Plug-in Signal Conditioners K-UNIT

POTENTIOMETER TRANSMITTER

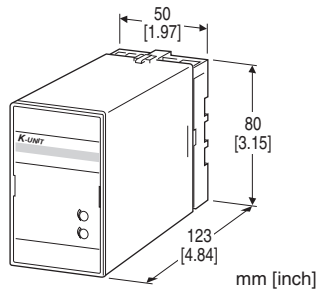
(CE, non-isolated)

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
• High-density mounting

Typical Applications

• Tank levels
• Positions



CE

MODEL: KM–[1]–[2]/CE

ORDERING INFORMATION

• Code number: KM-[1]-[2]/CE
Specify a code from below for each of [1] and [2].
(e.g. KM-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

OPTIONS

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 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 1 mA max. at ≥ 3 V

INSTALLATION

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

MG CO., LTD.
www.mgco.jp

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)

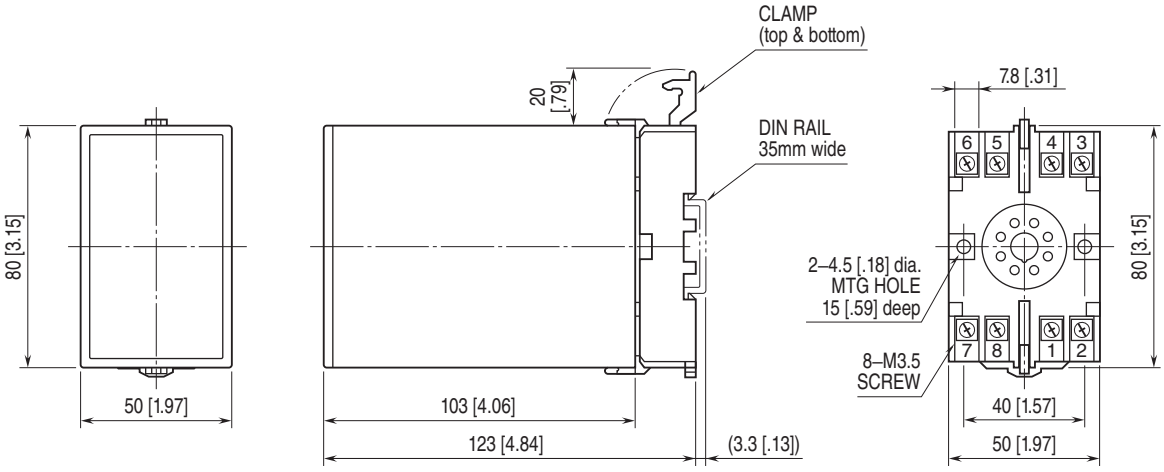
PERFORMANCE in percentage of span

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 MΩ with 500 V DC
Dielectric strength: 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)
RoHS Directive

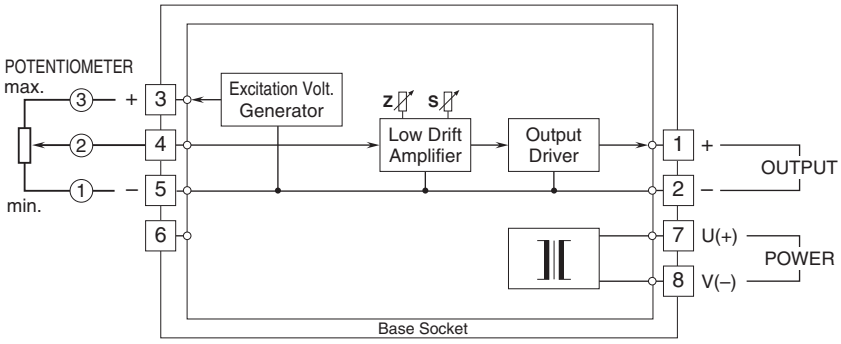
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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

MG CO., LTD.
www.mgco.jp

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



⚠ Specifications are subject to change without notice.

MG CO., LTD.
www.mgco.jp