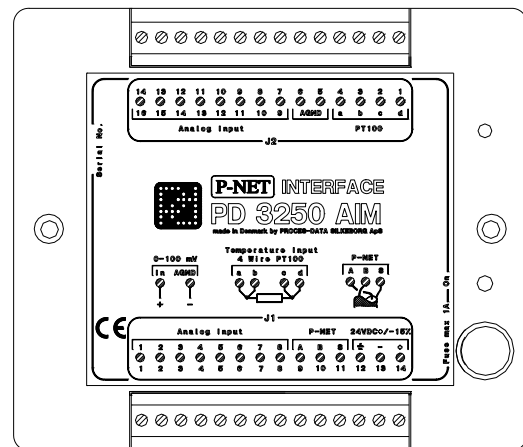


PD 3250 ANALOG INTERFACE MODULE

FEATURES

- 16 High resolution (15 bit) 0-100mV or Thermocouple inputs
- Linearisation for Thermocouple types: R,S,B,J,T,E,K & N
- 1 High resolution (15 bit) Pt-100 input
- Filtered input signals
- Suppression of 50 & 60 Hz noise
- High and Low level limit switch on each channel
- Advanced self test facility
- Overload protection
- P-NET Fieldbus communication
- Watchdog Timer
- Rail Mounting module (DIN / EN)
- EMC Approved (89/336/EEC)



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APPLICATION

The PD 3250 Analog Interface Module (AIM), is one of a collection of distributed process control units, intended for use within a P-NET Fieldbus system. It provides highly a versatile interface for measurement transducers generating analog voltage signals (0 -100 mV), and for a wide range of Thermocouple devices.

The PD 3250 provides internal conversion of voltage measurements into any engineering unit representing the analog process being monitored and controlled. In the case of thermocouple utilisation, ranging and linearisation are automatically applied, depending on the particular thermocouple type defined. Furthermore, an additional Pt-100 temperature input can provide an absolute temperature offset to any of the thermocouple measurements. All fully processed measurements are available for direct interrogation by central control or any other master unit connected to the P-NET fieldbus.

The compact design and outstanding environmental features, makes the Analog Interface Module an ideal process component within industrial, as well as other environments.

SYSTEM DESCRIPTION

The PD 3250 module is an intelligent measurement device, provided with 16 independent analog input channels for use with a wide range of thermocouple transducers, and/or for 0-100mV signals. Also included is a Pt-100 temperature reference input, and a communications interface for the P-NET fieldbus.

The PD 3250 utilises 4 analog to digital converters, functioning with a fully integrating principle. Each measurement is integrated over a 100mS period, which reduces the influence of noise, and results in highly stable input signal measurement readings. Input signals are galvanically isolated from the power supply.

The unit offers comprehensive self testing features, which enables the reporting of disconnection, overload and process failure. All inputs are protected against overload. The selectable watchdog timer generates an internal error message during a communications, or power failure.



All input signals are filtered and suppressed against 50 and 60 Hz interference. An additional filter may be applied to the input signal. The filter time constant is configurable for each channel.

As a distributed module, the unit can be mounted close to the process. Data communications between modules and controllers, are made using a single P-NET cable, having a ring length of over 1Km. This reduces plant wiring costs to a minimum.

The module may be plugged directly onto a mounting rail within a panel (EN 50 022 / DIN 46277), or in a box designed for the plant environment

SPECIFICATIONS (applicable within worst case EMI conditions)

Analog input (0-100mV):

Measurement error :
 @ 0°C to +50°C, max. $\pm 0.1\%$ of act. vol. $\pm 10 \mu\text{V}$
 @ -25°C to 70°C, max. $\pm 0.3\%$ of act. vol. $\pm 10 \mu\text{V}$
 Resolution : $5 \mu\text{V}$
 Repeatability : $\pm 10 \mu\text{V}$
 Input impedance: min. $5 \text{M}\Omega$

Power supply:

Voltage: 24V DC $\pm 15\%$
 Consumption: max. 1.3 W

Ambient Temperature:

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

Analog input (Thermocouple):

Measurement error:
 As above, except error due to repeatability depends on thermocouple device type.
 Refer to PD 3250 manual 502 082

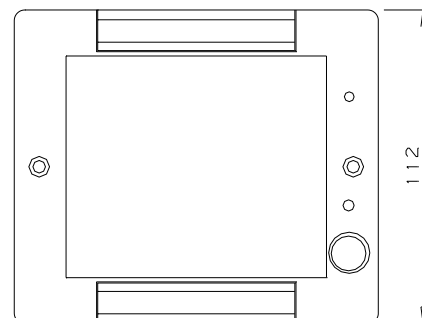
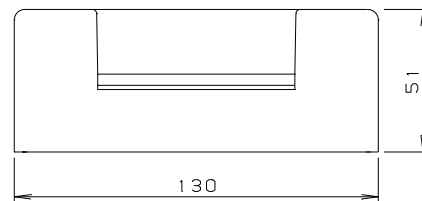
Temperature input (Pt-100):

Accuracy @ -100°C max. $\pm 0.19^\circ\text{C}$
 Accuracy @ 20°C max. $\pm 0.29^\circ\text{C}$
 Accuracy @ 200°C max. $\pm 0.51^\circ\text{C}$

Input Measurement update time:

Analog inputs:
 1 - 4 channels enabled 0.6 s
 1 - 16 channels enabled 1.5 s
 Temperature input:
 1 - 4 channels enabled 1.8 s
 1 - 16 channels enabled 4.5 s

Scale Drawing (in mm)



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PD 3250 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 3250 is approved in compliance with the **IEC 68-2-6 Test Fc** standard for vibration

Produced by:

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