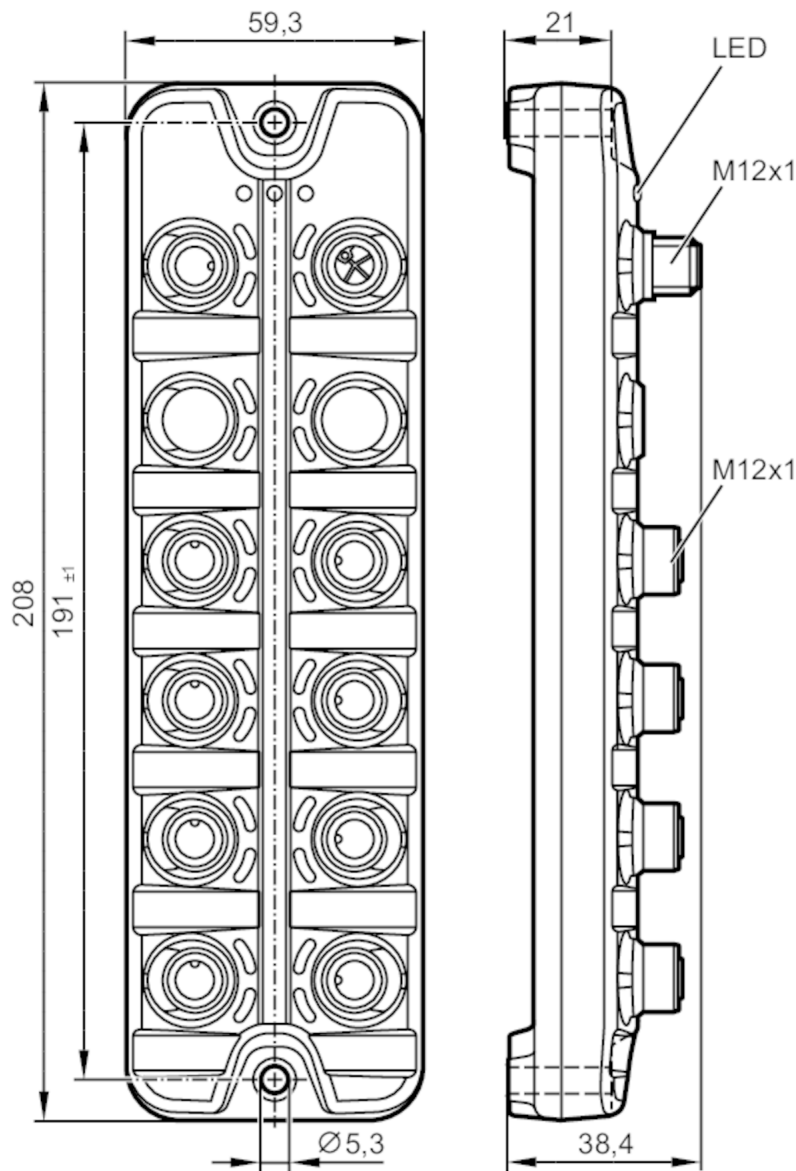


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IO-Link input/output module

IOL MOD PL 8XMP/DX E D M12 IP67



| Electrical data                                 |      |                  |
|-------------------------------------------------|------|------------------|
| Operating voltage                               | [V]  | 18...30 DC       |
| Current consumption                             | [mA] | 50; (US)         |
| Protection class                                |      | III              |
| Additional voltage supply                       | [V]  | 18...30 DC; (UA) |
| Max. current consumption from additional supply | [mA] | 16000; (UA)      |
| Inputs / outputs                                |      |                  |
| Total number of inputs and outputs              |      | 16               |



