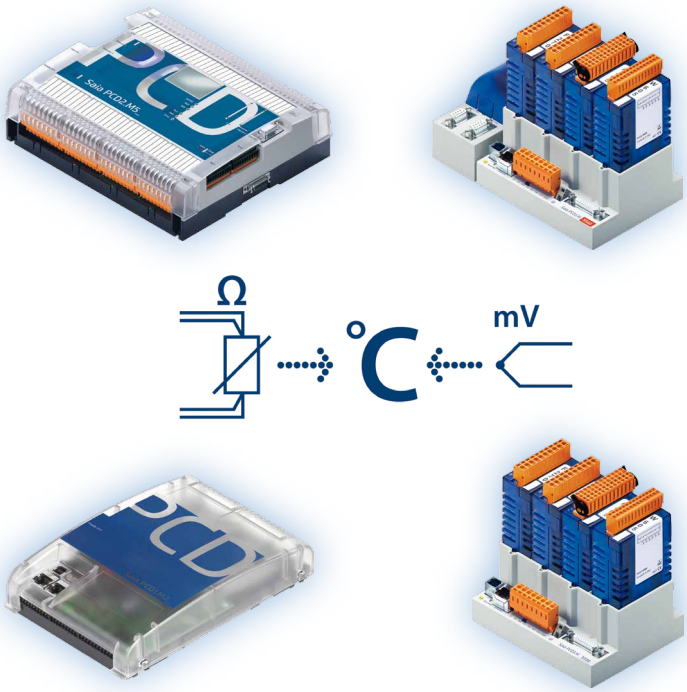
PCD2.W745/PCD3.W745

Universal modules for measuring temperature by linking thermocouples and resistance thermometers to devices from the PCD1, PCD2 and PCD3 series.



Features of the SBC Temperature measuring system

- Four input channels, each with 4 spring terminals, all inputs software configurable
- Electrical isolation between input channels and PCD ground (the channels themselves are not separated against each other)
- Integrated cold junction for thermocouple
- External cold junction compensation can be measured via channel 0
- RTD measurement with 2, 3, or 4-wire connection

Powerful sensor diagnostics

- Overshoot and undershoot detection in measurement range
- Line breaks detection
- Short-circuit detection for resistance thermometers (RTD)
- 3 LEDs to indicate configuration, data acquisition, connection states, line breaks or short circuits
- 3 IL function blocks (FBs) and graphical function blocks (FBoxes) for PCD (via PG5) or for the xx7 series (via I/0 Builder) are included with standard application elements (at no extra charge)

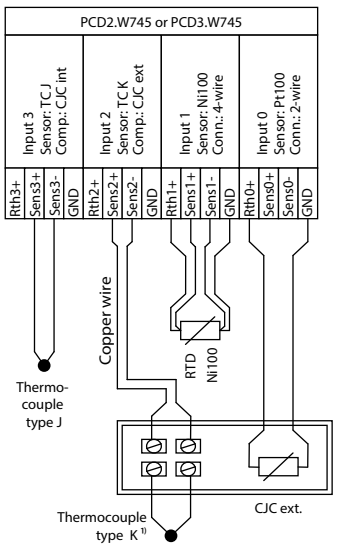
Hardware configuration

- PCD2.W745 modules are for use with the entire PCD2 family. This includes PCD1, PCD2, DDC/PLC and the xx7 series controllers
- PCD3.W745 modules are for use with: PCD3.Mxxxx, PCD3.Txxx and PCD3.Cxxx
- Hardware configuration of the PCD1/2/3 CPU takes place using the PG5, S-Net network editor or with MonitoRio to commission the PCD3.Txxx via a web-server
- Hardware configuration of the xx7 CPU takes place with original Step®7 software from Siemens®. The module parameters are defined with the xx7-I/O-Builder

Software configuration

- For the modules PCD2.W745 and PCD3.W745 exists a FBox with which the module parameters may be changed and the modules may be integrated into Fupla programs

Example of configuration and connection



1) Input 2: Thermocouple type K combined with external cold junction CJC ext. (RTD Pt 100, 2-wire) at input 0 for cold junction compensation.

Technical data

PCD2.W745/PCD3.W745	TC Type J	TC Type K	Pt 100/Pt 1000	Ni100/Ni1000
Measuring range	-210…1200°C	-270…1372°C	-200…850°C	-60…250°C
Resolution	0.1°C			
Operating temperature	0…55°C			
Basic accuracy	0.05%			
Measuring accuracy at 25° ambient temperature	-100…+100°C: ‹ 0.4°C *) -150…+500°C: ‹ 0.7°C *) -150…+1000°C: ‹ 1.0°C *)		-100…+100°C: ‹ 0.3°C *) -200…+500°C: ‹ 0.5°C *) -200…+1000°C: ‹ 0.5°C *)	
Temperature coefficient (0°…55°C)	10 ppm of max. range/°C *)		80 ppm of max. range/°C	
Measuring time/input	250 ms			
Measuring accuracy, internal	16 Bit			
50 Hz supression **60 Hz supression**	› 75 dB › 60 dB			
Line break detection	yes			
Short circuit detection	no		yes	
Linearization	integral			
Cold junction compensation	integral or external			
Electrical isolation	500 VDC between PCD and analogue inputs (the channels are not separated against each other)			

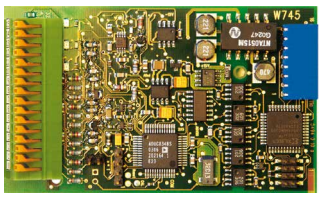
*) Without CJC tolerance

Area of use

PCD2.W745 and PCD3.W745 modules are used for regulating and monitoring temperature in process automation, for measuring very high temperatures with thermocouples (TC) of type J or K, and for very precise temperature measurement using stable resistance thermometers (RTD) Pt/Ni 100 or 1000.

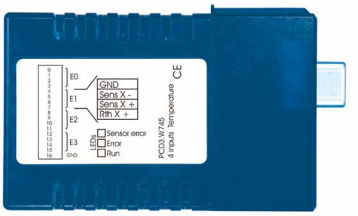
On request: Thermocouples of type R, S, T, E, N

PCD2.W745



Dimensions: 52 × 86 mm

PCD3.W745



Dimensions: 56 × 97 mm

Ordering information

Type	Description	Weight
PCD2.W745	Temperature module for up to 4 measuring inputs	40 g
PCD3.W745	Temperature module for up to 4 measuring inputs	80 g

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