



IO-Link Parameter Datasheet

Signal lamp

VAZ-70MM-IO

Support: fa-info@pepperl-fuchs.com
Internet: www.pepperl-fuchs.com

DOCT-8077 - Version 1.01.000 / 2021-11-20

General Information

Device Identification

| | |
|-----------|-------------------|
| Vendor ID | 1 (0x0001) |
| Device ID | 983810 (0x0F0302) |

Features

| | |
|------------------------|-----|
| Data Storage | Yes |
| Block Parameterization | Yes |

Communication Characteristics

| | |
|--------------------------------|-----------------------------|
| IO-Link revision | V1.1 (specification V1.1.2) |
| IO-Link backward compatibility | n/a |
| Data transmission rate | COM2 (38.4 kbit/s) |
| Min. cycle time | 5 ms |
| Process data input | n/a |
| Process data output | 16 bit |
| SIO mode support | n/a |
| Compatible master port type | Class A, Class B (see NOTE) |

NOTE: For use at master with port class B, use 3-pole adapter or 3-wire cable.

Profile

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Supported Product Variants

| Product ID | Product Name | Description | Connector |
|------------|--------------|---|---------------|
| 70136308 | VAZ-70MM-IO | Signal lamp, diameter 70 mm, max. 5 segments, clamp | Clamp, 4-pole |

Connection

| Connection Diagram | Description |
|--------------------|---|
| | Clamp, 4-pole 1: L+ 2: C/Q 3: L- 4: n.c. |

Process Data

Process Data Output

| Sub | Name | Data type | Length | Bitoffs. | Value | Unit | Description |
|-----|-----------------|-----------|--------|----------|--------|------|--|
| .1 | CSC - Segment 1 | Boolean | 1 bit | 0 | 0 1 | | Controls the status of the segment. Off On |
| .2 | CSC - Segment 2 | Boolean | 1 bit | 1 | 0 1 | | Controls the status of the segment. Off On |
| .3 | CSC - Segment 3 | Boolean | 1 bit | 2 | 0 1 | | Controls the status of the segment. Off On |
| .4 | CSC - Segment 4 | Boolean | 1 bit | 3 | 0 1 | | Controls the status of the segment. Off On |
| .5 | CSC - Segment 5 | Boolean | 1 bit | 4 | 0 1 | | Controls the status of the segment. Off On |

NOTE: The process data output content can be accessed in addition over parameter 'Process Data Output' at index 41 (0x29)

Parameter Data

Identification

| Index | Parameter | Access | Data type | Length | Default | Description | DS | R |
|--------------|--------------------------|--------|-----------|-----------------|---|---|----|---|
| 16 (0x10) | Vendor Name | ro | String | 13 byte | Pepperl+Fuchs | The vendor name that is assigned to a Vendor ID. | | |
| 17 (0x11) | Vendor Text | ro | String | 29 byte | www.pepperl-fuchs.com/io-link | Additional information about the vendor. | | |
| 18 (0x12) | Product Name | ro | String | max. 30 byte | See table Supported Product Variants | Complete product name. | | |
| 19 (0x13) | Product ID | ro | String | max. 16 byte | See table Supported Product Variants | Vendor-specific product or type identification (e.g., item number or model number). | | |
| 20 (0x14) | Product Text | ro | String | max. 30 byte | Signal lamp | Additional product information for the device. | | |
| 21 (0x15) | Serial Number | ro | String | 14 byte | | Unique, vendor-specific identifier of the individual device. | | |
| 22 (0x16) | Hardware Revision | ro | String | 7 byte | HW**.** | Unique, vendor-specific identifier of the hardware revision of the individual device. | | |
| 23 (0x17) | Firmware Revision | ro | String | 7 byte | FW**.** | Unique, vendor-specific identifier of the firmware revision of the individual device. | | |
| 24 (0x18) | Application Specific Tag | rw | String | max. 32 byte | Your automation, our passion. | Possibility to mark a device with user- or application-specific information. | Y | F |

| Diagnosis | | | | | | | | | | | |
|---------------|-----------------|--------|-----------|--------|----------|---------|--|------|--|----|---|
| Index .sub | Parameter | Access | Data type | Length | Bitoffs. | Default | Value | Unit | Description | DS | R |
| 74 (0x4A) | Operating Hours | ro | UInteger | 32 bit | | | 0 .. >10 ⁶ (0 .. 2 ³² -1) | h | Shows the overall hours of operation since initial commissioning in resolution of 1 second. Calculation: gradient 0.000277778, offset 0.00 | | |

