

AXL F DI8/1 DO8/1 1H

Axioline F digital input and output module, 8 inputs, 24 V DC, 8 outputs, 24 V DC, 500 mA, single-conductor connection technology



Data sheet
8670_en_02

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1 Description

The module is designed for use within an Axioline F station.

It is used to acquire and output digital signals.

The filter times of the inputs can be set to increase noise immunity.

Filter times of 100 µs allow the user to implement a counter function with a maximum input frequency of 5 kHz in the application.

The outputs are short-circuit and overload-protected .

Input features

- 8 digital inputs according to EN 61131-2 type 1 and type 3
- 24 V DC, 2.4 mA
- Connection of sensors in 1-wire technology
- Filter times can be set in three increments: < 100 µs, 1000 µs or 3000 µs
- Maximum input frequency: 5 kHz

Output features

- 8 digital outputs
- 24 V DC, 500 mA
- Connection of actuators in 1-wire technology

Features of Axioline F

- Minimum update time < 100 µs
- Device type label stored
- Diagnostic and status indicators



This data sheet is only valid in association with the UM EN AXL F SYS INST user manual.



Make sure you always use the latest documentation.
It can be downloaded from the product at phoenixcontact.net/products.

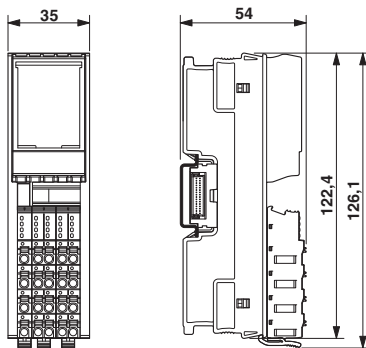
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3 Ordering data

| Description | Type | Order No. | Pcs. / Pkt. |
|--|--------------------------|-----------|-------------|
| Axioline F digital input and output module, 8 inputs, 24 V DC, 8 outputs, 24 V DC, 500 mA, single-conductor connection technology (including bus base module and connectors) | AXL F DI8/1 DO8/1 1H | 2701916 | 1 |
| Accessories | Type | Order No. | Pcs. / Pkt. |
| Axioline F bus base module for housing type H (Replacement item) | AXL F BS H | 2700992 | 5 |
| Axioline F connector set (for e.g., AXL F DO16/1 1H) (Replacement item) | AXL CNS 2L-O/D/UO/E1 | 2700986 | 1 |
| Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER (Marking) | ZB 20,3 AXL UNPRINTED | 0829579 | 25 |
| Zack marker strip, flat, in 10 mm pitch, unprinted, 10-section, for individual labeling with M-PEN 0,8, X-PEN, or CMS-P1-PLOTTER (Marking) | ZBF 10/5,8 AXL UNPRINTED | 0829580 | 50 |
| Insert label, Roll, white, Unlabeled, can be labeled with: THERMOMARK ROLL, THERMOMARK X, THERMOMARK S1.1, Mounting type: snapped into marker carrier, Lettering field: 35 x 28 mm (Marking) | EMT (35X28)R | 0801602 | 1 |
| Documentation | Type | Order No. | Pcs. / Pkt. |
| User manual, English, Axioline F: System and installation | UM EN AXL F SYS INST | - | - |
| User manual, English, Axioline F: Diagnostic registers, and error messages | UM EN AXL F SYS DIAG | - | - |

4 Technical data

Dimensions (nominal sizes in mm)



| | |
|--------------------|---|
| Width | 35 mm |
| Height | 126.1 mm |
| Depth | 54 mm |
| Note on dimensions | The depth is valid when a TH 35-7.5 DIN rail is used (according to EN 60715). |

General data

| | |
|--|---|
| Color | traffic grey A RAL 7042 |
| Weight | 133 g (with connectors and bus base module) |
| Ambient temperature (operation) | -25 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 5 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing) |

