

SQUARE ROOT EXTRACTOR

model **FN/FNS**

Thank you for choosing M-System. Before use, check specifications on the unit label.

If you have any problems or questions with the product, please contact M-System's Sales Office or representatives.

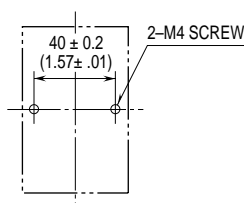
General Description

The M-UNIT Model FN/FNS accepts DC inputs typically from differential pressure flowmeters and provides a square root output which is linear to the actual flow.

- Low-end cutout under 10% output
- FN: Input-Output Non-isolated
- FNS: Input-Output Isolated

Installation [Scale: mm(inch)]

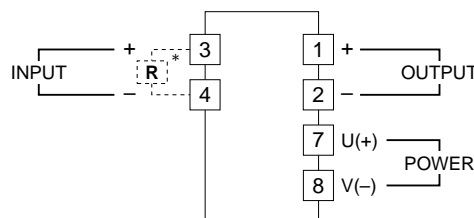
- Operating temperature: -5 to +60°C (23 to 140°F)
 - Operating humidity: 30 to 90% RH (non-condensing)
- Keep away from water, corrosive gas, dust and vibration. Wall or DIN rail mounting available.



When mounting, no extra space is needed between units.

Terminal Connections

Make wiring to terminals as shown in the figure below. Use the socket provided with the module. For low-level or high-impedance signal, use shielded cable or twisted-pair cable.



*Input shunt resistor attached for current input.

Adjustments

This module is factory calibrated within $\pm 0.1\%$ of reference input level. ZERO and SPAN are adjustable to $\pm 5\%$. Calibration procedure is as follows:

- ZERO: With 1% input, adjust output to 10%.
- SPAN: With 100% input, adjust output to 100%.
- Check ZERO adjustment again with 1% input.
- When ZERO value is changed, repeat the procedure A) to C).

Troubleshooting

When output is irregular, check the following points:

- Terminal wiring
- Power wiring and polarity
- Input: Check voltage across the terminal 3(+) – 4(–) with a voltmeter.
- Output: Check that output corresponds to the input shown in the table below.

INPUT [%]	OUTPUT [%]
0.0	0.0 \pm 0.1
4.0	20.0 \pm 0.1
16.0	40.0 \pm 0.1
36.0	60.0 \pm 0.1
64.0	80.0 \pm 0.1
100.0	100.0 \pm 0.1

- Output load: With current output, be sure that load resistance is within the permissible limit including wiring resistance. With voltage output, check that the minimum load is met.

M-SYSTEM WARRANTY

M-System warrants such new M-System product which it manufactures to be free from defects in materials and workmanship during the 36-month period following the date that such product was originally purchased if such product has been used under normal operating conditions and properly maintained, M-System's sole liability, and purchaser's exclusive remedies, under this warranty are, at M-System's option, the repair, replacement or refund of the purchase price of any M-System product which is defective under the terms of this warranty. To submit a claim under this warranty, the purchaser must return, at its expense, the defective M-System product to the below address together with a copy of its original sales invoice.

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