ULTRA SLIMPAK® II WV468

AC Voltage / Current Input Isolating Signal Conditioner

High Accuracy Signal Conditioner with an Isolated DC Voltage or Current Output

Benefits

- Lower Power Requirements with Smart Power Control
- Improved Accuracy
- True RMS Input
- Optional E-mail Notification of Alarms

Description

The Ultra SlimPak II is an exciting new line of isolating signal conditioners from Action Instruments with greater accuracy and better stability than virtually any other signal conditioners on the market today. The Ultra SlimPak II features Smart Power, which eliminates wasted power for low loop resistance loads in the current output mode.

The WV468 has both RMS voltage and RMS current input ranges. Eight AC voltage input ranges (50mV, 150mV, 500mV, 5V, 20V, 50V, 150V & 250V) are DIP switch selectable. Each of these ranges has at least 95% zero and span adjustment. Two AC current input ranges (20mA and 100mA) are also available. Outputs include 0-10V, 0-20mA and 4-20mA. The WV468 also supports reverse output mode.

ACTION INSTRUMENTS

Smart Power

The Ultra SlimPak II uses Smart Power to control its output supply. Smart Power automatically adjusts the the voltage to drive the output loop to the required current. A low impedance current loop will subsequently require less voltage than a loop with higher impedance. Previous designs provided only a single supply at the highest voltage required to drive the highest impedance load. Using Smart Power results in power savings and reduces the operating temperature of the signal conditioner.

Enhanced LED Diagnostics

Other than when executing the pushbutton calibration routine, the LEDs blink under the following conditions:

GREEN: Flashes at 2Hz when the input is under range.
Flashes at 8Hz when the input is over range.

RED: Flashes at 2Hz when the output is under range.
Flashes at8Hz when the output is over range.

An Under Range condition exists when the signal is lower than the operational low value minus 6.25% of the operational span. An Over Range condition exists when the signal is higher than the operational high value plus 6.25% of the operational span.

A voltage output short circuit may cause an under range condition (RED blinking at 2Hz rate). A current output open circuit may cause an over range condition (RED blinking at an 8Hz rate).

There could be two or more LEDs blinking at the same time, which means the module has more than one error condition. Only when all error conditions have been removed, will the LEDs be back to normal (Green ON, Red and Yellow Off).

Configuring Modules

Unless otherwise specified, the factory presets the Model WV468 as follows:

Input:	mVAC
Range:	0-500mV
Output:	DC Current
Range:	4-20mA
Reverse Out:	Off
Remote Cal:	Off

1. For other ranges, refer to the SWITCH SETTINGS table. Reconfigure switches S1 and S2 for the desired input type and range.

2. Set position 1 of S1 to ON if a WVC16 will be utilized and remote calibration capability is desired.

3. Set position 2 and 3 of S1 for the desired output type.

4. Set position 4 of S1 to ON for reverse output operation.

5. Set positions 5-8 of S1 and positions 1 & 4 of S2 for the desired input range.

It is also possible to remotely select the setpoints using an Ethernet connection and the optional WVC16 WebView Communications Interface module.

Alarms

When used with the optional WVC16 communications module, the WV468 supports up to 3 alarms, which can be configured as high limit, low limit and a timer for routine maintenance.

WV16 Communications Interface (Optional)

The WVC16 Communications Interface adds functionality never before found in a signal conditioning system. The WVC16 interfaces with Ultra SlimPak II devices via an internal infrared communications link (no programming required) and provides the ability to connect as many as 32 modules to the intranet, allowing the user to view process data on a near real time basis, perform data logging functions on specified modules, calibrate the signal conditioners remotely, and view diagnostic information.

The WVC16 contains a web page server and an e-mail server. Browsers supported include Internet Explorer 5 or later and Netscape Navigator 4.7 or later. The user has the ability to have setpoint trip conditions generate an e-mail message for up to 10 recipients. The module also contains a countdown timer that can be used to notify when routine maintenance is required, such as re-calibration. The internal temperature of the module can also be monitored. All memory to support the signal conditioner's historical data, storage of the web pages and all e-mail messages is contained in the WVC16.

The WVC16 downloads a JAVA applet to the client's computer. The applet provides access to the signal conditioner's data, which includes the following:

- Module configuration summary
- Module configuration editing
- Diagnostic/warning status
- Alarm setup & status
- E-mail setup, editing & address book
- Process variable viewing

See the WVC16 Data Bulletin for more detailed information.

Calibration

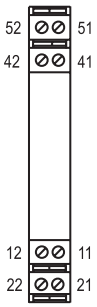
The calibration procedure is contained in the Installation & Calibration Instructions document, which is available on our website (www.actionio.com). You can also obtain it by telephoning Action technical support (703-669-1318).