General data

| | |
|----------------------------------|---|
| Air pressure (operation) | 70 kPa ... 106 kPa (up to 3000 m above sea level) |
| Air pressure (storage/transport) | 70 kPa ... 106 kPa (up to 3000 m above sea level) |
| Degree of protection | IP20 |
| Protection class | III, IEC 61140, EN 61140, VDE 0140-1 |
| Mounting position | Any (no temperature derating) |

Connection data

| | |
|--|---|
| Designation | Axioline F connector |
| Connection method | Push-in technology |
| Conductor cross section solid / stranded | 0.2 mm ² ... 1.5 mm ² / 0.2 mm ² ... 1.5 mm ² |
| Conductor cross section [AWG] | 24 ... 16 |

Interface Axioline F local bus

| | |
|--------------------|-----------------|
| Connection method | Bus base module |
| Transmission speed | 100 MBit/s |

Communications power

| | |
|------------------------------------|------------------------------|
| Communications power U_{BUS} | 5 V DC (via bus base module) |
| Current consumption from U_{BUS} | max. 120 mA |
| Power consumption at U_{BUS} | max. 600 mW |

I/O supply

| | |
|--|---|
| Digital input and output module supply U_{IO} | 24 V DC |
| Maximum permissible voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current consumption from U_{IO} | 8 A (external fuse) |
| Power consumption at U_{IO} | typ. 440 mW (Without actuators), max. 97.35 W (of which 1.35 W internal losses) |
| Surge protection of the supply voltage | Electronic (35 V, 0.5 s) |
| Polarity reversal protection of the supply voltage | Parallel diode; with external 5 A fuse (for startup only) |
| Protection | max. 8 A (polarity reversal protection up to 5 A) |



When using for the first time, protect the module with a 5 A fuse. If all the modules are correctly connected in the system, the 5 A fuse can be replaced by an 8 A fuse. you can now load the module up to 8 A. Loads over 8 A are not permitted.



NOTE: Damage to the electronics

Provide the module with an external fuse to protect it against polarity reversal. The power supply unit must be able to supply four times the nominal current of the external fuse, to ensure that it trips in the event of an error.

Digital inputs

| | |
|--|---|
| Number of inputs | 8 |
| Connection method | Push-in technology |
| Connection method | 1-wire |
| Description of the input | EN 61131-2 types 1 and 3 |
| Nominal input voltage | 24 V DC |
| Nominal input current | 2.4 mA |
| Current flow | Linear until nominal current is reached, then constantly approx. 2.4 mA |
| Input voltage range "0" signal | -3 V DC ... 5 V DC |
| Input voltage range "1" signal | 11 V DC ... 30 V DC |
| Input filter time | 3000 μ s (default), 1000 μ s, < 100 μ s |
| Process data update | < 100 μ s (bus-synchronous) |
| Polarity reversal protection of the inputs | Parallel diode (30 V, 5 s) |

Digital outputs

| | |
|---|---|
| Number of outputs | 8 |
| Connection method | Push-in technology |
| Connection method | 1-wire |
| Nominal output voltage | 24 V DC |
| Maximum output current per channel | 500 mA |
| Maximum output current per device | 4 A (external fuse) |
| Nominal load, ohmic | max. 12 W (48 Ω; with nominal voltage) |
| Nominal load, inductive | max. 12 VA (1.2 H; 48 Ω; with nominal voltage) |
| Nominal load, lamp | max. 12 W (at nominal voltage) |
| Signal delay | max. 100 μs (when switched on) |
| Signal delay | max. 100 μs (when switched off; with at least 50 mA load current) |
| Switching frequency | max. 10000 per second (with at least 50 mA load current) |
| Switching frequency | max. 1 per second (with inductive load) |
| Switching frequency | max. 16 per second (with nominal lamp load) |
| Load min. | 10 kΩ |
| Energy consumption | see diagram |
| Limitation of the voltage induced on circuit interruption | -25.8 V ... -15 V |
| Output voltage when switched off | max. 1 V |
| Output current when switched off | max. 300 μA |
| Behavior with overload | Shutdown with automatic restart |
| Behavior with inductive overload | Output can be destroyed |
| Reverse voltage resistance to short pulses | Limited protection up to 0.5 A for 1 s |



