

Plug-in Signal Conditioners K-UNIT

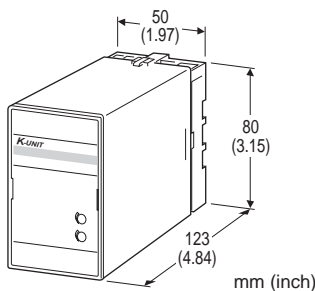
PEAK HOLD

Functions & Features

- Track mode: the output follows proportionally to the input
- Peak-hold mode: responds only to an increasing signal, holding the maximum value until a higher signal or a command to reset is received
- Minimum value (valley) hold selectable
- Isolation up to 2000 V AC
- High-density mounting

Typical Applications

- Monitoring peak power consumption



MODEL: KHS[1]-[2][3]-[4][5]

ORDERING INFORMATION

- Code number: KHS[1]-[2][3]-[4][5]
- Specify a code from below for each [1] through [5].
(e.g. KSH-6A-B/Q)
- Special input and output ranges (For codes Z & O)
- Specify the specification for option code /Q
(e.g. /C01/S01)

[1] HOLD FUNCTION

- H: Peak hold
L: Valley hold

[2] INPUT

Current

- A: 4 - 20 mA DC (Input resistance 250 Ω)
A1: 4 - 20 mA DC (Input resistance 50 Ω)
 B: 2 - 10 mA DC (Input resistance 500 Ω)
 C: 1 - 5 mA DC (Input resistance 1000 Ω)
 D: 0 - 20 mA DC (Input resistance 50 Ω)
 E: 0 - 16 mA DC (Input resistance 62.5 Ω)
 F: 0 - 10 mA DC (Input resistance 100 Ω)
 G: 0 - 1 mA DC (Input resistance 1000 Ω)
 H: 10 - 50 mA DC (Input resistance 100 Ω)

- J: 0 - 10 μA DC (Input resistance 1000 Ω)
 K: 0 - 100 μA DC (Input resistance 1000 Ω)
GW: -1 - +1 mA DC (Input resistance 1000 Ω)
FW: -10 - +10 mA DC (Input resistance 100 Ω)
 Z: Specify current (See INPUT SPECIFICATIONS)

Voltage

- 1: 0 - 10 mV DC (Input resistance 10 kΩ min.)
15: 0 - 50 mV DC (Input resistance 10 kΩ min.)
16: 0 - 60 mV DC (Input resistance 10 kΩ min.)
 2: 0 - 100 mV DC (Input resistance 100 kΩ min.)
 3: 0 - 1 V DC (Input resistance 1 MΩ min.)
 4: 0 - 10 V DC (Input resistance 1 MΩ min.)
 5: 0 - 5 V DC (Input resistance 1 MΩ min.)
 6: 1 - 5 V DC (Input resistance 1 MΩ min.)
4W: -10 - +10 V DC (Input resistance 1 MΩ min.)
5W: -5 - +5 V DC (Input resistance 1 MΩ min.)
 0: Specify voltage (See INPUT SPECIFICATIONS)

[3] 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)

[4] 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



[5] OPTIONS

blank: none

/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to M-System's 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 to output to power

Overrange output: Approx. -10 to +120 % at 1 - 5 V

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

Hold control: Holds when opening the terminals 5 - 6; tracks when closing them

INPUT SPECIFICATIONS

■ DC Current:

Shunt resistor attached to the input terminals (0.5 W)

Specify input resistance value for code Z.

■ DC Voltage: -300 - +300 V DC

Minimum span: 3 mV

Offset: Max. 1.5 times span

Input resistance

Span 3 - 10 mV : $\geq 10 \text{ k}\Omega$

Span 10 - 100 mV : $\geq 10 \text{ k}\Omega$

Span 0.1 - 1 V : $\geq 100 \text{ k}\Omega$

Span $\geq 1 \text{ V}$: $\geq 1 \text{ M}\Omega$

■ HOLD CONTROL

Contact rating: 5 V @1 mA

Detection levels: $\leq 1.25 \text{ k}\Omega / 1 \text{ V}$ at Track

$\geq 20 \text{ k}\Omega / 4 \text{ V}$ at Hold

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 $\geq 0.5 \text{ V}$

INSTALLATION

Power input

•**AC:** Operational voltage range: rating $\pm 10 \%$, 50/60 $\pm 2 \text{ Hz}$, approx. 2 VA

