WEST INSTRUMENTS
HENGSTLER · Veeder-Root

West 6100 1/16 DIN Process Controller

The West 6100 combines technical functionality, field flexibility and ease of use to give you the best in comprehensive process control.

- **Heat/Cool operation**
- **Two process alarms**
- **Loop alarm**
- **RS485 comms**

- **Auto/Manual Tuning**
- **Ramping setpoint**
- **Dual setpoint selection**
- **Configuration via PC**

cULus   CE

Technical Data

Features

Control Types	Full PID with Pre-tune, Self-tune, Manual Tuning, or On-Off control. Heat only or heat & cool
Auto/Manual	Selectable from front panel, with bumpless transfer
Output Configuration	Up to 3 total. Max 2 for control (Heat & Cool), max 2 for Alarms, max 1 for retransmit Process Value or Setpoint
Alarm 1 & 2 Types	Process high, process low, SP deviation, band, logical OR and hysteresis. Also 1 loop alarm
Human Interface	4 button operation, dual 4 digit 10mm & 8mm high LED displays, plus 3 LED indicators
PC Configuration	Off-line configuration from serial port to dedicated config socket (comms option not required)

Input

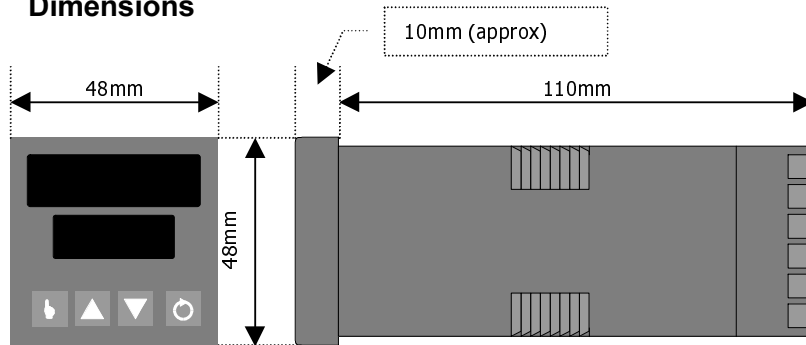|	
Thermocouple	J, K, R, S, T, B, L, & N.
RTD	3 Wire PT100, 50Ω per lead maximum (balanced)
DC Linear	0-20/4-20mA, 0-50/10-50mV, 0-5/1-5/0-10/2-10V. Scaleable -1999 to 9999, dec point available
Impedance	>100MΩ for Thermocouple and mV ranges, 47KΩ for V ranges and 4.7Ω for mA ranges
Accuracy	+/- 0.25% of input span +/- 1 LSD (T/C CJC better than 0.7°C)
Sampling	4 per second, 14 bit resolution approximately
Sensor Break Detection	<2 secs (except zero based DC ranges), control O/P's turn off, high alarms activate for T/C and mV ranges, low alarms activate for RTD, mA or V ranges.

Outputs & Options

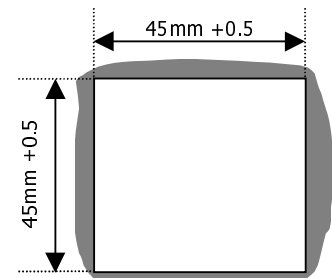|	
Control & Alarm Relays	Contacts SPDT 2 Amp resistive at 240V AC, >500,000 operations
Control SSR Outputs	Drive capability >4.2V DC in 1KΩ minimum (10V 500Ω version available)
Solid State (Triac) Outputs	0.01 to 1 Amp AC 20 to 280V, 47 to 63Hz
Control DC Outputs	0-20/4-20mA into 500Ω max, 0-10/0-5V into 500Ω min. Accuracy typically +/- 0.5%
Retransmit Outputs	0-20/4-20mA into 500Ω max, 0-10/0-5V into 500Ω min. Accuracy typically +/- 0.25%
Communications	2 Wire RS485, 1200 to 9600 Baud, West ASCII (Modbus Optional)
Dual Setpoint Selection	Selects between 2 SP's using volt free or TTL input (SP1 = -0.6 to 0.8V, SP2 = 2 to 24V)

