Product Data Sheet
September 2018
SD 8724-2E04

PD 667 DPI with RS485 Interface

Profibus DP-V0 Essential Features Master
PD Series 600

PD 667 DPI is used as a gateway between a Profibus DP-V0 Essential Features Master (RS-485) and the local cluster via Light-Link P-NET. It uses the BM 002 base module. The PD 667 is included in the Series 600 modules and features:

- Real time clock with battery backup
- Built-in replaceable lithium battery
- LED state indicators
- Low power consumption

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Introduction

The PD 600 series of Distributed Process Intelligence units - DPIs - has been developed as the 3rd generation of P-NET fieldbus programmable master devices, for use as distributed computing elements within highly complex as well as simple process control systems. The PD 600 series is part of a new family of standard process control devices, which can be mounted on a DIN rail. When mounted, communication is automatically enabled through the Light-Link interface. Power is applied to all devices on the same rail by a common power bar. These facilities make mounting, connection, replacement and addition of devices very quick and easy.

Communication Interface

Channel 1 is a standard P-NET RS-485 communication channel for communicating with Profibus devices.

Channel 2 is a P-NET Light-Link communication channel intended for communicating with other locally mounted P-NET devices using the optical Light-Link interface.

Programming

The PD 667 DPI is programmed in Process-Pascal, which is an extension of standard Pascal, allowing easy declaration and utilisation of P-NET variables and objects. Programs are developed and compiled on a standard PC, then downloaded directly via a P-NET interface. Program code can be downloaded to FLASH memory.

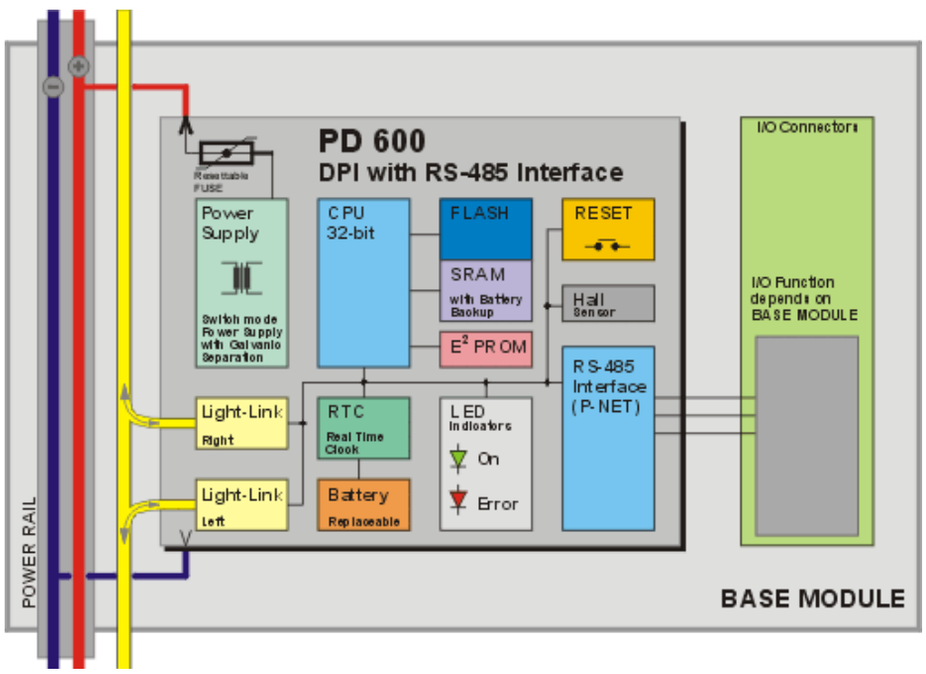
The PD 667 DPI series devices have the channels shown in the following table.

The PD 667 is pre-programmed by Process Data.

Channel		
No.	**Name**	**Description**
0	Service	Service channel
1	RS485Port	Communication channel, RS-485, P-NET mode or data mode
2	LightPort	Communication channel, Light-Link, P-NET mode or data mode
5	OpSysCh	Program channel for operating system
6	PPProgCh	Program channel for Process-Pascal

Block Schematic

The following figure provides a block diagram showing the internal structure of a PD 667 DPI which is identical to PD 600.



LED Indicators

A PD 667 DPI series device is equipped with 2 LED indicators, “Error” (red) and “On” (green). The state of the device is indicated by the LEDs, according to the scheme shown in the table.

Meaning	Error (Red)	On (Green)
No power	OFF	OFF
Error, nor running	ON	OFF
Proces-Pascal not running	OFF	Flash, 2 Hz
Proces-Pascal running	OFF	ON
Power supply voltage too low	Flash, 0.5 Hz	OFF
Error, Proces-Pascal not running	ON	Flash. 2 Hz
Error, Proces-Pascal running	ON	ON

Power supply voltage too low occurs when MaxPowerdownTime is <> 0, and the power supply voltage is below approx. 18 V.

