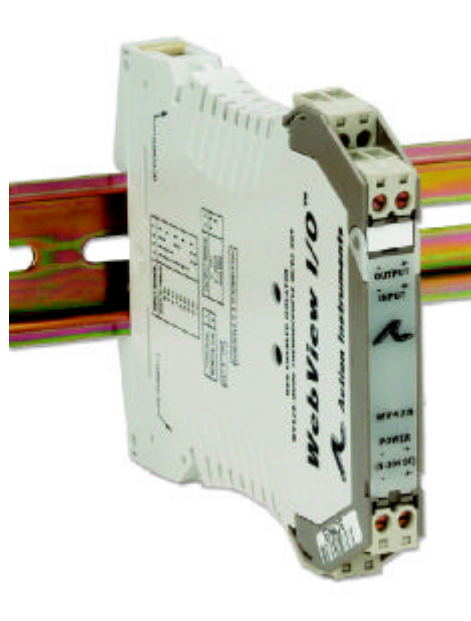


# WV168

## MODEL



## WV Series AC Input, Limit Alarm

Provides Relay Contact Closure(s) at a Preset DC Input Level

- Adjustable Setpoints Programmable HI or LO Failsafe or Non-failsafe
- Greatly Improved Input/Output Accuracy and Stability
- Configurable with or without Ethernet Connection
- Direct Access to Sensor Data when Connected to the Intranet (with optional WVC16)
- Provides Remote Diagnostic Capability (with optional WVC16)
- Versatile Alarm Capabilities Provide Email Notification when Problems Occur (with optional WVC16)
- Lifetime Warranty

### DESCRIPTION

The WV Series from Eurotherm Action Instruments is an exciting new line of isolating signal conditioners. This new line provides features never before found in traditional signal conditioners. The WV Series has greater input and output accuracy than most signal conditioners on the market today. In addition, the stability of the unit beats that of most signal conditioners as well. The WV Series also provides the user with the capability to view sensor data directly over your company's intranet with a standard web browser. Just imagine, the WV Series will allow you to view configuration, maintenance and process information through a remote web browser. Further, the modules are capable of generating e-mail messages, triggered when process variables or maintenance based performance parameters exceed or fall below pre-set levels.

The WV168 is a AC Voltage or Current Input Limit Alarm with dual setpoints and two contact closure outputs. The field configurable input and alarm functions offer flexible setpoint capability. Eight input voltage ranges are available between 50mV and 250V. There are two current input ranges,  $\pm 10\text{mA}$  and  $\pm 100\text{mA}$ . All ranges allow the setpoints to be fully adjustable throughout the whole range.

There are two versions of the WV168, the WV168-2000 and the WV168-2001. The WV168-2000 contains standard SPDT relays. When power is removed, the relays revert to their non-powered state. The WV168-2001 contains latching relays. Whatever position they are in when power is removed is where they will remain when power is re-applied. A reset switch is provided to reset the relays after the alarm is no longer true. Both models are configurable as a single or dual setpoint alarm, with HI or LO trips. The WV168-2000 supports failsafe or non-failsafe operation.

## OPERATION

The field configurable WV168 limit alarm setpoints can be configured for HI or LO, failsafe or non-failsafe operation (failsafe only available on the -2000). Each of the setpoints has a respective HI or LO deadband. In a tripped condition, the setpoint is exceeded and the appropriate red LED will illuminate. The trip will reset only when the process falls below the HI deadband or rises above the LO deadband. (The WV168-2001 requires pressing the reset switch in order to reset the relay after being tripped.) The deadband can be left at the minimum level (the factory default) or can be set to whatever level is desired. In failsafe operation (-2000 only), the relay is energized when the process is below the HI setpoint or above the LO setpoint (opposite for non-failsafe). In the failsafe mode, a power failure results in an alarm state output.

## ENHANCED LED DIAGNOSTICS

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

### RUN (Green):

On when unit is powered  
Flashes at 2Hz when input under range.  
Flashes at 8Hz when input over range.

