

## Plug-in Signal Conditioners K-UNIT

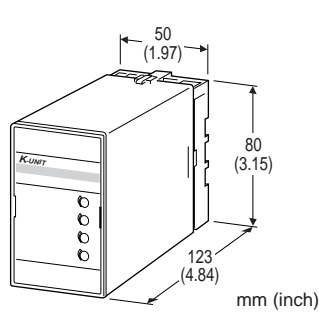
### INPUT LOOP POWERED ISOLATOR

#### Functions & Features

- Loop-powered design eliminates output loop power supply
- 500 V DC input-to-output isolation
- 2 isolators housed in one enclosure
- 350 Ω output drive with 4 - 20 mA
- High-density mounting
- CE marking

#### Typical Applications

- Isolation between control room and field instrumentation, between telemetering system and input device
- Eliminates ground problems in existing systems thanks to easiness of application without requiring additional power wiring



### MODEL: KSN-2[1]/CE

#### ORDERING INFORMATION

- Code number: KSN-2[1]/CE
- Specify a code from below for [1].  
(e.g. KSN-2A6/CE)

#### NO. OF CHANNELS

2: 2 channels

#### [1] INPUT / OUTPUT

- A6:** 4 - 20 mA DC / 1 - 5 V DC
- H6:** 10 - 50 mA DC / 1 - 5 V DC
- AA:** 4 - 20 mA DC / 4 - 20 mA DC
- HA:** 10 - 50 mA DC / 4 - 20 mA DC

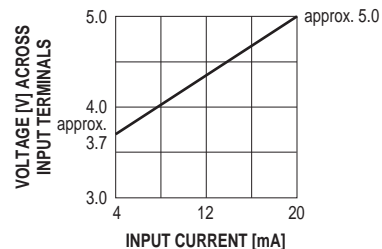
#### GENERAL SPECIFICATIONS

- Construction:** Plug-in
- Connection:** M3.5 screw terminals
- Housing material:** Flame-resistant resin (black)
- Isolation:** Input to output, between channels
- Zero adjustment (front)**

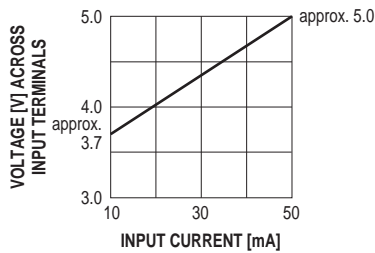
- Voltage output:** -5 to +5 %
- Current output:** -0.5 to +0.5 %
- Span adjustment (front)**
- Voltage output:** 95 to 105 %
- Current output:** 98.5 to 101.5 %

#### INPUT & OUTPUT

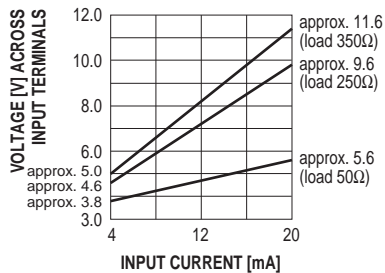
- **INPUT 4 - 20 mA DC / OUTPUT 1 - 5 V DC**  
**Equivalent input impedance:** Approx. 250 Ω with 20 mA input  
**Operational range:** 3 - 22 mA DC  
 (Accuracy is assured within 4 - 22 mA)  
**Load resistance:** ≥ 50 kΩ
- **INPUT 10 - 50 mA DC / OUTPUT 1 - 5 V DC**  
**Equivalent input impedance:** Approx. 100 Ω with 50 mA input  
**Operational range:** 7 - 55 mA DC  
 (Accuracy is assured within 8 - 55 mA)  
**Load resistance:** ≥ 50 kΩ
- **INPUT 4 - 20 mA DC / OUTPUT 4 - 20 mA DC**  
**Equivalent input impedance:** 230 Ω plus load resistance with 20 mA input  
**Operational range:** 3 - 22 mA DC  
 (Accuracy is assured within 4 - 22 mA)  
**Load resistance:** 50 - 350 Ω (min. 50 Ω required for adequate operation)
- **INPUT 10 - 50 mA DC / OUTPUT 4 - 20 mA DC**  
**Equivalent input impedance:** 90 Ω + [load resistance × 0.16] with 50 mA input  
**Operational range:** 7 - 55 mA DC  
 (Accuracy is assured within 8 - 55 mA)  
**Load resistance:** 50 - 600 Ω (min. 50 Ω required for adequate operation)
- **INPUT 4 - 20 mA DC / OUTPUT 1 - 5 V DC**



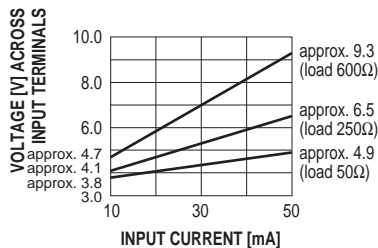
## •INPUT 10 - 50 mA DC / OUTPUT 1 - 5 V DC



