

Terminal Block Dual Output Signal Conditioners *W5-UNIT*

CURRENT LOOP SUPPLY

MODEL **W5DY**

MODEL & SUFFIX CODE SELECTION

W5DY-□□-□□

MODEL _____

INPUT _____
4 – 20mA DC

OUTPUT 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	4W : -10 – +10V DC
Z : Specify current	5W : -5 – +5V DC
	0 : Specify voltage

OUTPUT 2 _____
Same range availability as Output 1
Y : None

POWER INPUT _____

AC Power	DC Power
M : 85 – 264V AC *1	R : 24V DC
	R2: 11 – 27V DC *1
	P : 110V DC *1

*1: CE not available

OPTIONS _____
/K: Fast response

ORDERING INFORMATION

Specify code number and variables. When only one (1) output is needed, the output must be assigned to Output 1 terminal.

- Code number (e.g. W5DY-A6-R/K)
- Special output range (For codes Z & 0)

GENERAL SPECIFICATIONS

Construction: Terminal block

Connection

Input: M3.5 screw terminals

Output & power: M3 screw terminals

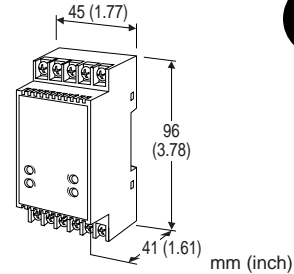
Screw material: Nickel-plated steel
(torque 0.8 N·m)

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: ±2% for zero and span



Functions & Features

- Powers a 4 – 20mA DC current loop
- Two independent output ranges
- Universal power input
- Fast response type available
- High-density mounting
- CE marking for 24V DC power

INPUT & OUTPUT

■SUPPLY OUTPUT (across the terminals 4 – 5)

Output voltage: 24 – 28V DC with no load
20V DC with 20mA load

Current rating: 22mA DC maximum

- Shortcircuit Protection
- Current limited:** 30mA maximum
- Protected time duration:** no limit

■INPUT: 4 – 20mA DC; input resistor incorporated (0.125W)

Input resistance: 249.5Ω

■OUTPUTS (two)

•DC Current: 0 – 20mA DC

Minimum span: 1mA

Zero suppression/elevation: Max. 1.5 times span

Load resistance: output drive 11V maximum

Output	Load Resistance
4 – 20mA	: 550 (Ω maximum)
2 – 10mA	: 1100
1 – 5mA	: 2200
0 – 20mA	: 550
0 – 16mA	: 685
0 – 10mA	: 1100
0 – 1mA	: 11k

•DC Voltage: -10 – +12V DC
Spans: Min. 5mV, max. 20V
Zero suppression/elevation: Max. 1.5 times span
Load resistance: Output drive 10mA maximum;
 5mA for negative voltage output; at $\geq 0.5V$

Output	Load Resistance
0 – 10mV	: 10k (Ω minimum)
0 – 100mV	: 100k
0 – 1V	: 100
0 – 10V	: 1000
0 – 5V	: 500
1 – 5V	: 500
-10 – +10V	: 2000
-5 – +5V	: 1000

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%)
 approx. 25 milliseconds with option /K
Line voltage effect: $\pm 0.1\%$ over voltage range
Insulation resistance: $\geq 100M\Omega$ with 500V DC
Dielectric strength: 2000V AC @1 minute
 (input to output 1 or output 2 to power)
 1000V AC @1 minute (output 1 to output 2)

INSTALLATION

Power input

AC: Operational voltage range 85 – 264V;
 47 – 66 Hz; approx. 4VA at 100V
 approx. 5VA at 200V
 approx. 6VA 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

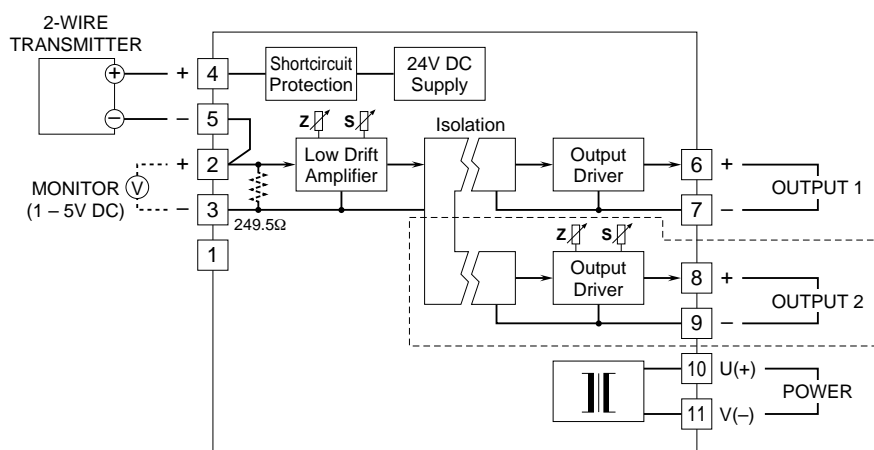
Operating temperature: -5 to $+55^{\circ}C$ (23 to $131^{\circ}F$)
Operating humidity: 0 to 90% RH (non-condensing)
Mounting: DIN rail
Dimensions: W45xH96xD41 mm (1.77"x3.78"x1.61")
 See General Spec. Sheet Figure A-1.

Weight: 130 g (0.29 lbs)
Terminal assignment: See General Spec. Sheet Figure B-1.

STANDARDS & APPROVALS

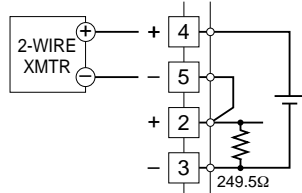
CE conformity: EMC Directive (89/336/EEC)
 EMI EN61000-6-4
 EMS EN61000-6-2

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Remark 1: The section enclosed by broken line is only with 2nd output option.
 Remark 2: DO NOT connect to the terminal 1.

■When Used as DC Supply



■When Used as Isolator

