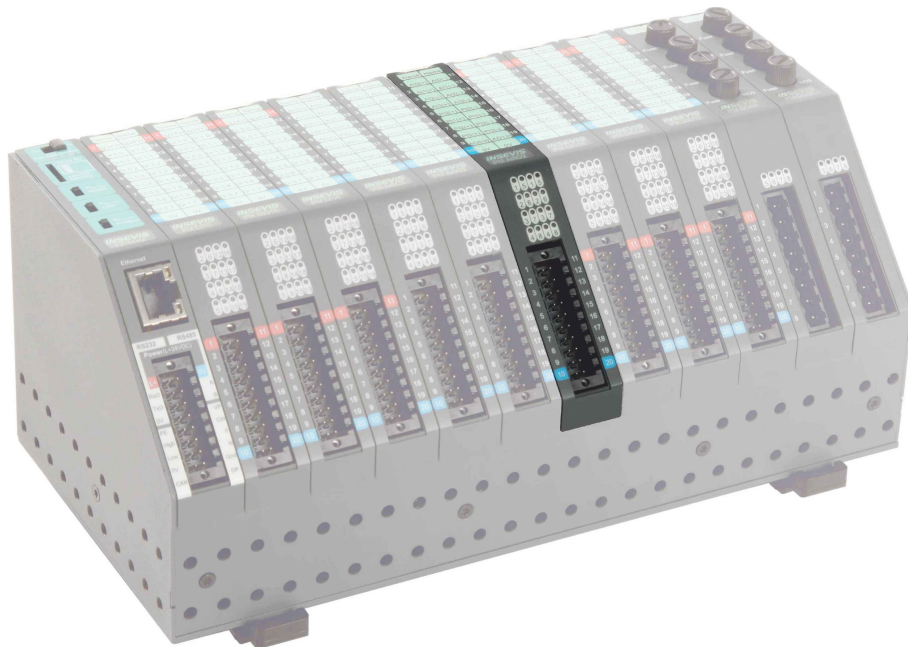


Product Information

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

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 short cut detection or temperature below - 50°C)
- insertion stripe with description field for every signal
- cage-clamp connector with 2 lift arms or bolt flanges on side

INSEVIS-benefit:

This module has an internal supply for the 2-wire encoders (4-20mA). So it is not necessary to care for external supply!

If you use these pins 1-4, do not apply external encoder supply!

