

## EPAD2/CPAD2-TH8-x

- Intelligent amplifier with integrated A/D conversion
- 8 input channels for thermocouples
- Available thermocouple types:
  - xPAD2-TH8-x: K, J, T standard type
  - xPAD2-TH8-UNIVERSAL: Universal type
- CPAD2-TH8-x: CAN interface
- EPAD2-TH8-x: RS485 interface (optional USB, RS232, CAN via EPAD-BASE2 interface)



## Specifications

xPAD2-TH8-x	
Input channels	8 isolated Thermocouple Channels
Input signals	Thermocouple type K, J, T (others on request)
xPAD2-TH8-x	Thermocouple type K, J, T, R, S, N, E, C, U, B
xPAD2-TH8-UNIVERSAL	
Sampling rate	max. 12.5 S/sec per channel
Bandwidth (-3 dB)	6 Hz
ADC type	24 Bit Delta Sigma Converter
Input connector	mini Thermocouple connector
Resolution	0.01 °C for all types
Input impedance	typically 1.4 MΩ
Bias current	typically 10 nA
Open thermocouple detection	module indicates fullscale if input is open
Accuracy*	
Standard models xPAD2-TH8-K /-J / -T	
Type K (-270 to 1372 °C):	±1.0 °C @ -200 to -25 °C    ±0.4 °C @ -25 to 1000 °C    ±0.5 °C @ 1000 to 1372 °C
Type J (-210 to 1200 °C):	±1.0 °C @ -210 to -100 °C    ±0.3 °C @ -100 to 760 °C    ±0.4 °C @ 760 to 1200 °C
Type T (-270 to 400 °C):	±1.0 °C @ -250 to -150 °C    ±0.4 °C @ -150 to 400 °C
Special models on request xPAD-TH8-x	
Type R, S (-50 to 1760 °C):	±1.6 °C @ -50 to 0 °C    ±1.0 °C @ 0 to 100 °C    ±0.4 °C @ 100 to 1760 °C
Type N (-270 to 1300 °C):	±1.2 °C @ -200 to -100 °C    ±0.5 °C @ -100 to 1300 °C
Type E (-270 to 1000 °C):	±1.0 °C @ -200 to -50 °C    ±0.4 °C @ -50 to 1000 °C
Type C (0 to 2300 °C):	±0.6 °C @ 0 to 800 °C    ±0.8 °C @ -800 to 1500 °C    ±1.5 °C @ 1500 to 2300 °C
Type U (-200 to 600 °C):	±1.0 °C @ -200 to -50 °C    ±0.4 °C @ -50 to 200 °C    ±0.3 °C @ 200 to 600 °C
Type B (0 to 1820 °C):	±20 °C @ 0 to 400 °C    ±0.6 °C @ 400 to 1000 °C    ±0.5 °C @ 1000 to 1800 °C
<sup>†</sup> ±1.0 °C when using xPAD2-TH8-UNIVERSAL.	
Max. gain drift	25 ppm/°C
Max. offset drift	25 ppm of range /°C
Isolation voltage	350 V <sub>DC</sub> (channel to channel and channel to Bus, Power and Chassis)
Overvoltage protection	15 V <sub>DC</sub>
CMRR (50/60 Hz)	130 dB
<b>EPAD2-TH8</b>	
Interface	RS-485
Communication speed	9600 bps (2400 to 115200 programmable)
Standard settings	9600 bps, 8 data bits, 1 stop bit, no parity, module address 00 hex
Readout speed	depending on baudrate and number of channels (typ. 80 ch/sec. @ 9600bps)
<b>CPAD2-TH8</b>	
Interface	highspeed CAN
Specification	CAN 2.0B
Communication speed	50 kBaud to 1000 kBaud
Data Format	16 Bit Intel or Motorola
Identifier Types	standard; extended
Standard settings	500 kBaud; Intel Format
Readout speed	12.5Hz, 10Hz, 5Hz, 2Hz, 1Hz, 0.5Hz, 0.2Hz or 0.1Hz programmable
Bus/Power Connector	LEMO EGG.1B.304
Power Supply Voltage	7 to 40V
Power consumption	max 0.5 W
Dimensions	
Base module (W x D x H)	129 x 72 x 34.2 mm (5.1 x 2.8 x 1.3 in.) incl. mounting holes
Mounting holes distance:	119 x 7 mm (4.7 x 0.3 in.), 4.2 mm (0.165 in.) diameter
Weight	typically 360 g