## •INPUT 4 - 20mA DC / OUTPUT 4 - 20 mA DC



## •INPUT 10 - 50 mA DC / OUTPUT 4 - 20 mA DC



## STANDARDS & APPROVALS

### CE conformity:

EMC Directive (2004/108/EC)

EMI EN 61000-6-4

EMS EN 61000-6-2

## INSTALLATION

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 lbs)

## PERFORMANCE in percentage of span

Accuracy:  $\pm 0.1\%$

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

Response time

Voltage output:  $\leq 0.5$  sec. (0 - 90 %)

Current output: Approx. 15 msec. (0 - 90 %)

Load effect (current output)

4 - 20 mA input: 0.015 %/ $\Omega$  (50 - 150  $\Omega$ )

0.003 %/ $\Omega$  (150 - 350  $\Omega$ )

10 - 50 mA input: 0.015 %/ $\Omega$  (50 - 100  $\Omega$ )

0.003 %/ $\Omega$  (100 - 600  $\Omega$ )

(The unit is calibrated with 250  $\Omega$  load at the factory.)

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

Dielectric strength:

500 V AC @1 minute (input to output)

1500 V AC @1 minute (between channels)

2300 V AC @1 minute (input or output to ground)



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XIN TOP CORPORATION

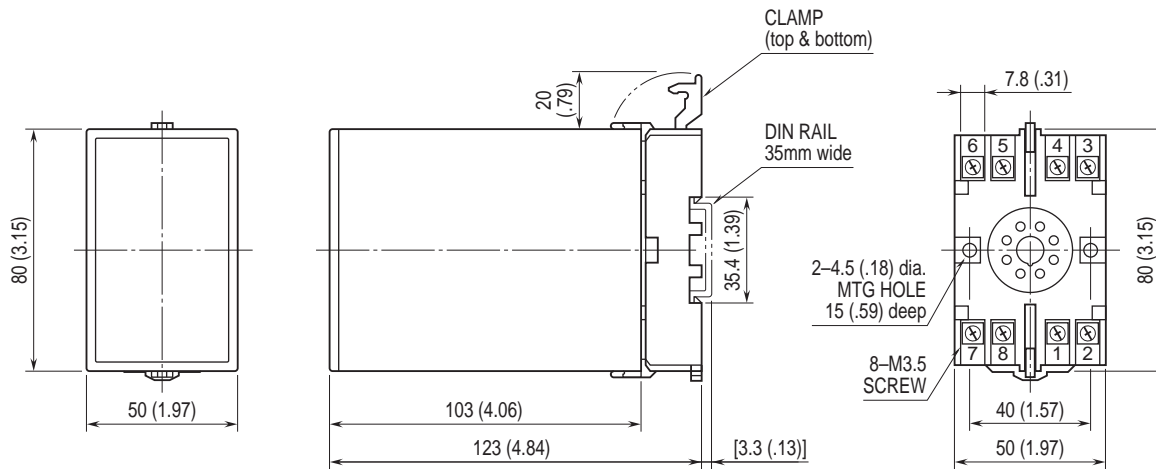
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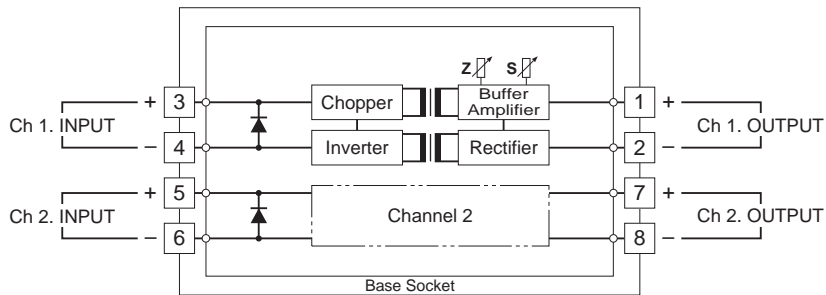
## DIMENSIONS unit: mm (inch)



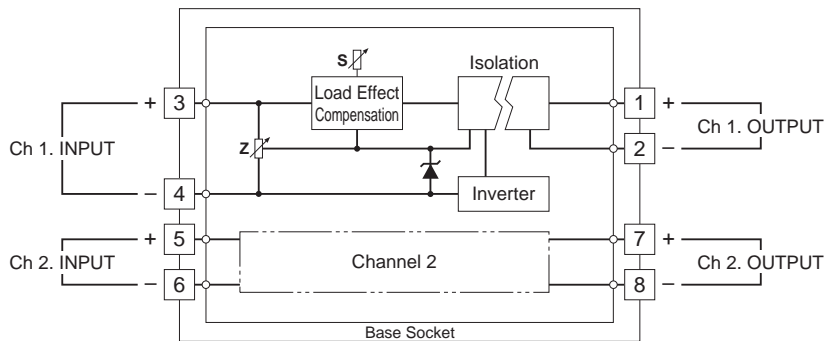
• When mounting, no extra space is needed between units.

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

### ■VOLTAGE OUTPUT



### ■CURRENT OUTPUT



Specifications are subject to change without notice.