



IO-Link

# Powerful IO-Link master for the food industry



IO-Link master  
PerformanceLine Food



**4- and 8-port IO-Link masters with matching L-code power cables in IP 69K available**

**Daisy-chain power with standardised L-coded M12 connection technology, max. 2 x 16 A**

**For actuators up to 2 A**

- ↻ **Current measurement and configurable current limitation for each port**
- ↻ **Master and device configurable via moneo|configure software**



### Robust field bus modules with fail-safe connection

The decentralised IO-Link masters are used as gateways between intelligent IO-Link sensors and the fieldbus. They are the perfect choice, even in the most difficult environments: The materials and production methods are identical to the ifm jumper cables of the tried-and-tested EVF product series. The ecolink technology guarantees reliable, permanently ingress-resistant M12 connections of the connection cables.

### L-coded cables for high currents

Used to supply higher power levels to the new ifm Performance Line IO-Link masters in demanding applications. The L-coded M12 power connector is becoming more and more established on the market and the perfect solution to supply these modules with power. This allows high currents to be transmitted with low voltage drop. ifm offers connection cables and jumpers that are perfectly adapted to this.



## Advantages and customer benefits

### • L-coding for the food industry

For the first time, ifm offers high-current-capable IO-Link masters with special housing materials and high protection rating for the food industry.

### • 16 amps on an M12 connector

The IO-Link master is supplied via the standardised L-coded M12 connector. This connection technology with 5 x 2.5 mm<sup>2</sup> can be used for 16A US (sensor supply) and 16A UA (actuator supply). The energy can be looped through the master (daisy chain).

### • Connection of 2A actuators with high current consumption

Optionally, a digital output mode can be set for pin 2 of a B port. Thus, large solenoid valves and actuators can be switched with up to 2A. Pin 2 is supplied from the actuator voltage UA.



### • Energy monitoring



The current for each port can be limited, which can be set in the PLC. Moreover, voltage and current values of each port can be measured. This makes it easy to determine the energy required by an installation and to transfer it to ERP systems for analysis.

### • Sensor configuration with moneo|configure SA

The intuitive software finds all IO-Link masters in the network and creates an overview of the whole plant. Besides, all sensors connected are indicated with the respective parameters. This means that parameter setting of all sensors in the system is possible from one central point.






## Accessories

| Type  | Description  | Order no.     |
|---|--|---------------|
|  | <b>moneo configure SA</b><br>(Stand-alone) licence, software for online and offline parameter setting of IO-Link devices including maintenance and support until the end of the following year | <b>QMP010</b> |
|  | M12 protective caps<br>4 pcs, high-grade stainless steel   | <b>E12542</b> |

| Type  | Description                          | Order no.     |
|---|--------------------------------------|---------------|
| <b>IO-Link master PerformanceLine Food</b>  |                                      |               |
|  | PROFINET<br>4 B ports                | <b>AL1401</b> |
|   | EtherNet/IP<br>4 B ports             | <b>AL1421</b> |
|  | PROFINET<br>4 A ports / 4 B ports    | <b>AL1403</b> |
|   | EtherNet/IP<br>4 A ports / 4 B ports | <b>AL1423</b> |

| Technical data                                    | AL1401<br>AL1421 | AL1403<br>AL1423                                       |
|---|------------------|--|
| Operating voltage                                 | [V DC]           | 20...30  |
| <b>Actuator supply UA</b>                         |                  |  |
| Total current rating                              | [A]              | 8  |
| Current rating per port                           | [A]              | 2<br>(adjustable: 0...2;<br>factory setting: 2)        |
| <b>Sensor supply US</b>                           |                  |  |
| Total current rating                              | [A]              | 3.6  |
| Current rating per port                           | [A]              | 2<br>(adjustable: 0...2;<br>factory setting: 0.45)     |
| IO-Link version                                   |                  | 1.1  |
| Number of binary inputs<br>(IO-Link in SIO mode)  | 4                | 4 + 8  |
| Number of binary outputs<br>(IO-Link in SIO mode) | 4 + 4            | 4 + 8  |
| Protection rating                                 |                  | IP 65, IP 67, IP 69K                                   |
| Ambient temperature                               | [°C]             | -25...60   |
| Housing materials                                 |                  | PA grey;<br>socket: stainless steel<br>(316L / 1.4404) |

## Connection technology

| Type  | Description | Order no.                   |
|---|-------------|-----------------------------|
| <b>Ethernet cable (fieldbus)</b>  |             |                             |
|  | 0.5 m       | <b>EVF549</b> <b>EVF529</b> |
|   | 2 m         | <b>EVF551</b> <b>EVF531</b> |
|  | 5 m         | <b>EVF552</b> <b>EVF532</b> |
|   | 10 m        | <b>EVF553</b> <b>EVF533</b> |
| <b>M12 connection cable 2.5 mm<sup>2</sup>, L-coded (power)</b>                     |             |                             |
|  | 0.5 m       | – <b>EVF622</b>             |
|   | 2 m         | <b>EVF611</b> <b>EVF624</b> |
|  | 5 m         | <b>EVF612</b> <b>EVF625</b> |
|   | 10 m        | <b>EVF613</b> <b>EVF626</b> |
| <b>M12 connection cable 0.34 mm<sup>2</sup> (sensor)</b>                            |             |                             |
|  | 0.5 m       | – <b>EVF042</b>             |
|   | 2 m         | – <b>EVF043</b>             |
|   | 5 m         | – <b>EVF044</b>             |
|   | 10 m        | – <b>EVF045</b>             |

