



WAGO I/O System Field

Automate and Network Modular Machines for the Future

IP67





WAGO I/O System Field

Automate and network modular machines for the future.

High performance, designed for time-sensitive networking (TSN) and unshakeable in the harshest environmental conditions: The WAGO I/O System Field for cabinet-free automation merges an impressive variety of functions with robust IP67 housings.





A Convincing Innovative Portfolio

Effective Power Supply

- Two power supply lines (up to 16 A)
- Actuators can be switched off separately

Bluetooth® Interface

- For communication
- For maintenance and diagnostics

High-Performance Fieldbus Modules

- For PROFINET
- Include OPC UA, MQTT, Webserver
- Optional Android and iOS app

Standard Marking

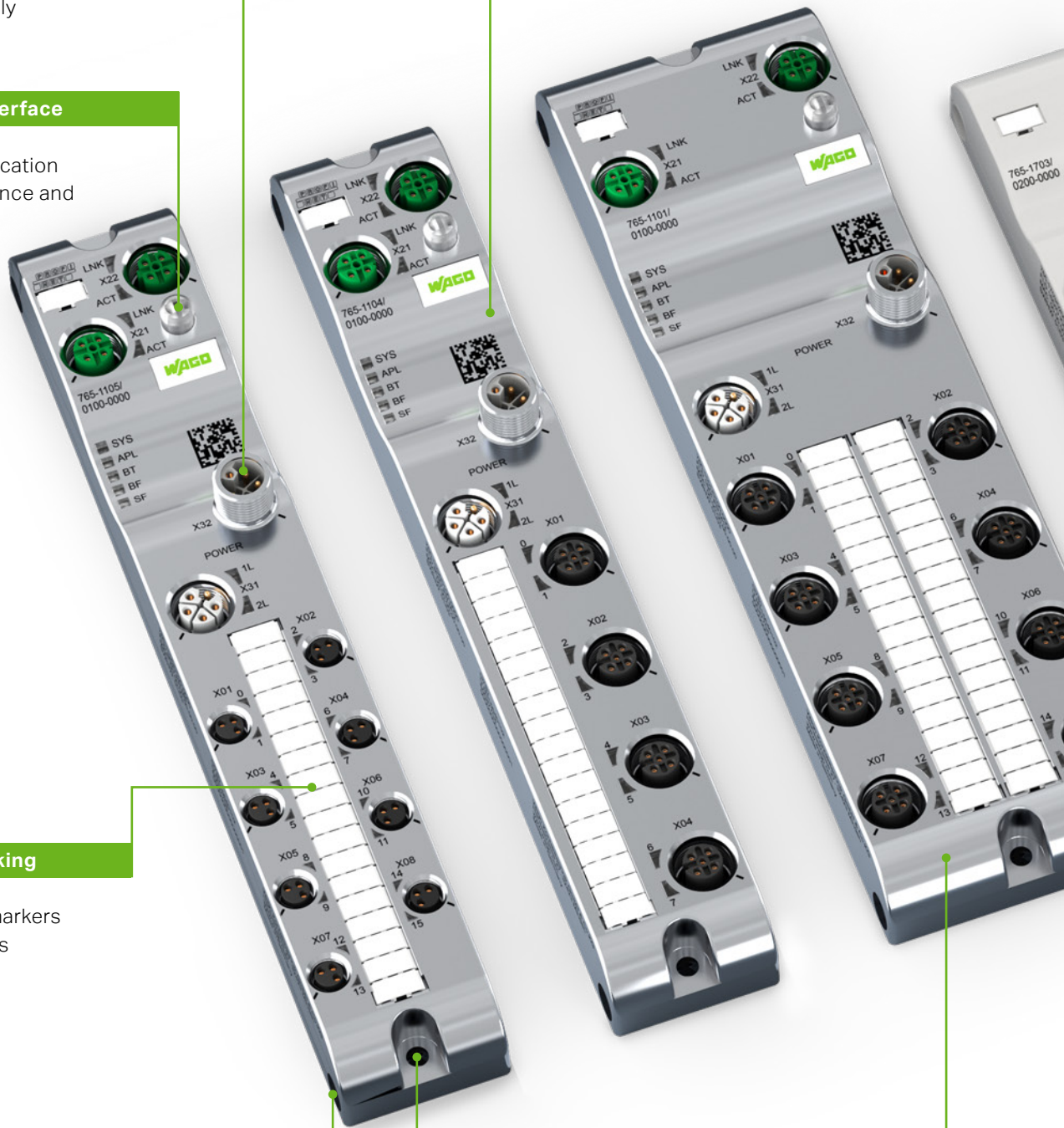
- WMB Inline markers
- Marking strips

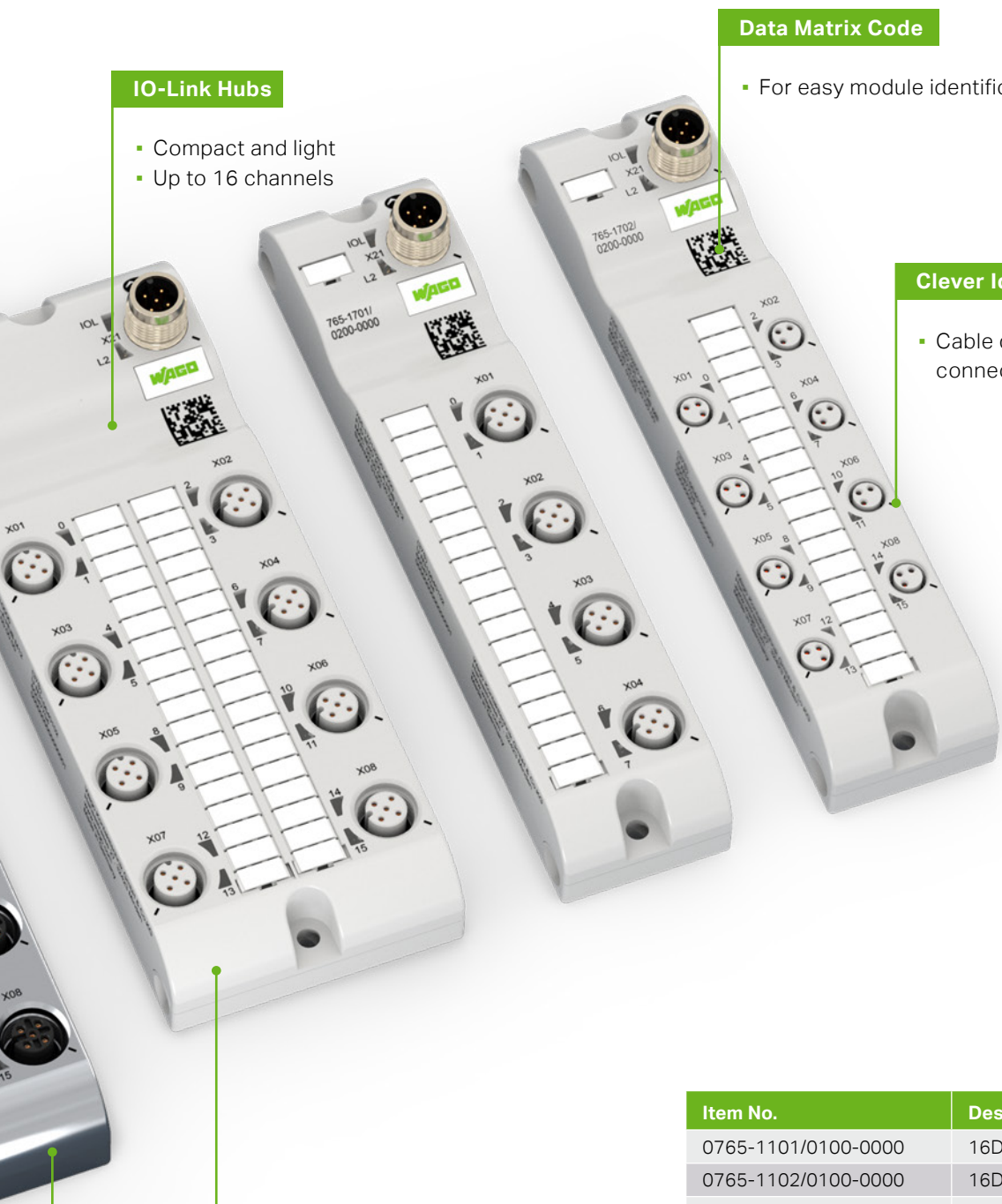
Flexible Assembly

- Lateral or front-mount options
