Space-saving Plug-in Signal Conditioners F-UNIT

SQUARE ROOT EXTRACTOR

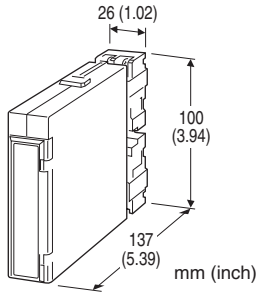
(non-isolated)

Functions & Features

• Provides a DC output proportional to the root of input signal
• Low-end cutout

Typical Applications

• Converting differential pressure to flow



MODEL: FFL–[1]6–[2]

ORDERING INFORMATION

• Code number: FFL-[1]6-[2]
Specify a code from below for each [1] and [2]
(e.g. FFL-66-K)

[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

6: 1 – 5 V DC (Input resistance 100 kΩ min.)

OUTPUT

Voltage

6: 1 – 5 V DC (Load resistance 10 kΩ min.)

[2] POWER INPUT

AC Power

K: 85 – 132 V AC
(Operational voltage range 85 – 132 V, 47 – 66 Hz)
L: 170 – 264 V AC
(Operational voltage range 170 – 264 V, 47 – 66 Hz)

DC Power

R: 24 V DC
(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)
P: 110 V DC
(Operational voltage range 85 – 150 V, ripple 10 %p-p max.)

GENERAL SPECIFICATIONS

Construction: Plug-in
Connection: M3.5 screw terminals (torque 0.8 N·m)
Screw terminal: Nickel-plated 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. 10 % (output)

INPUT SPECIFICATIONS

■ **DC Current**:
Shunt resistor attached to the input terminals (0.5 W)

INSTALLATION

Power input

•**AC**: Approx. 4.5 VA
•**DC**: 24 V approx. 70 mA
110 V approx. 20 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 lbs)

PERFORMANCE in percentage of span

Accuracy: ± 0.1 % (input 1 – 100 %)
Temp. coefficient: ±0.015 %/°C (±0.008 %/°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
Power input code R:
2000 V AC @ 1 minute (input or output or power to ground)
500 V AC @ 1 minute (I/O to power)
Power input code K, L, P:
2000 V AC @ 1 minute (input or output or power to ground)
1500 V AC @ 1 minute (I/O to power)

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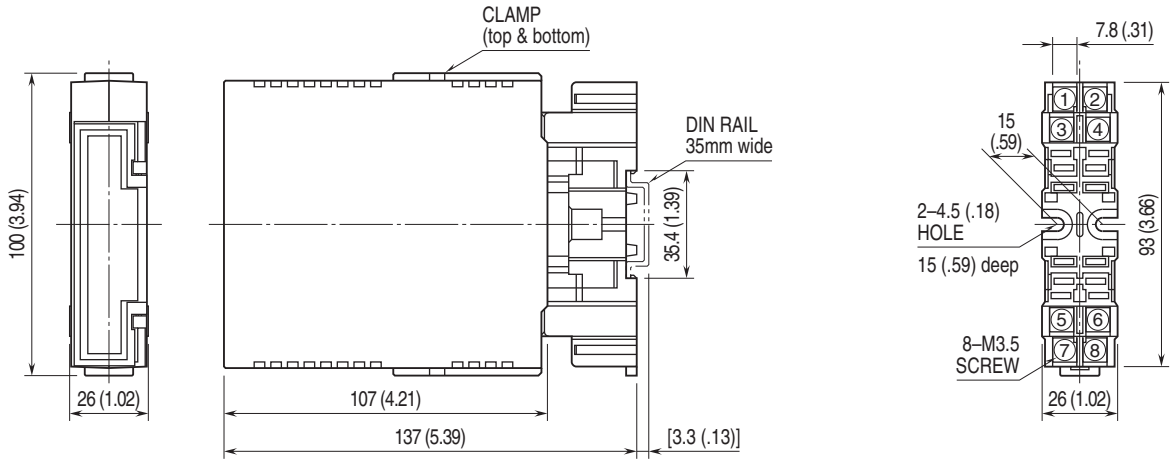
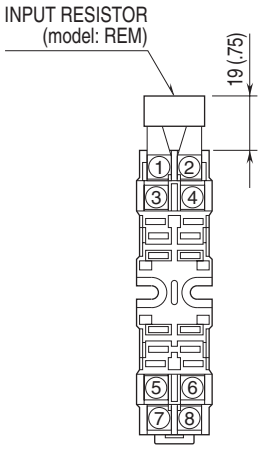
DIMENSIONS unit: mm (inch)



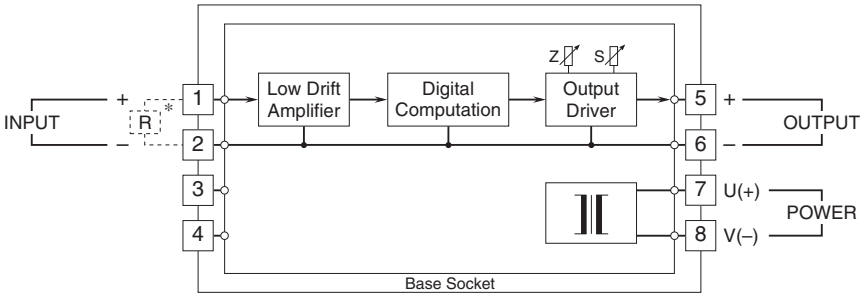
•When mounting, no extra space is needed between units.

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.

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