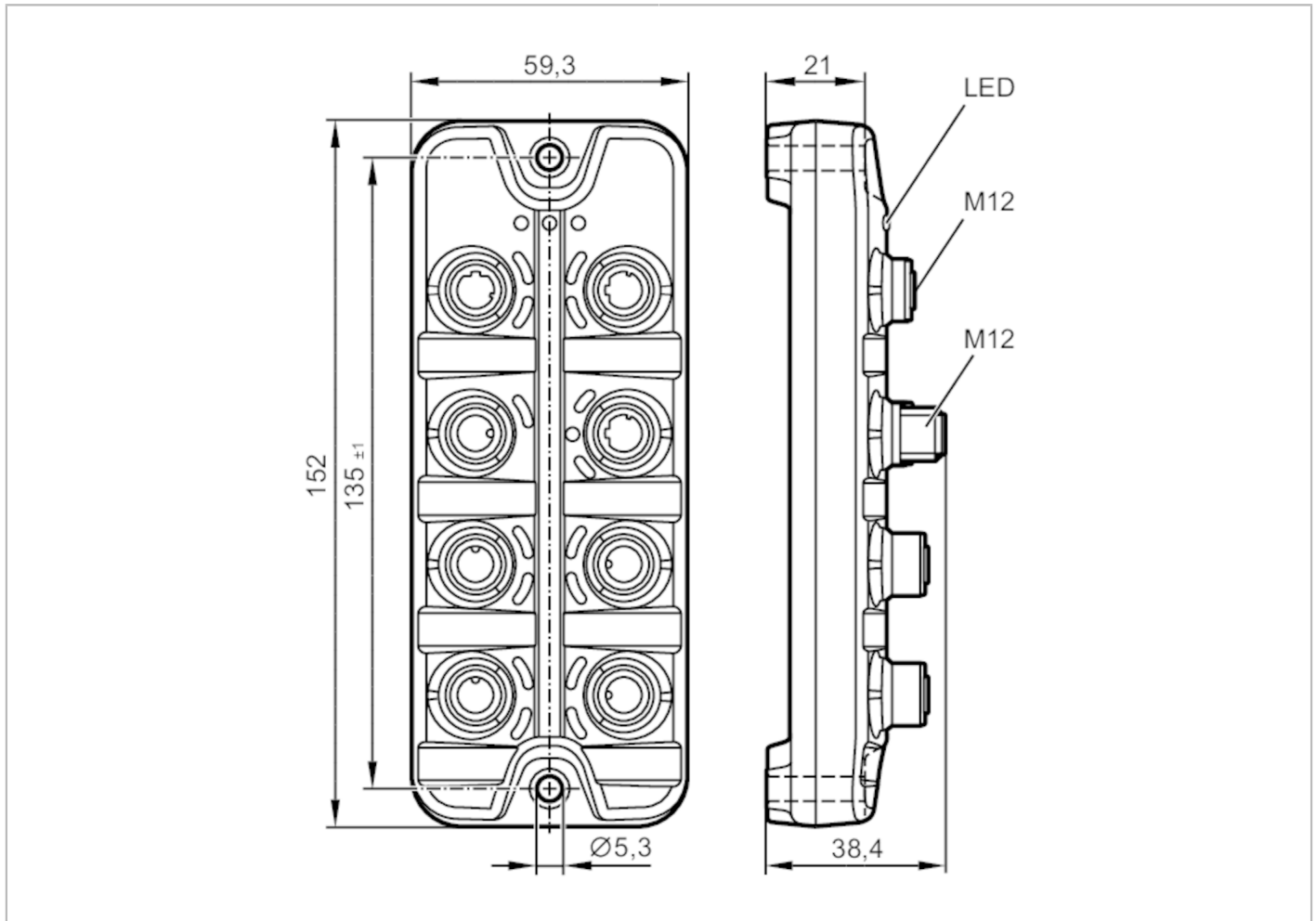


AL1331



IO-Link master with EtherCAT interface

IO-Link Master DL EC 4P IP69K



| Application | |
|------------------------------------|---|
| Application | hygienic systems; I/O modules for field applications |
| Daisy-chain function | fieldbus interface |
| Electrical data | |
| Operating voltage [V] | 20...28 DC; (US; to SELV/PELV) |
| Current consumption [mA] | 300...3900; (US) |
| Protection class | III |
| Sensor supply US | |
| Max. current load total [A] | 3.6 |
| Inputs / outputs | |
| Total number of inputs and outputs | 8; (configurable) |
| Number of inputs and outputs | Number of digital inputs: 8; Number of digital outputs: 4 |
| Inputs | |
| Number of digital inputs | 8; (IO-Link Port Class A: 4 x 2) |
| Switching level high [V] | 11...28 |
| Switching level low [V] | 0...5 |



