

Plug-in Signal Conditioners K-UNIT

POTENTIOMETER TRANSMITTER

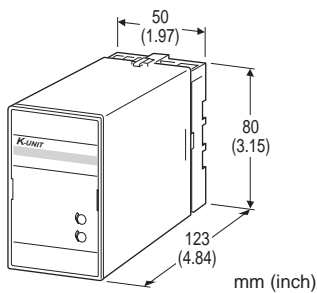
(3-port isolation)

Functions & Features

- Providing a DC output proportional to a potentiometer or slidewire position input
- Constant voltage excitation allows the connection of pots with total resistance from 100 Ω - 10 kΩ without affecting accuracy
- 50 % zero/span adjustments with minimal interaction
- Signal isolation
- Fast response type available
- High-density mounting
- CE marking

Typical Applications

- Tank levels
- Positions



MODEL: KMS-[1]-[2][3]/CE

ORDERING INFORMATION

- Code number: KMS-[1]-[2][3]/CE
- Specify a code from below for each [1] through [3]. (e.g. KMS-A-H/CE)
- Special output range (For codes Z & 0)

INPUT POTENTIOMETER

Total resistance 100 Ω - 10 kΩ

[1] OUTPUT

Current

- A: 4 - 20 mA DC (Load resistance 750 Ω max.)
- B: 2 - 10 mA DC (Load resistance 1500 Ω max.)
- C: 1 - 5 mA DC (Load resistance 3000 Ω max.)
- D: 0 - 20 mA DC (Load resistance 750 Ω max.)
- E: 0 - 16 mA DC (Load resistance 900 Ω max.)
- F: 0 - 10 mA DC (Load resistance 1500 Ω max.)
- G: 0 - 1 mA DC (Load resistance 15 kΩ max.)

Z: Specify current (See OUTPUT SPECIFICATIONS)

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 3000 Ω min.)
- 4: 0 - 10 V DC (Load resistance 10 kΩ min.)
- 5: 0 - 5 V DC (Load resistance 5000 Ω min.)
- 6: 1 - 5 V DC (Load resistance 5000 Ω min.)
- 4W: -10 - +10 V DC (Load resistance 20 kΩ min.)
- 5W: -5 - +5 V DC (Load resistance 10 kΩ min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

[2] POWER INPUT

AC Power

- G: 200 V AC
- H: 220 V AC
- J: 240 V AC

DC Power

- S: 12 V DC
- R: 24 V DC

[3] OPTIONS

RESPONSE TIME (0 - 90 %)

- blank: Standard (≤ 0.5 sec.)
- /K: Fast Response (Approx. 25 msec.)

GENERAL SPECIFICATIONS

- Construction: Plug-in
- Connection: M3.5 screw terminals
- Housing material: Flame-resistant resin (black)
- Isolation: Input to output to power
- 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: 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 15 V max.
- DC Voltage: -10 - +12 V DC
- Minimum span: 5 mV
- Offset: Max. 1.5 times span
- Load resistance: Output drive 1 mA max. at ≥ 3 V



INSTALLATION

Power input

AC: Operational voltage range: rating $\pm 10\%$,
50/60 ± 2 Hz, approx. 2 VA

DC: Operational voltage range: rating $\pm 10\%$,
ripple 10 %p-p max., approx. 2 W (80 mA at 24 V)

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

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Surface or DIN rail

Weight: 300 g (0.66 lbs)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$

Temp. coefficient: $\pm 0.02\%/^{\circ}\text{C}$ ($\pm 0.01\%/^{\circ}\text{F}$)

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

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

Dielectric strength:

1350 V AC @1 minute (input to output)

2300 V AC @1 minute (input or output to power to ground)

STANDARDS & APPROVALS

CE conformity:

EMC Directive (2004/108/EC)

EMI EN 61000-6-4

EMS EN 61000-6-2

Low Voltage Directive (2006/95/EC)

EN 61010-1

Installation Category II

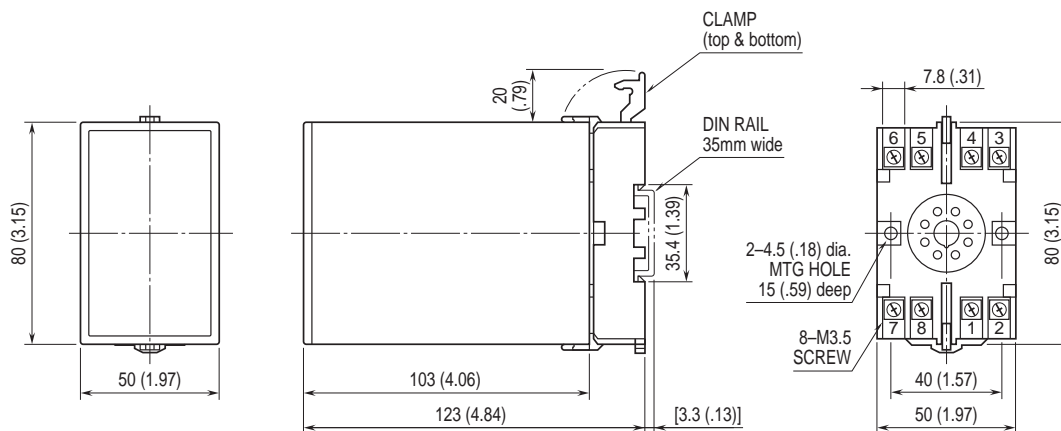
Pollution Degree 2

Max. operating voltage 300 V

Input or output to power: Reinforced insulation

Input to output: Basic insulation

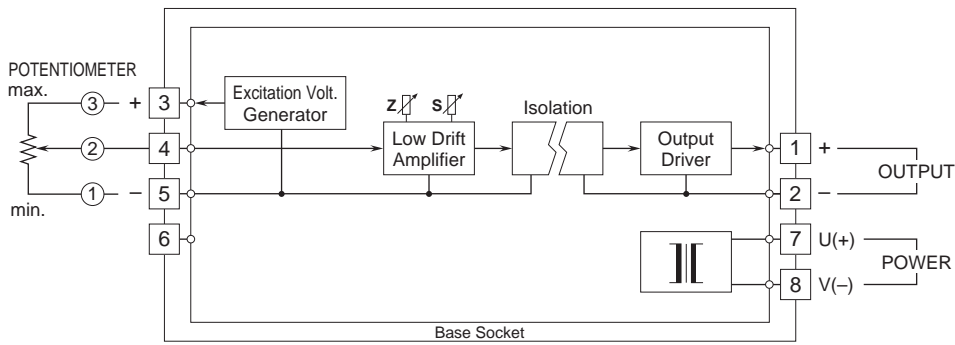
DIMENSIONS unit: mm (inch)



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



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.