

## Dual Output Plug-in Signal Conditioners W-UNIT

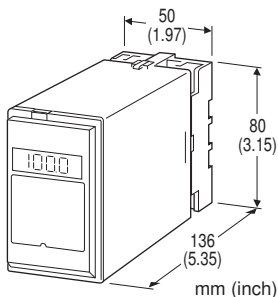
### CURRENT LOOP SUPPLY

#### Functions & Features

- Powering a 4 - 20 mA DC current loop
- Shortcircuit protection
- Applicable to smart transmitters
- Isolation up to 2000 V AC
- LCD meter
- High-density mounting

#### Typical Applications

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



## MODEL: WDY-[1][2]-[3][4]

### ORDERING INFORMATION

- Code number: WDY-[1][2]-[3][4]
- Specify a code from below for each of [1] through [4].  
(e.g. WDY-A6-B/E/Q)
- Special output ranges (For codes Z & 0)
  - Specify the specification for option code /Q  
(e.g. /C01/S01)

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

### INPUT

#### Current

4 - 20 mA DC (Input resistance 250  $\Omega$ )

### [1] OUTPUT 1

#### Current

- A: 4 - 20 mA DC (Load resistance 600  $\Omega$  max.)
- B: 2 - 10 mA DC (Load resistance 1200  $\Omega$  max.)
- C: 1 - 5 mA DC (Load resistance 2400  $\Omega$  max.)
- D: 0 - 20 mA DC (Load resistance 600  $\Omega$  max.)
- E: 0 - 16 mA DC (Load resistance 750  $\Omega$  max.)

F: 0 - 10 mA DC (Load resistance 1200  $\Omega$  max.)

G: 0 - 1 mA DC (Load resistance 12 k $\Omega$  max.)

Z: Specify current (See OUTPUT SPECIFICATIONS)

#### Voltage

1: 0 - 10 mV DC (Load resistance 10 k $\Omega$  min.)

2: 0 - 100 mV DC (Load resistance 100 k $\Omega$  min.)

3: 0 - 1 V DC (Load resistance 1000  $\Omega$  min.)

4: 0 - 10 V DC (Load resistance 10 k $\Omega$  min.)

5: 0 - 5 V DC (Load resistance 5000  $\Omega$  min.)

6: 1 - 5 V DC (Load resistance 5000  $\Omega$  min.)

4W: -10 - +10 V DC (Load resistance 10 k $\Omega$  min.)

5W: -5 - +5 V DC (Load resistance 5000  $\Omega$  min.)

0: Specify voltage (See OUTPUT SPECIFICATIONS)

### [2] OUTPUT 2

#### Current

A: 4 - 20 mA DC (Load resistance 350  $\Omega$  max.)

B: 2 - 10 mA DC (Load resistance 700  $\Omega$  max.)

C: 1 - 5 mA DC (Load resistance 1400  $\Omega$  max.)

D: 0 - 20 mA DC (Load resistance 350  $\Omega$  max.)

E: 0 - 16 mA DC (Load resistance 430  $\Omega$  max.)

F: 0 - 10 mA DC (Load resistance 700  $\Omega$  max.)

G: 0 - 1 mA DC (Load resistance 7000  $\Omega$  max.)

Z: Specify current (See OUTPUT SPECIFICATIONS)

#### Voltage

Same range availability as Output 1

### [3] POWER INPUT

#### AC Power

B: 100 V AC

C: 110 V AC

D: 115 V AC

F: 120 V AC

G: 200 V AC

H: 220 V AC

J: 240 V AC

#### DC Power

S: 12 V DC

R: 24 V DC

V: 48 V DC

P: 110 V DC

### [4] OPTIONS (multiple selections)

#### Input Signal Indicator

blank: Without

/E: With (0.0 - 100.0 % display)

#### 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

### TERMINAL SCREW MATERIAL

/S01: Stainless steel

## GENERAL SPECIFICATIONS

**Construction:** Plug-in

**Connection:** M3.5 screw terminals

**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.

### ■ DISPLAY (Input indicator)

**LCD digital display:** 0.0 - 100.0 % (min. digit 0.1 %)

(No scaling)

## SUPPLY OUTPUT

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

**Current rating:** ≤ 22 mA DC

• **Shortcircuit Protection**

**Current limited:** 35 mA max.

**Protected time duration:** No limit

## INPUT SPECIFICATIONS

■ **DC Current:** Input resistor incorporated

## OUTPUT SPECIFICATIONS

■ **DC Current:** 0 - 20 mA DC

**Minimum span:** 1 mA

**Offset:** Max. 1.5 times span

**Load resistance:** Output drive 12 V max. for Output 1;

7 V max. for Output 2

■ **DC Voltage:** -10 - +12 V DC

**Minimum span:** 5 mV

**Offset:** Max. 1.5 times span

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

## INSTALLATION

### Power input

• **AC:** Operational voltage range: rating ±10 %,

50/60 ±2 Hz, approx. 3 VA

• **DC:** Operational voltage range: rating ±10 %,

or 85 - 150 V for 110 V rating, ripple 10 %p-p max.,

approx. 3 W (125 mA at 24 V)