### SETPOINT A (Red):

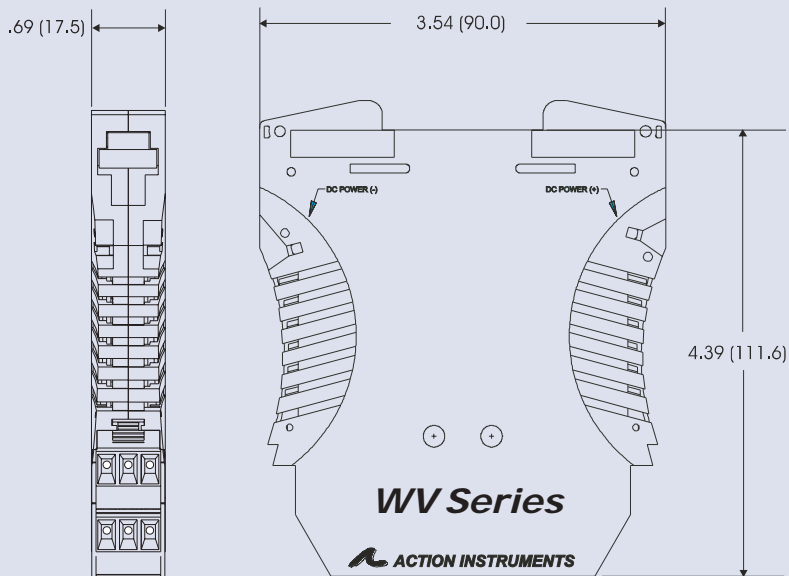
On when Setpoint A is tripped.  
Status for setting Setpoint A  
Flashes while calibrating the input level

### SETPOINT B (Red):

On when Setpoint B is tripped  
Status for setting Setpoint B  
On while calibrating the input level

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.

## DIMENSIONS



## CONFIGURING MODULES

Configuration is accomplished via setting DIP switches and using a push button for adjusting the setpoints. Additionally, it is possible to remotely select the setpoints using an Ethernet connection and the optional WVC16 WebView Communications Interface module. The browser supported is Internet Explorer 6.0 or later. With the addition of the Ethernet interface, 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 via the Ethernet connection.

## WV SERIES COMMUNICATIONS INTERFACE (OPTIONAL)

Each WVC16 is capable of communicating with up to 32 I/O modules. The interface contains a web page server and an e-mail server as well as being the interface to the modules. 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.

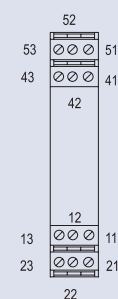
The WVC16 actually downloads a JAVA applet to the client's computer. The applet provides access to the signal conditioner's data. The information available includes the following:

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

## WIRING CONNECTIONS

Pin	Description
11	N.O. Relay B
12	Com. Relay B
13	N.C. Relay B
21	DC Power (+)
22	DC Power (-)
23	No Connection
41	AC Input (Hot)
42	AC Input (Neu)
43	No connection
51	N.O. Relay A
52	Com. Relay A
53	N.C. Relay A

### TERMINAL DESIGNATIONS



## FACTORY ASSISTANCE

For additional information on installation, operation and calibration, please contact Eurotherm's Technical Services Group. Call toll free:

**86-411-82650498**

## SPECIFICATIONS

### Inputs

#### Voltage Input

<b>Ranges:</b>	50mV, 150mV, 500mV, 5V, 20V, 50V, 150V, 250V
Impedance:	> 100k $\Omega$
Overvoltage:	275VAC

#### Current Input Range:

20mA, 100mA	
Impedance:	20 $\Omega$ , typical
Overcurrent:	200mA, max
Overvoltage:	60V