NOTE: Damage to the electronics

If there is a faulty external voltage (reverse voltage) at one of the outputs, the output may be destroyed. This may cause unintentional setting of further outputs.

| | |
|---|-------------|
| Overcurrent shut-down | as of 0.7 A |
| Output current with ground connection interrupt when switched off | < 1 mA |
| Short-circuit protection, overload protection of the outputs | Electronic |

Fieldbus data telegram

| | |
|-----------------------------|-------------|
| Fieldbus system | PROFIBUS DP |
| Required parameter data | 3 Byte |
| Need for configuration data | 7 Byte |

Error messages to the higher level control or computer system

| | |
|---|-----|
| I/O supply failure | Yes |
| Short-circuit / overload of the digital outputs | Yes |

Electrical isolation/isolation of the voltage areas

| Test section | Test voltage |
|---|------------------------|
| 5 V communications power (logic), 24 V supply (I/O) | 500 V AC, 50 Hz, 1 min |
| 5 V supply (logic)/functional earth ground | 500 V AC, 50 Hz, 1 min |
| 24 V supply (I/O) / functional earth ground | 500 V AC, 50 Hz, 1 min |

Mechanical tests

| | |
|--|------|
| Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 | 5 g |
| Shock in acc. with EN 60068-2-27/IEC 60068-2-27 | 30 g |
| Continuous shock according to EN 60068-2-27/IEC 60068-2-27 | 10 g |

Conformance with EMC Directive 2004/108/EC

Noise immunity test in accordance with EN 61000-6-2

| | |
|--|---|
| Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 | Criterion B; 6 kV contact discharge, 8 kV air discharge |
| Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 | Criterion A; Field intensity: 10 V/m |
| Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 | Criterion B, 2 kV |
| Transient surge voltage (surge) EN 61000-4-5/IEC 61000-4-5 | Criterion B; DC supply lines: ± 0.5 kV/ ± 0.5 kV (symmetrical/asymmetrical) |
| Conducted interference EN 61000-4-6/IEC 61000-4-6 | Criterion A; Test voltage 10 V |

Noise emission test according to EN 61000-6-3

| | |
|--|---------|
| Radio interference properties EN 55022 | Class B |
|--|---------|

Approvals

For the latest approvals, please visit phoenixcontact.net/products.

5 Maximum outputs power consumption when inductive loads are switched off



NOTE: Damage to the electronics

Restrict freewheeling voltage to a maximum of -17 V when using an external freewheeling circuit! The external freewheeling circuit does not function in the case of higher negative voltages.

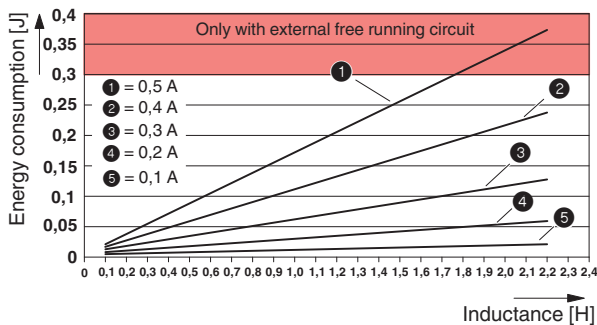


Figure 1 Maximum outputs power consumption when inductive loads are switched off

The specifications in the diagram refer to a maximum switching frequency of 1 Hz.

The diagram shows the maximum amount of energy that may be fed back into the corresponding output groups (outputs 1 to 4, 5 to 8) for each switch-off procedure when switching off an inductive load without external freewheeling circuit.

The current data refers to the ohmic DC voltage component of the inductive load.

