

# Product Information

# Periphery module

# PM AI802



(valid from 06/2012)

## Changes to older versions of this document

**Changed in Rev. 5:** Temperature range PT100, connectors, new design line  
**Changed in Rev. 6:** information for disposal of old equipment



## Description

compact periphery module for

### - 8 analog inputs

- 4x 4mA...20mA
- 4x PT100

### 2 analog outputs

- 2x 4mA...20mA

- Resolution 12 Bit
- green diagnostic LED for each input
- red diagnostic LED for each input for error (short cut detection or temperature below - 50°C )
- insertion stripe with description field for every signal
- cage-clamp connector with bolt flanges on side

### Attention!

This module has an internal supply for the 2-wire encoders (4-20mA).

**Do not connect pins 1-4 when using 3/4-wire encoders!**

## for 3- / 4-wire encoders

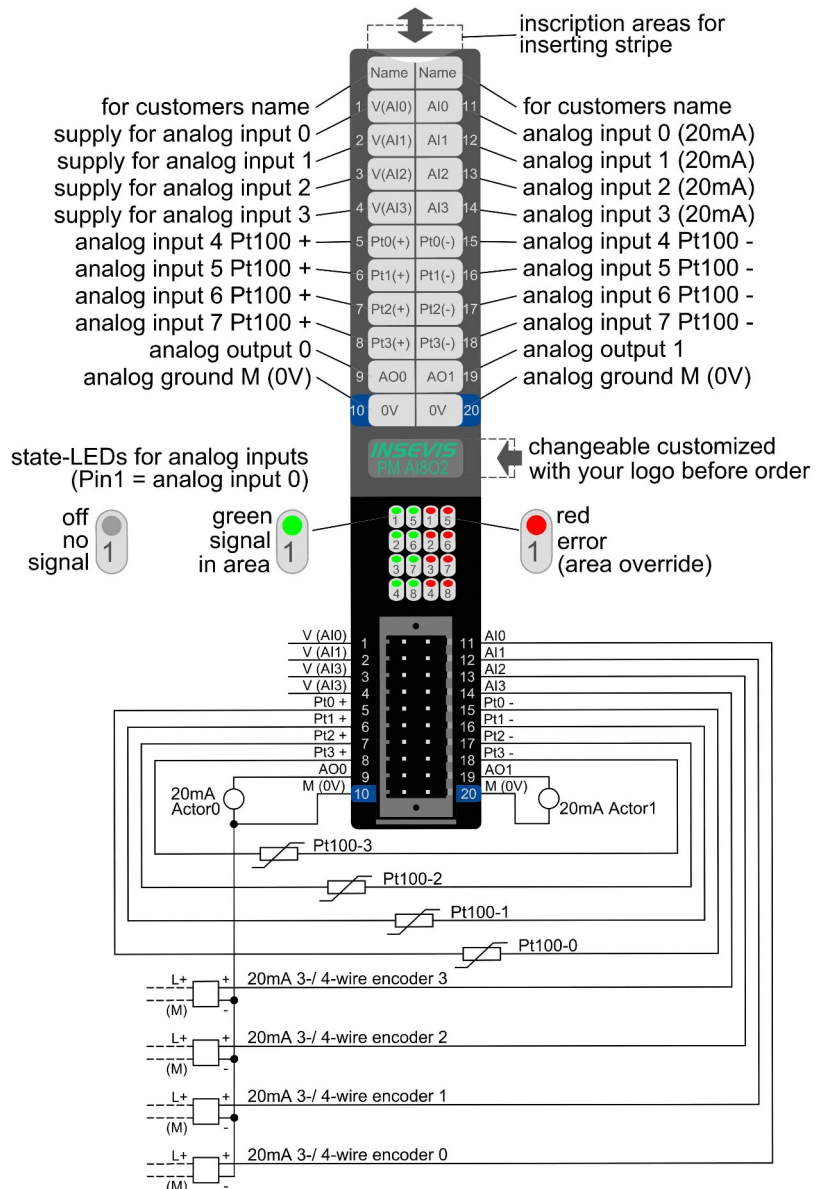


Figure above: Description and wiring of all connections of periphery module AI8O2 for 3-/ 4-wire encoders