#### Minimum Deadband

Range	Deadband
50mV	0.2% (100 $\mu$ V)
150mV	0.2% (300 $\mu$ V)
500mV	0.2% (1mV)
10V	0.1% (10mV)
50V	0.1% (50mV)
150V	0.1% (150mV)
300V	0.1% (300mV)
20mA	0.1% (20 $\mu$ A)
100mA	0.1% (100 $\mu$ A)

#### Response Time

**Dynamic Deadband:** Relay status will change when proper setpoint/ process condition exists for 100mSec. or greater.

#### Normal Mode

**(analog filtering):** < 250mSec

**Setpoint Effectivity:** Setpoints are adjustable (by push-button) over 100% of the selected input span

#### Repeatability (constant

**temperature):** > 200mV/10mA: 0.1% of full scale  
< 200mV/10mA: 0.2% of full scale

**Relay Contacts** 2 SPDT (2 form C) Relays  
1 relay per setpoint

#### Current rating (resistive)

120VAC: 5A  
240VAC: 2A  
28VDC: 5A

**Material:** Gold flash over silver alloy

**Electrical Life:** 10<sup>5</sup> operations

#### Reset Switch

**(WV168-0001 only)** For cycling the relay without cycling power to the unit.

#### Local Range

**Selection** By DIP switch

#### LED Indication

RUN (Green): On when unit is powered  
Flashes at 2Hz when input under range.  
Flashes at 8Hz when input over range.  
SETPOINT A (Red): On when Setpoint A is tripped.  
Status for setting Setpoint A  
Flashes while calibrating the input level  
SETPOINT B (Red): On when Setpoint B is tripped  
Status for setting Setpoint B  
On while calibrating the input level

#### Stability

$\pm 100$ ppm of FS/ $^{\circ}$ C

#### Common Mode

#### Rejection

120dB @ DC, >90dB @ 60Hz, or better

#### Isolation

$\geq 1800$ VDC

#### Humidity

#### (non-condensing)

Operating: 15 to 95% RH (@45 $^{\circ}$ C)  
Soak: 90% RH for 24hrs (@60 $^{\circ}$ C)

#### Temperature

Operating: 0 to 60 $^{\circ}$ C  
Storage: -25 to +85 $^{\circ}$ C

#### Power

9 to 30VDC  
1.2W typical, (3.25W max w/ both relays energized)

#### Host Module

#### Interface

IR link

#### Default

#### Configuration

Input: Current  
Range: 4-20mA  
Output: Dual, SPDT  
Trip: A: Hi, B: Lo  
Failsafe: No  
Deadband: A, B: minimum

### Physical

#### Size Dimensions Environmental

DIN rail case - 0.69" wide (17.5mm), refer to drawing  
Operating Temperature: 0 $^{\circ}$ C to +60 $^{\circ}$ C (32 to 140 $^{\circ}$ F)  
Storage Temperature: -25 $^{\circ}$ C to +85 $^{\circ}$ C (-13 to 185 $^{\circ}$ F)  
Operating Relative Humidity (non condensing): 15% to 95% RH at 45 $^{\circ}$ C  
Non-operating Relative Humidity: 90% RH at 60 $^{\circ}$ C for 24 hours  
Agency Approvals  
CE, EN61326, EN61010-1  
UL508 and CSA C22.2 No. 1010-1 Combined mark (pending)

## MODELS & ACCESSORIES

### Ordering Information

Specify:

1. Model: **WV168-0000** or **WV168-0001**
2. Optional Custom Factory Calibration (specify **C620** with desired input and output range.)
3. Accessories

### Accessories

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

**WVC16** WebView 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

## 大连爱克新仪器有限公司

[www.actionio.com.cn](http://www.actionio.com.cn)

辽宁省大连市中山区七七街23号海鹰大厦403室

电话: 0411-82650498 ; 传真: 0411-82650478

Email: [Sales@actionio.com.cn](mailto:Sales@actionio.com.cn) [Support@actionio.com.cn](mailto:Support@actionio.com.cn)

