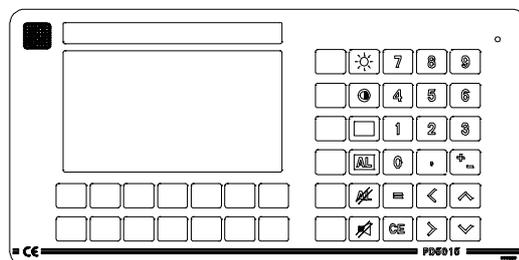


PD 5015 P-NET CONTROLLER

FEATURES

- Operator interface
- 32 Bit Microprocessor (68020)
- Multi-Tasking Capabilities
- Programmed in Process-Pascal
- Large Expandable Data Memory
- Backlit Graphics LCD Display with a resolution of 240 by 128 pixels
- Sealed Keyboard to IP65 (44 keys)
- Two P-NET Ports and one RS232 Port
- Battery Back-Up & Internal Clock
- EMC approved (89/336/EEC)



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APPLICATION

The PD 5000-Series of controllers has been developed as the 2nd generation of P-NET fieldbus controllers (masters), for use as distributed computing elements within either highly complex or simple process control systems. The PD 5000-Series ranges from the PD 5000, a controller without keyboard/display, via the PD 5010 and PD 5015 having sealed keyboard/display, to the PD 5020 with built in colour graphics card. Together with possible additional controllers and PC's, the PD 5015 is used in conjunction with other distributed input/output modules (slaves) such as digital, analogue, flow, and weight nodes, to form a complete control system, which all communicate via the P-NET fieldbus (EN 50170 Vol. 1). Since the Controller offers dual P-NET ports together with an RS232 connection, it can be used to link two P-NET sections (multi-net), or as a gateway to other communications media, including PCs, MODEMS etc. Although the PD 5000 can be utilised independently as a powerful processing element, the PD 5010 and PD 5015 enable a controller to be used as an operator input and display interface. Furthermore, the PD 5020 enables the controller to be used with a VGA monitor, a standard PC keyboard and a mouse, as a Supervisory Control System

SYSTEM DESCRIPTION

Programming

The Controller is programmed in Process-Pascal, which is an extension of standard Pascal, allowing easy declaration and utilisation of P-NET variables and objects. Programmes are developed on a standard PC, compiled and down loaded directly via a PC/P-NET interface card, or via the RS232 interface. Program code can be down loaded to FLASH memory or battery backed RAM.

Memory

The PD 5015 has on board memory consisting of 512 Kbytes of FLASH and 512 Kbytes of lithium backed RAM. In addition, a 128 Kbyte EPROM is provided which holds the Operating System. The use of the RAM Extension Board (PD 5090), extends each of the FLASH and RAM memory capacities to 1 Mbyte.

Channels

In keeping with the standardised, object orientated channel structure of other P-NET devices, the PD 5015 provides a structure of up to 16 Channels, dealing with the configuration and use of Communication Ports, Program control, keyboard and display usage, and the digital alarm output. As with all P-NET devices, the Service channel (channel 0) provides the ability, amongst other facilities, to identify the device and to provide the means to set the node address.

Communications Interfaces

The Controller has three serial communications interfaces, configurable for PNETmode, DatamodeIn, DatamodeOut or DatamodeInOut. Two of these provide galvanically isolated RS485, multi-master, multi-net interfaces with the P-NET fieldbus, and run at the standardised speed of 76.8 Kbaud or at 9.6 Kbaud. In non PNETmode the communication channels are used to provide an interface to other communication protocols using RS485. In non PNETmode the Baud rates are adjustable between 1.2 and 76.8 Kbaud.

The third is a standard RS232 interface, which has an adjustable Baud rate of between 1200 and 9600. This communications channel is used to provide an interface to printers, modems, barcode readers etc., as well as other communications protocols using this medium.

Digital Channel

The PD 5015 has a built in digital channel, controlling the operation of the "Alarm Output" available at the rear of the controller.

Keyboard/Display

The PD 5015 provides a 44 programmable key layout using sealed, membrane switch technology. A customised self adhesive keyboard overlay can be used to provide the operator with the ideal visual interface associated with the usage of the controller. The associated display is an LCD Supertwist technology type, having a resolution of 240 by 128 pixels, providing adjustable contrast and wide viewing angle. An adjustable LED back light is also provided. A program controlled LED is placed in the front of the Controller.

SPECIFICATIONS

Power Supply:

24V DC \pm 15%, 6 watts

Operational Ambient Temperature:

-10 to +45 °C

Storage Temperature:

-20 to +60 °C

Weight:

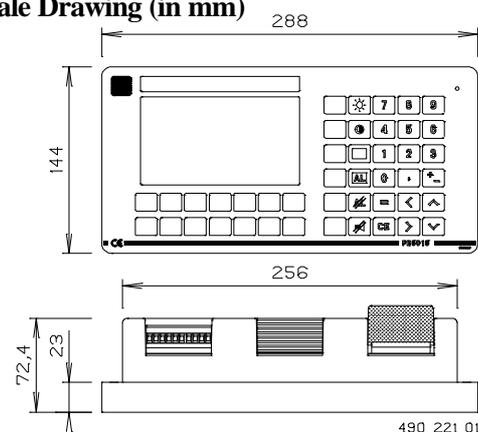
1.5 Kg

Memory:

512 Kbytes FLASH and 512 Kbytes RAM.

With extension: 1 Mbyte FLASH/1 MB RAM

Scale Drawing (in mm)

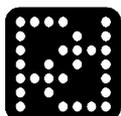


PD 5015 is approved in compliance with **EMC Directive No. 89/336/EEC**. Test limits are determined by the generic standards **EN 50081-1** for emission and **EN 50082-2** for immunity.

PD 5015 is approved in compliance with the **IEC 68-2-6 Test Fc** standard for vibration.

Produced by:

Distributed by:



PROCES-DATA A/S

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