- Mounts without adapters

Integrated IO-Link Masters

- Up to 8 IO-Link ports
- Up to 4 A per port
- Up to 16 digital I/Os





IO-Link Hubs

- Compact and light
- Up to 16 channels

Data Matrix Code

- For easy module identification

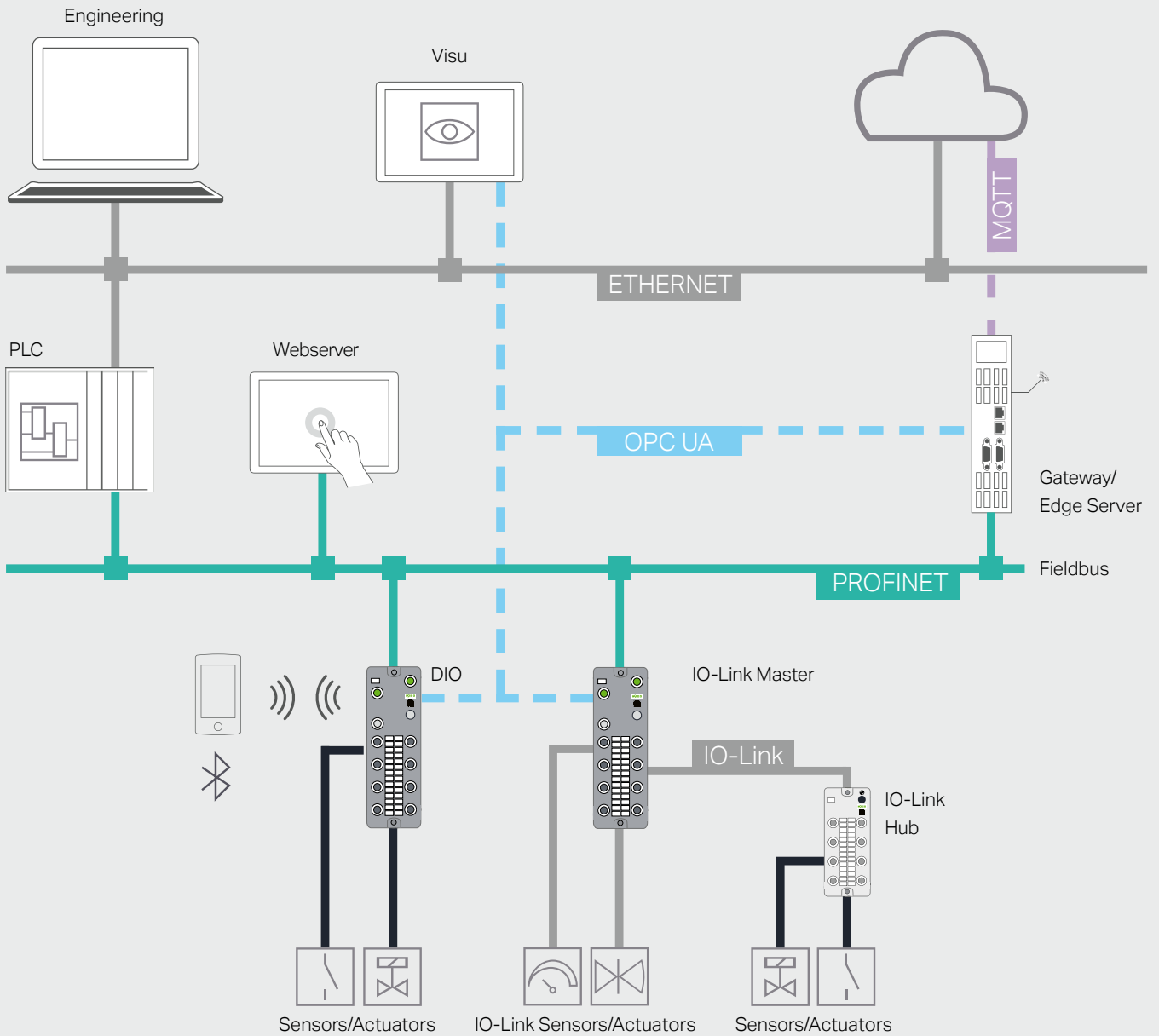
Clever Identification

- Cable direction for right-angle connectors

IP67 Housings

- Metal and plastic
- Strength for the toughest tasks
- Low weight for mobile applications

