

**Space-saving Dual Output Signal Conditioners
Mini-MW Series**

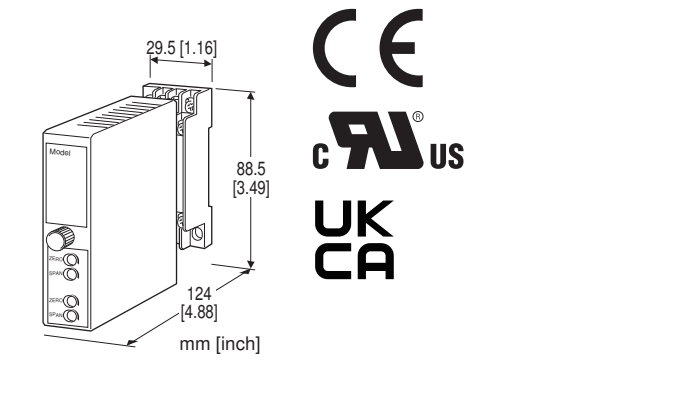
SIGNAL TRANSMITTER

Functions & Features

- Converts DC input from a sensor into a standard process signal
- Fast response type available

Typical Applications

- Isolation between control room and field instrumentation



MODEL: W2VS-[1][2][3]-[4][5]

ORDERING INFORMATION

- Code number: W2VS-[1][2][3]-[4][5]
- Specify a code from below for each of [1] through [5].
(e.g. W2VS-6A6-M2/K/CE/Q)
- Special input and output ranges (For codes Z & 0)
- Specify the specification for option code /Q
(e.g. /C01/V01)

Note: When the user requires a current and a voltage output, specify the current to be the Output 1 which allows a greater load.

[1] INPUT

Current

- A:** 4 - 20 mA DC (Input resistance 250 Ω)
- A1:** 4 - 20 mA DC (Input resistance 50 Ω)
- B:** 2 - 10 mA DC (Input resistance 500 Ω)
- C:** 1 - 5 mA DC (Input resistance 1000 Ω)
- D:** 0 - 20 mA DC (Input resistance 50 Ω)
- E:** 0 - 16 mA DC (Input resistance 62.5 Ω)
- F:** 0 - 10 mA DC (Input resistance 100 Ω)
- G:** 0 - 1 mA DC (Input resistance 1000 Ω)
- H:** 10 - 50 mA DC (Input resistance 100 Ω)
- J:** 0 - 10 μA DC (Input resistance 1000 Ω)
- K:** 0 - 100 μA DC (Input resistance 1000 Ω)

- GW:** -1 - +1 mA DC (Input resistance 1000 Ω)
 - FW:** -10 - +10 mA DC (Input resistance 100 Ω)
 - Z:** Specify current (See INPUT SPECIFICATIONS)
- Voltage
- 1:** 0 - 10 mV DC (Input resistance 10 kΩ min.)
 - 15:** 0 - 50 mV DC (Input resistance 10 kΩ min.)
 - 16:** 0 - 60 mV DC (Input resistance 10 kΩ min.)
 - 2:** 0 - 100 mV DC (Input resistance 100 kΩ min.)
 - 3:** 0 - 1 V DC (Input resistance 1 MΩ min.)
 - 4:** 0 - 10 V DC (Input resistance 1 MΩ min.)
 - 5:** 0 - 5 V DC (Input resistance 1 MΩ min.)
 - 6:** 1 - 5 V DC (Input resistance 1 MΩ min.)
 - 4W:** -10 - +10 V DC (Input resistance 1 MΩ min.)
 - 5W:** -5 - +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.)
 - 4W:** -10 - +10 V DC (Load resistance 10 kΩ min.)
 - 5W:** -5 - +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)
(90 – 264 V for UL)

DC Power

R: 24 V DC(Operational voltage range 24 V \pm 10 %, ripple 10 %p-p max.)**R2:** 11 – 27 V DC

(Operational voltage range 11 – 27 V, ripple 10 %p-p max.)

(Select 'N' for 'Standards & Approvals' code.)

P: 110 V DC

(Operational voltage range 85 – 150 V, ripple 10 %p-p max.)

(110 V \pm 10 % for UL)**[5] OPTIONS (multiple selections)**

Response Time (0 – 90 %)

blank: Standard (\leq 0.5 sec.)**/K:** Fast Response (Approx. 25 msec.)

Standards & Approvals (must be specified)

/N: Without CE, UKCA or UL**/CE:** CE marking**/UK:** CE, UKCA marking**/UL:** UL approval, CE marking

Other Options

blank: none**/Q:** Option other than the above (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 (UL not available)

ADJUSTMENT

/V01: Multi-turn fine adjustment (UL not available)

TERMINAL SCREW MATERIAL

/S01: Stainless steel (UL not available)**GENERAL SPECIFICATIONS****Construction:** Plug-in**Connection:** M3 screw terminals (torque 0.8 N·m)**Screw terminal:** Chromated steel (standard) or stainless steel**Housing material:** Flame-resistant resin (black)**Isolation:** Input to output 1 to output 2 to power**Overrange output:** Approx. -10 to +120 % at 1 – 5 V**Zero adjustment:** -5 to +5 % (front)**Span adjustment:** 95 to 105 % (front)

Adjustable individually for each output 1 and output 2.

