

Plug-in Signal Conditioners K-UNIT

POTENTIOMETER TRANSMITTER

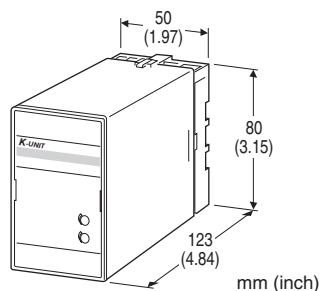
(CE, isolated)

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 k Ω without affecting accuracy
- 50 % zero/span adjustments with minimal interaction
- Signal isolation
- Fast response type available
- High-density mounting

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 of [1] through [3].
(e.g. KMS-A-H/CE)
- Special output range (For codes Z & 0)

INPUT POTENTIOMETER

Total resistance 100 Ω – 10 k Ω

[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 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 3000 Ω min.)
 4: 0 – 10 V DC (Load resistance 10 k Ω 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 k Ω min.)
 5W: -5 – +5 V DC (Load resistance 10 k Ω 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 (multiple selections)

Response Time (0 – 90 %)

blank: Standard (≤ 0.5 sec.)

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

Standards & Approvals (must be specified)

/CE: CE marking

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3.5 screw terminals

Screw terminal: Chromated steel

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 lb)

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

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

Low Voltage Directive

EN 61010-1

Installation Category II

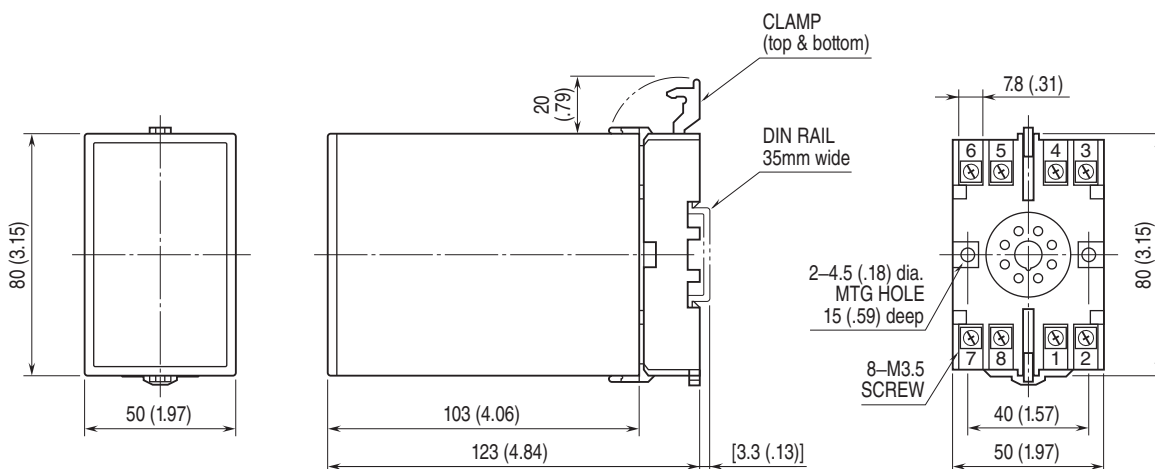
Pollution Degree 2

Input or output to power: Reinforced insulation (300 V)

Input to output: Basic insulation (300 V)

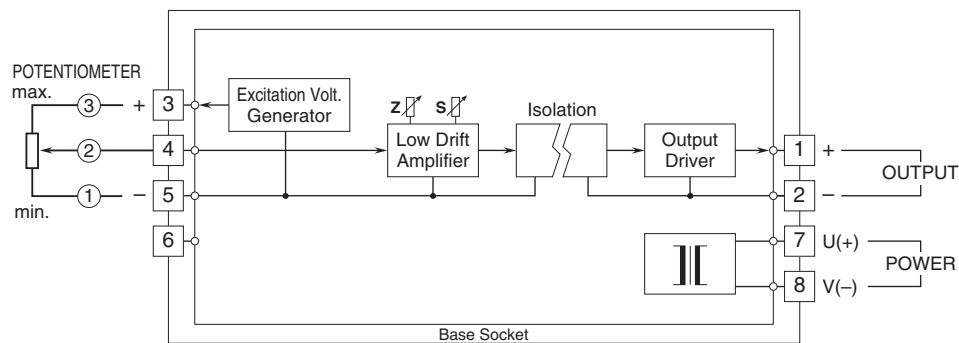
RoHS Directive

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.