2300
1/32 DIN Indicator & Controller

The 2300 is available as an indicator or controller. Small size does not come at the expense of features, they have large 10mm high displays, 2 amp relays and full 3-wire PT100 inputs. The controller features our hands-free Easy Tune PID algorithm.

- **Red or Green Display**
- **Two process alarms**
- **Setpoint Lock**
- **RS485 comms**

- **3-Wire PT100 or T/C**
- **Manual or Easy Tune**
- **On Control Indicator**
- **0.1% Accuracy**

Technical Data

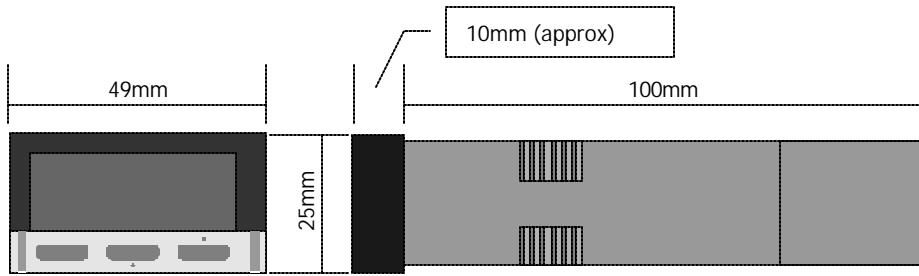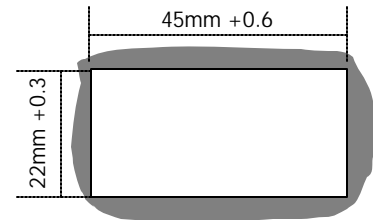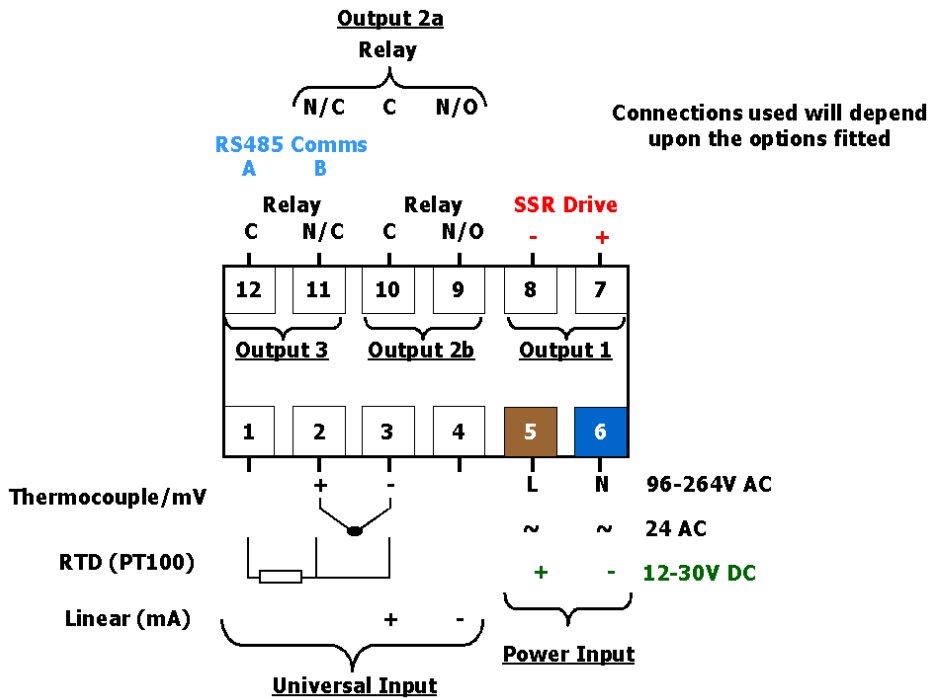| Features	
Functions	Three term PID controller, indicator with alarms or indicator only versions available
Control Types	Controller versions have PID with Easy-tune, manual tuning plus pre-tune or On-Off control
Setpoint Lock	Limits operator access to the controller setpoint value
Output Configuration	Up to 3 Total. Max 1 for control, max 2 for Alarms
Alarm 1 & 2 Types	Process high, process low, setpoint deviation and band
Human Interface	3 button operation, 4 digit 10mm high LED display (available in either red or green), plus on-control, set-up, alarm and setpoint indicators
Dual Setpoint Selection	Front panel selection of SP1 and SP2 on controller versions
Input	
Thermocouple	J, K, R, S, T, B, & N
RTD	3 Wire PT100, 50Ω per lead maximum (balanced)
DC Linear	0-20mA, 4-20mA, 0-50mV, 10-50mV. Scaleable -1999 to 9999, decimal point as required
Impedance	>10MΩ for Thermocouple and mV ranges, 4.7Ω for mA ranges
Accuracy	+/- 0.1% of input span (0.25% for J & T T/C) +/- 1 LSD (T/C CJC better than 0.7°C)
Sampling	4 per second, 14 bit resolution approximately
Sensor Break Detection	<2 seconds (except on 0-20mA range), control O/P's turn off, high alarms activate for T/C and mV ranges, low alarms activate for RTD, mA ranges
Outputs & Options	
Control & Alarm Relays	Contacts SPDT 2Amp resistive at 240V AC, >500,000 operations (if comms or 2nd relay is fitted, all relay contacts become SPST)
Control SSR Outputs	Drive capability >10V DC into 500Ω minimum
Communications	2 Wire RS485, 1200 to 9600 Baud, Modbus
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 (optional 12 to 24V AC/12 to 30V DC), approx 4 Watts
Front Panel Protection	IEC IP66 (Behind panel protection is IP20)
Approvals and Certification	CE, UL & ULc

Dimensions

49mm

10mm (approx)

100mm

25mm

Panel Cut-out

45mm +0.6

22mm +0.3

Connection Details

Output 2a
Relay

N/C   C   N/O

RS485 Comms
A   B

Relay
C   N/C

Relay
C   N/O

SSR Drive
-       +

Connections used will depend upon the options fitted

| 12 | 11 | 10 | 9 | 8 | 7 |

Output 3   **Output 2b**   **Output 1**

| 1 | 2 | 3 | 4 | 5 | 6 |

Thermocouple/mV   +   -   L   N   **96-264V AC**

RTD (PT100)   ~   ~   **24 AC**

Linear (mA)   +   -   +   -   **12-30V DC**

Power Input

Universal Input

Field Reconfiguration

Hardware options cannot be retro-fitted to this model. Some re-configuration of existing features is possible

Input
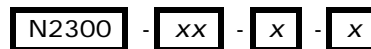Configurable to any available type.
No extra parts required

Control/Alarm 1 Output
Re-configurable on controller version only, as relay control with SSR alarm 1, or SSR control with relay alarm 1.
No extra parts required

Other Options
RS485 comms or alarm 2 relay is only available at time or order.
No field re-configuration is possible

Order Code

N2300 - *xx* - *x* - *x*

Ouput type		
Indicator Only	00	
Indicator + Alarm 1 (Relay)	01	
Indicator + Alarm 1 (SSR)	02	
Controller (Relay) + Alarm 1 (SSR)	12	
Controller (SSR) + Alarm 1 (Relay)	21	

Display Colour and Power Supply	
0	Green Display/100-240V AC supply
1	Red Display/100-240V AC supply
2	Green Display/12-30VDC/24VAC supply
3	Red Display/12-30VDC/24VAC supply
Option	
0	No Option Fitted
1	Alarm 2 Relay Output
2	RS485 Comms