PD 642 4-Channel Analog Input (mV)
PD Series 600

The PD 642 is an analogue input module included in the Series 600 modules and features:

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

EMERSON

Introduction

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.

Block Schematic

The diagram shows the I/O circuits and connection possibilities for a PD 642.
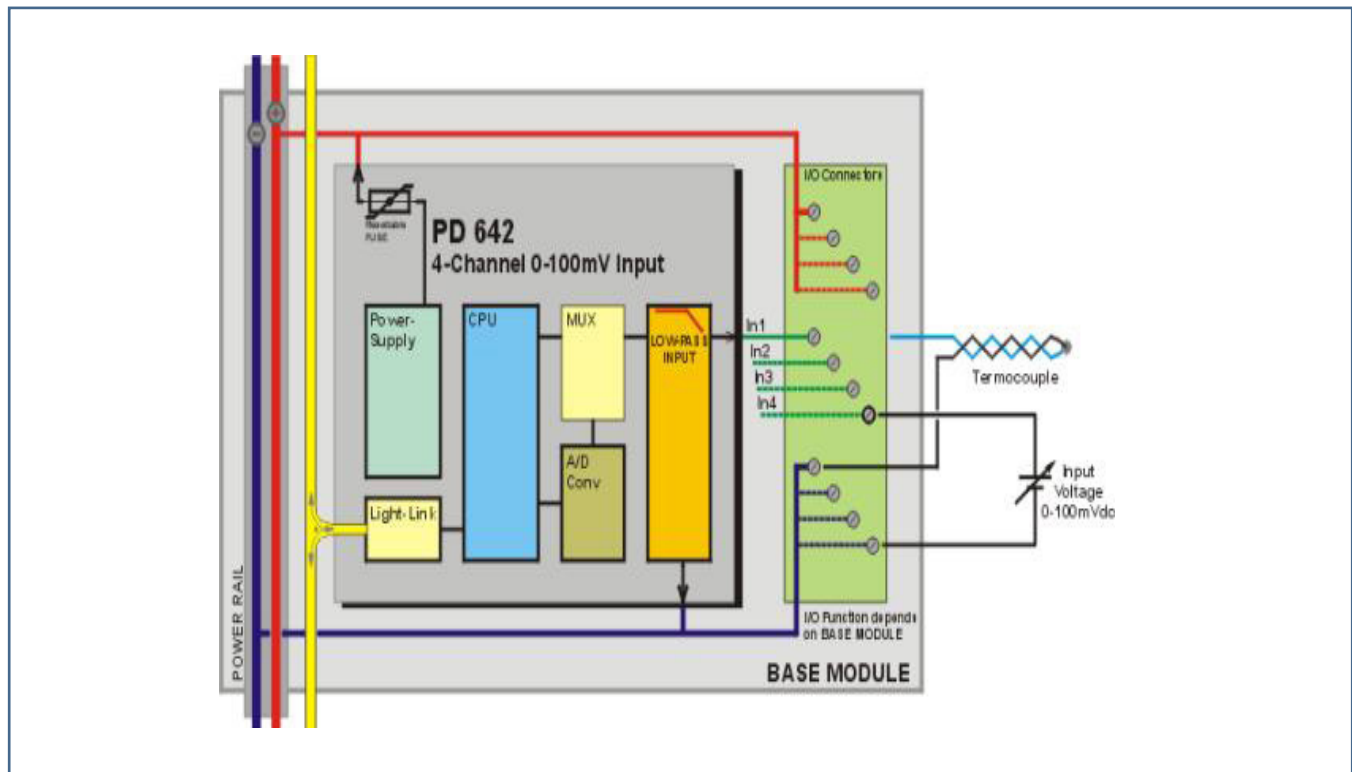
LED Indication

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 642 consists of 5 channels as shown in the table.

