

# Manostar Electronic Micro Differential Pressure Measurement System

- WO81
- WO70
- FR51A
- MS30
- MS61A
- MS65
- EB3C
- EMD8
- EMD7
- EMT6
- EMT1
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- EMP5
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## Manosys Square root Converter EMRT1

RoHS compliant

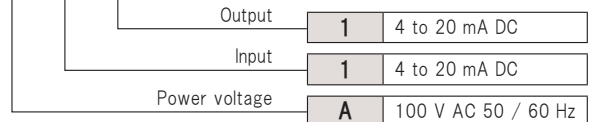
Manosys square root converter output the electrical signal been in proportion to air volume that it carry out square root to input pressure value inside the product. Input signal and output signal are insulated electrically.



EMRT1

### Product code

EMRT1 **A** **1** **1**



◆If you order or ask, please specify the product code.

## Specification

Type	EMRT1
Input signal	4 to 20 mA DC (input resistance 50 Ω)
Output signal	4 to 20 mA DC (load resistance 500 Ω or less)
Cut point of square root output	15 % FS or less
Accuracy	± 1 % FS(at 20 °C) during from 15 to 100 % FS
Temperature characteristics	± 0.01 % FS / °C ( 0 to 40 °C )
Power supply voltage	100 V AC ± 10 % 50 / 60 Hz approximately 3.5 VA.
Material of the outer case	Polycarbonate and ABS resin
Medium and ambient temperature	0 to + 50 °C (no freezing)
Ambient humidity	90 % RH or less (no dewing)
Insulation resistance	Between terminal and case more than 20 MΩ (500 V DC megger)
Withstand voltage	Between powersupply terminal and case 1000 V AC 50 / 60 Hz for one minute
Installation method	Installing applicable rail (35 mm DIN rail)
Mass	Approximately 300 g

### Cut point of square root output

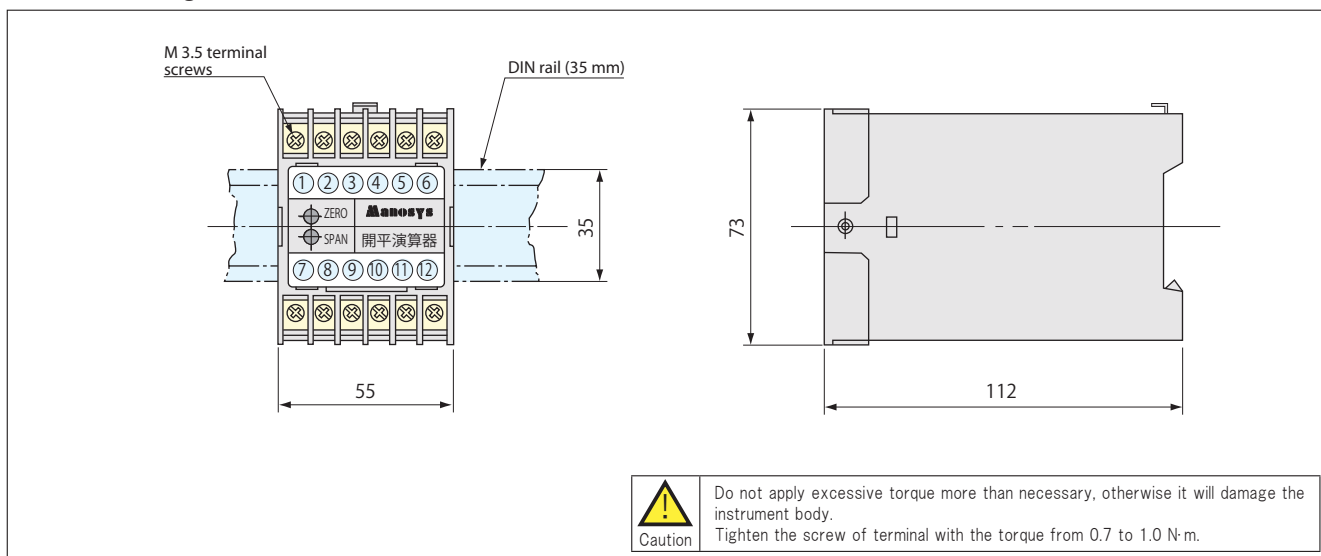
The point cutting from 0 to 15 % FS of output signal not to carry out square root output is called the cut point of square root output

Refer below comparative table compared input and output. As the output grows smaller, input grows smaller too far to be without the accuracy of calculator unit. Therefore, EMRT1 set up the cut point in the permissible range of 15 % FS or less.