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For further technical details, please visit: [ifm.com](http://ifm.com)



IO-Link

# DIN rail adapter for IO-Link field bus modules



IO-Link accessories



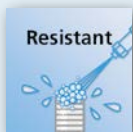
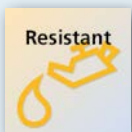
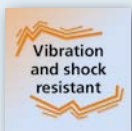
**Transfer of IO-Link masters, Ethernet switches and I/O modules to the DIN rail**

**Complete mounting set for various module sizes**

**Simple, quick and vibration resistant mounting**

**Robust design for use in harsh environments**

**For installation directly on the machine or in the control cabinet**



### Flexible



Whether directly on the machine or in the control cabinet, as of now, IO-Link masters and modules can be mounted quickly and safely on the DIN rail. Moreover, the adapters provide a quick solution for exchanging or upgrading modules.

### Compatible

The DIN rail adapter is available in two sizes. The small variant, for example, is designed for 4-port IO-Link masters, while the large adapter supports both 4-port and 8-port IO-Link masters.

In addition, the DIN rail adapters can also be used for IO-Link modules, Ethernet switches, Ethernet I/O modules and passive splitter boxes.



| Type  | Description                    | Weight [g] | Dimensions [mm] | Interface                       | Material   | Items supplied | Order no.     |
|---|--------------------------------|------------|-----------------|---------------------------------|--|----------------|---------------|
|  | for 6- and 4-row field modules | 74         | 208 x 60 x 19   | TS 35 according to IEC/EN 60715 | Adapter: PC/ABS; threaded insert: stainless steel (316Ti/1.4404) | 2 x M5 x 25    | <b>E78002</b> |
|  | for 4- and 3-row field modules | 65         | 152 x 60 x 19   | TS 35 according to IEC/EN 60715 | Adapter: PC/ABS; threaded insert: stainless steel (316Ti/1.4404) | 2 x M5 x 25    | <b>E78000</b> |

The DIN rail adapter is particularly well suited for the following modules:

### IO-Link master for the automation and IT world

The decentralised IO-Link master modules serve as a gateway between intelligent IO-Link sensors and the field bus. Besides, important information of the intelligent sensors can simultaneously be sent into the IT world. With a separate IoT Ethernet socket the IT network can be set up completely separated from the automation network. Sensor information is transferred into the IT world via the established TCP/IP JSON interface.

### Ethernet I/O modules







The decentralised DI modules serve as a gateway between binary sensors and the fieldbus. This means that binary switching signals in the field can be transmitted directly via the fieldbus.

### Ethernet switches

The decentralised modules serve as network nodes between the participants in the field. They are connected directly via robust and reliable M12 connection cables.

### IO-Link I/O modules

These IO-Link modules allow connection of conventional digital and analogue sensors as well as digital actuators to IO-Link. For this purpose, we offer modules with ports that have either a fixed configuration or can be configured by the customers themselves. This unique capability to freely combine analogue and digital ports in just one module saves cost. You only need an IO-Link port on the master.

| Type  | Description  | Order no.     |               |
|---|--|---------------|---------------|
|   |  | Coolant       | Food          |
| <b>IO-Link master</b>   |  |               |               |
|    | PROFINET + IoT 8 ports                                 | <b>AL1302</b> | <b>AL1303</b> |
|   | EtherNet/IP + IoT 8 ports                              | <b>AL1322</b> | <b>AL1323</b> |
|   | EtherCat + IoT 8 ports                                 | <b>AL1332</b> | <b>AL1333</b> |
|   | Modbus TCP + IoT 8 ports                               | <b>AL1342</b> | <b>AL1343</b> |
|   | IoT only 8 ports                                       | <b>AL1352</b> | <b>AL1353</b> |
|   | POWERLINK + IoT 8 ports                                | <b>AL1372</b> | <b>AL1373</b> |
| <b>Ethernet I/O modules</b>   |  |               |               |
|  | PROFINET 16DI  | <b>AL4002</b> | <b>AL4003</b> |
|   | EtherNet/IP 16DI                                       | <b>AL4022</b> | <b>AL4023</b> |
| <b>Ethernet switches</b>  |  |               |               |
|  | StandardLine IIoT (TCP/IP), EtherNet/IP, Modbus TCP    | <b>AL3050</b> | <b>AL3051</b> |
|   | StandardLine PROFINET CC-A                             | <b>AL3000</b> | <b>AL3001</b> |
|  | PerformanceLine IIoT (TCP/IP), EtherNet/IP, Modbus TCP | <b>AL3150</b> | <b>AL3151</b> |
|   | PerformanceLine PROFINET CC-A                          | <b>AL3100</b> | <b>AL3101</b> |
| <b>IO-Link I/O modules</b>  |  |               |               |
|  | Multiport Powerline / StandardLine with AUX power      | <b>AL2605</b> | <b>AL2205</b> |
|   | Multiport StandardLine with A-Port power               | <b>AL2301</b> | <b>AL2201</b> |
|  | Digital input module StandardLine 6 ports              | <b>AL2340</b> | <b>AL2240</b> |

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