

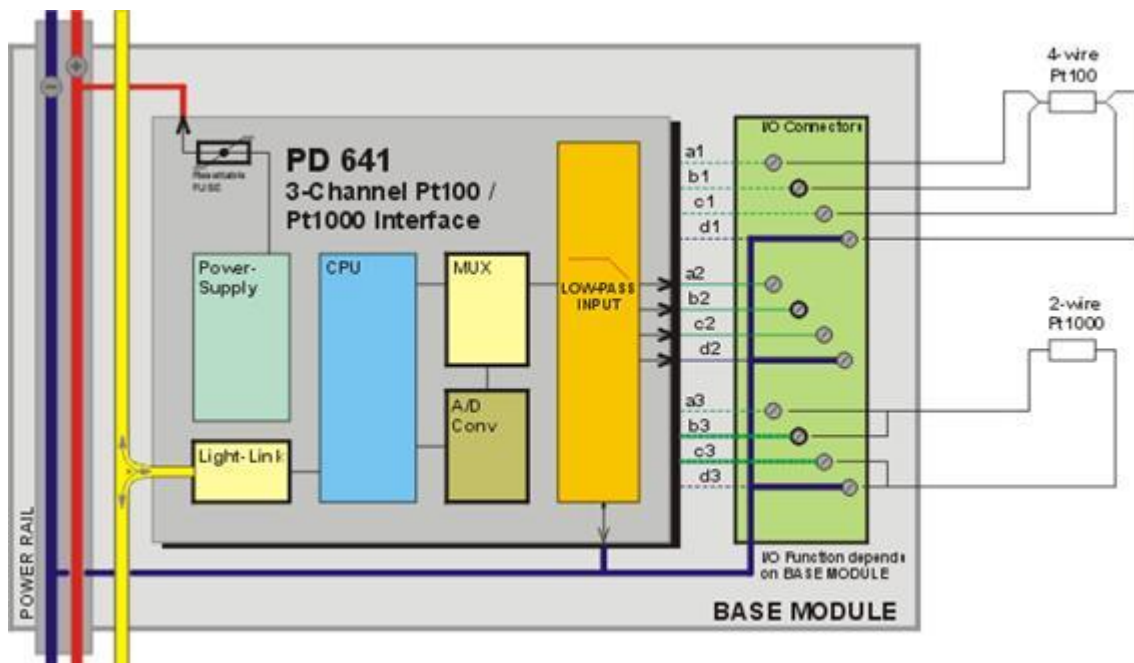
PD 641 Analogue Input Module

Specific Features

The PD 641 is an analogue input module with three temperature input channels, each of which can be configured for either Pt100 or Pt1000 sensor types.



PD 641 Block Schematic



Channel Structure

The PD 641 consists of 4 channels as shown in the table.

Channel No.	Channel Name	Channel Description
0	Service	Device Ident., Address and Config.
1	Analog_1	Analogue Input
2	Analog_2	Analogue Input
3	Analog_3	Analogue Input

Electrical Specifications

Power supply

Power supply:	Nom.	24.0 V
	min.	18.0 V
	max.	32.0 V
Ripple voltage	max.	5 %

Power consumption @ 24V DC

Operation:	max.	25 mA
Current at power up:	max.	60 mA

Analogue input (Ch. 1 - 3)

Signal type:	Pt100 / Pt1000	
Connection:	4-wire / 2-wire	
Update time:	Fixed	2.4 s
Input temperature range:	Pt100	-100 °C → +600 °C
	Pt1000	-100 °C → +200 °C
Ambient temperature coefficient T _c :	max.	± 15 ppm / °C
Ambient temperature influence (ΔT):	T _c x (T _{ambient} - 20) x (T _{sensor} + 273)	

Pt-100 Data (excluding sensor)

Calibration error: @ Tamb. 20 °C	max.	± 0.1 °C
Resolution:	typ.	0.05 °C
Measuring current:	max.	500 μA

Pt-1000 Data (excluding sensor)

Calibration error: @ Tamb. 20 °C	max.	± 0.2 °C
Resolution:	typ.	0.2 °C
Measuring current:	max.	50 μA

Filter for analogue input signal

Type:	4th order low pass	
Time constant:	configurable	3.0 s – 50.0 s
Gain error:	max.	± 0.1 %

Ambient temperature range

Operating:	-25 °C – 70 °C
Storage:	-40 °C – 85 °C

Humidity

Relative humidity:	max.	95 %
--------------------	------	------

EMC

Immunity:	EN 61000-6-2
Emission:	EN 61000-6-3

Vibration

Test method:	IEC 60068-2-6
Frequency / amplitude:	2-10 Hz: ± 5.0 mm
	10-100 Hz: ± 2g
Sweep rate:	max. 1 octave/min
Number of axes:	3 mutually perpendicular