Product family overview

SIG300

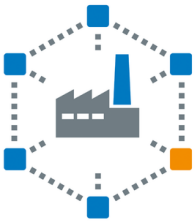
Universal IO-Link Master with IIoT competence and logic editor

SICK
Sensor Intelligence.

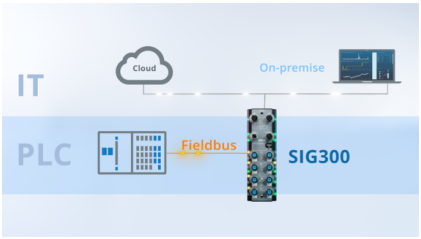
Advantages

Intelligent data integration for greater efficiency

The SIG300 IO-Link Master integrates sensor and actuator data into Ethernet networks and IIoT applications. Remote data collection and pre-processing enables an efficient display and analysis of this information in higher-level IIoT environments. The IO-Link Master therefore makes a significant contribution to transparent processes and efficient communication between OT and IT. Thanks to the intuitive web-based user interface and the Function Block Factory, integration costs are significantly reduced.



Integration into heterogeneous fieldbus landscapes
The Function Block Factory from SICK simplifies the integration of IO-Link devices into different PLC systems. In combination with the SIG300, it speeds up programming, avoids errors and ensures seamless automation.



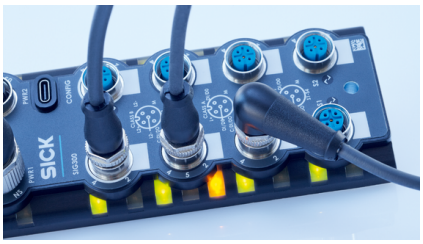
Dual talk for parallel communication
The SIG300 can simultaneously communicate with the cloud and the PLC system via two communication channels. The advantage: Data for monitoring the status of the devices and for process control can be evaluated simultaneously.

Transparency and real-time monitoring
The various IIoT interfaces (REST API, MQTT) allow IT and cloud systems to be linked directly to the field level. Extensive process and device data provide meaningful KPIs in real time for controlling production processes and material flows.

High efficiency through intelligent data integration: The SIG300 ensures transparency, real-time monitoring and optimized process control.

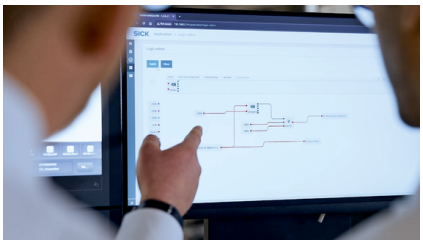
Smart and flexible

The SIG300 facilitates the integration and control of digital I/O (DIO) and IO-Link devices. Thanks to intelligent device configuration and integrated control logic, SIG300 reduces complexity, simplifies integration processes and optimizes production processes. Eight IO-Link ports and a total output of 16 A offer high flexibility for demanding applications.



Flexible Class A and Class B ports
Depending on requirements, the eight IO-Link ports can also be defined as digital inputs or outputs – for high flexibility in use. The pins of the class B ports supplying the voltage are galvanically isolated and ensure a reliable supply of up to 4 A per port to power-intensive components.

Smart device configuration with integrated IODD interpreter
The SIG300 automatically recognizes IO-Link devices and loads the appropriate IODD files directly into the system. This simplifies commissioning, reduces configuration work and enables fast, error-free integration of new sensors and actuators – without any manual updates.



Logic editor for decentralized control tasks
The integrated logic editor allows control tasks to be solved remotely without a PLC. This reduces the data load on central controllers and shortens response times in the event of detected faults. This makes the SIG300 particularly suitable for making existing control systems more efficient.

Even in demanding applications, SIG300 is the IO-Link Master for intuitive integration and control of DIO and IO-Link devices.

Transparent condition monitoring and efficient maintenance

Thanks to the connection to Field Analytics, SIG300 enables real-time monitoring of the connected devices and detailed performance analyses. It also allows remote maintenance if a connected sensor reports a need for maintenance. If a device needs to be replaced, SIG300 significantly reduces downtime thanks to the backup and restore function.

Real-time device monitoring
SIG300 provides meaningful KPIs such as throughput, capacity utilization and downtimes. Using Field Analytics, this data can be visualized, monitored and evaluated in real time. Intelligent dashboards and alerts ensure seamless 24/7 monitoring and support well-founded decisions – for a more efficient production with higher availability.

Plug-and-play device replacement
The backup and restore function of the SIG300 makes it much easier to replace devices. SIG300 recognizes the new device and automatically uploads the previously saved device configuration to it – without any additional effort for users.

Remote maintenance thanks to bidirectional communication
Bidirectional communication with the connected devices enables efficient remote maintenance and parameterization. Device diagnostics and parameter information can be conveniently accessed and changed remotely.

SIG300 makes device monitoring and maintenance efficient – for higher machine availability and lower maintenance costs.

Product description

The SIG300 Sensor Integration Gateway is a high-performance IO-Link Master with eight ports (class A/B) that consolidates the data from the connected devices and forwards them to the higher level system. The gateway provides up to 16 A, which is sufficient power for energy-intensive sensors and actuators. With variants for PROFINET, EtherNet/IP and EtherCAT as well as a REST API version, the SIG300 can be integrated into almost any system environment. Thanks to the programmable logic editor, simpler tasks can be executed autonomously and remotely. This shortens the response times for automated processes. Furthermore, the integrated web server allows fast, intuitive parameterization.

At a glance

- 8 IO-Link input ports (Class A/B)
- Ethernet interfaces: PROFINET, EtherNet/IP and EtherCAT
- IIoT interfaces: REST API and MQTT
- Galvanically isolated pins for the power supply from class B ports
- Max. 16 A in the IO-Link Master with max. 4 A per port
- Programmable logic editor
- Configuration via web server
- Enclosure rating IP67

Your benefits

- Allows vertical integration in state-of-the-art production environments – from sensor through to the PLC system and to the cloud solution
- High system compatibility through variants for the most commonly used Ethernet standards as well as a REST API variant
- High flexibility thanks to IO-Link ports that can also be configured as digital inputs or outputs
- Fast response times due to remote data processing and process control via an integrated logic editor
- Low cabling requirements thanks to consolidation of several sensor signals into a single IO-Link message
- Intuitive parameterization via an integrated web server

Fields of application

- IO-Link Master for factory and logistics automation
- Creation of autonomous sensor systems in the logic editor without an additional controller
- Areas in which sensors or actuators required class B ports
- Integration of IO-Link sensor and actuator data into IIoT environments

Ordering information

Other models and accessories ➜ www.sick.com/SIG300

- **Product category:** IO-Link Master
- **Supported products:** IO-Link Devices, binary switching sensors, binary actuators
- **Scope of delivery:** SIG300, safety instruction, Blind plugs (9 x M12, 1 x USB-C)
- **Further functions:** Web server integrated, IIoT interface available

Communication interface	Type	Part no.
IO-Link, REST API, Ethernet, EtherCAT®	SIG300-0A06AA100	1131013
IO-Link, REST API, Ethernet, EtherNet/IP™	SIG300-0A05AA100	1131012
IO-Link, REST API, Ethernet, PROFINET	SIG300-0A04AA100	1131011
IO-Link, REST API, MQTT, Ethernet	SIG300-0A0GAA100	1131014

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com