

**Plug-in Signal Conditioners K-UNIT**

**POTENTIOMETER TRANSMITTER**

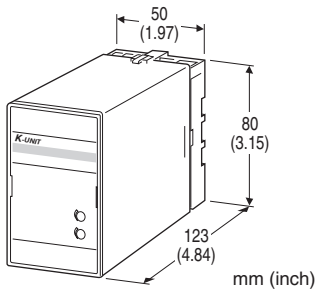
(CE, isolated)

**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 kΩ 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 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 (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  $\pm 2$  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)

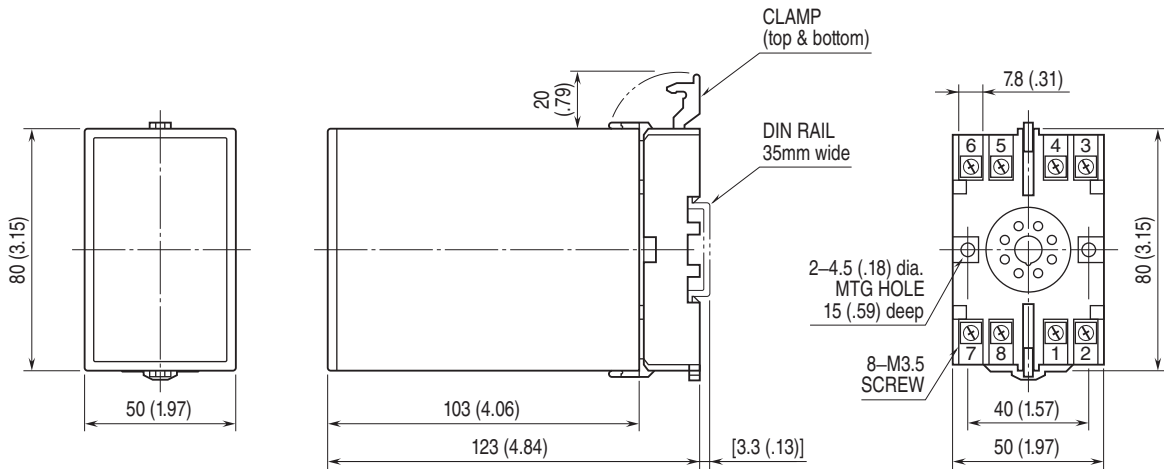
**PERFORMANCE in percentage of span**

- 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**

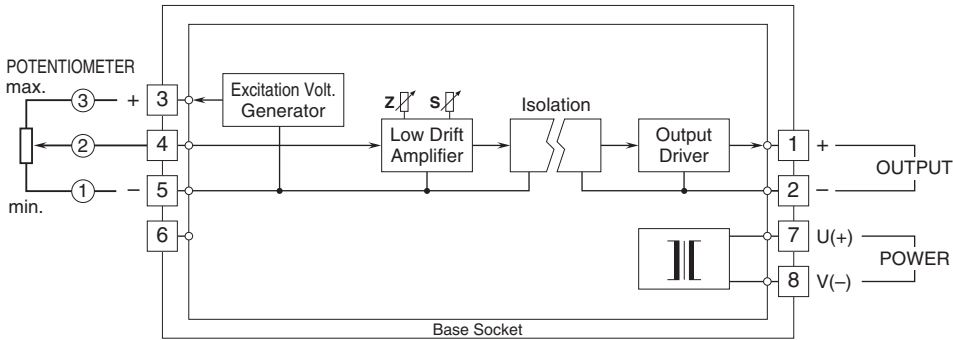
- EU conformity:**  
EMC Directive  
EMI EN 61000-6-4  
EMS EN 61000-6-2  
Low Voltage Directive  
EN 61010-1  
Installation Category II  
Pollution Degree 2  
Input or output to power: Reinforced insulation (300 V)  
Input to output: Basic insulation (300 V)
- RoHS Directive

**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.