

WV448

MODEL

- Lower Power Requirements with Smart Power Control
- 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



WV Series Bridge Input, Isolating Signal Conditioner

Traditional Signal Isolator with Not so Traditional Features

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. Another feature, unique from other signal conditioners, is Smart Power. Smart Power eliminates wasted power in current output mode for low loop resistances loads. In addition, the WV Series provides the user with the capability to view sensor data directly over your company's intranet with a standard browser. Just imagine, the WV Series will allow you to view configuration, maintenance and process information through a remote browser. Further, the modules are capable of generating scripted e-mail messages, triggered when process variables or maintenance based performance parameters exceed or fall below pre-set levels.

The WV448 is a bridge input signal conditioner supporting three-wire input full scale ranges of $\pm 5\text{mV}$ to $\pm 200\text{mV}$, (default is $\pm 50\text{mV}$). The switch selectable output ranges are 0-10VDC, 0-20mA and 4-20mA. All the input and output ranges are fully adjustable via pushbutton calibration. The default output range is 4-20mA.



ACTION INSTRUMENTS

SMART POWER

The WV Series modules incorporate Smart Power for their output supplies, providing a potential power savings of 500mW per unit. Smart Power adjusts its output voltage and current, depending upon the power output required to drive the current load. A low impedance current loop will now use less power than a high impedance current loop. Previous technology only allowed for a single supply at the highest voltage required to drive the highest impedance load. Low impedance loops only require an output supply voltage of 5VDC. For a 20mA current, this consumes 100mW. In comparison, a high impedance load or older style supply requires 26VDC. This would consume 520mW.

ENHANCED LED DIAGNOSTICS

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

GREEN: 2Hz when the **input** is **under** range
8Hz when the **input** is **over** range

RED: 2Hz when the **output** is **under** range
8Hz 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. That 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

As mentioned above, configuration is accomplished via setting DIP switches and using an push button for calibrating ranges. Additionally, it is possible to remotely modify parameters of each module, such as range, using as Ethernet connection to the WVC16 and a remote PC-based web browser. The browsers supported include Internet Explorer 6.0 or later. From the browser, it is possible to configure any of three alarms that would be available from each input (see ALARMS below). The configuration of alarms includes the ability to set alarm limit values for each input and the ability to trigger generation of an e-mail message when an alarm limit condition is invoked. Once the alarm is triggered, the WVC16 will e-mail the specified users (up to 10) if desired. The message can contain the following: Date/Time the trigger occurred, Trigger Name, trigger Type, Trigger value (if applicable), Module Name and WVC16 name.

ALARMS

Each module supports up to three alarms. These alarms could be configured to support the following: high limit, low limit and a timer for routine maintenance.

WEBVIEW 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:

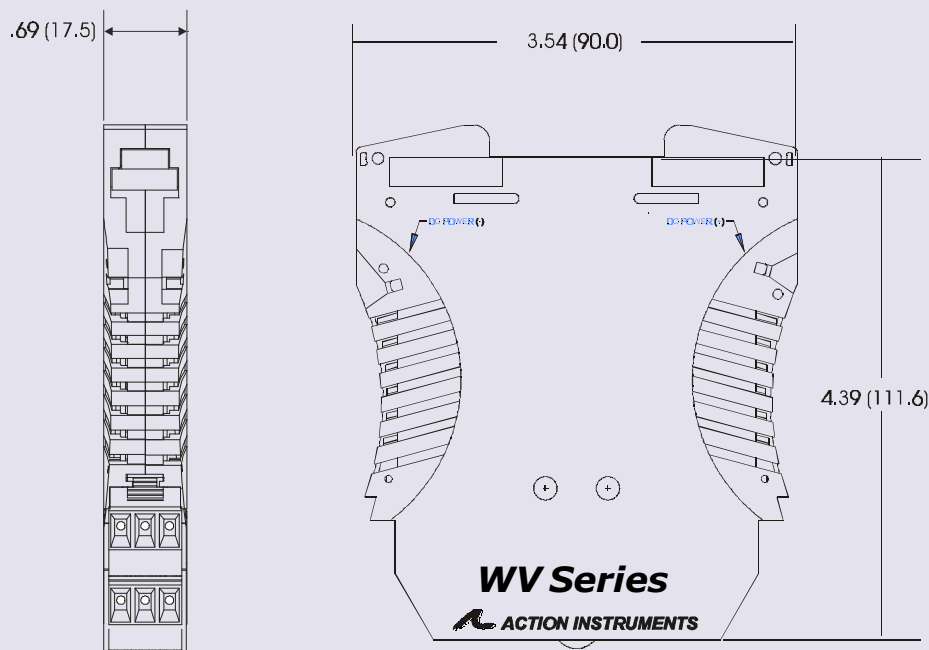
- Module configuration summary
- Module configuration editing
- Diagnostic/warning status
- Alarm setup & status
- E-mail setup, editing & address book
- Process variable viewing