Item No.	Description
0765-1101/0100-0000	16DI FLD PN DC 24V
0765-1102/0100-0000	16DIO FLD PN DC 24V 2.0A
0765-1103/0100-0000	16DO FLD PN DC 24V 2.0A
0765-1104/0100-0000	8DIO FLD PN DC 24V 2.0A
0765-1105/0100-0000	8DIO FLD PN DC 24V 2.0A
0765-4101/0100-0000	8PORT IOL-A FLD PN DC 24V 2.0A
0765-4102/0100-0000	8PORT IOL-B FLD PN DC 24V 2.0A
0765-4103/0100-0000	4PORT IOL-A FLD PN DC 24V 2.0A
0765-4104/0100-0000	4PORT IOL-B FLD PN DC 24V 2.0A
0765-1701/0200-0000	8DIO FLD IOL-A HUB DC 24V 2.0A
0765-1702/0200-0000	8DIO FLD IOL-A HUB DC 24V 2.0A
0765-1703/0200-0000	16DIO FLD IOL-A HUB DC 24V 2.0A
0765-1704/0200-0000	8DIO FLD IOL-B HUB DC 24V 2.0A
0765-1705/0200-0000	8DIO FLD IOL-B HUB DC 24V 2.0A
0765-1706/0200-0000	16DIO FLD IOL-B HUB DC 24V 2.0A



Extended Network Connectivity

Modern, decentralized production facilities require automation solutions that ensure the highest level of connectivity while providing maximum performance outside of the control cabinet.

WAGO developed its upgradable I/O System Field with IP67 protection to meet these needs today and tomorrow: It combines fast ETHERNET-based fieldbuses (e.g., PROFINET), technologies such as OPC UA, *Bluetooth*[®] and Webserver, and MQTT as a protocol for cloud connectivity.

Made for TSN

Industrial ETHERNET and PROFINET on the field level provide the basis for digitalization with WAGO I/O System Field. ETHERNET/IP and EtherCAT[®] are planned in as ETHERNET-based standards; in the future, the IO System Field will also support TSN (Time-Sensitive Networking).

MQTT

The WAGO I/O System Field supports MQTT as an open message protocol for data transmission.

OPC-UA

Equipped with an OPC UA server, OPC UA clients can access the widest range of device data (e.g., parameter data, status information, identification/diagnostics data, containers).

IO-Link

Fieldbus modules equipped with IO-Link masters and IO-Link hubs as devices facilitate effective, versatile connection of intelligent sensors/actuators to the automation system.

***Bluetooth*[®]**

An app for direct access to a WAGO Field Device by identification of a data matrix code and through communication via BLE (*Bluetooth*[®] Low Energy) is available for wireless access with a mobile device.

HTTP/HTTPS

An integrated Webserver enables HTTP and HTTPS communication. With this capability, many different kinds of system information can be accessed with popular commercial browsers.

Your Benefits:

- Platform-independent data exchange through OPC UA
- System information provided via MQTT
- Fast and distributed access to module information via *Bluetooth*[®]
- Access to system information via integrated Webserver
- #made for TSN

Combines Functionality and Aesthetics

The IP67-rated I/O System Field is optimized for dependable, cabinet-free automation. The modules mount exactly where you need them – at the heart of the action, close to sensors and actuators. This adaptability not only reduces the cabling required, but it also simplifies commissioning, maintenance and diagnostics.

The system offers no-compromise protection with pressure cast zinc housings for extremely harsh environments, or robust yet lightweight plastic housings for mobile applications. The modules operate reliably at temperatures from -25 to $+70^{\circ}\text{C}$ (-13 ... $+158^{\circ}\text{F}$) and are immune to electromagnetic interference thanks to internal shielding. Slim housing variants and lateral mounting options provide more space.





Rugged resistance against the harshest environmental conditions – like those found in metalworking centers prone to impact, vibration, oil, grease, water or dust loads – thanks to the encapsulated electronics of the metal housing.



Highly dynamic for robotic and handling machines due to low weight of non-encapsulated plastic housings.



Flexible mounting on the machine through variable mounting options and compact dimensions (no adapter, oblong slots for lateral mounting); simple mounting of the module on T-nut profile with machine screws and T-nuts – and no drilling.



Space-saving ergonomic design

User-specific marking with WMB InLine from the WAGO marking program; ergonomically positioned LEDs are highly visible despite presence of cables and connectors. On-device factory markings are easy to understand. Sensors and actuators are connected via standard M8 and M12 connectors. The M12 L-coded power supply version offers up to 16 A, bringing more power in less space.

