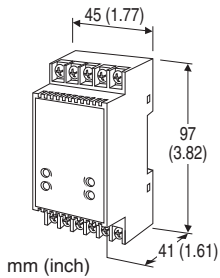


Terminal Block Dual Output Signal Conditioners W5-UNIT

CURRENT LOOP SUPPLY

Functions & Features

- Powers a 4 – 20 mA DC current loop
- Two independent output ranges
- Four-way isolation (input to output 1 to output 2 to power)
- Fast response type available
- High-density mounting



MODEL: W5DY-[1][2]-[3][4]

ORDERING INFORMATION

- Code number: W5DY-[1][2]-[3][4]
- Specify a code from below for each [1] through [4].
(e.g. W5DY-A6-R2/K/Q)
- Special output ranges (For codes Z & 0)
 - Specify the specification for option code /Q
(e.g. /C01/S01)

INPUT

Current

4 – 20 mA DC (Input resistance 249.5 Ω)

[1] OUTPUT 1

Current

- A: 4 – 20 mA DC (Load resistance 550 Ω max.)
 B: 2 – 10 mA DC (Load resistance 1100 Ω max.)
 C: 1 – 5 mA DC (Load resistance 2200 Ω max.)
 D: 0 – 20 mA DC (Load resistance 550 Ω max.)
 E: 0 – 16 mA DC (Load resistance 685 Ω max.)
 F: 0 – 10 mA DC (Load resistance 1100 Ω max.)
 G: 0 – 1 mA DC (Load resistance 11 k Ω max.)
 Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 1: 0 – 10 mV DC (Load resistance 10 k Ω min.)
 2: 0 – 100 mV DC (Load resistance 100 k Ω min.)
 3: 0 – 1 V DC (Load resistance 100 Ω min.)
 4: 0 – 10 V DC (Load resistance 1000 Ω min.)
 5: 0 – 5 V DC (Load resistance 500 Ω min.)
 6: 1 – 5 V DC (Load resistance 500 Ω min.)

4W: -10 – +10 V DC (Load resistance 2000 Ω min.)

5W: -5 – +5 V DC (Load resistance 1000 Ω min.)

0: Specify voltage (See OUTPUT SPECIFICATIONS)

[2] OUTPUT 2

Same range availability as Output 1

Y: None

[3] POWER INPUT

AC Power

M: 85 – 264 V AC (Operational voltage range 85 – 264 V, 47 – 66 Hz)

(CE not available)

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.)

(CE not available)

P: 110 V DC

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

(CE not available)

[4] OPTIONS (multiple selections)

Response Time (0 – 90 %)

blank: Standard ($\leq$ 0.5 sec.)

/K: Fast Response (Approx. 25 msec.)

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: Terminal block

Connection

Input: M3.5 screw terminals (torque 0.8 N·m)

Output & power: M3 screw terminals (torque 0.8 N·m)

Screw terminal: Nickel-plated 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: -2 to +2 % (front)

Span adjustment: 98 to 102 % (front)

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

EN 50581

SUPPLY OUTPUT

(across the terminals 4 - 5)

Output voltage: 24 - 28 V DC with no load

20 V DC min. at 20 mA

Current rating: ≤ 22 mA DC

• **Shortcircuit Protection**

Current limited: 30 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 11 V max.

■ **DC Voltage:** -10 - +12 V DC

Spans: Min. 5 mV, max. 20 V

Offset: Max. 1.5 times span

Load resistance: Output drive 10 mA max.; 5 mA for negative voltage output; at ≥ 0.5 V

INSTALLATION

Power Consumption

• **AC:**

Approx. 4 VA at 100 V

Approx. 5 VA at 200 V

Approx. 6 VA at 264 V

• **DC:** Approx. 3 W

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

Operating humidity: 0 to 90 %RH (non-condensing)

Mounting: DIN rail

Weight: 130 g (0.29 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 M Ω with 500 V DC

