WV418

MODEL

WV Series RTD Input, Isolating Signal Conditioner

Traditional Signal Isolator with Not so Traditional Features

- Lower Power Requirements with Smart Power Control
- Greatly Improved Input/ Output Accuracy and Stability
- DIP Switch or PC Programmable Configuration
- 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 WVSeries 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 WV418 supports Pt100 RTDs with alphas of either 0.00385 or 0.00392 as well as Cu10. They can be 2-, 3- or 4-wire RTDs. Ranges are DIP switch selectable, or PC programmable. Outputs include 0-10V, 0-20mA and 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 pushbutton calibration routine, the LEDs blink under the following conditions:

Green:	Flashes at 2Hz when the in put is under range by 5°C Flashes at 8Hz when the input is over range by 5°C
Red:	Flashes at 2Hz rate when the output is under range by 6.25% Flashes at 8Hz rate when the output is over range by 6.25%

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:

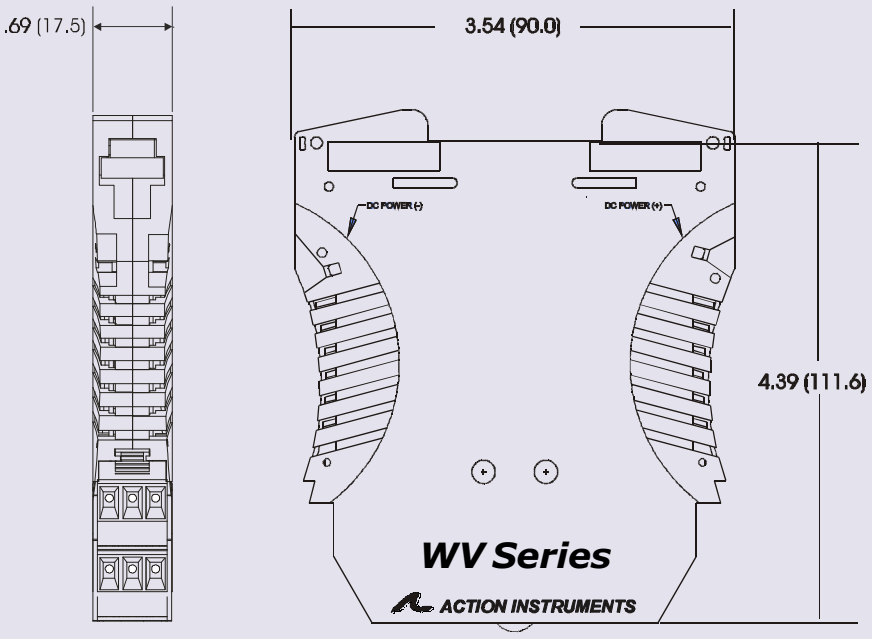
- Module configuration summary
- Module configuration editing
- Diagnostic/warning status
- Alarm setup & status
- E-mail setup, editing & address book
- Process variable viewing

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

Inputs

Sensor Types	Pt100, both alphas of 0.00385 & 0.00392 Cu10
Sensor Connection	2-, 3-, or 4-wire RTD
Ranges	Same ranges as a G418

Pt100 RTDs

C	F	alpha	Range Number
-200 to 600	-328 to 1112	0.00385	1
-200 to 260	-328 to 500	0.00385	2
-200 to -100	-328 to -148	0.00385	3
-50 to 100	-58 to 212	0.00385	4
-18 to 300	0 to 572	0.00385	5
-200 to 600	-328 to 1112	0.00392	6
-200 to 260	-328 to 500	0.00392	7
-200 to -100	-328 to -148	0.00392	8
-50 to 100	-58 to 122	0.00392	9
-18 to 300	0 to 572	0.00392	10

Cu10 RTDs

C	F	Range Number
-200 to 260	-328 to 500	11
-200 to 100	-328 to 212	12
-200 to –100	-328 to -148	13
-50 to 100	-58 to 212	14
-18 to 260	0 to 500	15

RTD Excitation	Pt100: 0.45mA, max Cu10: 5.0mA, max
Lead Wire Resistance	40% of the base sensor resistance maximum or 100 ohms (whichever is less)
Lead Wire Effect	Changing from 0 ohm lead resistance (each lead) to maximum allowed lead resistance: Error <1% of largest span PT and Cu ranges; -200 to 600°C for Pt and –200 to 260°C for Cu
Push-button Adjustment (Inputs >10mV)	Effective zero offset: ≥95% Effective span turn down: ≥95%
Local Range Selection	By DIP switch

Output

Voltage	0 to 10V
Source Impedance	<10Ω
Drive Current	10mA 0 to 20mA
Source Impedance	>100kΩ
Compliance	20V
LED Indication	RUN (Green): On when unit is powered. Flashes at 2Hz when input is under range by 5°C Flashes at 8Hz when input is over range by 5°C INPUT (Yellow): On while calibrating the input level. OUTPUT (Red): On while calibrating the output level. Flashes at 2Hz rate when output is under range by 6.25% Flashes at 8Hz rate when output is over range by 6.25%
Output Accuracy	0.05% of Full Scale
Response Time	100mSec (10 to 90%)
Stability	±100ppm of full scale/°C (±0.01%/°C)
Common Mode Rejection	120dB @ DC, >90dB @ 60Hz, or better
Isolation	≥1800VDC or peak AC between input, output & power.
ESD Susceptibility	Capable of meeting IEC 801-2 level 3 (8kV)
Humidity (non-condensing)	Operating: 15 to 95% RH (@45°C) Soak: 90% RH for 24hrs (@60°C)
Temperature	Operating: 0 to 60°C Storage: -25 to +85°C
Power	9 to 30VDC 1.0W typical, 2.0W max
Host Module Interface	IR link, same specifications as Phase 1 modules
Agency Approvals	CE, EN61326, EN61010-1 UL & CSA combined mark (Pending)
Default Configuration	Input: Pt100Ω Range: -200 to 600°C Output: 4-20mA

Specifications are subject to change.

MODELS & ACCESSORIES

Ordering Information

Specify:

1. Model: **WV418-0000**
2. Optional Custom Factory Calibration (specify **C620** with desired input and output range.)
3. Accessories

Accessories

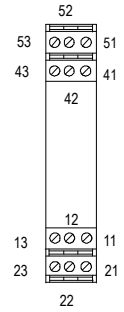
All WV Series modules will mount on standard TS35 (model MD03) DIN rail. In addition, the following accessories are available:

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

Terminal Connections

Terminal	Function
11	DC Power (+)
12	DC Power (-)
13	No Connection
21	DC Power (+)
22	DC Power (-)
23	No Connection
41	RTD Input (+)
42	RTD Input (-)
43	RTD Sense (-)
51	Output (+)
52	Output (-)
53	RTD Sense (+)

TERMINAL DESIGNATIONS



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