6 Internal circuit diagram

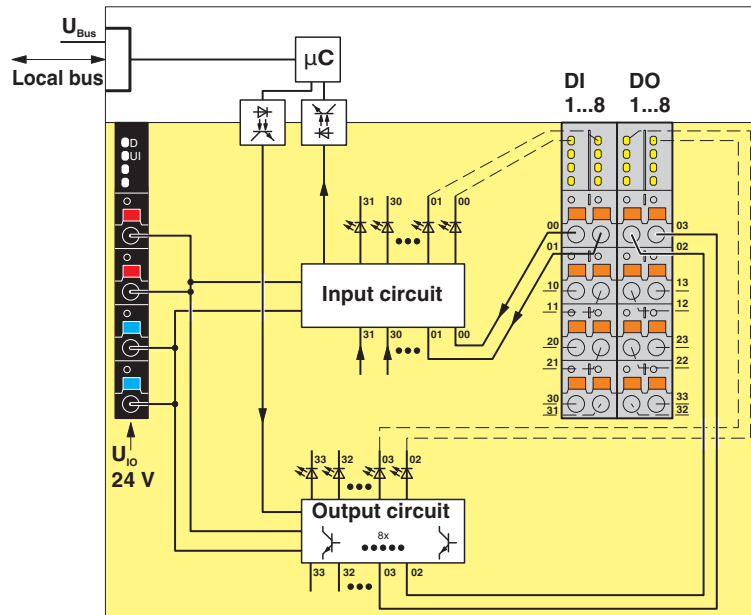


Figure 2 Internal wiring of the terminal points

Key:

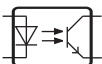
Local bus Axioline F local bus
(hereinafter referred to as local bus)



Microcontroller



Transistor



Optocoupler



LED



Power supply unit



Electrically isolated areas

Input circuit

Input circuit

Output circuit

Output configuration

7 Terminal point assignment

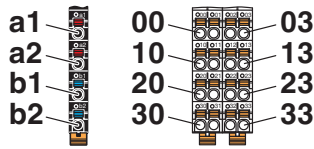


Figure 3 Terminal point assignment

| Terminal point | Color | Assignment | |
|-----------------------------|--------|----------------------------|--|
| Supply voltage input | | | |
| a1, a2 | Red | 24 V DC (U _{IO}) | Supply to digital input and output modules (internally jumpered) |
| b1, b2 | Blue | GND | Reference potential of the supply voltage (internally jumpered) |
| Digital inputs | | | |
| 00, 01, 10, 11 | Orange | IN1 ... IN4 | Digital inputs 1 ... 4 |
| 20, 21, 30, 31 | Orange | IN5 ... IN8 | Digital inputs 5 ... 8 |
| Digital outputs | | | |
| 02, 03, 12, 13 | Orange | OUT1 ... OUT4 | Digital outputs 1 ... 4 |
| 22, 23, 32, 33 | Orange | OUT5 ... OUT8 | Digital outputs 5 ... 8 |

8 Connection example

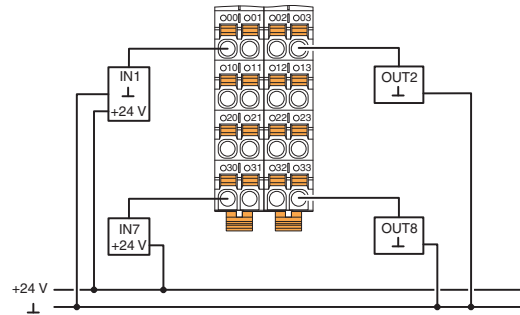


Figure 4 Typical connection of sensors and actuators when using external busbars

Ensure that GND of the sensors and actuators and GND for U_{IO} have the same potential.