Dielectric strength:

2000 V AC @1 minute (input to output 1 or output 2 to power to ground)

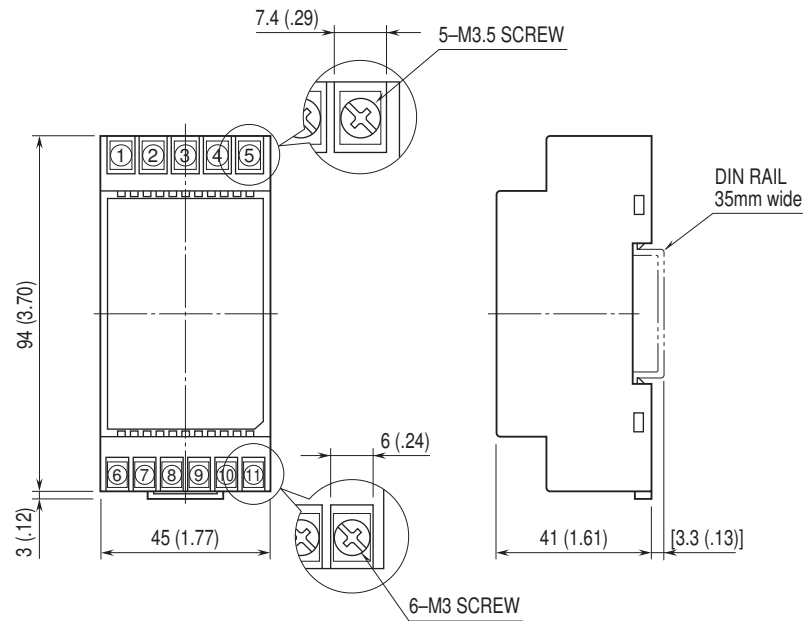
1000 V AC @1 minute (output 1 to output 2)

STANDARDS & APPROVALS

EU conformity:

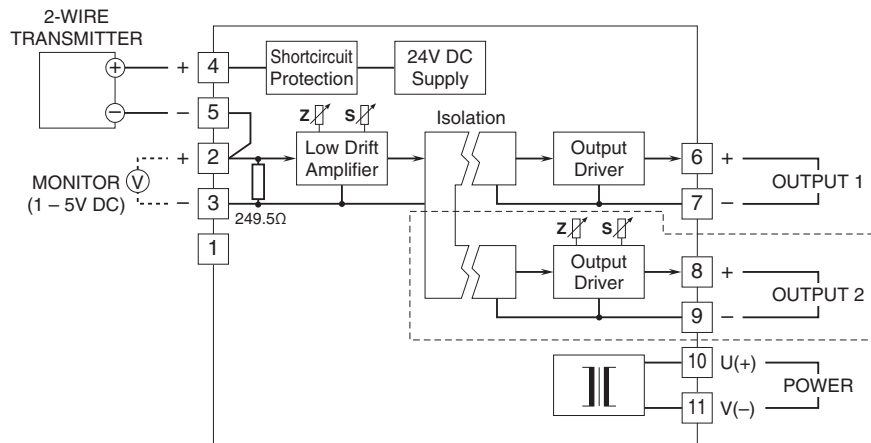
EMC Directive

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

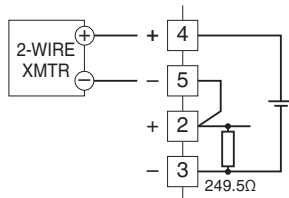
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



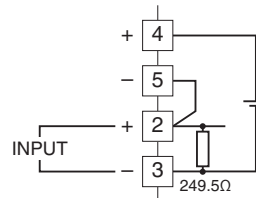
Note 1: The section enclosed by broken line is only with 2nd output option.

Note 2: DO NOT connect to the terminal 1.

■ When Used as DC Supply



■ When Used as Isolator



Specifications are subject to change without notice.