

# PD 641 3-Channel Analog Input

## PD Series 600 (Pt100 or Pt1000)



**The PD 641 is an analogue I/O module included in the Series 600 modules and features:**

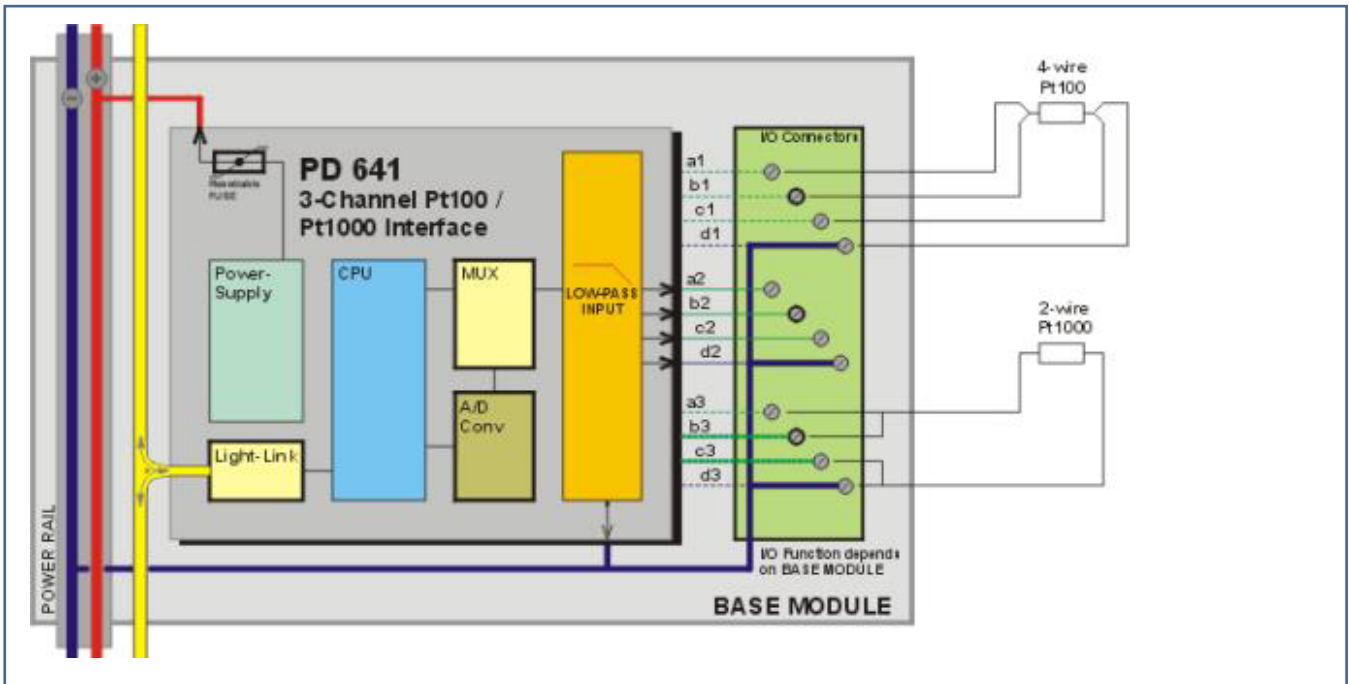
- Advanced internal self testing
- Wide power supply range
- Wide temperature range
- 2 LEDs for power on and error indication

## Introduction

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

## Block Schematic

The diagram shows the I/O circuits and connection possibilities for a PD 641.



## LED Indicators

Series 600 slave devices are equipped with 2 LEDs, a green (On) for indication Power supply, and a red (Error) for indicating errors in the device.

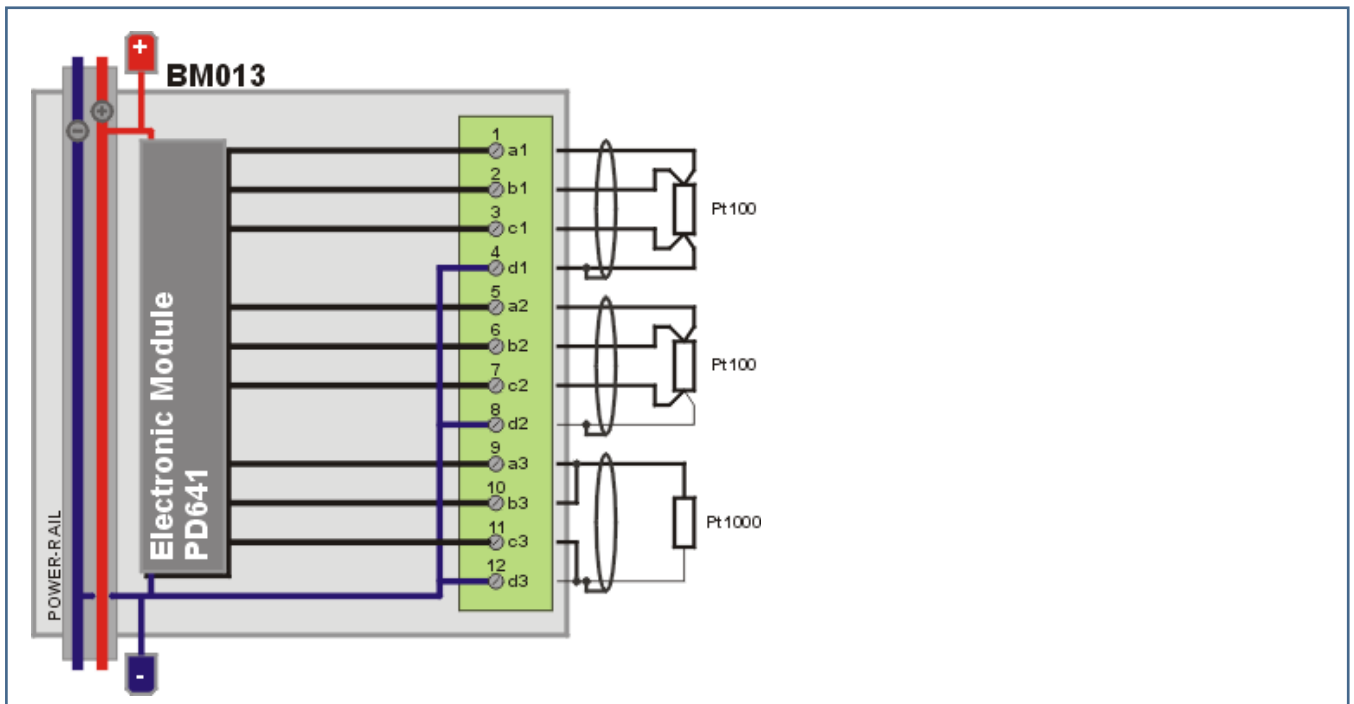
The Error LED is ON if an error occurs inside the device, which causes one of the error flags to be set to TRUE. This is for example watchdog error or error in EEPROM memory.