Your Benefits:

- Fully encapsulated IP67 metal housings for extreme environments
- Non-encapsulated, lightweight IP67 plastic housings for mobile applications
- Detailed identification, convenient marking options and clearly visible LEDs

Integrated Load Management

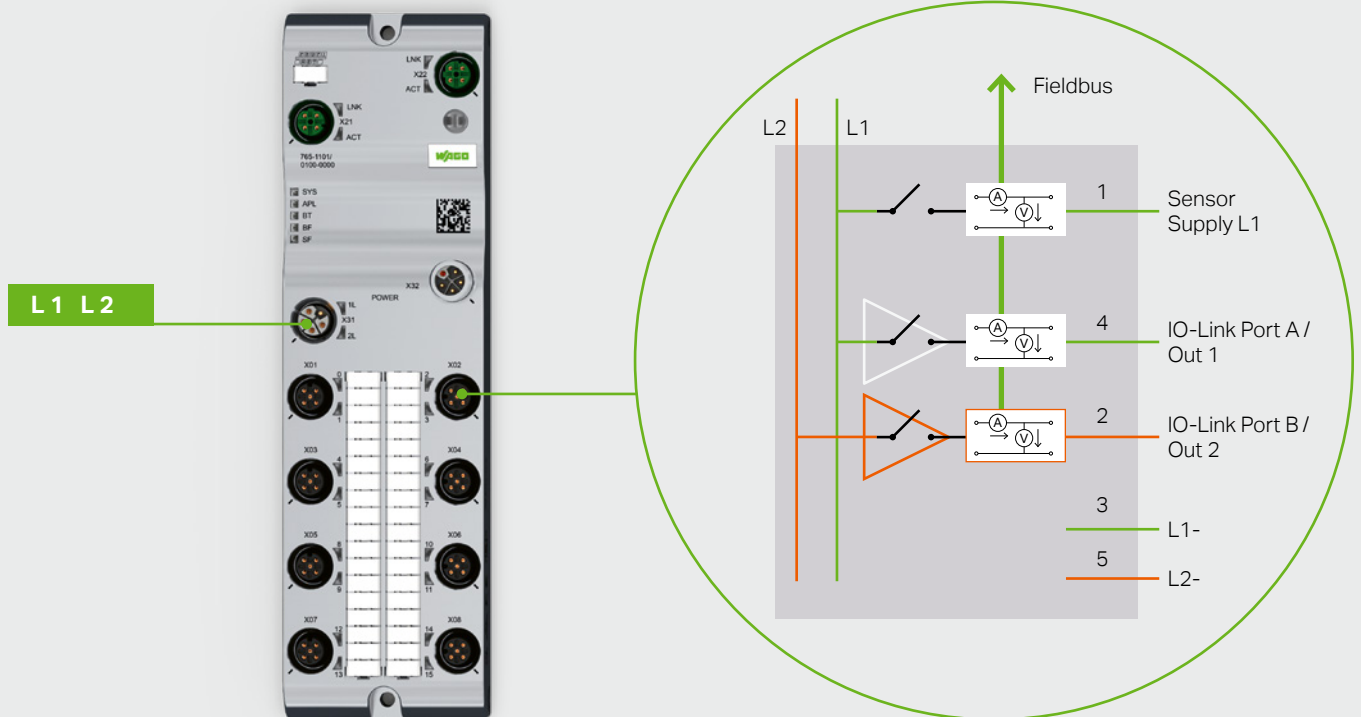
Innovative load management ensures that the system's power is fully utilized via supply and output current load management. Current and voltage can be recorded and evaluated per channel. Overload limits can be set for individual channels. As a result, errors can be detected faster and more clearly differentiated in the event of faults – errors are also more easily predicted, which is essential for future trends such as predictive maintenance.

Your Benefits:

- High-capacity power supply with up to 2 x 16 A and up to 4 A per IO-Link port
- Adjustable output current limitation
- Power consumption monitoring
- Definition of pre- and main alarms
- Monitoring voltages and currents (per channel and module-wide)
- Channel-based temperature monitoring

Diagnostics Options:

