

Plug-in Signal Conditioners K-UNIT

POTENTIOMETER TRANSMITTER

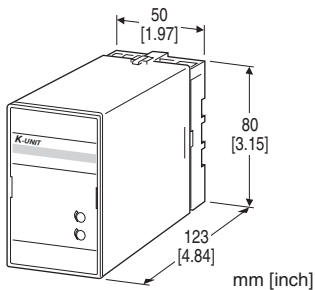
(non-isolated)

Functions & Features

- Providing a DC output proportional to a potentiometer or slidewire position input
- Constant voltage excitation allows use with pots with total resistances from 100 Ω - 10 kΩ without affecting accuracy
- 50 % zero/span adjustments with minimal interaction
- High-density mounting

Typical Applications

- Tank levels
- Positions



MODEL: KM-[1]-[2][3]

ORDERING INFORMATION

- Code number: KM-[1]-[2][3]
- Specify a code from below for each of [1] through [3]. (e.g. KM-A-B/Q)
- Special output range (For codes Z & 0)
- Specify the specification for option code /Q (e.g. /C01/S01)

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 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] POWER INPUT

AC Power

- B:** 100 V AC
 - C:** 110 V AC
 - D:** 115 V AC
 - F:** 120 V AC
 - G:** 200 V AC
 - H:** 220 V AC
 - J:** 240 V AC
- DC Power
- S:** 12 V DC
 - R:** 24 V DC

[3] OPTIONS

- blank:** none
- /Q:** With options (specify the specification)

SPECIFICATIONS OF OPTION: Q (multiple selections)

- COATING** (For the detail, refer to our web site.)
- /C01:** Silicone coating
- /C02:** Polyurethane coating
- /C03:** Rubber coating
- TERMINAL SCREW MATERIAL**
- /S01:** Stainless steel

GENERAL SPECIFICATIONS

- Construction:** Plug-in
- Connection:** M3.5 screw terminals
- Screw terminal:** Chromated steel (standard) or stainless steel
- Housing material:** Flame-resistant resin (black)
- Isolation:** Input or 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 10 mA max.; 5 mA for negative voltage output; at ≥ 0.5 V

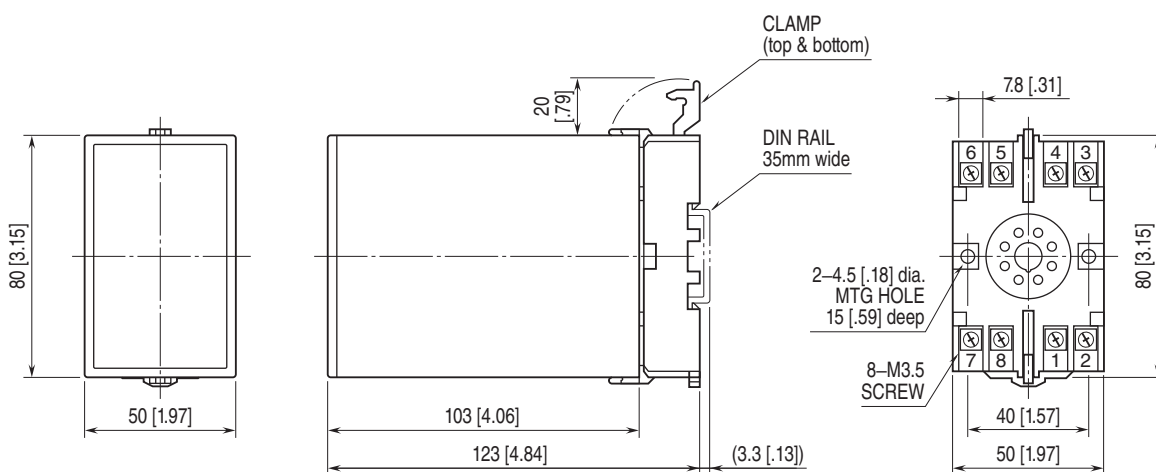
INSTALLATION

- Power input**
- **AC:** Operational voltage range: rating ± 10 %, 50/60 ± 2 Hz, approx. 2 VA
 - **DC:** Operational voltage range: rating ± 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

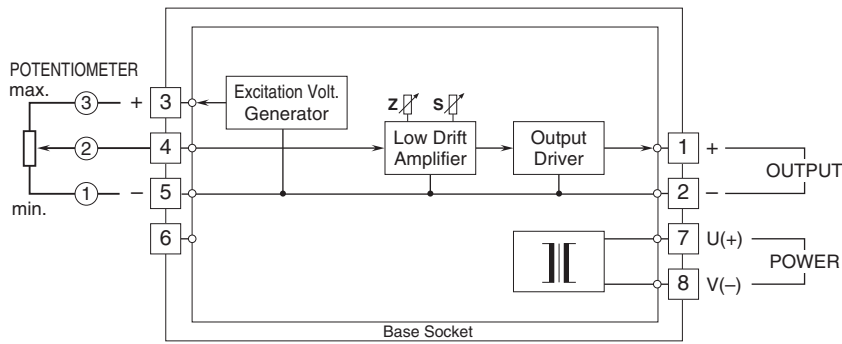
- Accuracy:** ± 0.1 %
- Temp. coefficient:** ± 0.02 %/°C (± 0.01 %/°F)
- Response time:** ≤ 0.5 sec. (0 - 90 %)
- Line voltage effect:** ± 0.1 % over voltage range
- Insulation resistance:** ≥ 100 M Ω with 500 V DC
- Dielectric strength:** 2000 V AC @1 minute (input or output to power to ground)

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.