

Space-saving Dual Output Signal Conditioners Mini-MW Series

CT TRANSMITTER

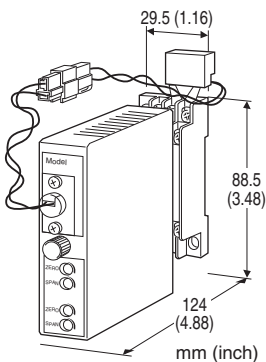
(Average sensing, RMS calibrated)

Functions & Features

- Converts alternating current from a current transformer into a standard process signal
- Minimum ripple
- Rerouted input signal does not pass through the base socket in order to protect it from melting caused by rush current of a motor
- CT Protector provided for open-circuit protection

Typical Applications

- Centralized monitoring and control of motors, pumps or heaters by DCS
- Monitoring power line and power supply current



MODEL: W2CA-[1][2][3]-[4][5]

ORDERING INFORMATION

- Code number: W2CA-[1][2][3]-[4][5]

Specify a code from below for each [1] through [5].

(e.g. W2CA-5AA-M2/CE/Q)

- Special output range (For codes Z & 0)
- Specify the specification for option code /Q (e.g. /C01/S01)

Note: If one of the outputs should be a current range, specify it for the Output 1 to allow a greater load.

[1] INPUT (sine wave)

Current

- 1: 0 – 1 A AC
- 5: 0 – 5 A AC

[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 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 1000 Ω min.)
- 4: 0 – 10 V DC (Load resistance 10 k Ω 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 k Ω 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)

Standards & Approvals (must be specified)

/N: Without CE or UL

/CE: CE 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 M-System's web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating (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

Input waveform

Average sensing: Sine wave

Overrange output: 0 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

Frequency: 50 or 60 Hz

Input burden:

≤ 0.1 VA (input 0 - 1 A)

≤ 0.5 VA (input 0 - 5 A)

Overload capacity: 500 % of rating for 5 sec., 120 % continuous

Operational range: 0 - 120 % of rating

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: ±0.3 %

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

Response time: ≤ 0.5 sec. (0 - 90 %)

Ripple: 0.5 %p-p max. (100/120 Hz)

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)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

Low Voltage Directive

EN 61010-1

Installation Category II

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

EN 50581

Approval:

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

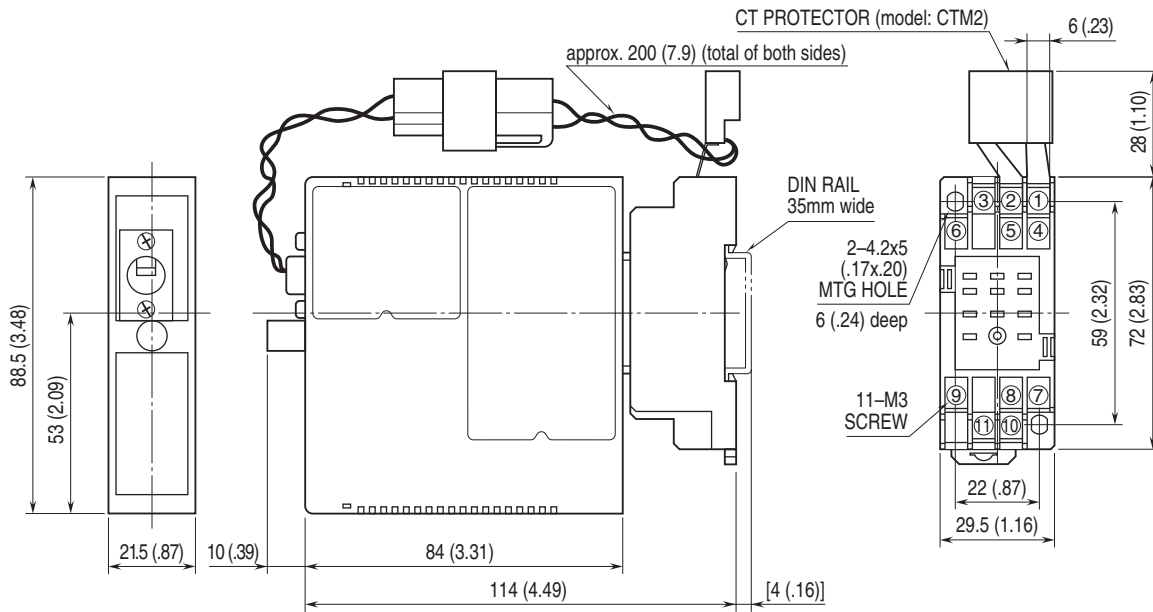
Groups A, B, C, and D

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

UL/C-UL general safety requirements

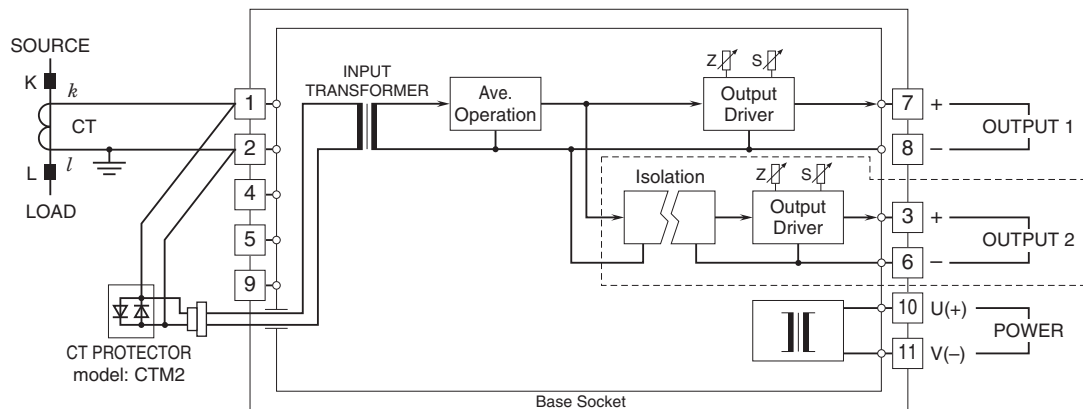
(UL 61010-1, CAN/CSA-C22.2 No.61010-1)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



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



Specifications are subject to change without notice.