Note that Custom Calibration (option C620) is available from the factory (settings **MUST** be within the units specifications). For a C620, specify the following:

a) Input Type, Range and Units.

b) Output Type, Range and Units.

c) Reverse Output (ON/OFF)



Pin	Description
11	DC Power (+)
12	DC Power (-)
21	DC Power (+)
22	DC Power (-)
41	AC Input (hot)
42	AC Input (neutral)
51	Output (+)
52	Output Common

Figure 1: Wiring Connections

Function	S1				S2	
	5	6	7	8	1	4
Input Ranges						
250V	■	■	■	■		■
150V	■	■		■		■
50V	■		■	■		■
20V	■			■		■
5V		■	■	■		■
500mV		■		■		■
150mV			■	■		■
50mV				■		■
100mA	■	■	■		■	
20mA	■	■			■	
Key: ■ = 1 = ON or Closed						

Function	S1	
	2	3
Output Ranges		
0 to 10V	■	■
0 to 20mA		■
4 to 20mA		
Key: ■ = 1 = ON or Closed		

Function	S1	
	1	4
Remote Cal Enable	■	
Reverse Out		■
Key: ■ = 1 = ON or Closed		

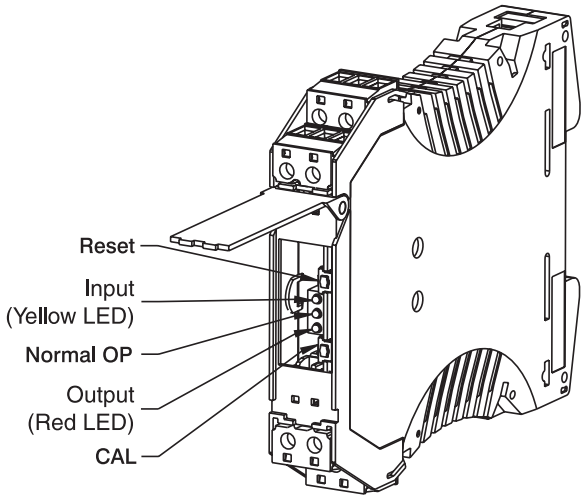


Figure 2: Switch Settings

Specifications

Inputs

RMS Voltage Ranges
- 50mV, 150mV, 500mV, 5V, 20V, 50V, 150V, 250V @ ±0.15% of FS accuracy
- Impedance: >100k ohms
- Over-voltage 275Vrms

RMS Current Ranges
- 20mA, 100mA @ ±0.15% of FS accuracy
- Impedance: 10 ohms typical
- Over-current: 200mA, protected by self-resetting fuse
- Over-voltage: 60V

Frequency Range
- 40 to 400Hz

Linearity
- ±0.1% of span, typical

Input Ranges
- Pushbutton adjustable
- Effective zero offset: ≥ 95%
- Effective span turndown: ≥ 95%

Turn-Up/Turn-Down
- 80% (90% to ±0.25%)

Output Ranges
- 0-10VDC
- 0-20mA, 4-20mA

Output Accuracy
- ±0.05% of Full Scale

Response Time
- 100mSec typical

Stability
- ±100ppm of span/°C

Output Ripple
- 0.2% of span, or 5mVrms, whichever is greater

Output Impedance
- Voltage Output: <10 ohms (source impedance)
- Current Output: >100k ohms

Common Mode Rejection
- 60Hz: >90dB
- DC: >120dB

Output Drive
- Voltage Output: 10mA, max
- Current Output: 20V compliance @ 20mA (1k ohms max)

Temperature Range
- Operating: 0° to 60°C (32 to 140°F)
- Storage: -20° to 85°C (-4 to 185°F)

Power
- 9 to 30VDC
- 1W typical, 2W maximum

Isolation
- Input to Output to Power: 1800VDC

Host Module Interface
- IR Link

Size
- DIN rail case – refer to Dimensions drawing

Ordering Information

Specify:
1. Model:
   WV468-2000
2. Optional Custom Factory Calibration (specify C620, see required settings under "Calibration, page 2).
3. Accessories.

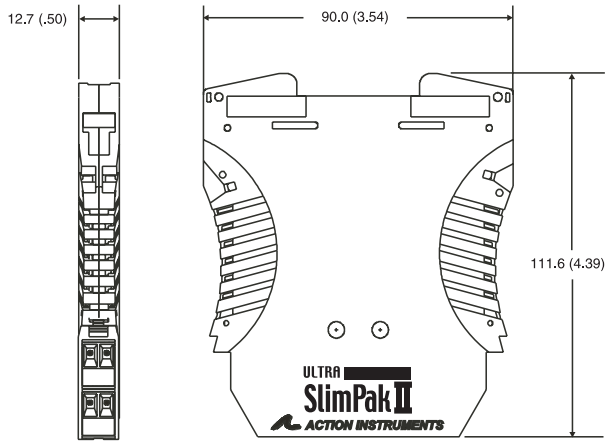
Accessories

All WV Series modules will mount on standard TS35 (model MD03) DIN rail. In addition, the following accessories are available:

WVC16	Communications Interface
MD03	TS35 x 7.5 DIN Rail (2 meters)
WV905	24VDC Power Supply (0.5 Amp)
H910	24VDC Power Supply (1 Amp)
H915	24VDC Power Supply (2.3 Amp)
MB03	End Bracket for MD03
C650	Utility software for WVC16

Dimensions

Dimensions are in millimeters (inches)



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Factory Assistance

For additional information on calibration, operation and installation contact our Technical Services Group:

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