### Space-saving Plug-in Signal Conditioners H-UNIT

# SQUARE ROOT EXTRACTOR

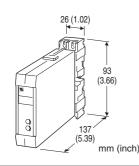
#### (non-isolated)

#### **Functions & Features**

- Providing a DC output proportional to the root of input signal
- Low-end cutout
- High-density mounting

#### **Typical Applications**

• Converting differential pressure to flow



# MODEL: HN-[1]6-R[2]

## **ORDERING INFORMATION**

- Code number: HN-[1]6-R[2]
- Specify a code from below for each of [1] and [2]. (e.g. HN-66-R/Q)
- Specify the specification for option code /Q (e.g. /C01/S01)

## [1] INPUT

#### Current

A: 4 - 20 mA DC (Input resistance 250 Ω) B: 2 - 10 mA DC (Input resistance 500 Ω) C: 1 - 5 mA DC (Input resistance 1000 Ω) H: 10 - 50 mA DC (Input resistance 100 Ω)

Voltage

 $\textbf{6}{:}~1$  – 5~V~DC~ (Input resistance 100 k $\Omega$  min.)

## OUTPUT

Voltage **6**: 1 – 5 V DC (Load resistance 10 k $\Omega$  min.)

## **POWER INPUT**

DC Power R: 24 V DC (Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

## [2] OPTIONS

blank: none

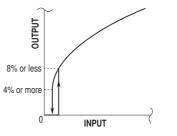
/Q: With options (specify the specification)

### **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 (torque 0.8 N·m) Screw terminal: Nickel-plated steel (standard) or stainless steel Housing material: Flame-resistant resin (black) Isolation: Input or output to power Overrange output: 0 - 105 % at 1 - 5 V Zero adjustment: -5 to +5 % (front) Span adjustment: 95 to 105 % (front) Low-end cutout: Approx. 4 - 8 % (output)



# **INPUT SPECIFICATIONS**

DC Current:

Shunt resistor attached to the input terminals (0.5 W)

## INSTALLATION

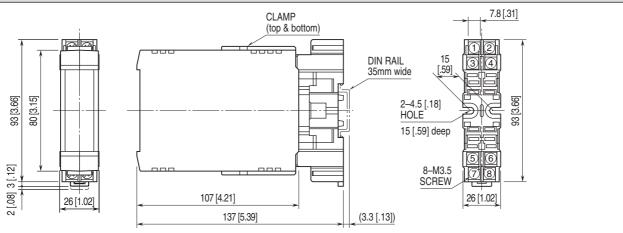
Current consumption: Approx. 60 mA Operating temperature: -5 to +55°C (23 to 131°F) Operating humidity: 30 to 90 %RH (non-condensing) Mounting: Surface or DIN rail; Standard Rack Mounting Frame BX-16H available Weight: 200 g (0.44 lb)

## **PERFORMANCE** in percentage of span

Accuracy:  $\pm 0.1 \%$  (input 1 - 100 %) Temp. coefficient:  $\pm 0.015 \%/^{\circ}C (\pm 0.008 \%/^{\circ}F)$ 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**: 500 V AC @ 1 minute (input or output to power)

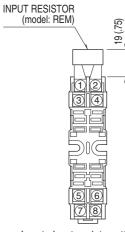
1500 V AC @ 1 minute (input or output or power to ground)

# EXTERNAL DIMENSIONS unit: mm [inch]



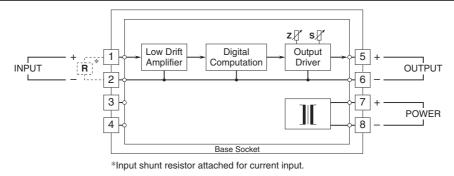
•When mounting, no extra space is needed between units.

## TERMINAL ASSIGNMENTS unit: mm [inch]



Input shunt resistor attached for current input.

# SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.