

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

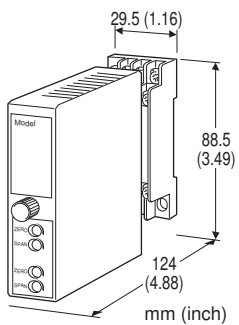
**CURRENT LOOP SUPPLY**

**Functions & Features**

- Powers a 4 – 20 mA DC current loop
- Shortcircuit protection
- Applicable to smart transmitters
- CE marking for 24 V DC power

**Typical Applications**

- Various 2-wire transmitters
- Isolation application (4 – 20 mA input)



**MODEL: W2DY-24[1][2]-[3][4]**

**ORDERING INFORMATION**

- Code number: W2DY-24[1][2]-[3][4]
  - Specify a code from below for each [1] through [4]. (e.g. W2DY-24A6-R/CE/Q)
  - Special output ranges (For codes Z & 0)
  - Specify the specification for option code 'Q.' (e.g. /C01 /V01)
- Note: If one of the outputs should be a current range, specify it for the Output 1 to allow a greater load.

**SUPPLY OUTPUT**

24: 24 V DC

**INPUT**

**Current**

4 – 20 mA DC

**[1] 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)

**[2] 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

**[3] POWER INPUT**

**AC Power**

M2: 100 – 240V AC (Operational voltage range 85 – 264 V, 47 – 66 Hz)  
(Select 'N' for 'Standards & Approvals' code.)

**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.)  
(Select 'N' for 'Standards & Approvals' code.)  
P: 110 V DC  
(Operational voltage range 85 – 150 V, ripple 10 %p-p max.)  
(Select 'N' for 'Standards & Approvals' code.)

**[4] OPTIONS (multiple selections)**

**Standards & Approvals (must be specified)**

- /N: Without CE
- /CE: 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 M-System's web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

### ADJUSTMENT

/V01: Multi-turn fine adjustment

### TERMINAL SCREW MATERIAL

/S01: Stainless steel

## 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)

## SUPPLY OUTPUT

**Output voltage:** 24 - 28 V DC with no load

**Current rating:** ≤ 22 mA DC

• Shortcircuit Protection

**Current limited:** 30 mA max.

**Protected time duration:** No limit

## INPUT SPECIFICATIONS

■ **DC Current:** Input resistors incorporated

Approx. 300 Ω (50 Ω as receiving resistor, 250 Ω across the monitor terminals)

## 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:** 0 - 12 V DC (up to 10 V for Output 2)

**Minimum span:** 5 mV

**Offset:** ≤ 1.5 times span

**Load resistance:** Output drive 1 mA max.; at ≥0.5 V

## INSTALLATION

### Power Consumption

•AC:

Approx. 5 VA at 100 V

Approx. 6 VA at 200 V

Approx. 7 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)

**Response time:** ≤ 0.5 sec. (0 - 90 %)

**Line voltage effect**

**Supply output:** ±3 % over voltage range

**Output signal:** ±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)

## STANDARDS & APPROVALS

**CE conformity:**

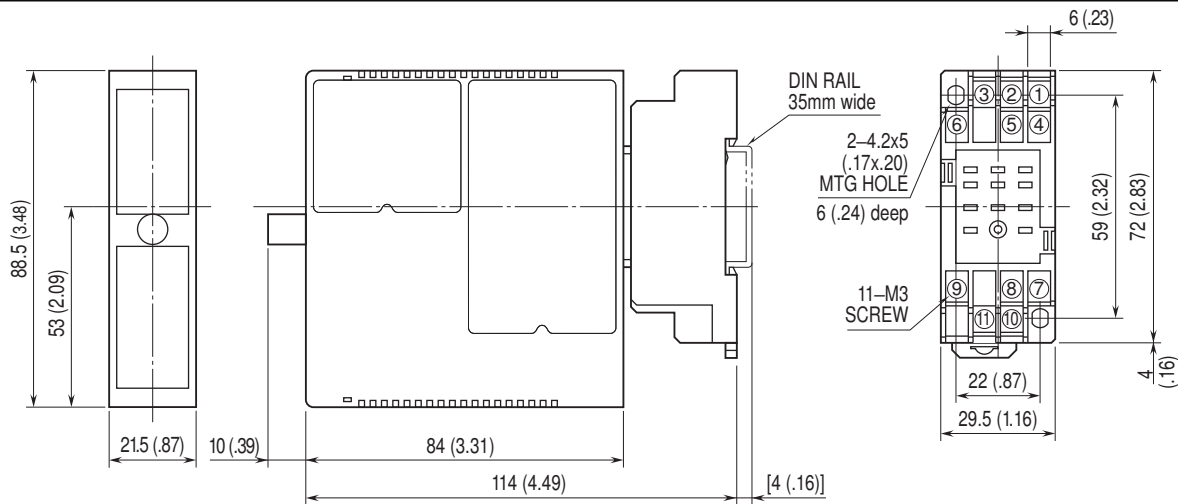
EMC Directive (2004/108/EC)

EMI EN 61000-6-4: 2007

EMS EN 61000-6-2: 2005

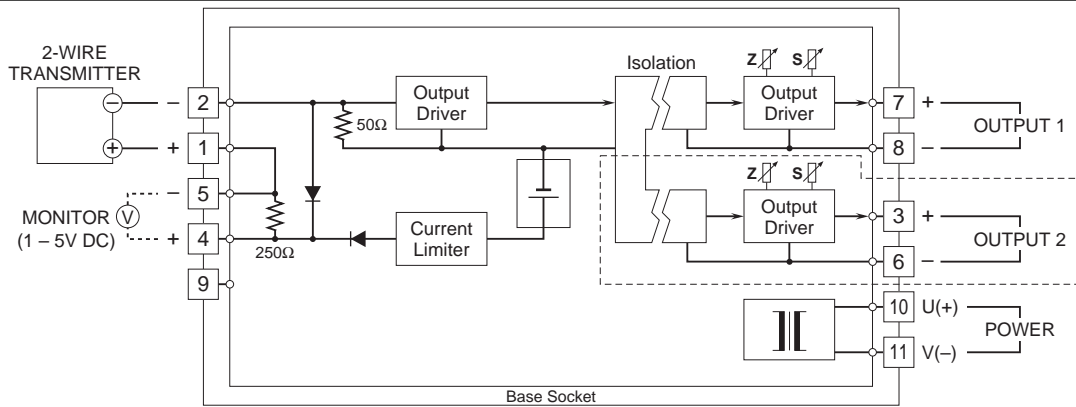


## DIMENSIONS unit: mm (inch)



When mounting, no extra space is needed between units.

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



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



Specifications are subject to change without notice.