| Parameterization & Configuration | | | | | | | | | | | |
|----------------------------------|------------------------|--------|----------------------|--------|----------|---------|--------|------|--|----|---|
| Index .sub | Parameter | Access | Data type | Length | Bitoffs. | Default | Value | Unit | Description | DS | R |
| 12 (0x0C) | Device Access Locks | rw | Record ^{S0} | 2 byte | | | | | The access to the device parameters can be restricted by setting appropriate flags within this parameter. | Y | F |
| .1 | Parameter Write Access | rw | Boolean | 1 bit | 0 | 0 | 0 1 | | This lock prevents the write access to all read/write parameters of the device except for the parameter 'Device Access Locks'. Note: Setting this feature to 'Locked', may lead to an unexpected system behavior, as any user application or engineering tool will not have write permissions for device configuration settings. <i>Unlocked</i> <i>Locked</i> | Y | F |
| .2 | Data Storage | rw | Boolean | 1 bit | 1 | 0 | 0 1 | | This lock prevents the write access to the device parameters via the data storage mechanism. Note: This feature is implemented only for compatibility reasons. Do not set this flag to 'Locked', as this will inhibit the function Data Storage between master and device and lead to an unintended system behavior. <i>Unlocked</i> <i>Locked</i> | Y | F |

| Observation | | | | | | | | | | | |
|---------------|-----------|--------|-----------|--------|----------|---------|-------|------|---|----|---|
| Index .sub | Parameter | Access | Data type | Length | Bitoffs. | Default | Value | Unit | Description | DS | R |
| 41 (0x29) | PD Output | ro | Record | 16 bit | | | | | Last valid process output data written to the device. <i>See Process Data Output</i> | | |

NOTE 1: The parameter data provide the attributes DS (Data Storage) and R (Reset behavior). The following rules apply:
DS: Parameter marked with 'Y' (yes) are exchanged with the master via the data storage mechanism.
R: Parameter marked with 'F' are reset to the default value upon reception of the command 'Restore Factory Settings'.

NOTE 2: Parameter with datatype Record or Array, which are marked with 'S0' can only be accessed over subindex 0 (whole parameter object). Subindex access to single items is not possible.

Command Interface

| <i>Index</i> | <i>Parameter</i> | <i>Access</i> | <i>Data type</i> | <i>Length</i> | <i>Value</i> | <i>Description</i> |
|--------------|------------------|---------------|------------------|---------------|-------------------|---|
| 2 (0x02) | System Command | wo | UInteger | 8 bit | See command value | Command interface for applications. A positive acknowledge indicates the complete and correct finalization of the requested function. |

| <i>Command Value</i> | <i>Command</i> | <i>Description</i> |
|----------------------|--------------------------|---|
| 130 (0x82) | Restore Factory Settings | The parameter of the device are reset to factory settings. Note: A download of the data storage may be executed on the next power cycle and overwrite the factory default settings! |

Error Codes

| <i>Code</i> | <i>Additional code</i> | <i>Name</i> | <i>Description</i> |
|-------------|------------------------|--|---|
| 128 (0x80) | 17 (0x11) | Index not available | Read or write access attempt to a non-existing index. |
| 128 (0x80) | 18 (0x12) | Subindex not available | Read or write access attempt to a non-existing subindex of an existing index. |
| 128 (0x80) | 32 (0x20) | Service temporarily not available | Parameter not accessible due to the current state of the technology-specific application. |
| 128 (0x80) | 33 (0x21) | Service temporarily not available - local control | Parameter not accessible. The device is currently in an ongoing, locally controlled operation. |
| 128 (0x80) | 34 (0x22) | Service temporarily not available - device control | Parameter not accessible. The technology-specific application is currently in a remotely triggered operation. |
| 128 (0x80) | 35 (0x23) | Access denied | Write access to a read-only parameter or read access to write-only parameter. |
| 128 (0x80) | 48 (0x30) | Parameter value out of range | Written parameter value is outside of the permitted value range. |
| 128 (0x80) | 49 (0x31) | Parameter value above limit | Written parameter value is above its specified value range. |
| 128 (0x80) | 50 (0x32) | Parameter value below limit | Written parameter value is below its specified value range. |
| 128 (0x80) | 51 (0x33) | Parameter length overrun | Written parameter is longer than specified. |
| 128 (0x80) | 52 (0x34) | Parameter length underrun | Written parameter is shorter than specified. |
| 128 (0x80) | 53 (0x35) | Function not available | Written command is not supported by the technology-specific application. |
| 128 (0x80) | 54 (0x36) | Function temporarily unavailable | Written command is unavailable due to the current state of the technology-specific application. |
| 128 (0x80) | 64 (0x40) | Invalid parameter set | Written single parameter value collides with other existing parameter settings. |
| 128 (0x80) | 65 (0x41) | Inconsistent parameter set | Parameter set inconsistencies at the end of block parameter transfer. Device plausibility check failed. |