

Space-saving Dual Output Signal Conditioners Mini-MW Series

CURRENT LOOP SUPPLY

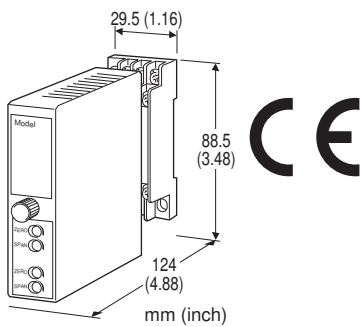
(applicable to HART signal)

Functions & Features

- Powers a 4 - 20 mA DC current loop
- Isolates and relays HART signals
- Shortcircuit protection
- Opencircuit detection
- High-density mounting

Typical Applications

- 2-wire HART transmitters



MODEL: W2DYH2-24A[1]-[2][3]

ORDERING INFORMATION

- Code number: W2DYH2-24A[1]-[2][3]
- Specify a code from below for each [1] through [3].
(e.g. W2DYH2-24AA-M2/B/CE)

SUPPLY OUTPUT

24: 24 V DC

INPUT

Current

4 - 20 mA DC (Input resistance 250 Ω)

OUTPUT 1

Current

A: 4 - 20 mA DC (Load resistance 600 Ω max.)
225 - 600 Ω for HART communication

[1] OUTPUT 2

Y: None

Current

A: 4 - 20 mA DC (Load resistance 350 Ω max.)

[2] POWER INPUT

AC Power

M2: 100 - 240 V AC (Operational voltage range 85 - 264 V, 47 - 66 Hz)

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.)

[3] OPTIONS (multiple selections)

Opencircuit detection

blank: none

/B: Opencircuit detector (Output 1)

Standards & Approvals (must be specified)

/N: Without CE

/CE: CE marking

GENERAL SPECIFICATIONS

Construction: Plug-in

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

Screw terminal: Chromated steel

Housing material: Flame-resistant resin (black)

Isolation: Input to output 1 to output 2 to power

Overrange output: Approx. -10 to +110 %

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

Opencircuit detection: Input current 0 mA when the Output 1 loop is open.

Photo MOS Relay ON Resistance; 3 Ω max.

SUPPLY OUTPUT

(across the terminals 1 - 4)

Output voltage: 24 - 28 V DC with no load

18 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

Input current: ≥ 0 mA

HART COMMUNICATION

Transmission gain: Approx. -3 dB (within 1 k - 3 kHz)
measured with 250 Ω at output



Loop impedance: 250 Ω \pm 10 %

Communication directions: Bidirectional

(HART communication not available for Output 2)

INSTALLATION

Power consumption

•AC:

Approx. 5 VA at 100 V

Approx. 7 VA at 200 V

Approx. 8 VA at 240 V

•DC: Approx. 4 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 lbs)

PERFORMANCE in percentage of span

Accuracy: \pm 0.1 %

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

Response time

Output signal 1: \leq 0.5 sec. (0 - 90 %)

Output signal 2: \leq 0.2 sec. (0 - 90 %)

Line voltage effect

Supply output: \pm 3 % over voltage range

Output signal: \pm 0.1 % over voltage range

Insulation resistance: \geq 100 M Ω 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

Low Voltage Directive (2006/95/EC)

