Product Data Sheet
February 2015
SD 8716-2E04

PD 662 RPI with RS-485 P-NET Interface (Redundant)

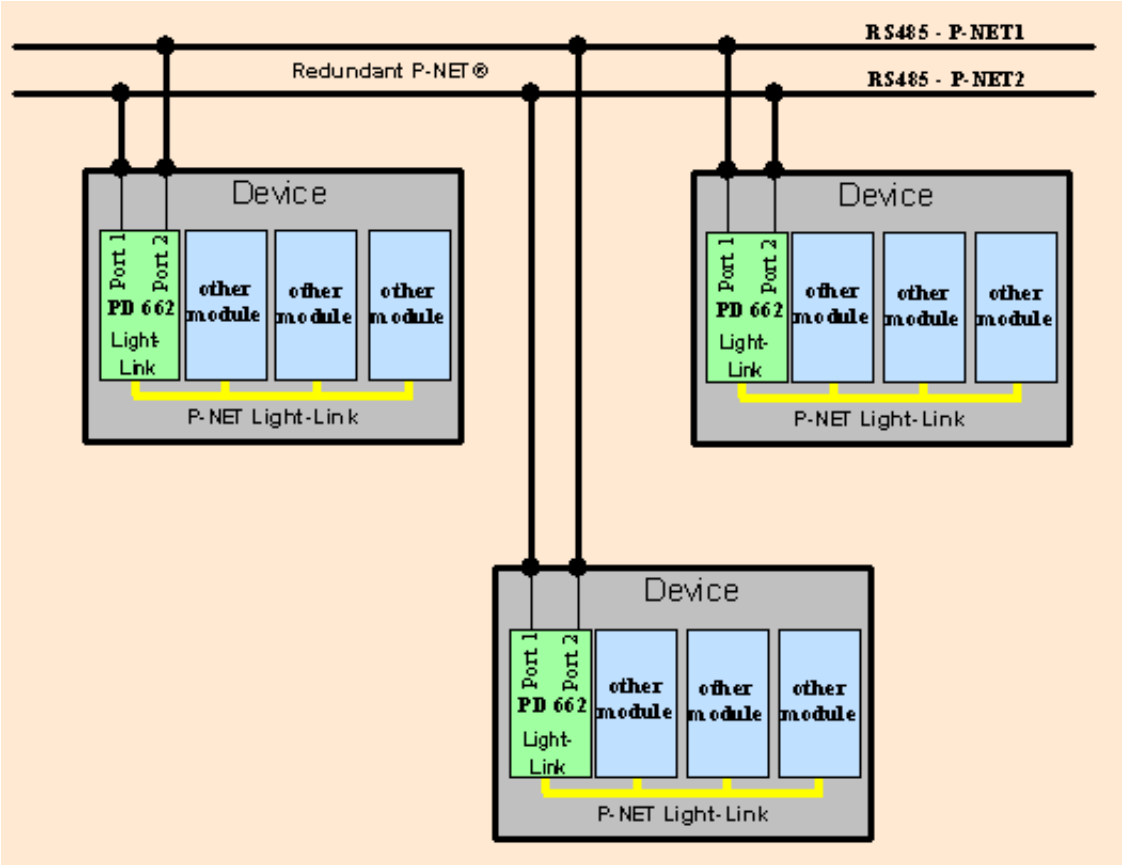
PD Series 600

EMERSON
Process Management

Introduction

The PD 662 Redundant P-NET Interface is one of a number of standard modules within the PD 600 series range. Its main purpose is to provide a redundant and transparent link between optical Light-Link and a duplicated RS-485 P-NET. The module frequently scans the RS-485 communication links to check if the communication networks are functioning correctly. The PD 662 will ensure that the local cluster of modules (i.e. the device, in which the PD 662 itself is a component) will receive data from one of the two RS-485 P-NET ports, and that data from the local cluster will be transmitted on both RS-485 P-NET ports. If, for example, P-NET port 1 is used, and a short circuit or a cable break is detected, the PD 662 will automatically switch to P-NET port 2. The module itself does not require any programming, but a P-NET slave address and a few other parameters must be configured. The PD 662 is used with a BM 010 base module.

