WEST - P6100, P8100, P4100, TEMPERATURE AND PROCESS CONTROLLERS

P4100-21000000
Panel mount PID-controller, 96x96mm front plate



- Jumperless configuration
- Auto detected hardware
- Process and loop alarms
- Modbus and ASCII comms

PRODUCT DESCRIPTION

With their improved interface, technical functionality and field flexibility, the WEST 6100, 8100 and 4100 give you the best comprehensive control for most temperature and process control loops.
They have a universal input and are available with a red and green displays. Plug-in modules allow up to 2 alarm relays (latching or non-latching), PV retransmission, remtote set point (RSP) or transmitter PSU



SPECIFICATION

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 or via digital input, with bumpless transfer.
Output configuration	Up to 3 possible, for control, alarm, 24VDC transmitter power supply or retransmit of process value or setpoint.
Alarm 1 & 2 types	Process high, process low, SP deviation, band, logical OR / AND. Also 1 loop alarm for process control security. Process alarms have adjustable hysteresis.
Human Interface	4 button operation, dual 4 digit 10mm & 8mm high (6100+, 8100+) and 13mm & 10mm high (4100+) LED displays, optional choice of colours (Red/Red, Red/Green, Green/Red or Green/Green), plus 5 LED indicators
PC configuration	Off-line configuration from PC serial port to dedicated config socket (comms option not required). Configuration Software for Windows 98 or higher. West Part Number: PS1-CON
Input:	
Thermocouple	J, K, C, R, S, T, B, L, N & PtRh20%vsPtRh40%.
RTD	3 Wire PT100, 50Ω per lead maximum (balanced)
DC Linear	0 to 20mA, 4 to 20mA, 0 to 50mV, 10 to 50mV, 0 to 5V, 1 to 5V, 0 to 10V, 2 to 10V. Scaleable -1999 to 9999, with adjustable decimal point

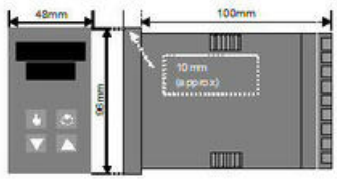
Impedance	>10MΩ for Thermocouple and mV ranges, 47KΩ for V ranges and 5Ω for mA ranges
Accuracy	±0.1% of input range ±1 LSD (T/C CJC better than 1°C)
Sampling	4 per second, 14 bit resolution approximately
Sensor break detection	<2 seconds (except zero based DC ranges), control O/P's turn off High alarms activate for T/C and mV ranges, Low alarms activate for RTD, mA or V ranges
Outputs & Operations:	
Control & alarm relays	Contacts SPDT 2 Amp resistive at 240V AC, >500,000 operations
Control SSR driver outputs	Drive capability >10V DC in 500□ minimum
Triac outputs	0.01 to 1 Amp AC, 20 to 280Vrms, 47 to 63Hz
DC linear outputs	0 to 20mA, 4 to 20mA into 500Ω max, 0 to 10V, 2 to 10V, 0 to 5V into 500Ω min. Control outputs have 2% over/under drive applied. Accuracy ±0.25% at 250Ω (degrades linearly to 0.5% for increasing burden to specified limits)
Transmitter power supply	Output 24VDC (nominal) into 910Ω minimum to power external devices
Communications	2 Wire RS485, 1200 to 19200 Baud, Modbus and ASCII protocol (selectable)
Digital input	Selects between 2 setpoints or Auto/Manual control. Volt free or TTL input
Remote setpoint input	0 to 20mA, 4 to 20mA, 0 to 5V, 1 to 5V, 0 to 10V or 2 to 10V. Scaleable -1999 to 9999. Local/Remote setpoint selected from front panel
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 48V AC 7.5VA/22 to 65V DC 5 watts)
Front panel protection	IEC IP66 (Behind panel protection is IP20)
Standards	CE, UL & ULC recognised

DIMENSIONS

6100+



8100+

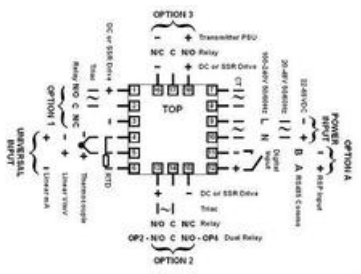


4100+

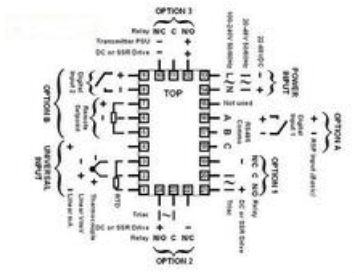


WIRING

6100+



8100+/4100+

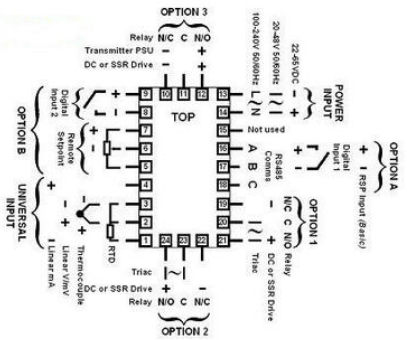


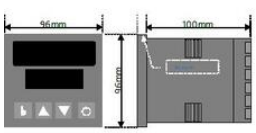
PART NO. CONFIGURATOR

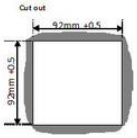
P6100/P4100/P8100	X	X	X	X	X	X	X	X	
Input type:									**Option slot B (not on 6100):**
3 wire RTD or DC mV	1							0	Not fitted
Thermocouple	2							R	Remote setpoint input (full)
DC mA	3								**Display colour:**
DC Voltage	4						0		Red upper & lower
Option slot 1:							1		Green upper & lower
Not fitted		0					2		Red upper, green lower
Relay		1					3		Green upper, red lower
DC for SSR		2							**Power supply:**
DC 0-10V		3				0			100-240V AC
DC 0-20mA		4				2			24-48V AC or DC
DC 0-5V		5							**Option slot A:**
DC 2-10V		6			0				Not fitted
DC 4-20mA		7			1				RS485 communications
Triac		8			3				Digital input
Option slot 2:					4				Remote setpoint input (basic)
Not fitted			0						**Option slot 3:**
Relay			1	0					Not fitted
DC driver for SSR			2	1					Relay
DC 0-10V			3	2					DC driver for SSR
DC 0-20mA			4	3					DC 0-10V
DC 0-5V			5	4					DC 0-20mA
DC 2-10V			6	5					DC 0-5V
DC 4-20mA			7	6					DC 2-10V
Triac			8	7					DC 4-20mA
				8					Transmitter power supply

SPECIFICATIONS

Power Supply AC min	100 V
Power Supply AC max	240 V
Panel size	96x96 mm
IP Class Front	IP66
Mounting	Panel mount


OPTION 3
Relay N/C C N/O
Transmitter PSU – +
DC or SSR Drive – +
TOP
POWER INPUT
100-240V 50/60Hz L/N
20-48V 50/60Hz | |
22-65VDC – +
Not used
RS485 Comms
A B C
OPTION A
+ – RSP Input (Basic)
Digital Input 1
OPTION 1
N/C C N/O Relay
– + DC or SSR Drive
| | Triac
OPTION B
Digital Input 2
Remote Setpoint
UNIVERSAL INPUT
+ – Linear mA
– + Linear V/mV
Thermocouple
RTD
Triac
DC or SSR Drive
Relay N/O C N/C
OPTION 2


96mm
100mm
92mm


Cut out
92mm ±0.5
92mm ±0.5