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|                                 |                                            |                                                                                                                           |            |
|---------------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------|
| Number of inputs and outputs    |                                            | Number of digital inputs: 16; Number of analog inputs: 8;<br>Number of frequency inputs: 2; Number of digital outputs: 16 |            |
| Inputs                          |                                            |                                                                                                                           |            |
| Number of frequency inputs      |                                            | 2                                                                                                                         |            |
| Number of digital inputs        |                                            | 16; (configurable)                                                                                                        |            |
| Input circuit of digital inputs |                                            | PNP; (type 3 (IEC 61131-2))                                                                                               |            |
| Sensor supply of the inputs     |                                            | AUX (UA)                                                                                                                  |            |
| Voltage supply                  | [V]                                        | 18...30                                                                                                                   |            |
| Input current High              | [mA]                                       | 2...15                                                                                                                    |            |
| Input current low               | [mA]                                       | 0...1.5                                                                                                                   |            |
| Switching level high            | [V]                                        | 11...28                                                                                                                   |            |
| Switching level low             | [V]                                        | 0...5                                                                                                                     |            |
| Number of analog inputs         |                                            | 8; (configurable current/voltage input)                                                                                   |            |
| Analog input (current)          | [mA]                                       | 4...20                                                                                                                    |            |
| Analog input (voltage)          | [V]                                        | 0...10                                                                                                                    |            |
| Resolution of analog input      |                                            | 16 Bit                                                                                                                    |            |
| Precision analog input          | [%]                                        | 0,3                                                                                                                       |            |
| Outputs                         |                                            |                                                                                                                           |            |
| Number of digital outputs       |                                            | 16; (configurable)                                                                                                        |            |
| Max. current load per output    | [mA]                                       | 2000                                                                                                                      |            |
| Max. current load outputs total | [A]                                        | 16                                                                                                                        |            |
| Short-circuit protection        |                                            | yes                                                                                                                       |            |
| Actuator supply outputs         |                                            | AUX (UA)                                                                                                                  |            |
| Number of PWM outputs           |                                            | 8; (acyclic enhanced modus)                                                                                               |            |
| Number of PWM-I outputs         |                                            | 2; (acyclic enhanced modus)                                                                                               |            |
| PMW/PWM-I output                | max. current PWM-I output                  | [mA]                                                                                                                      | 2000       |
|                                 | available factors for the controller       | [PID]                                                                                                                     | Kp, Ki, Kd |
|                                 | currently requested resolution             | [mA]                                                                                                                      | 1          |
|                                 | Accuracy PWM-I Ausgang                     | [%]                                                                                                                       | 2,2        |
|                                 | range of the PWM output pulse/pause ratio  |                                                                                                                           | 0...1000   |
|                                 | [%]                                        |                                                                                                                           |            |
|                                 | switch-on time resolution                  | ‰]                                                                                                                        | 1          |
|                                 | PWM/PWM-I frequency range                  | [Hz]                                                                                                                      | 20...1000  |
|                                 | number of configurable frequencies         |                                                                                                                           | 2          |
|                                 | number of PWM outputs with optional dither |                                                                                                                           | 8          |
|                                 | dither level                               | [%]                                                                                                                       | 1...250    |
| dither number                   |                                            | 1...20                                                                                                                    |            |
| Measuring/setting range         |                                            |                                                                                                                           |            |
| Sampling rate                   | [Hz]                                       | 0...3000                                                                                                                  |            |
| Interfaces                      |                                            |                                                                                                                           |            |
| Communication interface         |                                            | IO-Link                                                                                                                   |            |
| Transmission type               |                                            | COM3 (230,4 kBaud)                                                                                                        |            |
| IO-Link revision                |                                            | 1.1                                                                                                                       |            |
| SDCI standard                   |                                            | IEC 61131-9                                                                                                               |            |



