Space-saving Dual Output Signal Conditioners
Mini-MW Series

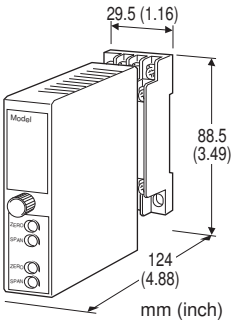
ABSOLUTE VALUE OUTPUT TRANSMITTER

Functions & Features

• Converts polarized DC input into standard process signals proportional to absolute value of input.
• Two independent output ranges
• Fast response type available

Typical Applications

• Monitor rotation speed of a machine rotating forward and reverse
• Monitor a deviation between SV and PV



MODEL: W2VABS-[1][2][3]-[4][5]

ORDERING INFORMATION

• Code number: W2VABS-[1][2][3]-[4][5]
Specify a code from below for each [1] through [5].
(e.g. W2VABS-2W11-M2/K/N)
• Special input and output ranges (For codes Z & 0)
Note: If one of the outputs should be a current range, specify it for the Output 1 to allow a greater load.

[1] INPUT

Current

DW: -20 – 0 – +20 mA DC (Input resistance 50 Ω)
EW: -16 – 0 – +16 mA DC (Inpurt resistance 62.5 Ω)
FW: -10 – 0 – +10 mA DC (Inpur resistance 100 Ω)
GW: -1 – 0 – +1 mA DC (Input resistance 1000 Ω)
KW: -100 – 0 – +100 µA DC (Input resistance 1000 Ω)
Z: Specify current (See INPUT SPECIFICATIONS)

Voltage

15W: -50 – 0 – +50 mV DC (Input resistance 10 kΩ min.)
16W: -60 – 0 – +60 mV DC (Input resistance 10 kΩ min.)
2W: -100 – 0 – +100 mV DC (Input resistance 100 kΩ min.)
3W: -1 – 0 – +1 V DC (Input resistance 1 MΩ min.)
4W: -10 – 0 – +10 V DC (Input resistance 1 MΩ min.)
5W: -5 – 0 – +5 V DC (Input resistance 1 MΩ min.)
0: Specify voltage (See INPUT SPECIFICATIONS)

[2] OUTPUT 1

Current

A: 4 – 20 mA DC (Load resistance 750 Ω max.)
B: 2 – 10 mA DC (Load resistance 1500 Ω max.)
C: 1 – 5 mA DC (Load resistance 3000 Ω max.)
D: 0 – 20 mA DC (Load resistance 750 Ω max.)
E: 0 – 16 mA DC (Load resistance 900 Ω max.)
F: 0 – 10 mA DC (Load resistance 1500 Ω max.)
G: 0 – 1 mA DC (Load resistance 15 kΩ max.)
Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

1: 0 – 10 mV DC (Load resistance 10 kΩ min.)
2: 0 – 100 mV DC (Load resistance 100 kΩ min.)
3: 0 – 1 V DC (Load resistance 1000 Ω min.)
4: 0 – 10 V DC (Load resistance 10 kΩ min.)
5: 0 – 5 V DC (Load resistance 5000 Ω min.)
6: 1 – 5 V DC (Load resistance 5000 Ω min.)
0: Specify voltage (See OUTPUT SPECIFICATIONS)

[3] OUTPUT 2

Y: None

Current

A: 4 – 20 mA DC (Load resistance 350 Ω max.)
B: 2 – 10 mA DC (Load resistance 700 Ω max.)
C: 1 – 5 mA DC (Load resistance 1400 Ω max.)
D: 0 – 20 mA DC (Load resistance 350 Ω max.)
E: 0 – 16 mA DC(Load resistance 430 Ω max.)
F: 0 – 10 mA DC (Load resistance 700 Ω max.)
G: 0 – 1 mA DC (Load resistance 7000 Ω max.)
Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

Same range availability as Output 1

[4] POWER INPUT

AC Power

M2: 100 – 240 V AC (Operational voltage range 85 – 264 V, 47 – 66 Hz)

DC Power

R: 24 V DC
(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)
R2: 11 – 27 V DC
(Operational voltage range 11 – 27 V, ripple 10 %p-p max.)
P: 110 V DC
(Operational voltage range 85 – 150 V, ripple 10 %p-p max.)

[5] OPTIONS (multiple selections)

Response Time (0 – 90 %)

blank: Standard (≤ 0.5 sec.)

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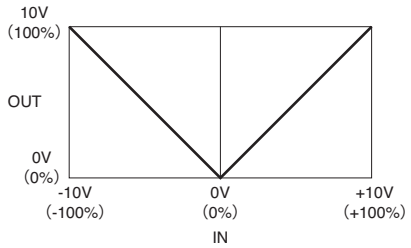
/K: Fast Response (Approx. 25 msec.)
Standards & Approvals (must be specified)
/N: Without CE

GENERAL SPECIFICATIONS

Construction: Plug-in
Connection: M3 screw terminals (torque 0.8 N·m)
Screw terminal: Chromated steel
Housing material: Flame-resistant resin (black)
Isolation: Input to output 1 to output 2 to power
Overrange output: 0 to 120 % (approx.) at 1 – 5 V
Zero adjustment: -5 to +5 % (front)
Span adjustment: 95 to 105 % (front)



INPUT SPECIFICATIONS

■ **DC Current**:
Shunt resistor attached to the input terminals (0.5 W)
Specify input resistance value for code Z.
■ **DC Voltage**: -300 – +300 V DC
Minimum span: 50 mV
Input 0 % corresponds 0 mA or 0 V.
Absolute value at ±100 % of input corresponds same value.
•**Input resistance**
Span 50 – 100 mV : ≥ 10 kΩ
Span 0.1 – 1 V : ≥ 100 kΩ
Span ≥ 1 V : ≥ 1 MΩ
The span is the difference between 100 % and 0 % inputs.