9 Local status and diagnostic indicators



Figure 5 Local status and diagnostic indicators

| Designation | Color | Meaning | State | Description |
|--------------------------------|--------------------------|---|--------------------------|---|
| D | Red/ yellow/ green | Diagnostics of local bus communication | | |
| | | Power down | OFF | Device in (power) reset. |
| | | Not connected | Red flashing | Device operating, but there is no connection to previous device. |
| | | Reset | Red ON | Application reset Device operating, but there is still a connection to the previous device, the application is reset. |
| | | Ready | Yellow ON | Device operating, there is still a connection to the previous device, but the device has not yet detected a valid cycle after power on. |
| | | Connected | Yellow flashing | Valid data cycles have been detected, but the device is (not) yet part of the current configuration. |
| | | Device application not active | Green/yellow alternating | Valid data cycles are being detected. The master application set the output data to valid, however, the slave application has not set the input data to valid as yet. The master application set the output data to valid, however, the slave application cannot set the output data to valid as yet. |
| | | Active | Green flashing | The device functions, communication within the station is ok. The input data is not being read by the master application. The master application has not yet set the output data to valid. (For example, the connection to the controller is not yet established.) |
| Run | Green ON | Valid data cycles are being detected. All data is valid | | |
| | | UIO | Green | U _{input/output} |
| E1 | Red | Peripheral fault | OFF | Supply for digital input and output modules is not available. |
| | | | ON | Short-circuit/overload of an output. |
| 00, 01, 10, 11, 20, 21, 30, 31 | Yellow | Status of the inputs | OFF | No I/O error |
| | | | ON | Input is set. |
| 02, 03, 12, 13, 22, 23, 32, 33 | Yellow | Status of the outputs | OFF | Input is not set. |
| | | | Yellow ON | Output is set. |
| | | | OFF | Output is not set. |



For more information on the meaning of local diagnostic and status indicators, please refer to the UM EN AXL F SYS INST user manual.

10 Process data

The I/O data is displayed in S7-compatible format.

| Input process data | | | | | | | | |
|--------------------|----|----|----|----|----|----|----|----|
| Byte | 0 | | | | | | | |
| Bit | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Channel | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Terminal point | 31 | 30 | 21 | 20 | 11 | 10 | 01 | 00 |

| Output process data | | | | | | | | |
|---------------------|----|----|----|----|----|----|----|----|
| Byte | 0 | | | | | | | |
| Bit | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Channel | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Terminal point | 33 | 32 | 23 | 22 | 13 | 12 | 03 | 02 |

11 Parameter, diagnostics and information (PDI)

Parameter and diagnostic data as well as other information is transmitted via the PDI channel of the Axioline F station.

The standard and application objects stored in the module are described in the following section.

The following applies to all tables below:

Please refer to the UM EN AXL F SYS INST for an explanation of the object codes and data types.

| Abbreviation | Meaning |
|--------------|------------------------|
| A | Number of elements |
| L | Length of the elements |
| R | Read |
| W | Write |



Every visible string is terminated with a zero terminator (00_{hex}). The length of a visible string element is therefore one byte larger than the amount of user data.



For detailed information on PDI and the objects, please refer to the UM EN AXL F SYS INST user manual.