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:** 3 mV**Offset:** Max. 1.5 times span**Input resistance**Span 3 – 10 mV : \geq 10 k Ω Span 10 – 100 mV : \geq 10 k Ω Span 0.1 – 1 V : \geq 100 k Ω Span \geq 1 V : \geq 1 M Ω **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 \geq 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:** \pm 0.1 %**Temp. coefficient:** \pm 0.015 %/°C (\pm 0.008 %/°F)**Line voltage effect:** \pm 0.1 % over voltage range**Insulation resistance:** \geq 100 M Ω with 500 V DC**Dielectric strength:** 2000 V AC @1 minute (input to output 1 to output 2 to power to ground)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

Low Voltage Directive

EN 61010-1

Measurement Category II (input)

Installation Category II (power)

Pollution Degree 2

Input or output 1 or output 2 to power input:

Reinforced insulation (300 V)

Input to output 1 to output 2: Basic insulation (300 V)

RoHS Directive

UK conformity (UKCA):

The UK legislations and designated standards are equivalent to the applicable EU directives.

(Refer to our website for more information about the legislations and designated standards.)

Approval:

UL/C-UL nonincendive Class I, Division 2,

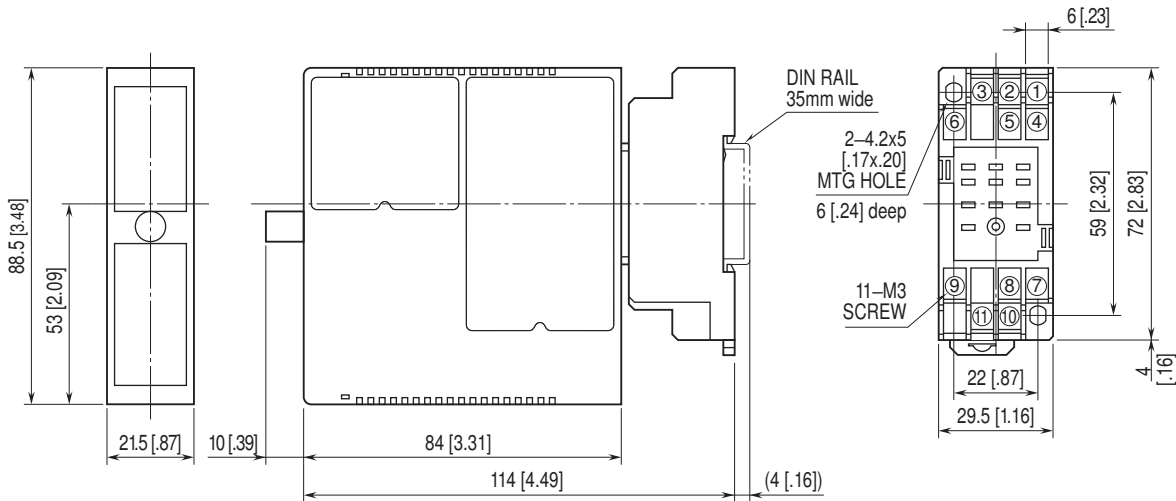
Groups A, B, C, and D

(ANSI/ISA-12.12.01, CAN/CSA-C22.2 No.213)

UL/C-UL general safety requirements

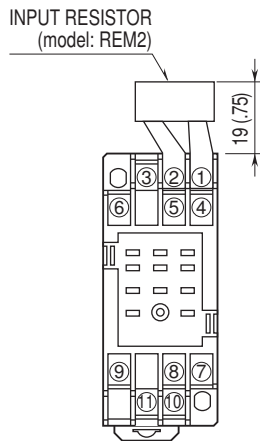
(UL 61010-1, CAN/CSA-C22.2 No.61010-1)

EXTERNAL DIMENSIONS unit: mm [inch]



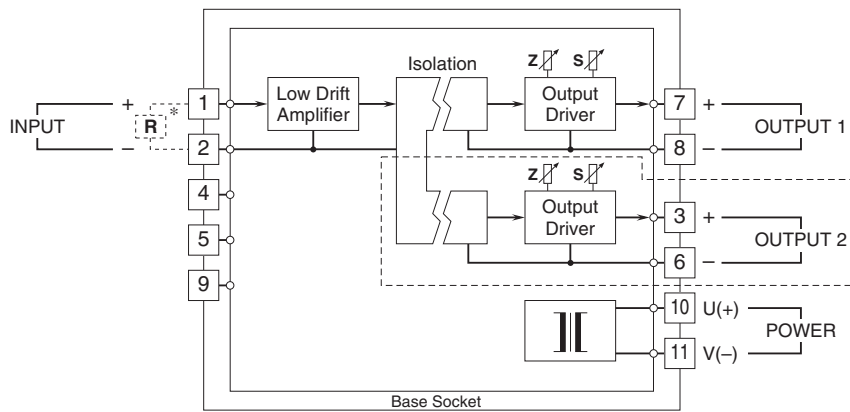
• When mounting, no extra space is needed between units.

TERMINAL ASSIGNMENTS unit: mm [inch]



Input shunt resistor attached for current input.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



* Input shunt resistor attached for current input.

Note: The section enclosed by broken line is only with 2nd output option.



Specifications are subject to change without notice.