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| | | |
|---|---|-------------------------|
| Digital inputs protected against short circuits | yes | |
| Outputs | | |
| Number of digital outputs | 4; (IO-Link Port Class A: 4 x 1) | |
| Max. current load per output [mA] | 300 | |
| Short-circuit proof | yes | |
| Interfaces | | |
| Communication interface | Ethernet; IO-Link | |
| Ethernet - EtherCAT | | |
| Transmission standard | 100Base-TX | |
| Transmission rate | 100 MBit/s | |
| Protocol | EtherCAT | |
| Factory settings | MAC address: see type label | |
| Note on interfaces | AoE (ADS over EtherCAT) | |
| | CoE (CANopen over EtherCAT) | |
| | EoE (Ethernet over EtherCAT) | |
| | FoE (File Access over EtherCAT) | |
| Ethernet - Internet of Things | | |
| Transmission standard | 10Base-T; 100Base-TX | |
| Transmission rate | 10 MBit/s; 100 MBit/s | |
| Protocol | MQTT JSON | |
| Factory settings | IP address: 169.254.x.x | |
| | subnet mask: 255.255.0.0 | |
| | gateway IP address: 0.0.0.0 | |
| | MAC address: see type label | |
| Note on interfaces | Secure protocol: HTTPS | |
| IO-Link Master | | |
| Transmission type | COM1 (4,8 kBaud); COM2 (38,4 kBaud); COM3 (230,4 kBaud) | |
| IO-Link revision | 1.1 | |
| Number of ports class A | 4 | |
| Operating conditions | | |
| Ambient temperature [°C] | -25...60 | |
| Storage temperature [°C] | -25...85 | |
| Max. relative air humidity [%] | 90 | |
| Protection | IP 65; IP 66; IP 67; IP 69K; (operation with stainless steel protective caps: IP 69K) | |
| Protection rating (NEMA 250) | 6P | |
| Pollution degree | 2 | |
| Chemical media | ISO 16750-5 | HLP, CC, DB, DC, DD, CA |
| | NEMA 250 5.13.1 | AA |
| Tests / approvals | | |
| EMC | EN 61000-6-2 | |
| | EN 61000-6-4 | |
| Shock resistance | DIN EN 60068-2-27 | |
| Vibration resistance | DIN EN 60068-2-64 2009-04 | |
| | DIN EN 60068-2-6 2008-10 | |

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IO-Link master with EtherCAT interface

IO-Link Master DL EC 4P IP69K

| | | |
|------|---------|----|
| MTTF | [years] | 95 |
|------|---------|----|

Mechanical data

| | | |
|------------------|---|-----|
| Weight | [g] | 283 |
| Materials | housing: PA grey; socket: stainless steel (1.4404 / 316L) | |
| Sealing material | EPDM | |

Accessories

| | |
|----------------|--|
| Items supplied | Protective cap: 1 x M12, stainless steel, E12542 |
|----------------|--|

Remarks

| | |
|---------------|--|
| Remarks | For further information please see the operating instructions. |
| Pack quantity | 1 pcs. |

Electrical connection - Ethernet

Connector: M12; coding: D; Sealing: EPDM



EtherCAT X21, X22

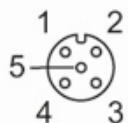
| | |
|---|----------|
| 1 | TX + |
| 2 | RX + |
| 3 | TX - |
| 4 | RX - |
| 5 | not used |

IoT X23

| | |
|---|----------|
| 1 | TX + |
| 2 | RX + |
| 3 | TX - |
| 4 | RX - |
| 5 | not used |

Electrical connection - Process connection

Connector: M12; coding: A; Sealing: EPDM



IO-Link Port Class A X01...X04

| | |
|---|-----------------------|
| 1 | Sensor supply (US) L+ |
| 2 | digital input |
| 3 | Sensor supply (US) L- |
| 4 | C/Q IO-Link |
| 5 | not used |

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IO-Link master with EtherCAT interface

IO-Link Master DL EC 4P IP69K

Electrical connection - power supply

Connector: M12; coding: A



X31

| | |
|---|----------------|
| 1 | + 24 V DC (US) |
| 2 | not used |
| 3 | GND (US) |
| 4 | not used |