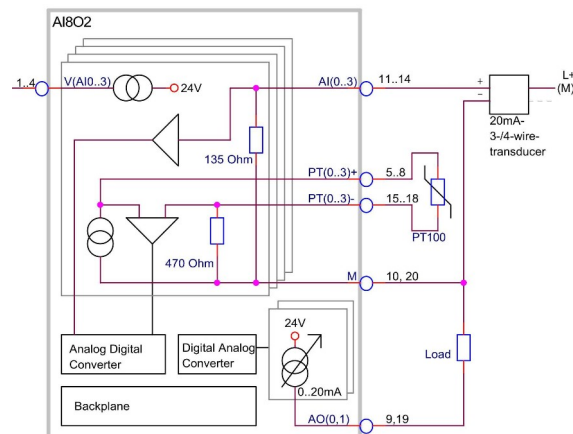


Figure above: Block diagram PM AI8O2 for 3-/ 4-wire encoders

Input	
Start address:	<input type="text" value="128"/>
End address:	<input type="text" value="143"/>
Output	
Start address:	<input type="text" value="128"/>
End address:	<input type="text" value="131"/>
General	
Integration time [ms]	<input type="text" value="0"/>

Figure above: configuration block of the start-/ end addresses of AI8O2-i/o's (in words) in the ConfigStage

Technical data			
Operating temperature range Storage temperature range Dimensions W x H x D (mm) Weight	-20°C ... +60°C (without condens.) -30°C ... +80°C 20 x 108 x 70 mm ca. 150 g	Load voltage L+  Current consumption Power dissipation	24V DC (10V ... 30V DC, connected by device supply) 150 mA (max.) 2 W (max.)
Connection technology	connector with cage clamp technology for cross section up to max. 1,5mm <sup>2</sup>	Wire length unshielded (max.) shielded (max.)	30 m 100 m
Analog inputs	8	valid voltage between inputs and A-GND (max.)	0 V ... +24 V DC
Input area (nominal values)	AE 0...3: 4 mA ... 20 mA AE 4...7: PT100 -200°C ... +300°C	Error message during override metering area	adjustable diagnosis- and limit value alert on request
Under- / override areas	0 mA ... < 4mA >20 mA ... 23 mA -243°C ... <-200°C >+300°C ... +450°C	Broken wire detection	by overrun / shortfall of metering area
Diagnostic LEDs	4 green: 4-10mA-signal in valid area 4 green: PT100: -50°C ... 300°C 4 red: override (mA) or short circuit 4 red: PT100-short cut or temperature below ≤ - 50°C no displaying broken wires and open inputs	Access of sensor	unsymmetric against A-GND (single ended) for metering area 4 mA ... 20 mA 2-wire, symmetric for metering area PT100
Input resistance	120 Ω (typ.) metering area 20 mA 500 Ω (typ.) metering area PT100	Value number format	0000 ... 6C00 (hexadecimal) for metering area 4 mA ... 20 mA 0,1°C for metering area PT100
Resolution	12 Bit	Integration time	adjustable 17 ms or 20 ms
Metering principle / conversion principle	successive approximation	Specifity (based on input area)	< 1%
Sampling cycle time (typ)	1 ms	Current limitation	50 mA
Analog outputs	2	Value number format	0000 ... 6C00 (hexadecimal) for metering area 4 mA ... 20 mA
Output area (nominal values)	4 mA ... 20 mA	Short cut protection	ja
Override area	20 mA ... 23 mA	Short cut current (typ.)	32 mA
Resolution	12 Bit	Setting time: response time τ (typ)	5 ms
Load resistance against A-GND	4..20 mA: 500 Ω (max.)	Specifity (based on output area)	< 1%

Ordering data module		
Identification	Order-no.	Packaging unit
Periphery module <b>AI8O2</b>	PM-AI8O2-02	PU: 1 piece
Connector 2x10pin with pin markings and bolt flanges on side	E-CONS20A-00	PU: 1 piece

**Qualified personnel**

All devices described in this manual may only be used, built up and operated together with this documentation. Installation, initiation and operation of these devices might only be done by instructed personnel with certified skills, who can prove their ability to install and initiate electrical and mechanical devices, systems and current circuits in a generally accepted and admitted standard.

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**Disposal**



Do not throw old appliances in the household waste! In the interest of environmental protection, old appliances must be collected separately from unsorted municipal waste. You can find out more about the proper disposal / return of your old appliance at [www.insevis.com/disposal](http://www.insevis.com/disposal).

Attention: The deletion of personal data on the old devices to be disposed of is the responsibility of the end user.

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