Block Schematic Redundancy System

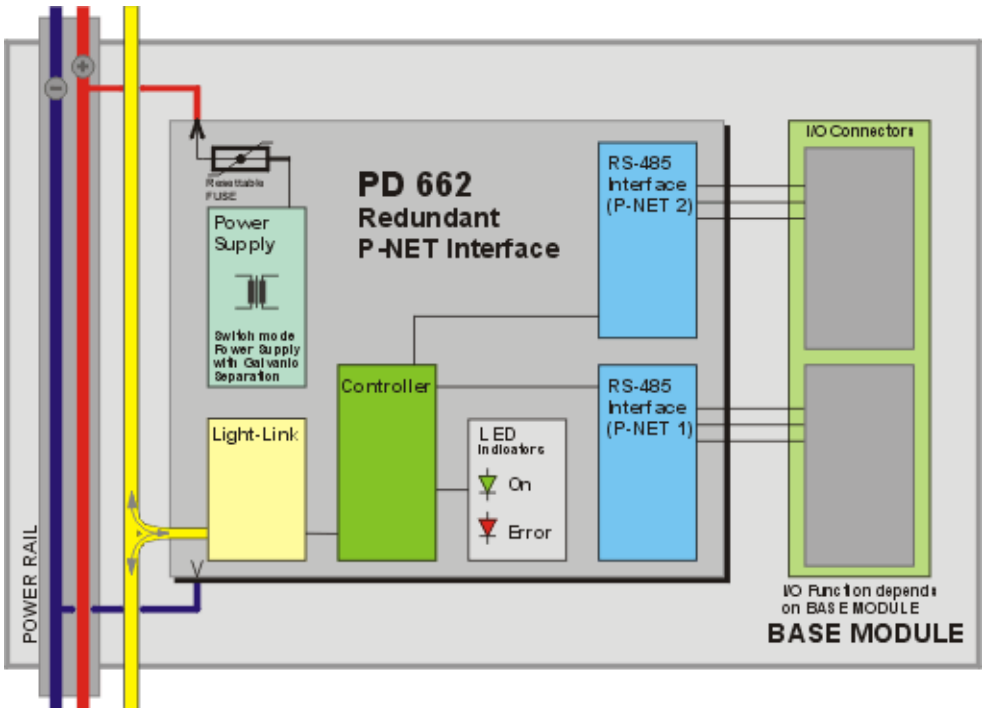


Communication Interfaces

The PD 662 has two galvanically isolated RS-485 P-NET interfaces, and one P-NET Light-Link communication interface that is used for communicating with other locally mounted P-NET devices using the optical Light-Link interface.

Block Schematic

The diagram shows connection possibilities for a PD 662.



LED Indicators

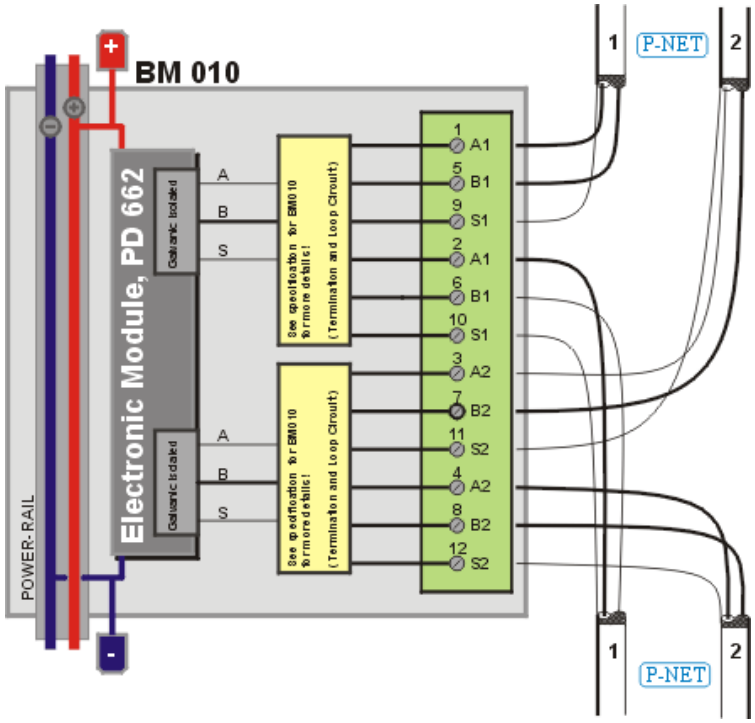
The module is equipped with four LED indicators: A green LED (on) to indicate that power is supplied to the module, a red (Error) to indicate internal errors within the module, and finally two red LED's (#1 and #2) to indicate whether RS-485 Port 1 or RS-485 Port 2 is currently reporting a malfunction. If none of these two red LEDs is ON, it indicates that both RS-485 nets are in a fully functional condition.