FACTORY ASSISTANCE

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

86-411-82650498

DIMENSIONS



SPECIFICATIONS

Electrical

Inputs	Full Scale Range: $\pm 5\text{mV}$ to $\pm 200\text{mV}$, (ranges listed below) $\pm 5, 10, 20, 50, 100, 200\text{mV}$
Impedance	$> 1\text{MW}$
Over-voltage	400Vrms (intermittent); 264Vrms (continuous)
Operation	Direct or reverse acting
Bridge	
Excitation	1 to 10VDC, 120mA
Input Accuracy	0.015% of span
Push-button	
Adjustment	Effective zero offset: $\geq 95\%$ Effective span turn down: $\geq 95\%$ (Inputs $< 10\text{mV}$) Effective zero offset: $\geq 50\%$ Effective span turn down: $\geq 50\%$ (Inputs $< 10\text{mV}$)
Local Range Selection	By DIP switch

Output

Voltage	0 to 10V (pushbutton adjustable to 95% of range) Source Impedance: $< 10\Omega$
Drive	10mA
Current	0 to 20mA (pushbutton adjustable to 95% of range) (4mA min position available on range switch) Source Impedance: $> 100\text{k}\Omega$
Compliance	20V

LED Indication

RUN (Green)	On when unit is powered Flashes at 2Hz when input is 7% below minimum Flashes at 8Hz when input is 7% above maximum
INPUT (Yellow)	On while calibrating the input level.

OUTPUT (Red) On while calibrating the output level.
Flashes at 2Hz when output is 7% below minimum
Flashes at 8Hz when output is 7% above maximum

Output

Accuracy	0.05% of Full Scale
Overall Accuracy	0.065% of Full Scale
Output Ripple	0.03% rms
Response Time	150 mSec, 10 to 90%
Stability	$\pm 100\text{ppm}/^\circ\text{C}$
Common Mode Rejection	120dB @ DC, $> 90\text{dB}$ @ 60Hz, or better
Isolation	1800VDC or peak AC between input, output & power.

Physical

Size	DIN rail case – 0.5" wide (17.5mm), refer to Dimensions drawing
Environmental	Operating Temperature: 0°C to $+60^\circ\text{C}$ (32 to 140°F) Storage Temperature: -25°C to $+85^\circ\text{C}$ (-13 to 185°F) Operating Relative Humidity (non condensing) : 15% to 95%RH at 45°C Non-operating Relative Humidity: 90%RH at 60°C for 24 hours
Power	9 to 30VDC, 1.5W typ, 3.5W max.
Agency Approvals	CE, EN61326, EN61010-1 (pending) CSA & UL Combined mark (pending)

MODELS & ACCESSORIES

Ordering Information

Specify:

- Model: WV448-0000
- Optional Custom Factory Calibration (specify C620 with desired input and output range).
- Accessories

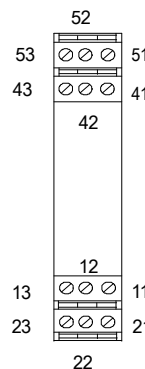
Accessories

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

Terminal Connections

TERMINAL DESIGNATIONS



Pin	Description
11	DC Power (+)
12	DC Power (-)
13	No Connection
21	DC Power (+)
22	DC Power (-)
23	No Connection
41	Bridge Input (+)
42	Bridge Input (-)
43	Excitation (+)
51	Output (+)
52	Output (-)
53	Excitation (-)

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