Operating & Environmental

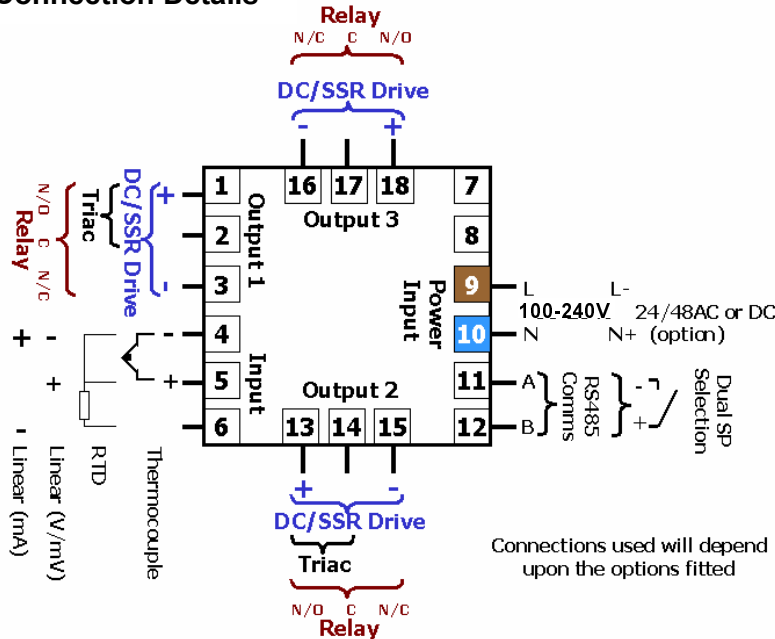|	
Temperature & RH	0 to 55°C (-20 to 80°C storage), 20% to 95% RH non-condensing
Power Supply	100 to 240V 50/60Hz 7.5VA (optional 20 to 50V AC 7.5VA/22 to 65V DC 4W)
Front Panel Protection	IEC IP66 (Behind panel protection is IP20)
Approvals and Certification	CE, UL & ULc

Dimensions

10mm (approx)

48mm

110mm

48mm

Cut-out

45mm +0.5

45mm +0.5

Connection Details

Relay
N/C C N/O

DC/SSR Drive
−   +

DC/SSR Drive
+
Triac   N/O C N/C
Relay
−

1	16	17	18	7
2	Output 3			8
3				9	L L− 100-240V 24/48AC or DC
4	Power Input			10	N N+ (option)
5	Output 2			11	A } RS485 Comms
6	13	14	15	12	B

Output 1

Input

Dual SP Selection

+   −
− +
+ −

RTD
Thermocouple
Linear (V/mV)
Linear (mA)

DC/SSR Drive
+   −
Triac
Relay
N/O C N/C

Connections used will depend upon the options fitted

Field Reconfiguration

Input
Configurable to any type, no extra parts required

Output 1
Type is fixed as ordered. Either Relay/SSR (selectable), Triac or DC Linear (selectable for mV, mA, Volts)

Output 2
Configurable as Cool O/P or Alarm via plug-in Relay, SSR, Triac or DC Linear modules

Output 3
Configurable as Alarm via plug-in Relay or SSR modules, or retransmit using DC Linear module

Option Slot
Configurable as RS485 comms or dual setpoint selection, via plug-in modules

Order Code

| N6100 | - x | - x | - x | - x | - xx | - xxx |

Input type
3 Wire RTD or DC mV	1
Thermocouple	2
DC mA	3
DC Voltage	4

Output 1
Relay Control	1
DC for SSR Control	2
DC 0-10V Control	3
DC 0-20mA Control	4
DC 0-5V SP Control	5
DC 4-20mA Control	7
Triac Control	8

Output 2
Not fitted	0
Relay Control or Alarm 2	1
DC for SSR Control or Alarm 2	2
DC 0-10V Control	3
DC 0-20mA Control	4
DC 0-5V Control	5
DC 4-20mA Control	7
Triac Control	8

Special Variants
Blan	Special Variant not required
S09	MODBUS instead of West ASCII (requires RS485 option)
S14	10V DC SSR outputs (requires SSR output codes)

Options and Power Supply
00	No Options/100-240V AC line supply
02	No Options/24-48V AC or DC line supply
10	RS485 Comms/100-240V AC line supply
12	RS485 Comms/24-48V AC or DC supply
30	Dual Setpoint/100-240V AC line supply
32	Dual Setpoint/24-48V AC or DC supply

Output 3
0	Not fitted
1	Relay Alarm 1 output
2	DC for SSR Alarm 1 output
3	DC 0-10V Re-Transmit PV or SP
4	DC 0-20mA Re-Transmit PV or SP
5	DC 0-5V Re-Transmit PV or SP
7	DC 4-20mA Re-Transmit PV or SP

PC Configuration Software for Windows 95 or higher Part Number: GCON-1000

In accordance with our policy of continuous improvement, we reserve the right to change specifications from those shown in this document.