

Super-mini Signal Conditioners *Mini-M Series*

CURRENT LOOP SUPPLY (non-isolated)

MODEL **M2D2**

MODEL & SUFFIX CODE SELECTION

MODEL _____ M2D2-24-□□

SUPPLY OUTPUT _____

24: 24V DC

INPUT _____

4 – 20mA DC

OUTPUT SIGNAL 1 _____

1 – 5V DC

OUTPUT SIGNAL 2 _____

4 – 20mA DC

POWER INPUT _____

AC Power	DC Power
M2 : 100 – 240V AC	R : 24V DC
	R2: 11 – 27V DC *1
	P : 110V DC

*1 : Select 'N' for 'Standards & Approvals' code.

STANDARDS & APPROVALS _____

/N : Without CE

/CE: CE marking

ORDERING INFORMATION

Specify code number. (e.g. M2D2-24-M2/CE)

GENERAL SPECIFICATIONS

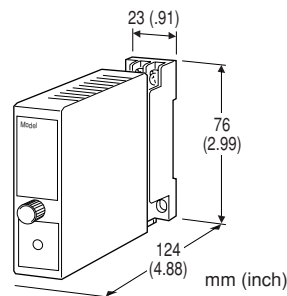
Construction: Plug-in

Connection: M3 screw terminals (torque 0.8 N·m)

Housing material: Flame-resistant resin (black)

Isolation: Input or output to power

Indicator LED: Red light turns on during operation.



Functions & Features

- Powering a 4 – 20mA DC current loop
- Electrically isolating output signal from power input
- Shortcircuit protection
- Applicable to smart transmitters
- Universal power input
- High-density mounting

Typical Applications

- Various 2-wire transmitters

INPUT & OUTPUT

■ **SUPPLY OUTPUT**

Output voltage: 24V DC with no load
Current rating: 30mA DC

- **Shortcircuit Protection**
- Current limited:** Approx. 30mA
- Protected time duration:** No limit

■ **INPUT:** 4 – 20mA DC; input resistor incorporated (0.25W)

■ **OUTPUT SIGNAL 1:** 1 – 5V DC
Load resistance: 250kΩ minimum

■ **OUTPUT SIGNAL 2:** 4 – 20mA DC

INSTALLATION

Power input

AC: Operational voltage range 85 – 264V
47 – 66 Hz; approx. 3VA at 100V
approx. 4VA at 200V
approx. 5VA at 264V

DC: Operational voltage range for R: 24V
 $\pm 10\%$, R2: 11 – 27V, or P: 85 – 150V,
ripple 10% p-p max.; approx. 3W

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

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

Mounting: Surface or DIN rail

Dimensions: W23×H76×D124 mm (0.91"×2.99"×4.88")

See General Spec. Sheet Figure A-1.

Weight: 150 g (0.33 lbs)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$ (accuracy of the receiving resistor)

Temp. coefficient: $\pm 0.003\%/^{\circ}\text{C}$ ($\pm 0.002\%/^{\circ}\text{F}$)

(temp. coefficient of the receiving resistor)

Line voltage effect to supply output:

$\pm 3\%$ over voltage range

Insulation resistance: $\geq 100\text{M}\Omega$ with 500V DC

Dielectric strength: 2000V AC @1 minute

(input or output to power to ground)

STANDARDS & APPROVALS

CE conformity: EMC Directive (89/336/EEC)

EMI EN61000-6-4

EMS EN61000-6-2

Low Voltage Directive (73/23/EEC)

EN61010-1

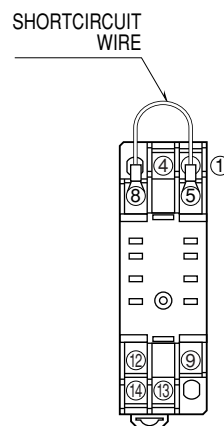
Installation category II

Pollution degree 2

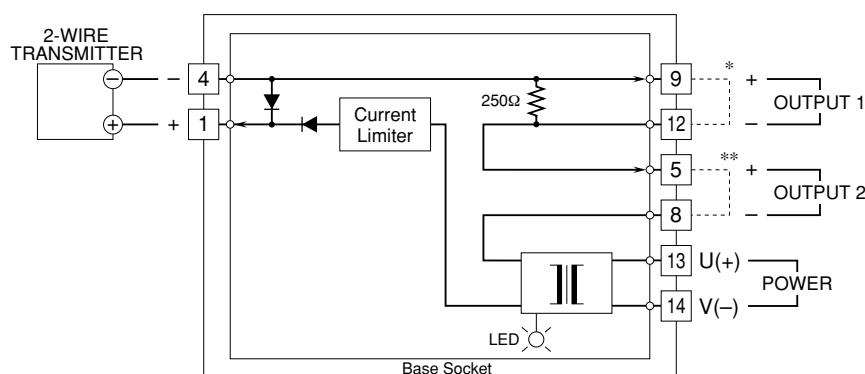
Max. operating voltage 300V

Input or output to power – Reinforced insulation

TERMINAL ASSIGNMENT



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



* Short across these terminals for large voltage allowance at Output 2.

Be sure to match specifications of smart transmitter.

Do not connect a capacitive load to Output 1.

**Short across these terminals when not using output 2.