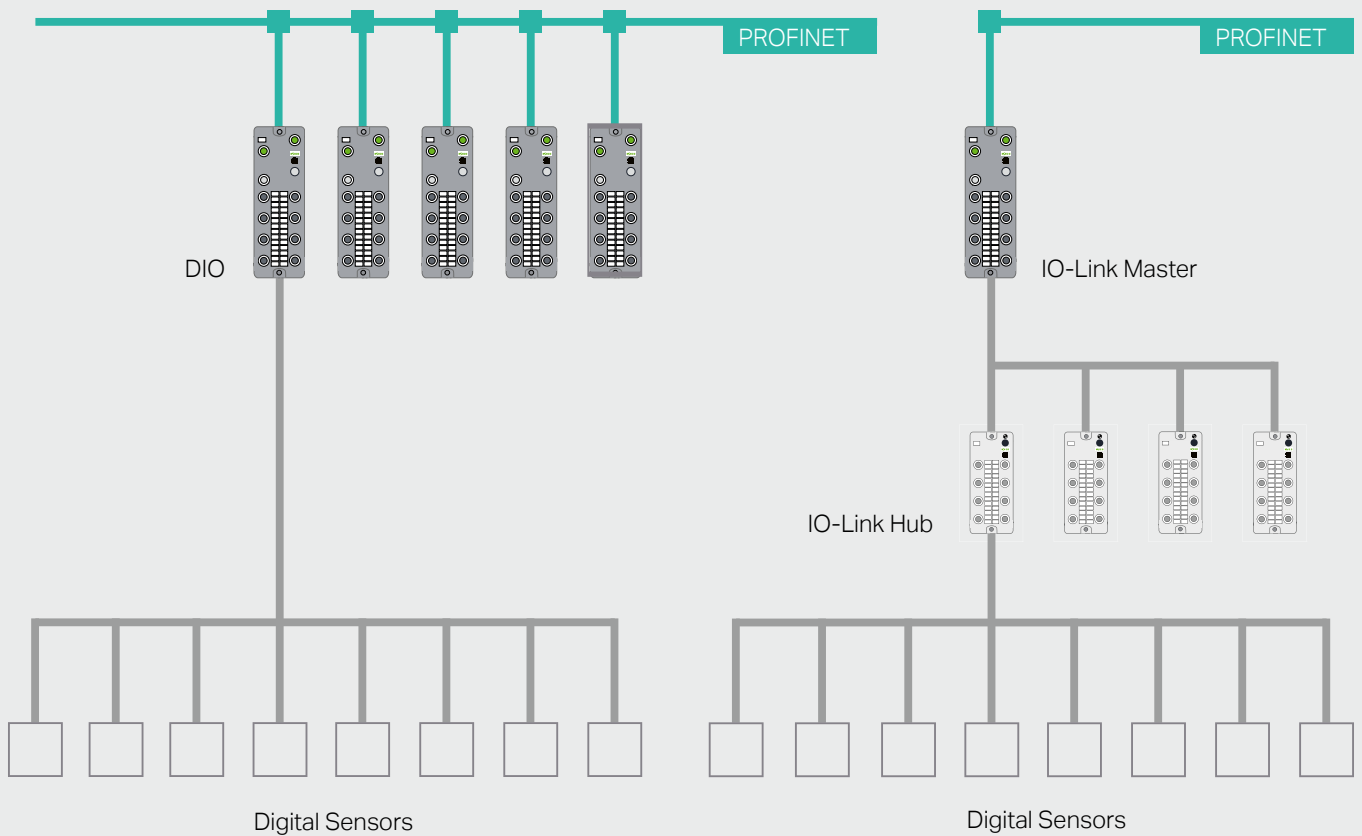
- **Monitoring power consumption:**
When and why does overload occur?
- **Monitoring all electricity flows:**
Who is to blame?
- **Optimizing current load:**
Genuine measurement versus datasheet of the connected sensor
- **Current limitation through parameters:**
No drastic increase in power consumption
- **Parallel access via TCP/IP:**
Monitoring and diagnostics during actual operation
- **Separate warning and overcurrent limits:**
Warning before shutdown
- **Settable warning and overload limits:**
Reliable optimization of own power resources
- **Settable warning and overload limits:**
Proactive maintenance of connected devices
- **Option:**
Saving in log file



Bluetooth®

EtherNet/IP

EtherCAT®



All-in-One Solution with IO-Link

In combination with IO-Link, the IO System Field fully demonstrates its strengths as a flexible “IO distributor” for both data collection and distribution. The prominent communication standard enables seamless data flow from the control to the sensor and actuator level. This considerably simplifies configuration and cabling. Furthermore, completely new possibilities arise for diagnostics, parameterization and device identification.

Your Benefits:

- End-to-end cloud and fieldbus communication with IO-Link
- Simplified wiring eases planning and device exchange
- Up to 8 IO-Link hubs per module
- Up to 4 A per port
- Up to 128 digital IOs on one master
- Star topology for short line paths
- Fewer IP addresses

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