

Product Information

Periphery module PM DI016













(valid from 06/2012)

Changes to older versions of this document

Changed in Rev. 4: in-/ output delay times changed

Changed in Rev. 5: information for a byte wise switching off of all outputs

Changed in Rev. 6: connectors, new design line

Changed in Rev. 7: wiring of outputs (2-wire-encoders) corrected

Changed in Rev. 8: input threshold voltage

Changed in Rev. 9: information for disposal of old equipment



application for 2-wire switches Description compact periphery module inscription areas for for 16 digital transistor inserting stripe outputs 24V with back-Name readable inputs for customers name L+(0) L+(1) for customers name green diagnostic LED L+ Byte0 (+24V) L+ Byte1 (+24V) DIO0.0 DIO1.0 for each in-/ output digital in- or output 1.0 digital in- or output 0.0 DIO1.14 DIO0.1 digital in- or output 0.1 digital in- or output 1.1 insertion stripe with DIO1.2 DIO0.2 digital in- or output 0.2 digital in- or output 1.2 description field for every signal DIO0.3 DIO1.3 digital in- or output 1.3 digital in- or output 0.3 digital in- or output 1.4 digital in- or output 0.4 DIO0.4 DIO1.4 cage-clamp connector with digital in- or output 0.5 digital in- or output 1.5 bolt flanges on side DIO0.5 DIO1.5 digital in- or output 0.6 digital in- or output 1.6 DIO0.6 DIO1.6 digital in- or output 1.7 digital in- or output 0.7 Scope of delivery: - technical information 0101.7 digital ground M (0V) digital ground M (0V) DIO0.7 - brief instruction 0V 0V changeable customized state LED for **INSEVIS-** benefit: with your logo before order (Pin2 = Byte 0.0)Each single outputs can be green off (switched off, so that you can "1" 2 High "0" realize different ratios of I/Os Low e.g.10dl and 6dO or 7dl and 9dO. Only the total sum of I/Os must be ≤16. Byte0 (+24V) Attention: DI 0.0 DO 1.0 L+supplys of the outputs are separated for each byte (left and right). At a use as outputs only all these outputs can be switched off together by switching off the L+ supply of sample: all bits of byte 0 as input sample: all bits of byte 1 as output this byte. above: Description and wiring of DIO16 → If there are used some of for 2-wire switches these bits as inputs, they **DIO16** may not have applied a L+ByteQ DIO(0..7) 2..9. 11 L+Byte1 voltage (24V) while switching 0 DIO(8..15) 12..19 off. Input 24V End address: 15k Ohm Back-Output plane 10, 20 0 End address: Block Mode diagram of DIO16 (as backreadable output) Disable the output Channel 0.0 \checkmark Channel 0.1 $\overline{\mathbf{v}}$ Channel 0.2 DIO16 Channel 0.3 DIO(0..7)Channel 0.4 L+Byte1 V DIO(8..15) Channel 0.5 | V | V Channel 0.7 Channel 1.0 24V Channel 1.3 Channel 1.4 15k Ohm Back-Channel 1.5 plane 10, 20 Channel 1.6 Channel 1.7 configuration block of DIO16 -in-/outputs Block diagram of DIO16 (as input only)

(in byte) in the ConfigStage



Description

compact periphery module for 16 digital transistor outputs 24V with backreadable inputs

- green diagnostic LED for each in-/ output
- insertion stripe with description field for every signal
- cage-clamp connector with bolt flanges on side
- Scope of delivery:
- technical information
- brief instruction

INSEVIS- benefit:

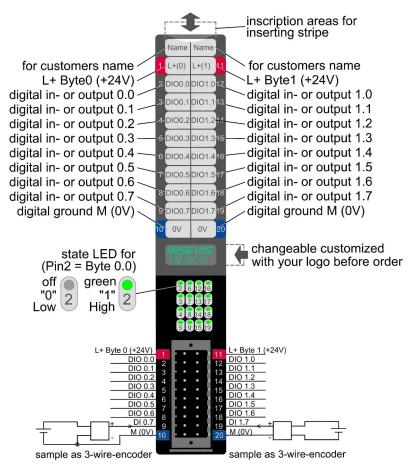
Each single outputs can be switched off, so that you can realize different ratios of I/Os e.g.10dl and 6dO or 7dl and 9dO. Only the total sum of I/Os must be ≤16.

Attention:

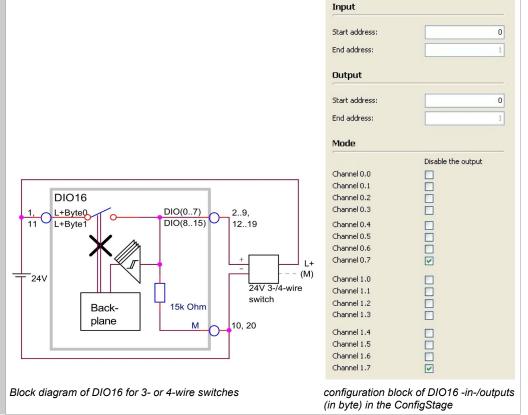
L+supplys of the outputs are separated for each byte (left and right).

- → At a use as outputs only all these outputs can be switched off together by switching off the L+ supply of this byte.
- → If there are used some of these bits as inputs, they may not have applied a voltage (24V) while switching off.

Application wit 3- or 4-wire switches



above: Description and wiring of DIO16 for 3-/ 4-wire switches





Technical data				
Dimensions W x H x D (mm) Weight	20 x 108 x 70 mm ca. 150 g			
Operating temperature range Storage temperature range Relative humidity	-20°C +60°C (without condensation) -30°C +80°C up to 96% (without condensation)			
Connection technology	connector with cage clamp technology for cross section up to max. 1,5mm ²			
IP-protection class Vibrations	IP41 Frequency range 2 -100Hz, amplitude 1mm peak < 13,2Hz acceleration 0,7g >13,2Hz			
Load voltage L+ Current consumption Power dissapation	10 V 30 V DC 50 mA (without load) internal limited			
Wire length unshielded (max.) shielded (max.)	30 m 100 m			

Digital in-/ outputs Diagnostic LEDs	16 in- or outputs (adjustable by software) 16, green		
Output current for signal 0 for signal 1 Cumulated current per output-byte	0,5 mA (max.) 0,5 A (max. bis 60°C) 3 A (max. bis 60°C)	Input current for signal 1	1 mA (typ.)
Signal level of outputs for signal 0 for signal 1	1,0 V at 500 Ω (max.) L+ - 1,0 V at 0,5 A load (min.)	Input voltage for signal 0 for signal 1	0V +5 V +10,5V +30 V
Input delay Output delay	50 μs (typ.) 30 μs (typ., without load)	Switch on delay Switch off delay Sampling cycle time	1,5 ms (typ.) 4,6 ms (typ.) synchronous to cycle
Max. switching frequency with ohmic load	100 Hz		
Broken wire detection Error diagnostic Potential separation to PLC		no no	

Ordering data module				
Identification	Order-no.	Packaging unit		
Periphery module DIO16	PM-DIO16-02	PU: 1 pieces		
Connector 2x10pin with pin markings and bolt flanges on side	E-CONS20D-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.

Manuals, sample programs

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Disposal

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

With publication of this information all other versions are no longer valid.