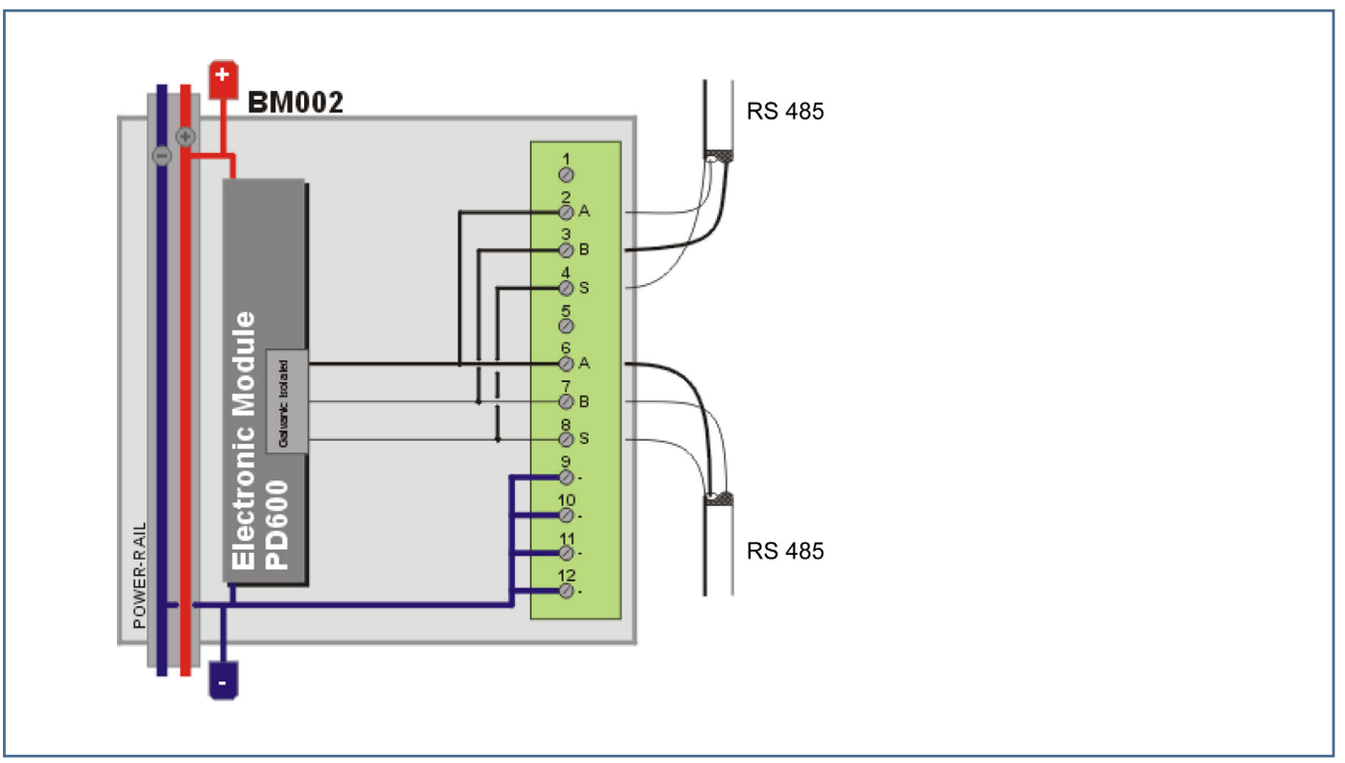
Battery Backup

A PD 667 DPI series device is equipped with a replaceable lithium battery for real time clock and RAM backup. The battery is not rechargeable. If the device is constantly powered, the lifetime of the battery is approx. 7 years. If the device is constantly unpowered, the lifetime of the battery is approx. 3 years.

Real Time Clock

The devices are equipped with a real time clock circuit with battery backup. Max. deviation is approx. 3 minutes per month over the full temperature range, and approx. 1 minute per month at 25 degrees Centigrade. The same circuit is used for the Process-Pascal timer system, ensuring that the real time clock and the Process-Pascal timers are synchronized.

Wiring Diagram

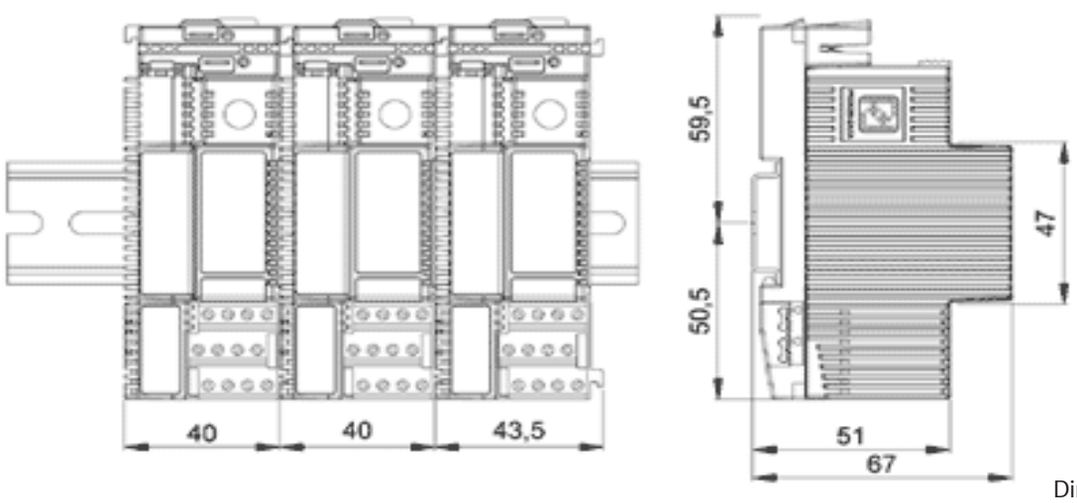


PD 667 DPI is identical to PD 600.

Available Base Modules: BM 002 - 010 .

Technical Specifications

Weight:	140 grams approx.
Power supply:	18 to 32 VDC
Ripple:	max. 5%
Power consumption @ 24 VDC:	
Operating	max. 50 mA
Current at power up	max. 100 mA
Operation Temperature:	–25 °C to + 70 °C
Storage temperature:	–40 °C to + 85 °C
Interface:	RS-485, Light Link
Replaceable battery:	Panasonic BR 1632



Dimensions in mm

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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