for 2-wire encoders

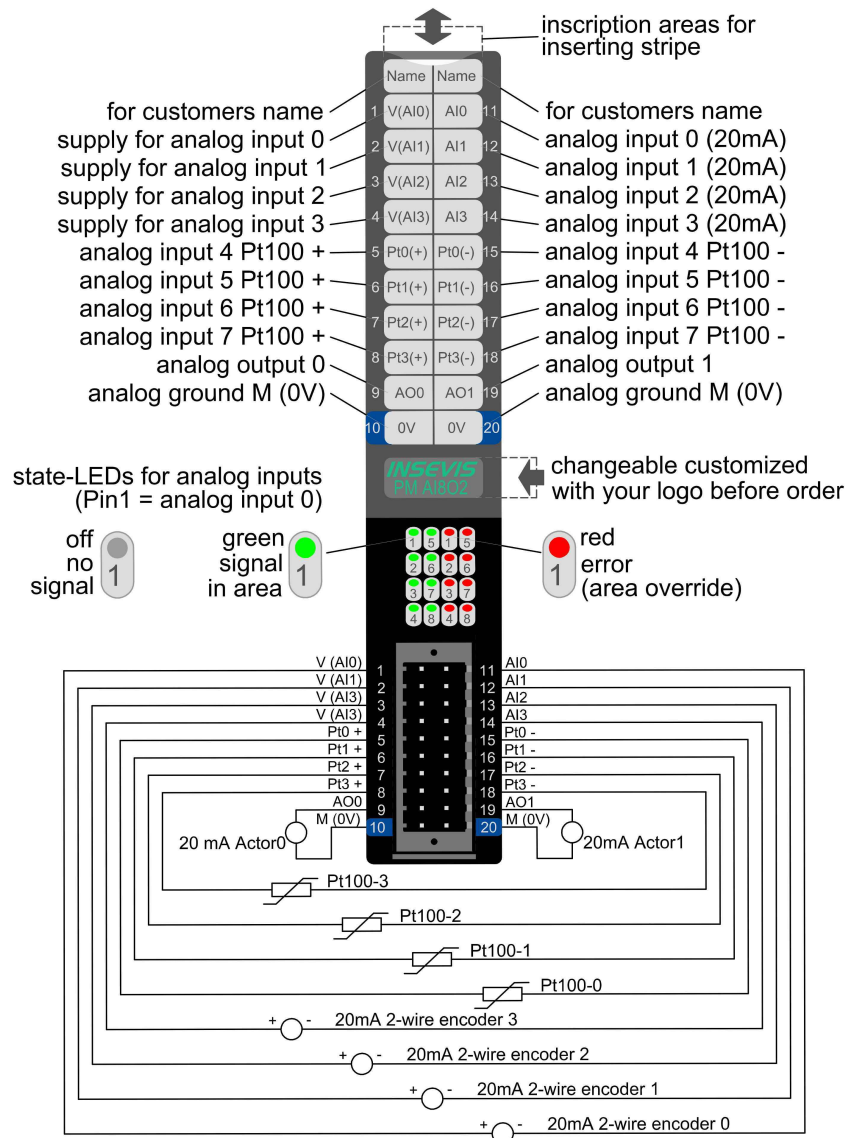


Figure above: Description and wiring of all connections of periphery module AI8O2 for 2--wire encoders

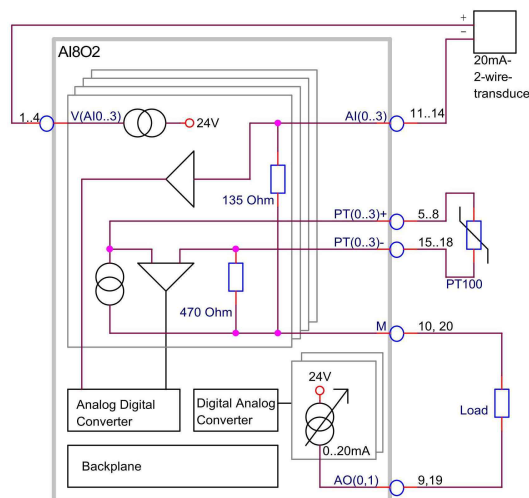


Figure above: Block diagram PM AI8O2 for 2-wire encoders

Input	
Start address:	128
End address:	143
Output	
Start address:	128
End address:	131
General	
Integration time [ms]	0

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

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 2 lift arms or 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

