Directive (89/336/EEC)

EMI EN61000-6-4

EMS EN61000-6-2

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

Specifications subject to change without notice.