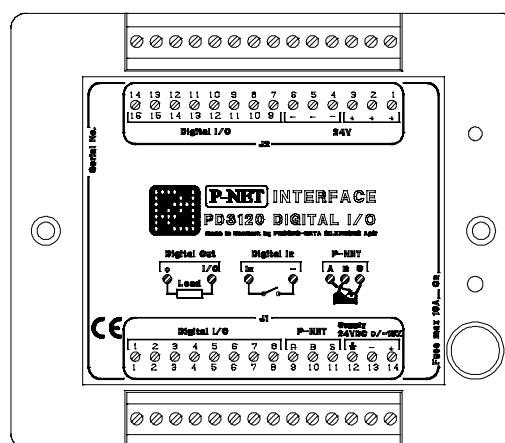


PD 3120 DIGITAL I/O MODULE

FEATURES

- * 16 Input/Output Channels (24 VDC)
- * Pulse or Contact Counting
- * Pulse and one-shot on all outputs
- * Output Feedback Facility
- * Automatic Output Functions
- * Overload Protection
- * Current measuring on each output
- * Programmable Calculator
- * Continuous Selftest
- * P-NET Fieldbus Communication
- * Watch Dog Timer
- * Rail mounting module (DIN / EN)
- * EMC approved (89/336/EEC)



APPLICATION

The PD 3120 Digital I/O Module is one of a collection of distributed process control units, intended for use within the P-NET Fieldbus system. It provides a versatile interface between valves, switches, pulses, lamps, alarms, motors, level detectors, etc., and distributed master control computers.

The module possesses a programmable Calculator, which can be purpose programmed to control the digital outputs and monitor the digital inputs. The Calculator operates with different types of variables, such as reals, integers, bytes, booleans, timers and arrays. With the utilization of user programmes, application specific functions, such as digital control loop and PLC functions may be set up for use in a wide variety of local autonomous process applications.

The compact design and the outstanding environmental specifications for the Digital I/O module, makes it an ideal process component in industrial as well as other environments.

SYSTEM DESCRIPTION

The PD 3120 Digital I/O Module is an intelligent module, provided with 16 input/output channels for 24 VDC, an interface for the P-NET Fieldbus and an internal programmable calculator for local control.

Various automatic functions can be selected on each digital channel, such as automatic feedback control (single as well as double), one-shot output and pulse output, to reduce the basic operations from the central control system or enable the unit to operate autonomously.

PD 3120 offers comprehensive self-testing features, which enables reporting of disconnection, overload and process failure. All outputs are protected against overload. The watchdog timer ensures the safe shut down of a process following a communication error or power failure.

The output current (Sink current) is measured continuously on each channel and can be read as a value in Amps. If the current exceeds the specified max value, the output is switched off and an error code (overload) is generated in the module. This feature may be used on purpose, eg. to open a window using a DC motor, where the motor is stopped automatically when reaching the end position because of the increasing current in the motor.

Each channel is automatically summarizing OperatingTime as a value in seconds and counting the number of pulses on the input. Data for maintenance may be stored directly on each channel.

A common channel in the module provides the possibility to read/set all inputs/outputs or error flags in one P-NET transmission.

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 over 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. The module may be removed for service without interference with operational activities on the rest of the network. 2 snap connectors provide the terminals for field connection, power and communication.

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

Digital Input Channels:

Switch Input	Nominal 24V DC
Frequency	50 Hz max

Digital Output Channels:

Voltage	Nominal 24V DC
Current	max 1.0 A
Measuring accuracy	±19 mA

Calculator Program:

Memory size	7000 bytes
Instruction time	0.3 ms typical

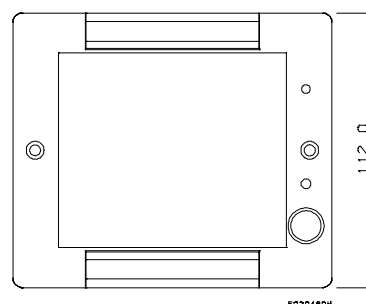
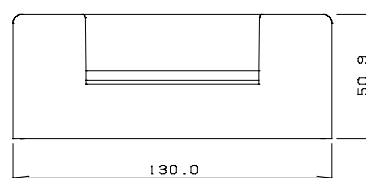
Power Supply:

Voltage	24V DC ±15 %
Consumption	max. 3 W

Ambient Temperature:

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

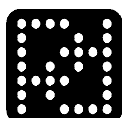
Scale Drawing (in mm)



PD 3120 is approved in compliance with the **EMC-directive no 89/336/EEC**. Test limits are determined by the generic standards **EN 50081-1** for emission and **PrEN 50082-2** for immunity. PD 3120 is approved in compliance with the **IEC 68-2-6 Test Fc** standard for vibration.

Produced by:

Distributed by:



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