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|                                  |                                                                                    |                                     |
|----------------------------------|------------------------------------------------------------------------------------|-------------------------------------|
| SIO mode                         | no                                                                                 |                                     |
| Required master port class       | A                                                                                  |                                     |
| Min. process cycle time [ms]     | 4                                                                                  |                                     |
| Supported DeviceIDs              | Type of operation                                                                  | DeviceID                            |
|                                  | Acyclic enhanced parametrisation                                                   | 1449                                |
|                                  | Acyclic parametrisation                                                            | 1316                                |
|                                  | Cyclic parametrisation                                                             | 1315                                |
| Note                             | Parameter setting can be changed from “cyclic” to “acyclic” and “acyclic enhanced” |                                     |
|                                  | For further information please see the IODD PDF file at "Downloads"                |                                     |
| Acyclic enhanced parametrisation |                                                                                    |                                     |
| Profiles                         | Common - I&D                                                                       | Identification and Diagnosis        |
|                                  | Function                                                                           | Multiple switching signal           |
| Acyclic parametrisation          |                                                                                    |                                     |
| Profiles                         | Common - I&D                                                                       | Identification and Diagnosis        |
| Cyclic parametrisation           |                                                                                    |                                     |
| Profiles                         | Common - I&D                                                                       | Identification and Diagnosis        |
| Operating conditions             |                                                                                    |                                     |
| Ambient temperature [°C]         | -25...60                                                                           |                                     |
| Storage temperature [°C]         | -25...70                                                                           |                                     |
| Max. relative air humidity [%]   | 90                                                                                 |                                     |
| Max. height above sea level [m]  | 2000                                                                               |                                     |
| Protection                       | IP 65; IP 67                                                                       |                                     |
| Protection rating (NEMA 250)     | 6P                                                                                 |                                     |
| Degree of soiling                | 2                                                                                  |                                     |
| Chemical media                   | ISO 16750-5                                                                        | AA, BA, BD, HLP, CC, DB, DC, DD, CA |
|                                  | NEMA 250 5.13.1                                                                    | AA                                  |
| Tests / approvals                |                                                                                    |                                     |
| EMC                              | EN 61000-6-2                                                                       |                                     |
|                                  | EN 61000-6-3                                                                       |                                     |
|                                  | IEC 61131-9                                                                        |                                     |
| Shock resistance                 | DIN EN 60068-2-27                                                                  |                                     |
| Vibration resistance             | DIN EN 60068-2-64                                                                  |                                     |
|                                  | DIN EN 60068-2-6                                                                   |                                     |
| MTTF [years]                     | 59                                                                                 |                                     |
| Mechanical data                  |                                                                                    |                                     |
| Weight [g]                       | 398.1                                                                              |                                     |
| Dimensions [mm]                  | 26 x 59.3 x 208                                                                    |                                     |
| Material                         | housing: PA orange; Socket: brass nickel-plated                                    |                                     |
| Sealing material                 | FKM                                                                                |                                     |
| Tightening torque [Nm]           | < 0.8                                                                              |                                     |
| Displays / operating elements    |                                                                                    |                                     |
| Display                          | Power                                                                              | 4 x LED, green                      |
|                                  | fault                                                                              | 3 x LED, red                        |
|                                  | Function                                                                           | 16 x LED, yellow                    |



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| Accessories                                 |                                                                                                                                                                                                                                                                                 |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accessories (optional)                      | protective cap for M12 sockets                                                                                                                                                                                                                                                  |
| Remarks                                     |                                                                                                                                                                                                                                                                                 |
| Remarks                                     | Using the device within a system with requirements for functional safety is possible by deactivating the actuator voltage UA without interaction.<br><br>For further information on functional safety, please refer to the operating instructions supplement under "Downloads". |
| Pack quantity                               | 1 pcs.                                                                                                                                                                                                                                                                          |
| Electrical connection - AUX                 |                                                                                                                                                                                                                                                                                 |
| Connector: 1 x M12; coding: L               |                                                                                                                                                                                                                                                                                 |
|                                             |                                                                                                                                                                                                                                                                                 |
| X31                                         |                                                                                                                                                                                                                                                                                 |
| 1:                                          | n.c.                                                                                                                                                                                                                                                                            |
| 2:                                          | L- (UA)                                                                                                                                                                                                                                                                         |
| 3:                                          | n.c.                                                                                                                                                                                                                                                                            |
| 4:                                          | L+ (UA)                                                                                                                                                                                                                                                                         |
| 5:                                          | FE                                                                                                                                                                                                                                                                              |
| Electrical connection - IO-Link             |                                                                                                                                                                                                                                                                                 |
| Connector: 1 x M12; coding: A               |                                                                                                                                                                                                                                                                                 |
|                                             |                                                                                                                                                                                                                                                                                 |
| X1                                          |                                                                                                                                                                                                                                                                                 |
| 1:                                          | L+ (US)                                                                                                                                                                                                                                                                         |
| 2:                                          | n.c.                                                                                                                                                                                                                                                                            |
| 3:                                          | L- (US)                                                                                                                                                                                                                                                                         |
| 4:                                          | DATA IO-Link                                                                                                                                                                                                                                                                    |
| Electrical connection - inputs / outputs    |                                                                                                                                                                                                                                                                                 |
| Connector: 8 x M12; coding: A; sealing: FKM |                                                                                                                                                                                                                                                                                 |
|                                             |                                                                                                                                                                                                                                                                                 |

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## IO-Link input/output module

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| X1.0...X1.7 |                       |
|-------------|-----------------------|
| 1:          | L+ (UA) Sensor supply |
| 2:          | MP2 DI2/DO2           |
| 3:          | L- (UA) Sensor supply |
| 4:          | MP1 DI1/DO1           |
| 5:          | FE                    |