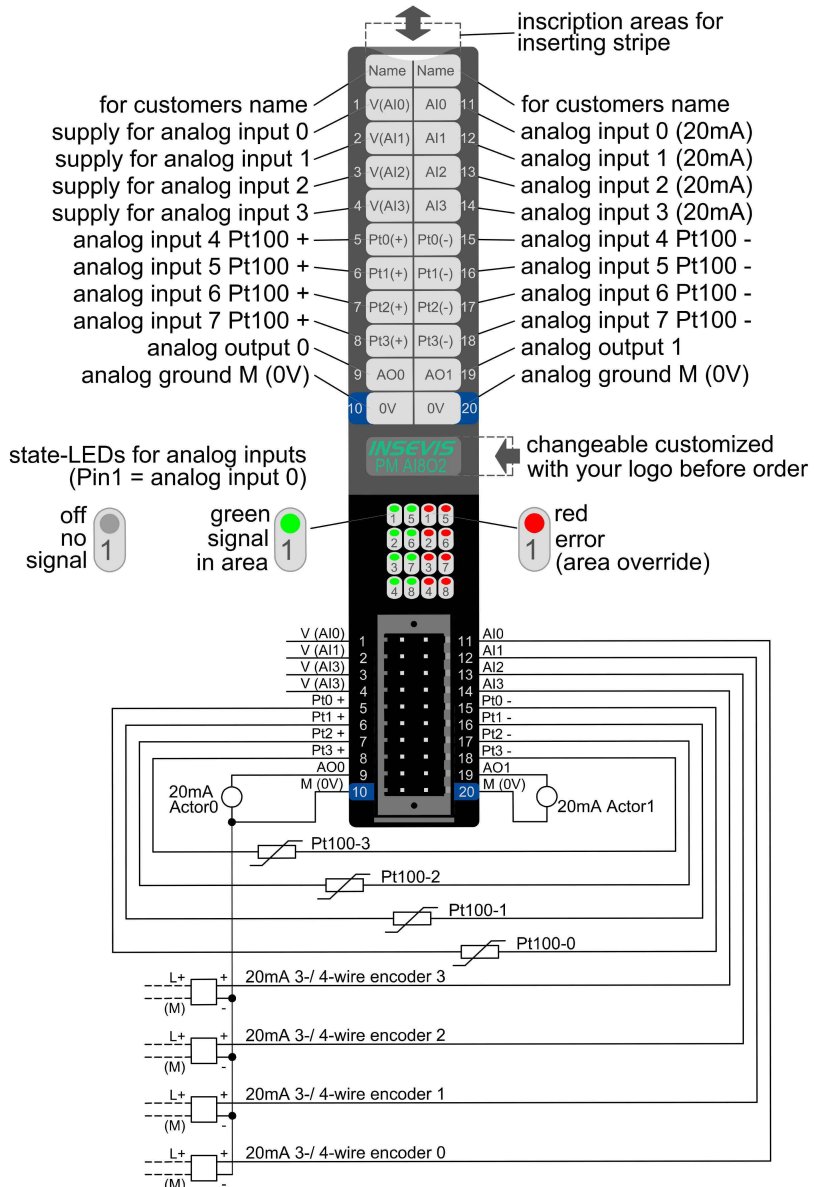


Figure above: Description and wiring of all connections of periphery module AI802 for 3-/ 4-wire encoders

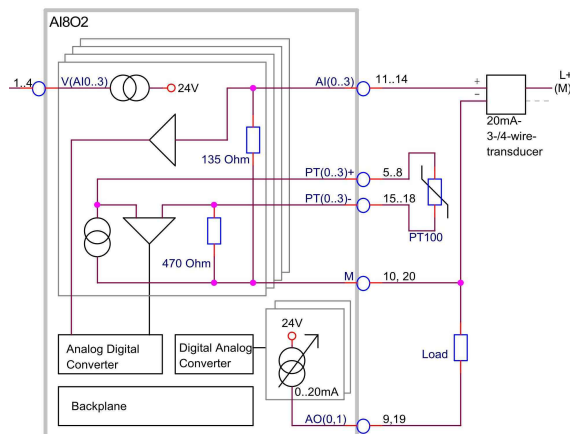


Figure above: Block diagram PM AI802 for 3-/ 4-wire encoders

Input	
Start address:	128
End address:	143
Output	
Start address:	128
End address:	131
General	
Integration time [ms]	0

Figure above: configuration block of the start-/ end addresses of AI802-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 ²	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	Specifyity (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.)	Specifyity (based on output area)	< 1%

Ordering data module

Identification	Order-no.	Packaging unit
Periphery module AI802	PM-AI802-02	PU: 1 piece

Ordering data accessoires

Identification	Order-no.	Packaging unit
Connector 2x10pin with pin markings and lift arms on side	E-CON20A-00	PU: 1 piece
Connector 2x10pin with pin markings and bolt flanges on side	E-CONS20A-00	PU: 1 piece
Spare part: Inserting stripe for description fields, 2x11 fields *	E-LABES22-00	PU: 20 pieces
Inserting stripe V for logo and identification for rear side *	E-LABV-00	PU: 100 pieces

* (1x already part of first deliveries scope)

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.

Manuals, sample programs

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