# Channel Structure

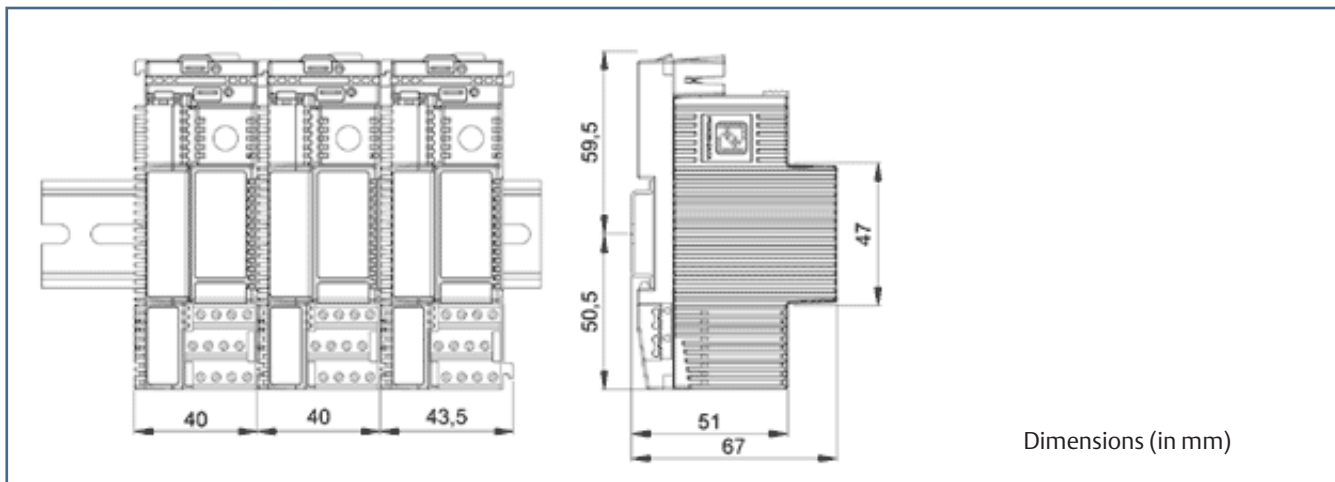
The PD 641 consists of 4 channels as shown in then table.

Channel		
No.	Name	Description
0	Service	Device identification, adress and configuration
1	Analog IN 1	General purpose Analog Input
2	Analog IN 2	General purpose Analog Input
3	Analog IN 3	General purpose Analog Input

# Wiring Diagram



# Technical Specifications



Dimensions (in mm)

<b>Weight</b>	140 grams approx.
<b>Power supply</b>	18 to 32 VDC
<b>Ripple</b>	max. 5%
<b>Power consumption @ 24VDC</b>	
<b>Operation</b>	max. 25 mA
<b>Current at power up.</b>	max. 60 mA
<b>Analogue Input (Ch. 1-3)</b>	
<b>Signal type</b>	Pt100 or Pt1000
<b>Connection</b>	4-wire / 2-wire
<b>Update time</b>	fixed 2.4 seconds
<b>Input temperature range</b>	Sensor -50 °C to + 200 °C
<b>Ambient temp. coefficient Tc</b>	Maximum ±15 ppm / °C
<b>Ambient temp. influence (DeltaT)</b>	$T_c \times (T_{ambient} - 20) \times (T_{sensor} + 273)$
<b>Pt100 Data (excluding sesnsor)</b>	
<b>Measurement error (20 °C)*</b>	Maximum ± 0.1 °C
<b>Resolution</b>	Typ. 0.05 °C
<b>Measuring current</b>	Maximum 0.05 mA
<b>Filter for analogue input signal</b>	
<b>Type</b>	4th order low pass
<b>Time constant</b>	Configurable 3.0 s – 50.0 s
<b>Gain error</b>	Maximum ± 0.1 %
<b>Operation temperature</b>	-25 °C to + 70 °C
<b>Storage temperature</b>	-40 °C to + 85 °C
<b>Interface</b>	Light-Link

\*) Ambient temperature

## Maritime Approvals

Meets the requirements of all the major international marine classification societies.

For more information see PDS for the PD Series 600 Introduction.

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