West P8700 $^1/_8$ Din Limit Alarm Unit

The West 8700+ is a programmable safety cut out with optional outputs for annunciators and alarms. A latched relay cuts power to your process if safe values are exceeded. The unit must be reset before the process can continue. It has the improved Plus Series hardware and user interface for optimal ease of use.

- **High or Low Trip Points**
- **5 Amp Latching Limit Relay**
- **Remote Reset Option**
- **Exceed & Relay Indicators**

- **Jumperless Configuration**
- **Auto Detected Hardware**
- **Modbus & ASCII Comms**
- **Two Annunciators or Alarms**

c$\mathbf{AL}$us FM C€

Technical Data

Features

Output Configuration	Up to 3 possible, for latching trip relays, alarm/annuncator relays, 24VDC transmitter power supply or retransmit of process value or limit trip setpoint
Alarm 1 & 2 Types	Process high, process low, Limit SP deviation, band, logical OR alarms or trip annunciator. Alarms have fully adjustable hysteresis.
Output Reset Action	Limit output can be reset only when exceed condition is absent. Local or remote reset options.
Annunciator Reset Action	Annunciator output can be reset at any time. Local or remote reset options.
Human Interface	4 button operation, dual 4 digit 10mm & 8mm high LED displays, optional choice of colours (Red/Red, Red/Green, Green/Red or Green/Green), plus 4 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 secs (except zero based DC ranges), Limit trip and annunciators activate. High alarms activate for Temperature and mV ranges, low alarms activate for, mA or V ranges

Outputs & Options

Limit Trip Relay Outputs	Latching SPDT, contacts 5Amp resistive at 240V AC, >100,000 operations
Alarm Relay Outputs	Non-latching SPDT, contacts 2Amp resistive at 240V AC, >500,000 operations
SSR Driver Alarm Outputs	Drive capability >10V DC in 500Ω minimum
Triac Alarm Outputs	0.01 to 1 Amp AC, 20 to 280Vrms, 47 to 63Hz
DC Linear Retransmit Outputs	0 to 20mA, 4 to 20mA into 500Ω max, 0 to 10V, 2 to 10V, 0 to 5V into 500Ω min. 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	Volt free or TTL input. -0.6 to 0.8V or contact closure resets latched relays and annunciators

Operating & Environmental
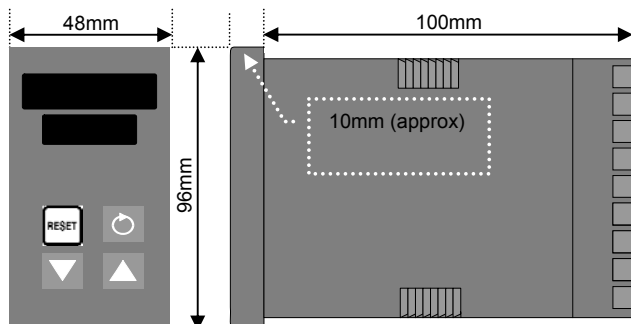
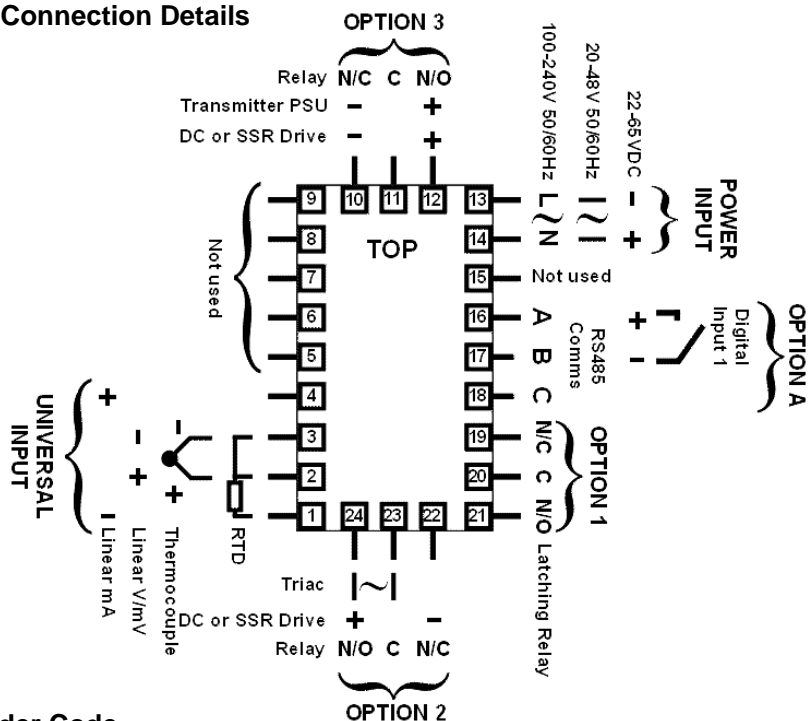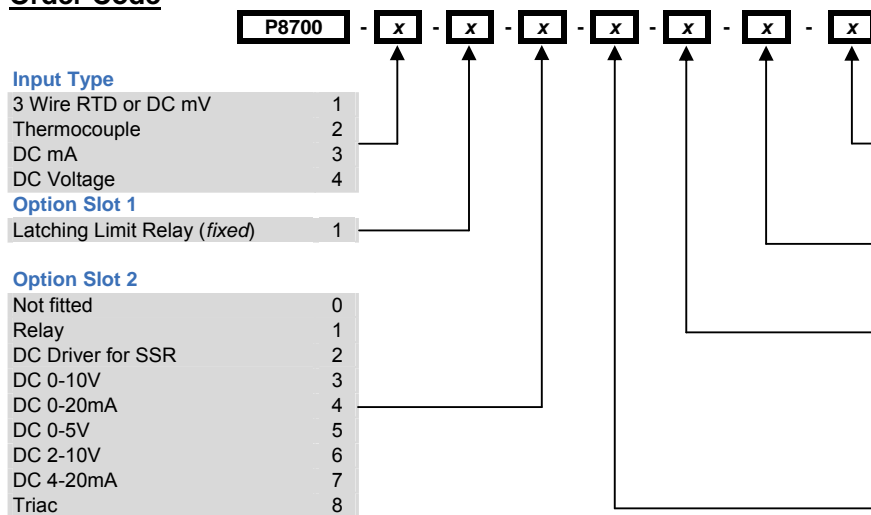|	
Temperature & RH	0 to 55°C (-20 to 80°C storage), 20% to 95% RH non-condensing
Power Supply	100 to 240V ±10% at 50/60Hz 7.5VA, (optional 20 to 48V AC 7.5VA/22 to 65V DC 5 watts)
Front Panel Protection	IEC IP66 (Behind panel protection is IP20)
Standards	FM, CE, UL & ULC recognised

