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Connecting and Configuring
a Calex Electronics PyroEpsilon Series sensor
with a PPT245 Controller

Connecting the sensor:

1. Attach mains wires to pin 23 & 24

2. Attach sensor wires for sensor power and measured temperature output:
   PWR + (Brown) to pin 16
   PWR - (White) to pin 13

   Attach sensor wires for emissivity adjustment via the PPT245's 4-20 mA output:
   IP+ (Yellow) to pin 12
   IP- (Green) to pin 11

3. Turn on the power. The display flashes "E-05"

Entering configuration mode:

4. Press and hold SET for 5 seconds until the display shows "0000".

5. Enter the password. Default password is "1234"
   Press UP to increase first digit to "1". Press SET
   Press UP twice to increase second digit to "2". Press SET
   Press UP three times to increase third digit to "3". Press SET
   Press UP four times to increase third digit to "4". Press SET.

   Display shows first configuration parameter "c.out".

Inputting the sensor's temperature range:

6. Adjust the configuration parameters:
   Press UP or DOWN to select a configuration parameter to adjust.
   Hold SET and press UP or DOWN to change the value.

7. Change the value of parameter "Sen." to "4.20"
   The controller now accepts connection from a 4-20 mA output sensor.

   Use the table below to input the temperature range limits:

8. Change the value of "Lo.L.1" to the lower limit of the sensor's temperature range, in ºC

9. Change the value of "uP.L.1" to the upper limit of the sensor's temperature range, in ºC

Sensor	Lo.L.1	uP.L.1
PExxxLT	-20	100
PExxxMT	0	250
PExxxHT	0	500

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To exit configuration mode:

10. Press UP and DOWN simultaneously to exit configuration mode. The display now shows the measured temperature.

To configure the PPT245 for emissivity adjustment:

11. Enter configuration mode as above.

12. Change the value of "c.out" to "c.0.1"

13. Change the value of "ui.ty" to "1.P.2.E" - this configures the main display to show the temperature and the secondary display to show the emissivity setting

14. Change the value of "rEtr." to "nA.En." - the analogue output will now provide a 4-20 mA linear signal for emissivity setting 0.2 to 1.0

15. Change the value of the Lower Limit Retransmission parameter "Lo.Lr." to 0.2 – this is the lower limit of the sensor's emissivity range

16. Change the value of the Upper Limit Retransmission parameter "uP.Lr." to 1.0 – this is the upper limit of the sensor's emissivity range

17. Press UP and DOWN simultaneously to exit configuration mode.

The display now shows the measured temperature. The emissivity setting may be changed simply by pressing UP or DOWN.