OUTPUT SPECIFICATIONS

■ **DC Current**: 0 – 20 mA DC
Minimum span: 1 mA
Offset: Max. 1.5 times span
Load resistance: Output drive 15 V max. for Output 1;
7 V max. for Output 2
■ **DC Voltage**: -10 – +12 V DC (up to 10 V for Output 2)
Minimum span: 5 mV
Offset: Max. 1.5 times span
Load resistance: Output drive 1 mA max.; at ≥ 0.5 V

INSTALLATION

Power Consumption
•**AC**:
Approx. 4 VA at 100 V
Approx. 5 VA at 200 V
Approx. 6 VA at 240 V
•**DC**: Approx. 3 W
Operating temperature: -5 to +55°C (23 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Surface or DIN rail
Weight: 200 g (0.44 lb)

PERFORMANCE in percentage of span

Accuracy: ±0.1 %
Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)
Line voltage effect: ±0.1 % over voltage range
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 2000 V AC @1 minute (input to output 1 to output 2 to power to ground)

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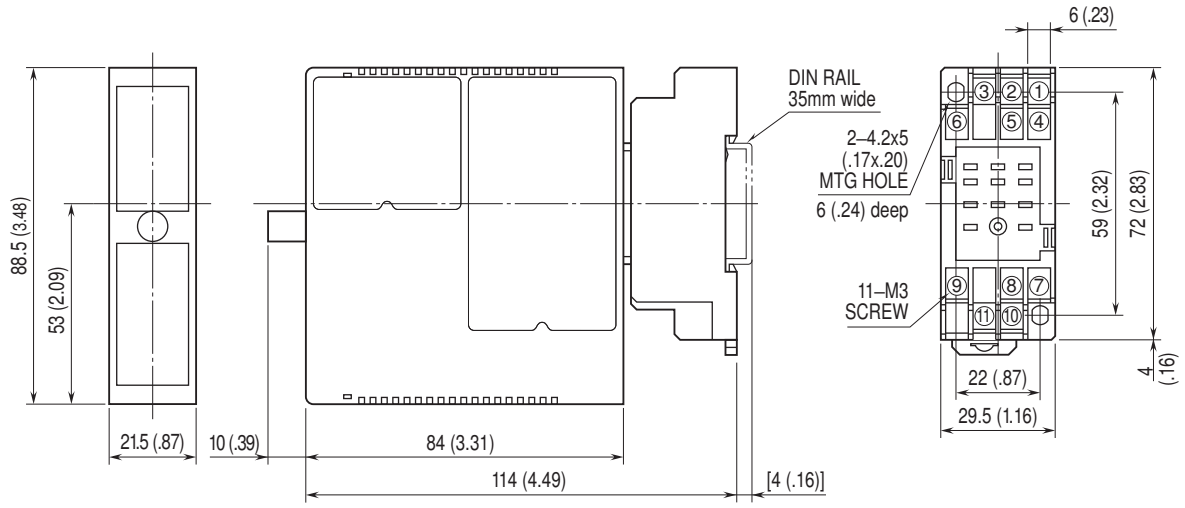
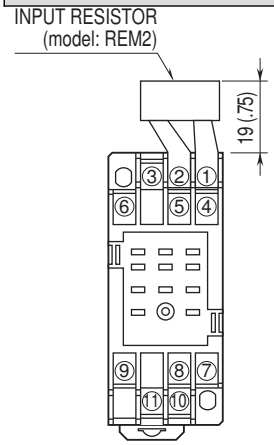
DIMENSIONS unit: mm (inch)



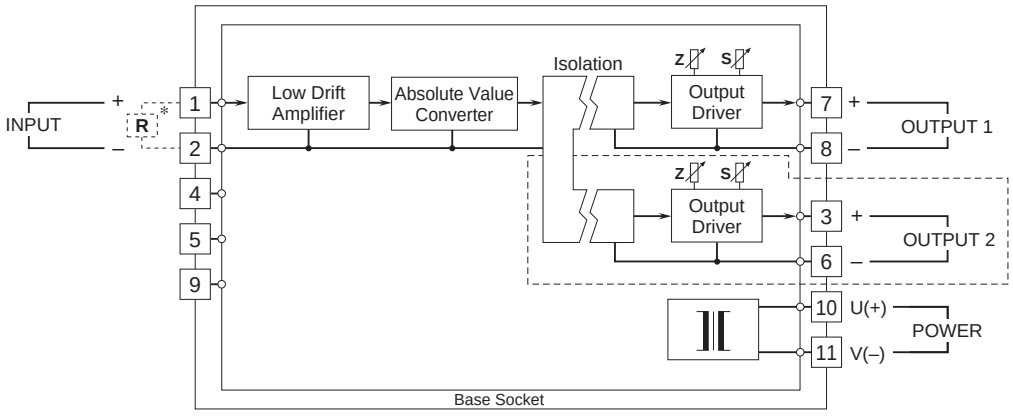
When mounting, no extra space is needed between units.

TERMINAL ASSIGNMENTS unit: mm (inch)



Input shunt resistor attached
for current input.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Input shunt resistor attached for current input.
Remark: The section enclosed by broken line is only with 2nd output option.

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⚠ Specifications are subject to change without notice.

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