**Operating temperature:** -5 to +55°C (23 to 131°F)

**Operating humidity:** 30 to 90 %RH (non-condensing)

**Mounting:** Surface or DIN rail

**Weight:** 400 g (0.88 lb)

## PERFORMANCE in percentage of span

**Accuracy:** ±0.1 %

**Display accuracy:** ±(0.1 % of FS + 1 digit)

**Temp. coefficient:** ±0.015 %/°C (±0.008 %/°F)

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

**Line voltage effect:** ±0.1 % over voltage range

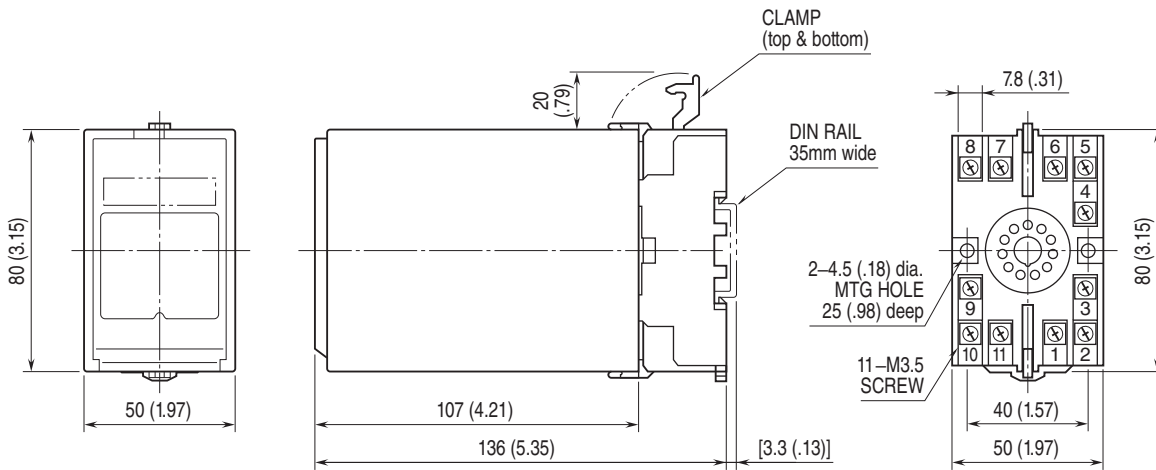
**Insulation resistance:** ≥ 100 MΩ with 500 V DC

**Dielectric strength:** 2000 V AC @1 minute

(input to output to power to ground)

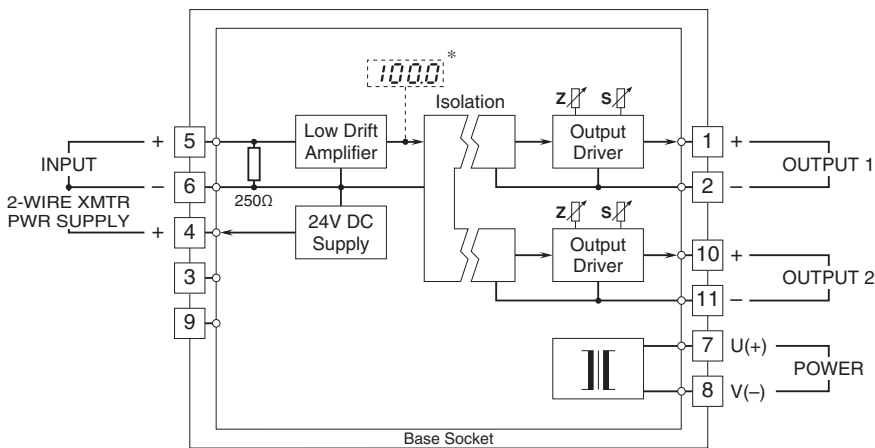
1000 V AC @ 1 minute (output 1 to output 2)

## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

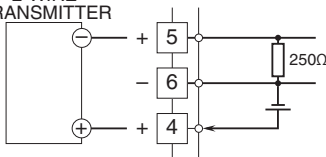
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



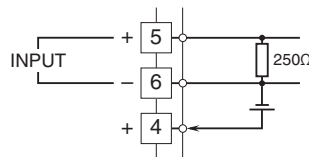
\* Option /E

■ When Used as DC Supply

2-WIRE  
TRANSMITTER



■ When Used as Isolator



Specifications are subject to change without notice.