12 Standard objects

12.1 Objects for identification (device rating plate)

| Index (hex) | Object name | Object type | Data type | A | L | Rights | Meaning | Contents |
|--------------------------|-----------------|-------------|----------------|---|--------|--------|-----------------------------|--|
| Manufacturer | | | | | | | | |
| 0001 | VendorName | Var | Visible String | 1 | 16 | R | Manufacturer name | Phoenix Contact |
| 0002 | VendorID | Var | Visible String | 1 | 7 | R | Manufacturer identification | 00A045 |
| 0003 | VendorText | Var | Visible String | 1 | 49 | R | Comment on the manufacturer | Components and systems for industrial automation |
| 0012 | VendorURL | Var | Visible String | 1 | 30 | R | URL of the manufacturer | http://www.phoenix-contact.com |
| Module - general | | | | | | | | |
| 0004 | DeviceFamily | Var | Visible String | 1 | 19 | R | Device family | I/O digital IN-OUT |
| 0006 | ProductFamily | Var | Visible String | 1 | 33 | R | Product family | Axioline - High speed I/O system |
| 000E | CommProfile | Var | Visible String | 1 | 4 | R | Communication profile | 633 |
| 000F | DeviceProfile | Var | Visible String | 1 | 5 | R | Device profile | 0010 |
| 0011 | ProfileVersion | Record | Visible String | 2 | 11; 20 | R | Device profile version | 2011-12-07; Basic Profile V2.0 |
| 003A | VersionCount | Array | Unsigned 16 | 4 | 4 * 2 | R | Version counter | e.g., 0007 0001 0000 0000 |
| Module - special | | | | | | | | |
| 0005 | Capabilities | Array | Visible String | 1 | 8 | R | Properties | Nothing |
| 0007 | ProductName | Var | Visible String | 1 | 21 | R | Product designation | AXL F DI8/1 DO8/1 1H |
| 0008 | SerialNo | Var | Visible String | 1 | 11 | R | Serial number | xxxxxxxxxx (e. g., 1234512345) |
| 0009 | ProductText | Var | Visible String | 1 | 55 | R | Product text | 8 digital inputs, adjustable filter, 8 digital outputs |
| 000A | OrderNumber | Var | Visible String | 1 | 8 | R | Order No. | 2701916 |
| 000B | HardwareVersion | Record | Visible String | 2 | 11; 3 | R | Hardware version | e. g., 2011-02-04; 00 |
| 000C | FirmwareVersion | Record | Visible String | 2 | 11; 3 | R | Firmware version | 0000-00-00; -- |
| 000D | PChVersion | Record | Visible String | 2 | 11; 6 | R | Parameter channel version | 2010-01-08; V1.00 |
| 0037 | DeviceType | Var | Octet string | 1 | 8 | R | Module identification | 00 C0 00 01 00 00 00 DD _{hex} |
| Use of the device | | | | | | | | |
| 0014 | Location | Var | Visible String | 1 | 59 | R/W | Installation location | Can be filled out by the user. |
| 0015 | EquipmentIdent | Var | Visible String | 1 | 59 | R/W | Equipment identifier | Can be filled out by the user. |
| 0016 | AppIDeviceAddr | Var | Unsigned 16 | 1 | 2 | R/W | User-defined device number | Can be filled out by the user. |

12.2 Object for multilingual capacity

| Index (hex) | Object name | Object type | Data type | A | L | Rights | Meaning | Contents |
|-------------|-------------|-------------|----------------|---|------|--------|----------|----------------|
| 0017 | Language | Record | Visible String | 2 | 6; 8 | R | Language | en-us; English |

12.3 Diagnostics objects

| Index (hex) | Object name | Object type | Data type | A | L | Rights | Assignment/content |
|-------------|-------------|-------------|-----------|---|---------------------|--------|------------------------------|
| 0018 | DiagState | Record | | 6 | 2; 1; 1; 2; 1; 1 | R | Diagnostics state; see below |

Diagnostics state (0018_{hex}: DiagState)

This object is used for a structured message of an error.

| 0018 _{hex} : DiagState (Read) | | | | | |
|--|----------------|-----------------|--------------------------|-----------------------------------|--------------------|
| Subindex | Data type | Length in bytes | Meaning | Contents | |
| 0 | Record | 8 | Diagnostic state | Complete diagnostics information | |
| 1 | Unsigned 16 | 2 | Error number | 0 ... 65535 _{dec} | |
| 2 | Unsigned 8 | 1 | Priority | 00 _{hex} | No error |
| | | | | 01 _{hex} | Error |
| | | | | 02 _{hex} | Warning |
| | | | | 81 _{hex} | Error removed |
| | | | | 82 _{hex} | Warning eliminated |
| 3 | Unsigned 8 | 1 | Group | 00 _{hex} | No error |
| | | | | FF _{hex} | entire device |
| 4 | Unsigned 16 | 2 | Error code | See table below | |
| 5 | Unsigned 8 | 1 | More information follows | 00 _{hex} (not supported) | |
| 6 | Visible String | 1 | Text | 00 _{hex} (not supported) | |



The message with the priority 81_{hex} or 82_{hex} is a one-time internal message to the bus coupler that is implemented onto the error mechanisms of the higher-level system by the bus coupler.