•**DC:** Operational voltage range: rating $\pm 10 \%$, ripple 10 %p-p max., approx. 2 W (90 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: 400 g (0.88 lb)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.2 \%$

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

Response time: $\leq 0.5 \text{ sec.}$ (0 - 90 %)

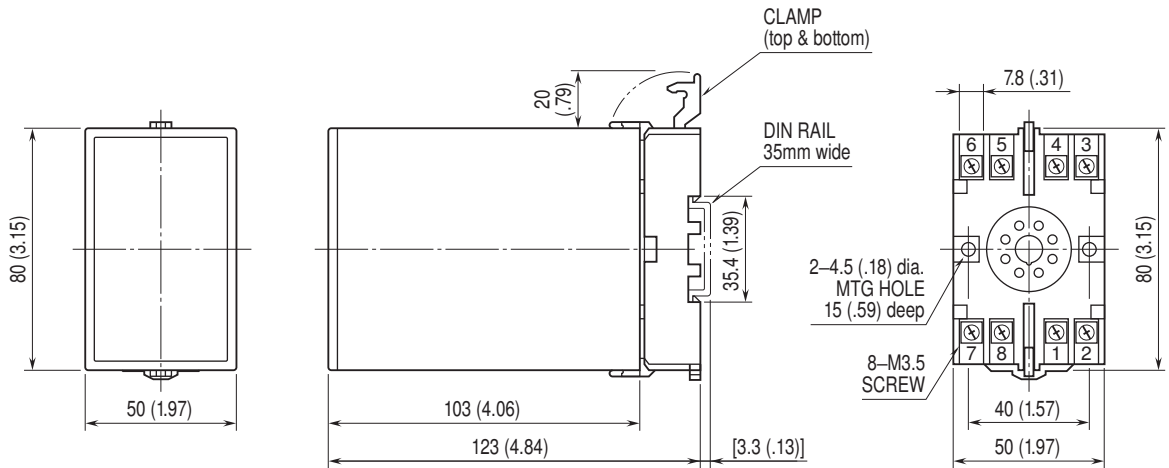
Line voltage effect: $\pm 0.1 \%$ over voltage range

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

Dielectric strength: 2000 V AC @1 minute (input to output to power to ground)

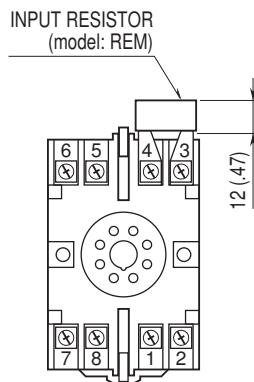


DIMENSIONS unit: mm (inch)



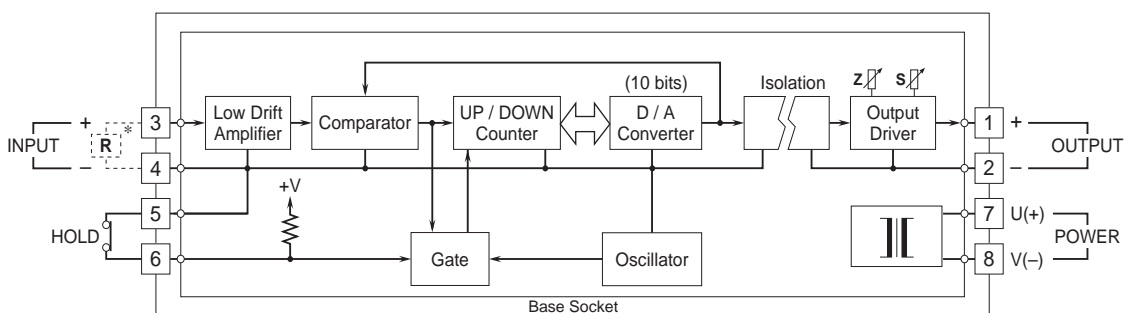
• When mounting, no extra space is needed between units.

TERMINAL ASSIGNMENTS unit: mm (inch)



Input shunt resistor attached for current input.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Input shunt resistor attached for current input.



Specifications are subject to change without notice.