

# PD 642 Analogue Input Module

## Specific Features

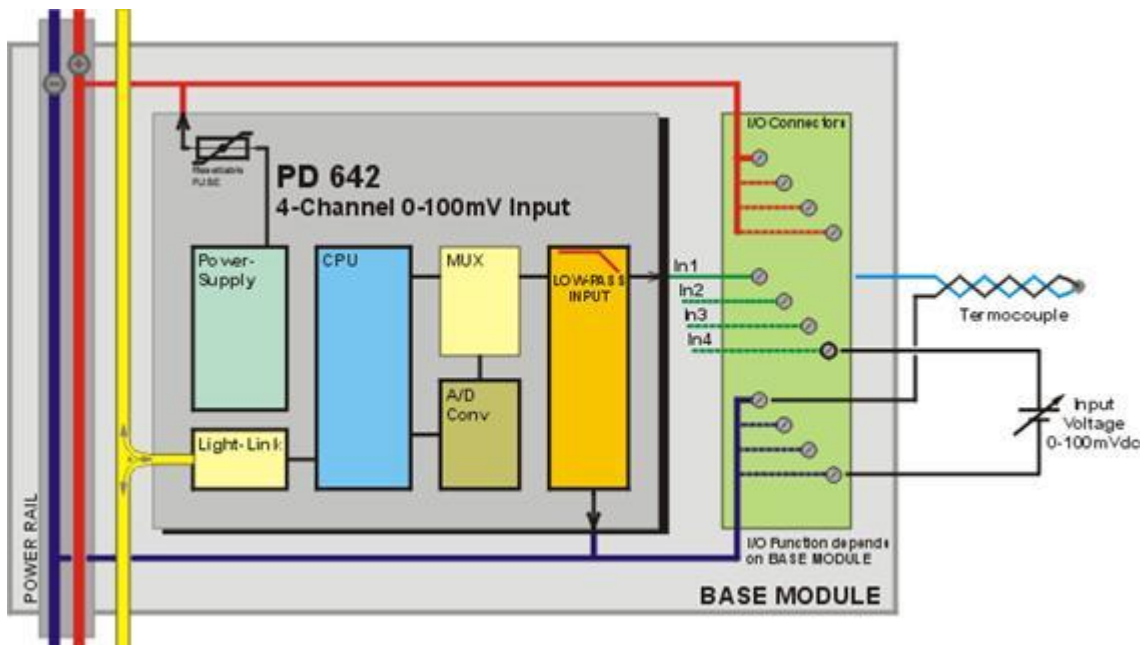
The PD 642 is an analogue input module with four voltage input (0-100 mV) channels.

The four input channels can be configured individually for either 0-100 mV or thermocouple temperature sensor input.

The PD 642 provides linearization for the following types of thermocouple transducers: Type R, S, B, J, T, E, K and N.



## PD 642 Block Schematic



## Channel Structure

The PD 642 consists of 5 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
4	Analog_4	Analogue Input

## Electrical Specifications

### Power supply

Power supply DC:	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- 4)

Signal type:	Voltage (0-100 mV)	
Input impedance:	> 5 M $\Omega$	
Calibration error: @ Tamb. 20 °C	max. +/- 0.1 % of fullscale	
Ambient temperature coefficient Tc:	max.	+/- 100 ppm / °C
Ambient temperature influence ( $\Delta V$ ):	Tc x (Tambient – 20) x input	
Resolution:	typ.	20 $\mu V$
Update time:	fixed	0.8 s

### Voltage to temperature conversion for thermo couples

Supported IEC 584-1 thermo couple types: R, S, B, J, T, E, K, N

### 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 temperature:	-25 °C – 70 °C
Storage temperature:	-40 °C – 85 °C

### Humidity

Relative humidity:	max.	95 %
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### 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