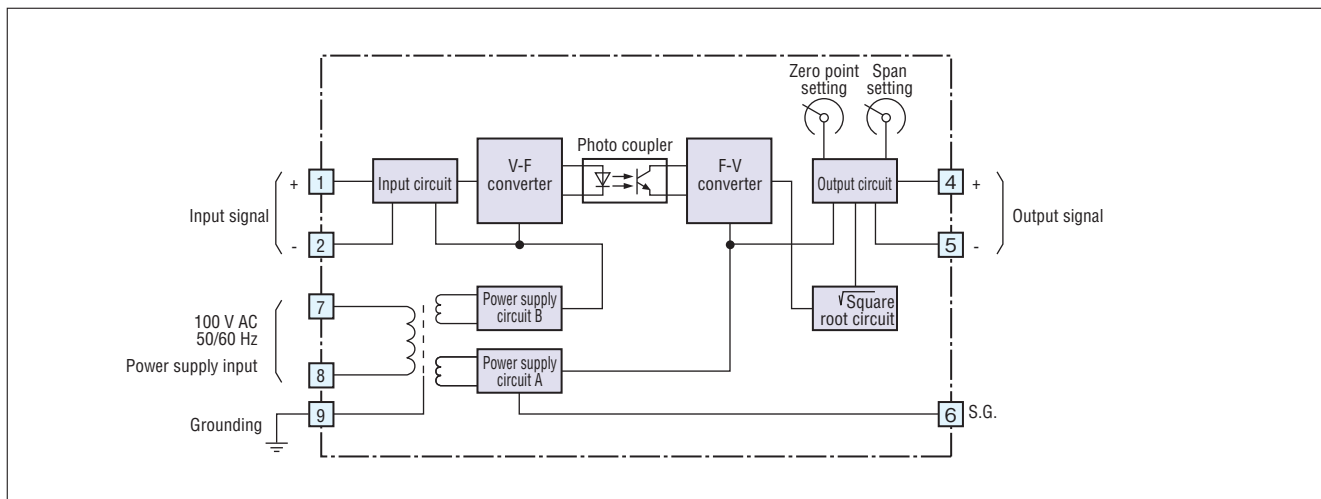
### Comparative table of square root input and output

Output	Input
20 %	$(0.2)^2 \times 100 \% = 4 \%$
15 %	$(0.15)^2 \times 100 \% = 2.25 \%$
10 %	$(0.1)^2 \times 100 \% = 1 \%$
5 %	$(0.05)^2 \times 100 \% = 0.25 \%$

## Outline drawing



## Electronics circuit block diagram



WO81

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EB3C

EMD8

EMD7

EMT6

EMT1

EMTGP1

EMT1H

EMP5

EMA3

EMRT1

HWS15

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## Product Warranty

### Warranty Period

This product warranty is valid for one year from the date of delivery to a place specified by an ordering party who has transacted directly with Yamamoto Electric Works Co., Ltd.

### Coverage

If a product breaks down due to a reason for which we are responsible during the warranty period and you return the product to us, we will either repair or replace the product free of charge.

This warranty does not cover:

- (1) Usage of the product under any inappropriate conditions or environment contrary to what is described in our product catalog, specifications or manual.  
Handling or usage of the product other than as described in our product catalog, specifications or manual.
- (2) Breakdown due to a reason other than a fault within our product.
- (3) Any product that has been modified or repaired by a party other than us.
- (4) Any breakdown due to a reason that was not foreseeable based on scientific and technical standards applied at the time of shipment.
- (5) Any breakdown due to a reason not attributable to us such as a natural calamity or other disaster.

These terms of warranty represent our entire liability with respect to the product, and we shall have no liability for any other loss arising in connection with a breakdown of the product.

\*This product warranty is only valid within Japan.

This document is a translation from the original Japanese version, and the original Japanese version has priority over this translation.

Be sure to refer to the original Japanese for the details of this warranty.



Caution

The Japanese original document shall always take precedence over the translated versions.

You should be sure to refer to the Japanese original document.

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