

Space-saving Dual Output Signal Conditioners *Mini-MW Series*

CURRENT LOOP SUPPLY
(isolated)

MODEL **W2DYS**

MODEL & SUFFIX CODE SELECTION

W2DYS-24□□-□□

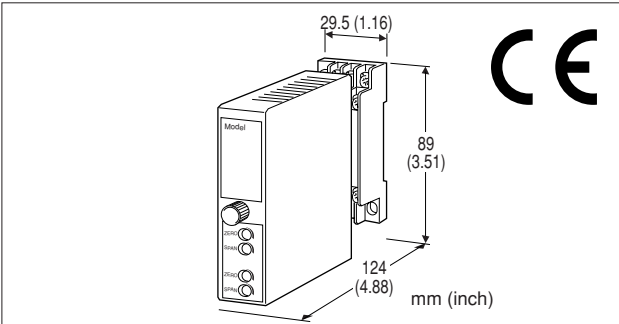
MODEL _____
 SUPPLY OUTPUT _____
 24: 24V DC
 INPUT _____
 4 – 20mA DC
 OUTPUT SIGNAL 1 _____
Current **Voltage**
A : 4 – 20mA DC **1** : 0 – 10mV DC
B : 2 – 10mA DC **2** : 0 – 100mV DC
C : 1 – 5mA DC **3** : 0 – 1V DC
D : 0 – 20mA DC **4** : 0 – 10V DC
E : 0 – 16mA DC **5** : 0 – 5V DC
F : 0 – 10mA DC **6** : 1 – 5V DC
G : 0 – 1mA DC **0** : Specify voltage
Z : Specify current
 OUTPUT SIGNAL 2 _____
 Same range availability as Output 1
Y : None
 POWER INPUT _____
AC Power **DC Power**
M : 85 – 264V AC *1 **R** : 24V DC
M2: 100 – 240V AC **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 and variables. When the user requires a current and a voltage output, specify the current to be the Output 1 which allows a greater load.
 • **Code number** (e.g. W2DYS-24A6-M2/CE)
 • **Special output ranges** (For codes Z & 0)

GENERAL SPECIFICATIONS

Construction: Plug-in
Connection: M3 screw terminals (torque 0.8 N·m)
Housing material: Flame-resistant resin (black)
Isolation: Input to output 1 to output 2 to power
Overrange output: Approx. -10 – +120% at 1 – 5V
Front adjustments: Zero and span; ±5%



Functions & Features

- Powering a 4 – 20mA DC current loop
- Shortcircuit protection
- Applicable to smart transmitters
- Two independent output ranges
- Universal power input
- High-density mounting
- CE marking

Typical Applications

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

INPUT & OUTPUT

■ **SUPPLY OUTPUT** (across the terminals 1 – 5)
Output voltage: 24 – 28V DC with no load
 18V DC maximum at 20mA
Current rating: 22mA DC maximum

• **Shortcircuit Protection**
Current limited: 30mA maximum
Protected time duration: No limit

■ **INPUT:** 4 – 20mA DC; input resistor incorporated (0.5W)
Input resistance: Approx. 300Ω

■ **OUTPUT SIGNALS (two)**
 • **DC Current:** 0 – 20mA DC
Minimum span: 1mA
Zero suppression/elevation: max. 1.5 times span
Load resistance: output drive 15V max. for Output 1;
 7V max. for Output 2

Output	Ch.1 L.R.	Ch.2 L.R.
4 – 20mA	: 750	350 (Ω max.)
2 – 10mA	: 1500	700
1 – 5mA	: 3000	1400
0 – 20mA	: 750	350
0 – 16mA	: 900	430
0 – 10mA	: 1500	700
0 – 1mA	: 15k	7000

- **DC Voltage:** 0 – 12V DC (up to 10V for Out. 2)
- Minimum span:** 5mV
- Zero suppression/elevation:** max. 1.5 times span
- Load resistance:** output drive 1mA maximum at $\geq 0.5V$

Output	Load Resistance
0 – 10mV	: 10k (Ω minimum)
0 – 100mV	: 100k
0 – 1V	: 1000
0 – 10V	: 10k
0 – 5V	: 5000
1 – 5V	: 5000

INSTALLATION

Power input

AC: Operational voltage range 85 – 264V
47 – 66 Hz; approx. 5VA at 100V
approx. 6VA at 200V
approx. 7VA 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:** W29.5xH89xD124 mm (1.16"x3.51"x4.88")
See General Spec. Sheet Figure A-1.
- Weight:** 200 g (0.44 lbs)
- Terminal assignment:** See General Spec. Sheet Figure B-1.

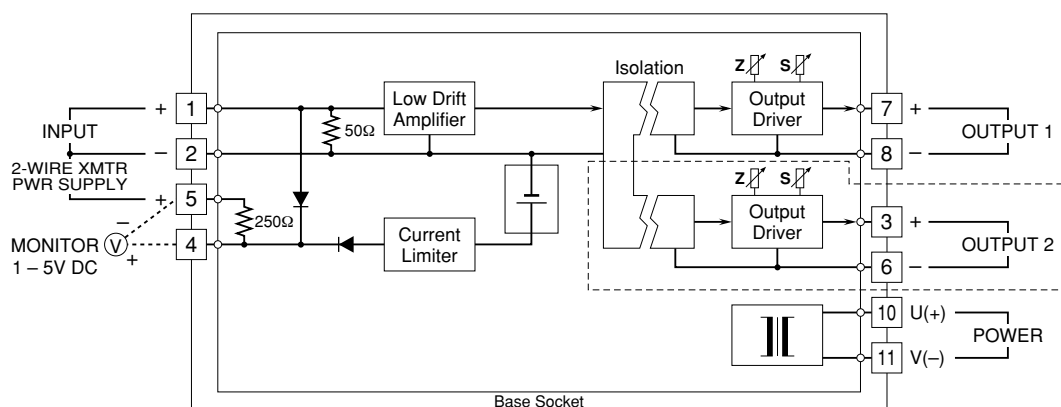
PERFORMANCE in percentage of span

- Accuracy:** $\pm 0.1\%$
- Temp. coefficient:** $\pm 0.015\%/^{\circ}C$ ($\pm 0.008\%/^{\circ}F$)
- Response time:** ≤ 0.5 seconds (0 – 90%)
- Line voltage effect**
 - Supply output:** $\pm 3\%$ over voltage range
 - Output signal:** $\pm 0.1\%$ over voltage range
- Insulation resistance:** $\geq 100M\Omega$ with 500V DC
- Dielectric strength:** 2000V AC @1 minute (input to output 1 to output 2 to power to ground)

STANDARDS & APPROVALS

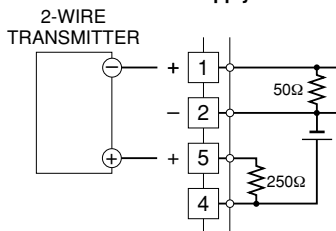
- CE conformity:** EMC Directive (89/336/EEC)
 - EMI EN61000-6-4
 - EMS EN61000-6-2
- Low Voltage Directive (73/23/EEC)
 - EN61010-1
 - Installation category II
 - Pollution degree 2
 - Max. operating voltage 300V
 - Input or output 1 or output 2 to power – Reinforced insulation
 - Input to output 1 to output 2 – Basic insulation

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



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

■When Used as DC Supply



■When Used as Isolator

