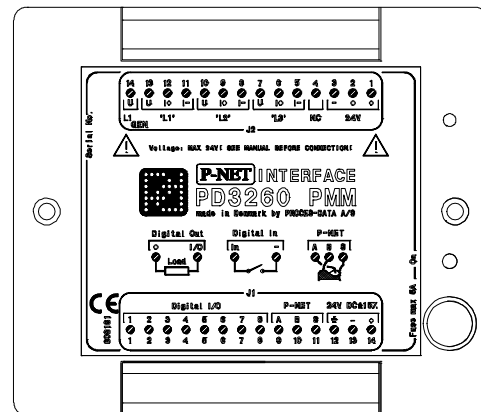


# PD 3260 POWER MONITOR

## FEATURES

- 1 Power Monitor channel.
- 1 Generator Switch channel.
- 1 Thyristor Switch channel.
- 8 Digital I/O channels.
- Programmable Calculator.
- Overload protection.
- Continuos self-test.
- P-NET Fieldbus communication.
- Watch Dog Timer.
- Rail mounting (DIN/EN).
- EMC approved (89/336/EEC).



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## APPLICATION

The PD 3260 Power Monitor Module is one of a collection of distributed process control units, intended for use within the P-NET Fieldbus system. Compact design and outstanding environmental specifications make the Power Monitor Module an ideal process component in industrial as well as other environments. A few possible applications are listed below:

- Electrical energy management in large plants.
- Power monitoring and automatic connection of accelerating generators.
- Thyristor switch controller for three-phase generators, motors, light, heating etc.
- Power-factor regulator with a capacitor battery, controlled by the digital outputs.

## SYSTEM DESCRIPTION

The Power Monitor Channel has analogue current and voltage inputs for a three-phase power line or three single phases. Voltages, Currents, Power, Power-factor and Frequency are continuously measured and presented in engineering units. Energy is summed over time.

The Generator Switch Channel performs automatic connection of accelerating synchronous or asynchronous generators to a power line. Asynchronous generators are measured with tachometer and synchronous generators with an additional analogue voltage input for the generator voltage.

The Thyristor Switch Channel has six modulated control outputs for a three-phase thyristor switch. A ramp function with user configurable min/max angle and slope are used to control the thyristor switch.

In the Digital I/O Channels various automatic functions such as automatic feedback control (single and double), one-shot output, pulse output etc. can be configured. Load current for each digital output is measured and can be read as a value in Amps.

Application specific functions can be added to the module with the user programmable calculator channel. This facility combined with the configurable automatic functions, significantly reduces the basic operations in the central control system.

The unit offers comprehensive self testing features, which enables reporting of disconnection, overload and process failure. All outputs are overload protected. A selectable watchdog timer ensures safe shut down of a process following a communication error or power failure.

As a distributed module, the unit can be mounted close to the process. Data communications with controllers are made with a single P-NET cable having a ring length of more than 1 km. This reduces plant wiring costs to a minimum.

The module may be plugged directly onto a mounting rail (EN 50 022 / DIN 46277) in a panel configuration or in a box designed for the plant environment. Modules may be removed for service without interference with operational activities on the rest of the network. Two snap connectors provide the terminals for field connection, power and communication.

**SPECIFICATIONS** (all specifications are respected in the approved EMI conditions):

**Power Monitor Channel**

Input frequency range 47 - 62 Hz  
Measuring accuracy  $\pm 0.1$  Hz

Input voltages nom. 24V RMS  
Input currents nom. 0.2/1.0A RMS  
Accuracy  $\pm 0.5$  % of FS  
Resolution  $\pm 0.2$  % of FS  
Update frequency 100 ms (50 Hz line)

Power factor -1.00 to +1.00

**Generator Switch Channel**

Tachometer input 0 - 100 Hz

**Thyristor Switch Channel**

Thyristor output 0 - 180 deg at 10kHz  
Update frequency 20 ms (50 Hz line)

**Digital I/O Channels**

Input frequency max. 50 Hz  
Input voltage nom. 24 V DC  
Output voltage nom. 24 V DC  
Output current max. 1.0 A  
Measuring accuracy  $\pm 19$ mA

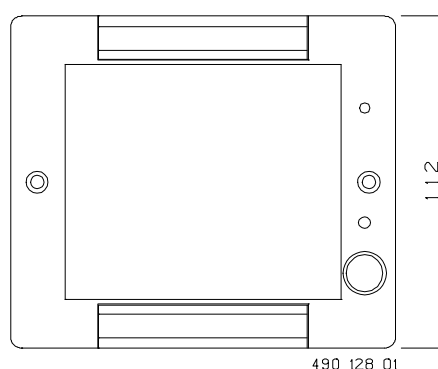
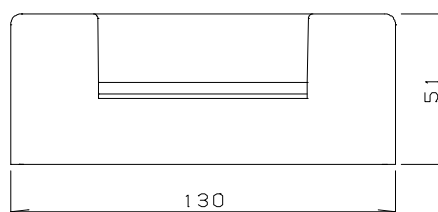
**Power Supply**

Voltage 24V DC  $\pm 15\%$   
Consumption max. 1.5 W

**Ambient Temperature**

Operation -25 - 70 °C  
Storage -40 - 85 °C

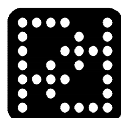
**Scale Drawing (in mm)**



PD 3260 is approved in compliance with the **EMC-directive no 89/336/EEC**. Test limits are determined by the generic standards **EN50081-1** for emission and **EN 50082-2** for immunity. PD 3260 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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