

PD 640 4-Channel Analog Input

PD Series 600 (0 - 20 or 4 - 20 mA)



The PD 640 is a general purpose analogue I/O device included in the Series 600 modules and features:

- Individually configurable analog I/O pr Input
- Process variables are read or written in floating-point engineering units
- Build in I/O or input functions
- Advanced internal self testing
- Wide power supply range
- Wide temperature range
- 2 LEDs for power on and error indication

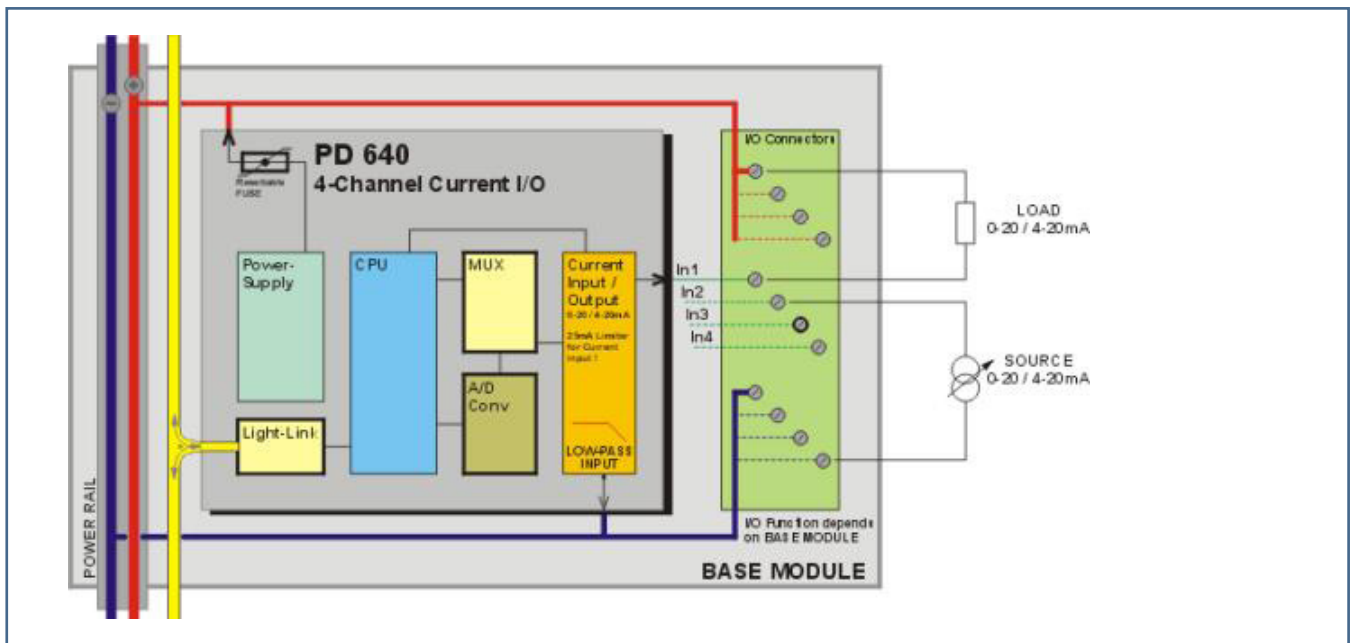
Introduction

The PD 640 is a general-purpose analogue I/O device with four I/O channels. Channel 1 and 2 may be configured for either input or output. Channel 3 and 4 are input channels. All 4 channels can be independently configured for either 0-20 mA or 4-20 mA signal types. This enables most standard type analogue transmitters for pressure, temperature, flow, etc., to be connected to the input channels, and, for example, analogue actuators, motor controllers, etc, to be connected to the output channels of the device. Conversion from or to 0/4–20 mA is performed directly

in the I/O channels, which means that process variables are read or written in floating-point engineering units. For example, a process controller or a PC can read the process value from a pressure transmitter, which is connected to an input channel, in bar, kPa, psi, or any other engineering unit, depending on the configuration.

Block Schematic

The diagram shows the I/O circuits and connection possibilities for a PD 640.



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.