EN 61010-1: 2001

Installation Category II

Pollution Degree 2

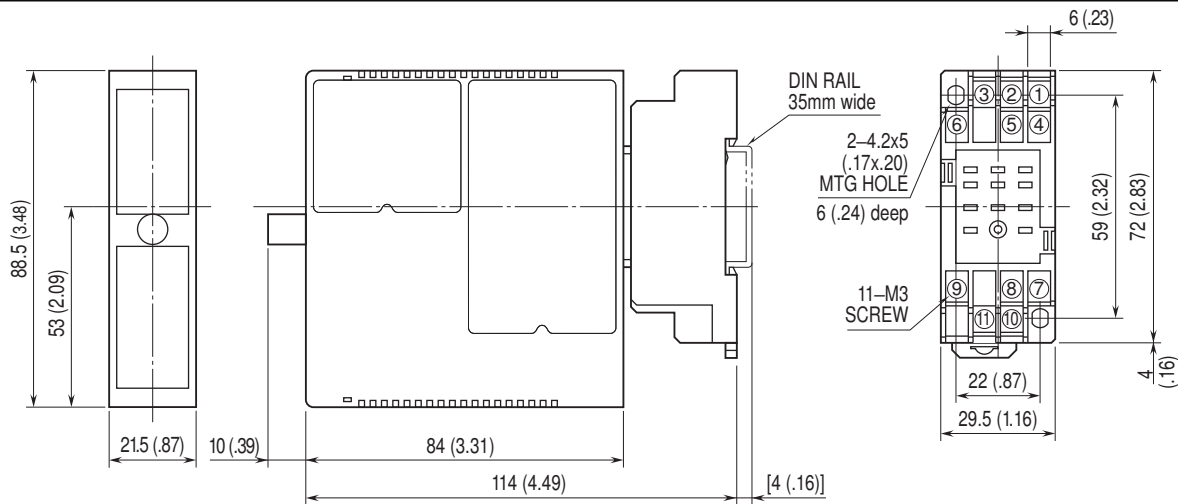
Input or output 1 or output 2 to power input:

Reinforced insulation (300 V)

Input to output 1 to output 2: Basic insulation (300 V)

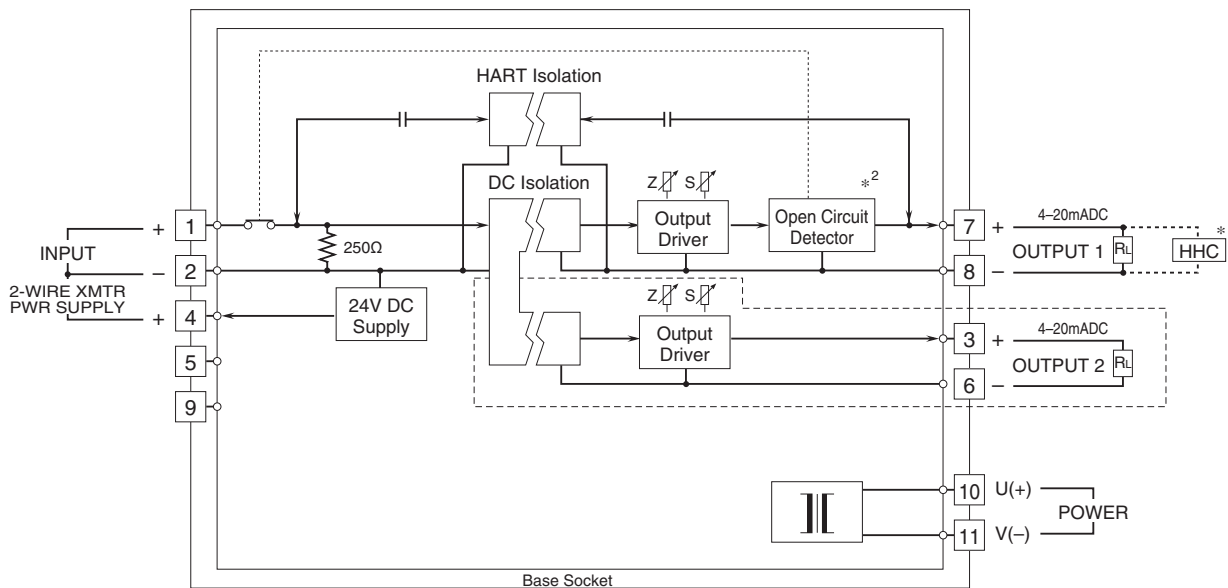


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



When mounting, no extra space is needed between units.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

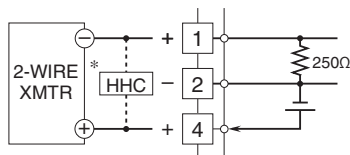


* Hand-held communicator

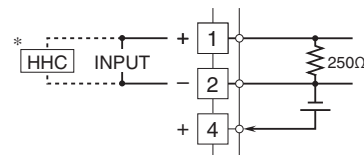
*2. Included with option /B

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

■ When Used as DC Supply



■ When Used as Isolator



Specifications are subject to change without notice.