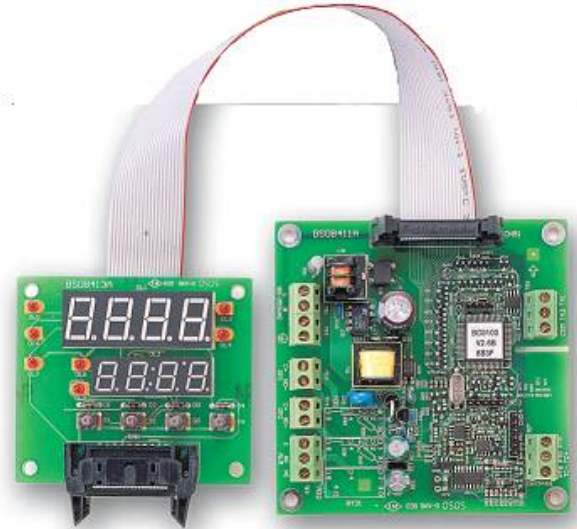


## B41 Board Level PID Control

The B41 Board Level Control is designed for OEM applications where available panel and/or depth does not allow traditional DIN sized panel mount controls.

The B41 is based upon FDC's 100 Series technology providing up to two PID outputs, alarm and communications capability.

The B41 display board is the approximate size of a ¼ DIN cutout providing the same display features of the ¼ DIN 4100: Setpoint, process value, degrees C or F, manual mode, Auto Tune and output 1, 2 & alarm annunciation.



- High Performance PID control at Low Cost
- Fuzzy modified PID Heat & Cool control
- Fast Scan Rate: 5 scans/second
- Universal Input: Thermocouple & RTD
  - High-accuracy 18 Bit A/D
- Up to two PID control outputs
- Alarm output: multiple configurations
- Lockout protection
- SEL function allows custom user menu
- Bumpless Auto/Manual & failure mode
- Soft-start setpoint ramp function
- Dwell timer
- Configuration Port standard
- RS232/485 Modbus port [optional]
  - Control Parameters may be addressed through Modbus eliminating need for control display board.

### B41 Specifications

Power: 90-250VAC, 47-63Hz, 10VA, 5W maximum  
 11-26 VAC/VDC 12VA, 5W maximum

Input [High Accuracy 18 Bit A/D Resolution]  
 Thermocouple: Type J, K, T, E, B, R, S, N, L  
 RTD: Pt 100 ohm RTD (DIN and JIS)  
 Linear: 4-20/0-20mA; 0-10VDC; 0-70mV

Sampling Rate: 5 times per second

Accuracy: Typically better than 0.25% of span

Cold Junction Compensation: 0.1° C/°C ambient typical

Sensor Break: Protection mode configurable

Common Mode Rejection Ratio: 120dB

Display  
 LED Process Display: 0.56"  
 LED Setpoint Display: 0.40"  
 Status Indicator LED: Out1, Out2, Alm, Man, AT, °C, °F

Control Outputs: (see order Matrix)

Retransmission and Communications:  
 Digital Communications: Modbus RS232 or 485  
 Retransmission (15-Bit): Linear mA, mV or VDC

Control:  
 Proportional Band: 0.1 to 500°C (0.1-900°F)  
 Reset [Integral]: 0 to 3600 seconds  
 Rate [Derivative]: 0 to 360.0 seconds  
 PID Fuzzy Auto Tune: Cold or Warm Start  
 Cycle Time: 0.1 to 90 seconds  
 Ramp Rate: 0 to 500°C (900°F)/minute or hour  
 Timer Dwell: 0 to 4553.6 minutes  
 Relay Hysteresis: Configurable 0.1 to 90.0°F  
 Control Action: Configurable Direct or Reverse

Control Outputs:

Environmental:  
 Operating Temperature: -10°C to 50°C  
 Storage Temperature: -40°C to 60°C  
 Humidity: 0 to 90% (non-condensing)  
 Insulation Resistance: 20 M ohms minimum @500VDC  
 Dielectric Strength: 2000 VAC, 50/60Hz for 1 minute  
 Vibration Resistance: 10-55Hz, 10 m/s for 2 hours  
 EMC: ENC61326