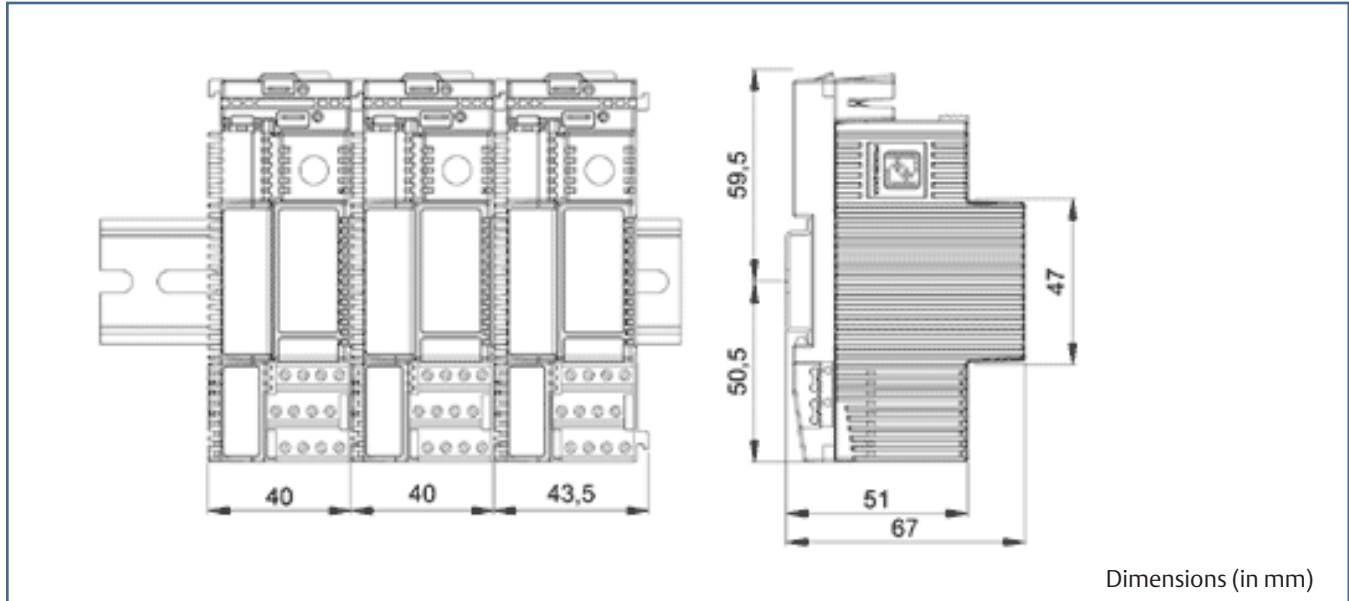| Channel		
No.	**Name**	**Description**
0	Service	Device identification, address and configuration
1	Analog IN 1	General purpose Analog Input
2	Analog IN 2	General purpose Analog Input
3	Analog IN 3	General purpose Analog Input
4	Analog IN 4	General purpose Analog Input