After all errors have been eliminated, it is automatically reset.

Error code and status of the local status and diagnostics indicators

| Error code | Error | Priority | Group | D LED | UIO LED | E1 LED |
|---------------------|--------------------------------------|-------------------|-------------------|-----------------------|---------|--------|
| 0000 _{hex} | No error | 00 _{hex} | 00 _{hex} | Green ON | ON | OFF |
| 3400 _{hex} | I/O supply failure | 01 _{hex} | FF _{hex} | Flashing green/yellow | OFF | OFF |
| 2344 _{hex} | Short-circuit/overload of an output. | 02 _{hex} | FF _{hex} | Green ON | ON | Red on |

12.4 Objects for process data management

| Index (hex) | Object name | Object type | Data type | A | L | Rights | Assignment |
|-------------|-------------|------------------|--------------|---|---------|--------|--|
| 0025 | PDIN | Var | Octet string | 1 | 1 | R | Input process data |
| 0026 | PDOUT | Var | Octet string | 1 | 1 | R | Output process data |
| 003B | PDIN_Descr | Array of Records | | 3 | 8; 2; 2 | R | Description of the IN process data |
| 003C | PDOUT_Descr | Array of Records | | 3 | 8; 2; 2 | R | Description of the output process data |

The objects 003B_{hex} and 003C_{hex} are only applicable to tools.

IN process data (0025_{hex}: PDIN)

You can read the IN process data of the module with this object.

The structure corresponds to the representation in the "Process data" section.

| 0025 _{hex} : PDIN (Read) | | | |
|-----------------------------------|--------------|-----------------|--------------------|
| Subindex | Data type | Length in bytes | Meaning |
| 0 | Octet string | 1 | Input process data |

OUT process data (0026_{hex}: PDOUT)

You can write the output process data of the module with this object.

The structure corresponds to the representation in the "Process data" section.

| 0026 _{hex} : PDOUT (Read) | | | |
|------------------------------------|--------------|-----------------|---------------------|
| Subindex | Data type | Length in bytes | Meaning |
| 0 | Octet string | 1 | Output process data |

13 Application objects

| Index (hex) | Object name | Object type | Data type | A | L | Rights | Assignment |
|-------------|------------------------------------|-------------|------------|---|---|--------|------------------|
| FF8D | PD Output Substitute Configuration | Var | Unsigned 8 | 1 | 1 | R/W | Substitute value |
| FF8F | Input_Filter | Var | Unsigned 8 | 1 | 1 | R/W | Filter time |

13.1 Substitute value (FF8D_{hex}: PD Output Substitute Configuration)

Configure the substitute value with which the module is to be operated with an application reset using this object.

| FF8D _{hex} : PD Output Substitute Configuration (Read, write) | | | | |
|--|-----------|-----------------|-----------------------------|-------------------------------|
| Subindex | Data type | Length in bytes | Contents | |
| 0 | Var | 1 | 00 _{hex} (Default) | "0" output to all output bits |
| | | | 01 _{hex} | Hold last value |

13.2 Filter time (FF8F_{hex}: Input_Filter)

Configure the filter time of the module using this object.

| FF8F _{hex} : Input_Filter (read, write) | | | | |
|--|-----------|-----------------|-----------------------------|---------------|
| Subindex | Data type | Length in bytes | Contents | |
| 0 | Var | 1 | 00 _{hex} (Default) | 3000 μ s |
| | | | 01 _{hex} | 1000 μ s |
| | | | 02 _{hex} | < 100 μ s |

14 Device descriptions

The device is described in the device description files.

The device descriptions for controllers from Phoenix Contact are included in PC Worx and the corresponding service packs.

The device description files for other systems are available for download at phoenixcontact.net/products in the download area of the bus coupler used.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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