Channel Structure

The PD 662 consists of 2 channels as shown in the table.

Channel		
No.	**Name**	**Description**
0	Service	Device identification, adress and configuration
1	Redundant	General purpose for setup of the redundant P-NETs

Wiring Diagram



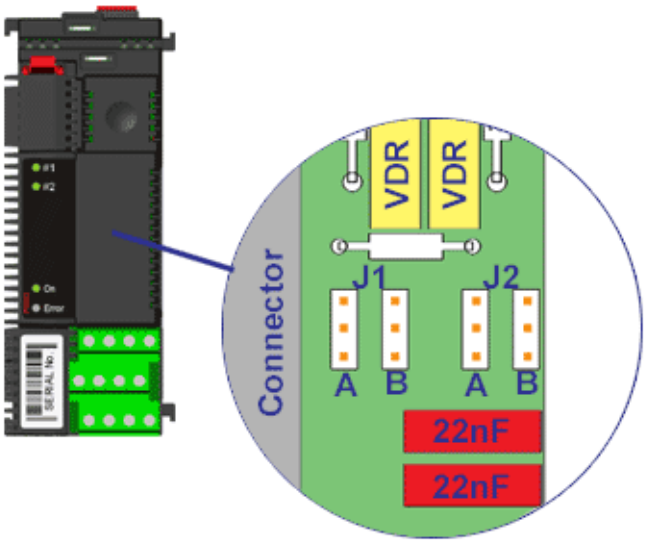
The BM 010 base module is equipped with termination circuits for the two P-NET channels. It is recommended to enable the termination circuit when the device is installed at the terminal ends of a transmission cable. Enabling/disabling the termination circuit is done via jumper settings.

Jumper location

The jumpers used to enable /disable the termination circuits are found on the printed circuit board inside the BM 010, as seen on the picture.

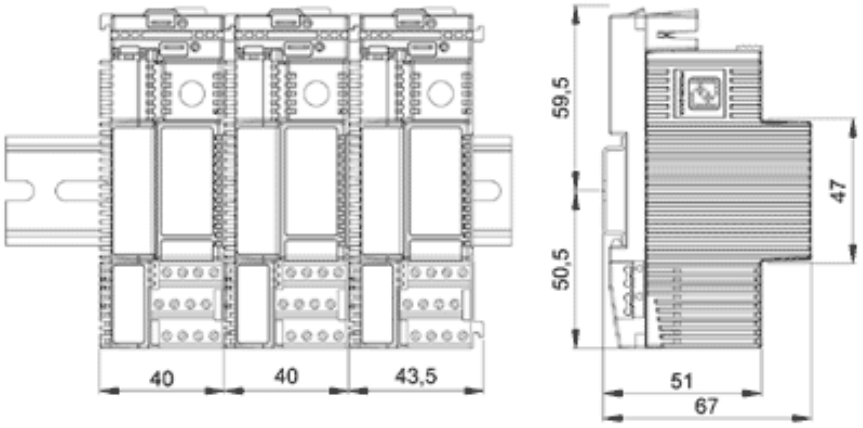
J1: P-NET 1

J2: P-NET 2



J1	J2	Description
A B	A B	P-NET 1 Termination disabled P-NET 2 Termination disabled (Factory settings)
A B	A B	P-NET 1 Termination disabled P-NET 2 Termination enabled
A B	A B	P-NET 1 Termination enabled P-NET 2 Termination enabled
A B	A B	P-NET 1 Termination enabled P-NET 2 Termination disabled

Technical Specifications



Dimensions (in mm)

Weight	140 grams approx.
Power supply	18 to 32 VDC
Ripple	maximum 5 %
Power consumption at 24VDC	
Operation	maximum 30 mA
Current at power up	maximum 100 mA
Operation Temperature	- 25 °C to + 70 °C
Storage temperature	- 40 °C to + 85 °C

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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