![WEST Temperature Control Solutions logo]

Dimensions

48mm

100mm

10mm (approx)

96mm

TOP

Cut-out

45mm +0.5

92mm +0.5

Connection Details

OPTION 3

Relay N/C C N/O
Transmitter PSU – +
DC or SSR Drive – +

100-240V 50/60Hz
20-48V 50/60Hz
22-65VDC

POWER INPUT

L (~) –
N (~) +

Not used

RS485 Comms

A B C

Digital Input 1

+ –

OPTION A

UNIVERSAL INPUT

+ – + +

I Linear mA
Linear V/mV
Thermocouple
RTD

Triac | ~ |
DC or SSR Drive + –
Relay N/O C N/C

OPTION 2

N/C C N/O
Latching Relay

OPTION 1

| 9 | 10 | 11 | 12 | 13 |
| 8 | | | | 14 |
| 7 | | | | 15 | Not used
6				16
5				17
4				18
3				19
2				20
1	24	23	22	21
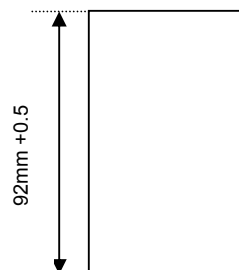
Field Reconfiguration

Input
Jumper-free configuration for any type
(no extra parts required)

Option Slot 1	
Latching Limit Relay.....................**Fixed**	
Option Slot 2	**Part Number**
Relay Output **PO2-C10**	
Linear mA/V DC Output **PO2-C21**	
SSR Driver Output **PO2-C50**	
Triac Output **PO2-C80**	
Option Slot 3	**Part Number**
Relay Output **PO2-C10**	
Linear mA/V DC Output **PO2-C21**	
SSR Driver Output **PO2-C50**	
24VDC Transmitter PSU........**PO2-W08**	
Option Slot A	**Part Number**
Digital Input **PA1-W03**	
RS485 Comms.......................**PA1-W06**	

Order Code

P8700 - x - x - x - x - x - x - x

Input Type

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

Option Slot 1

| Latching Limit Relay (*fixed*) | 1 |

Option Slot 2

Not fitted	0
Relay	1
DC Driver for SSR	2
DC 0-10V	3
DC 0-20mA	4
DC 0-5V	5
DC 2-10V	6
DC 4-20mA	7
Triac	8

Display Colour

0	Red Upper & Lower
1	Green Upper & Lower
2	Red Upper, Green Lower
3	Green Upper, Red Lower

Power Supply

| 0 | 100-240V AC |
| 2 | 24-48V AC or DC |

Option Slot A

0	Not fitted
1	RS485 Communications
3	Digital Input

Option Slot 3

0	Not fitted
1	Relay
2	DC Driver for SSR
3	DC 0-10V
4	DC 0-20mA
5	DC 0-5V
6	DC 2-10V
7	DC 4-20mA
8	Transmitter Power Supply

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