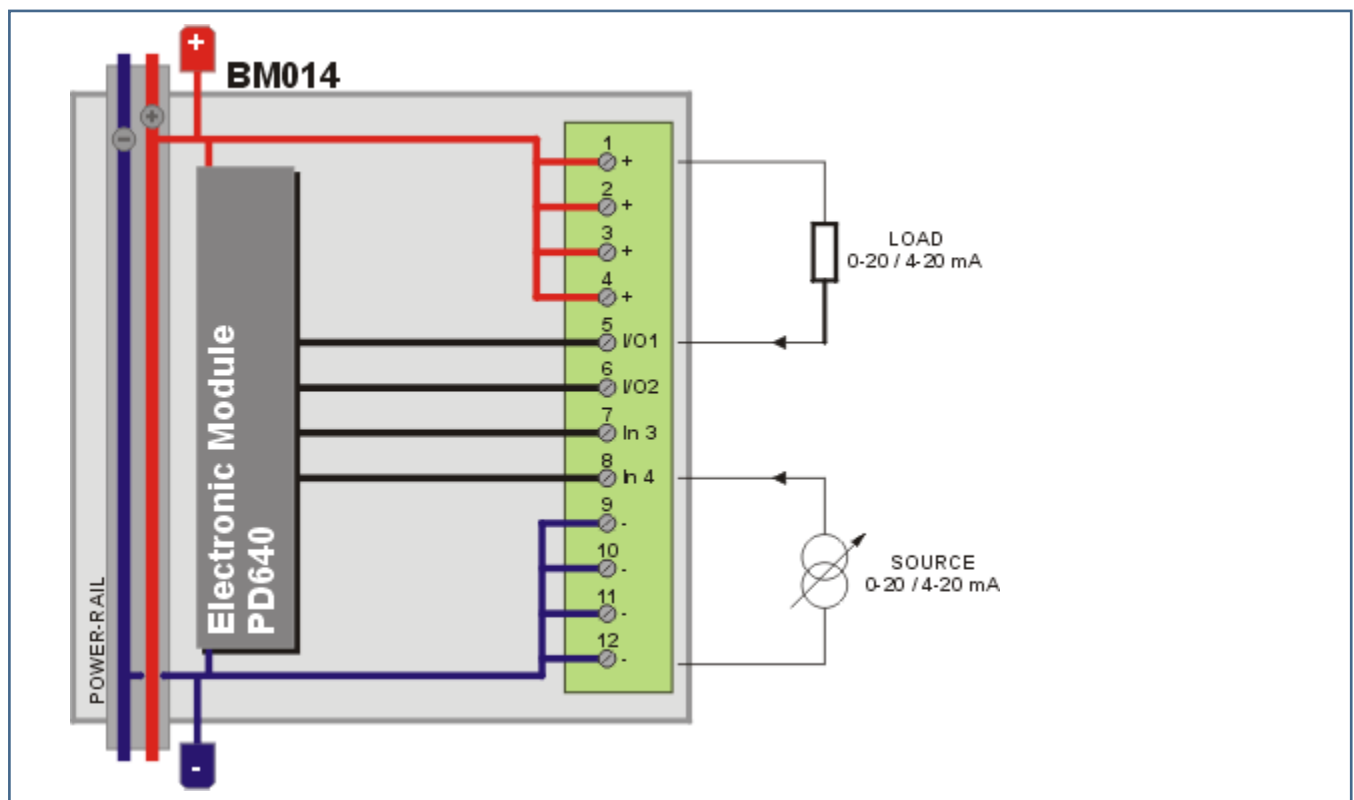
The Error LED is ON if an error occurs inside the device, which causes one of the error flags to be set to TRUE. This is for example watchdog error or error in EEPROM memory.

Channel Structure

The PD 640 consists of 5 channels as shown in then table.

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

Wiring Diagram



Available Base Modules: BM001 - 014*

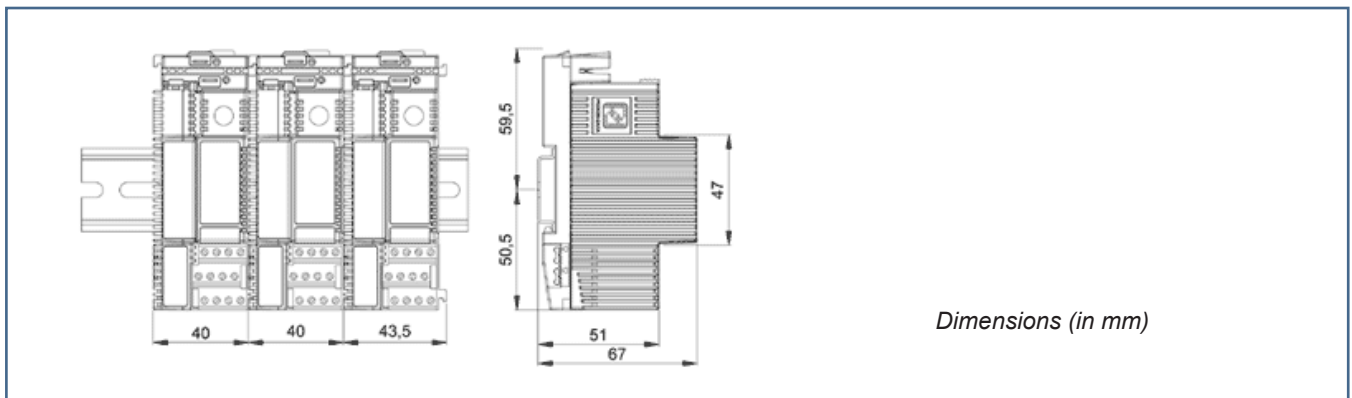
*) Recommended

Technical Specifications

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	Current (0-20/4-20 mA)
Calibration error (20 °C) *	max. ± 0.1 % of fullscale
Measurements error (0-50 °C) * (-25-70 °C) *	max. ± 0.35 % of act. current ± 20 µA max. ± 0.6 % of act. current ± 20 µA
Resolution	Typ. 2 µA
Updatetime	fixed 0.8 Second
Voltage drop across input at 20mA	nom. 1.2 V (60 Ohm)
Current limiter (protection)	typ. 25 mA
Filter for analogue input signal	
Type	4th order low pass
Time constant	configurable 3.0 s – 50.0 s
Gain error	max. +/- 0.1 %
Analog Output (Ch. 1 and 2)	
Signal type	Current (0-20/4-20 mA)
Accuracy (0-50 °C) * (-25-70 °C) *	max. ± 0.5 % of fullscale max. ± 1.0 % of fullscale
Resolution	typ. 100 µA
Operation Temperature	-25 °C to + 70 °C
Storage temperature	-40 °C to + 85 °C
Interface:	Light-Link

*) Ambient temperature

Technical Data



Maritime Approvals

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

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

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