Wiring Diagram
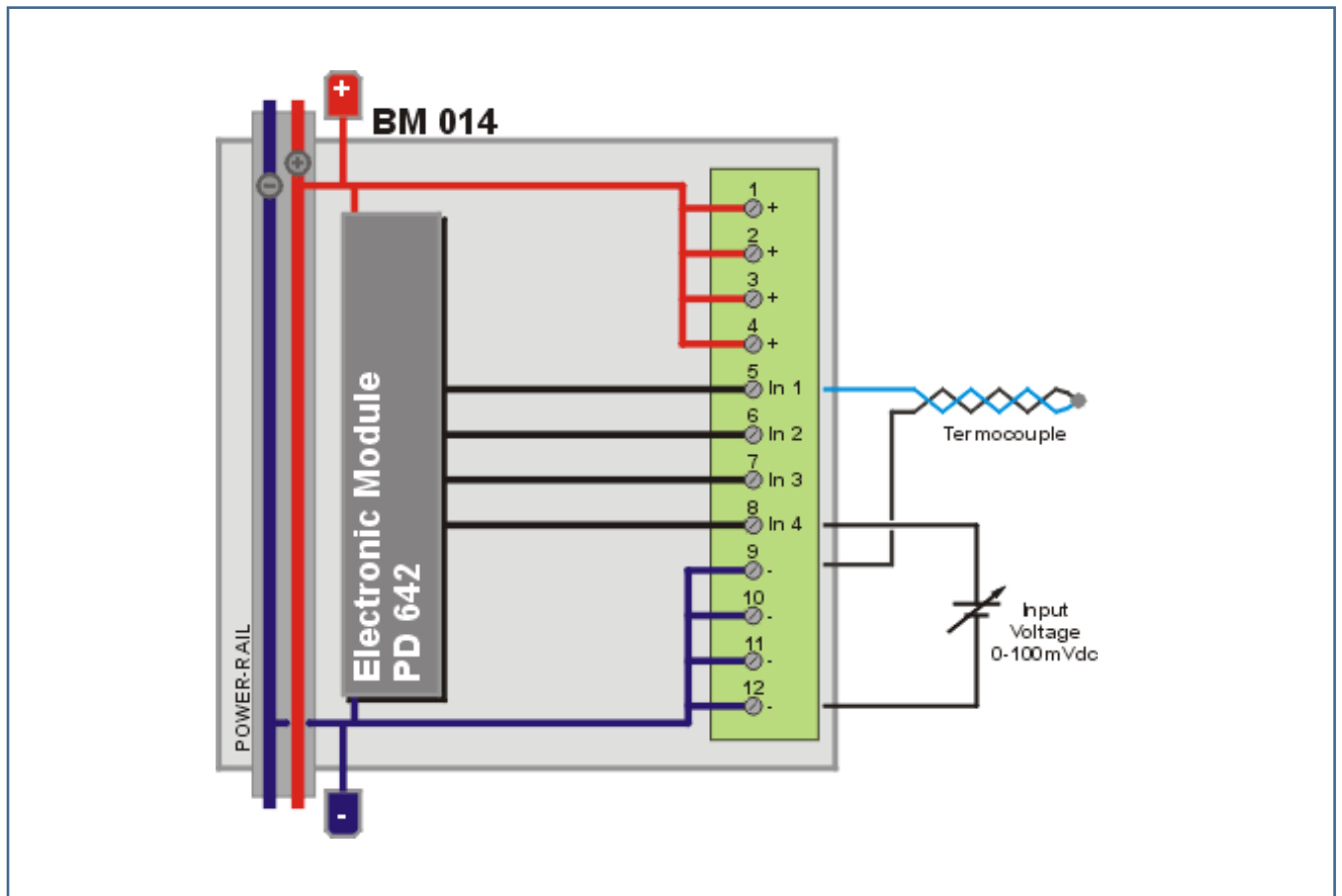
Available Base Modules: BM001 - 014 *

 *) Recommended

Technical Specifications

Dimensions (in mm)

Weight:	140 grams approx.
Power supply:	18 to 32 VDC
Ripple:	max. 5%
Power consumption @ 24VDC:	
Operation	max. 25 mA
Current at power up.	max. 60 mA
Analogue Input (Ch. 1-4):	
Signal type	Voltage (0-100mV)
Input impedance	> 5 M Ohm
Calibration error (20 °C) *	max. ± 0.1 % of fullscale
Measurements error (0-50 °C) * (-25-70 °C) *	max. ± 0.25 % of act. voltage ± 20 µV max. ± 0.5 % of act. voltage ± 20 µV
Resolution	Typ. 20 µV
Updatetime	fixed 0.8 Second
Voltage to temperature conversion for termo couples:	Supported IEC 584-1 termo 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 %
Operation Temperature:	−25 °C to + 70 °C
Storage temperature:	−40 °C to + 85 °C
Interface	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.

The contents of this publication are presented for information purposes only, and while effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, expressed or implied, regarding the products or services described herein or their use or applicability. Standard Terms and Conditions of Sale can be issued by contacting Damcos A/S. We reserve the right to modify or improve the designs and specifications of our products at any time without notice. Damcos A/S accepts no responsibility for any errors that may appear in this publication.

EMERSON.™