



ifm electronic



Operating instructions IO-Link Master Ethernet/IP AY1020

ecomat300[®]

You can use this Quick Start for an overview of the AY1020 installation. For complete installation and configuration information, download the device manual from the ifm.com website.

Installation and connection

The device must be installed in a suitable housing protected against fire and electrical or mechanical influences.

Connect the power and Ethernet cables according to the following table

Terminals	Description	Voltage Range	Remarks
V+, V- 24VDC PWR IN	Power supply for modules and sensors (A-ports via PWR Out connectors)	18...30 V DC, max. 4 A	Only use PWR connectors on one side top OR bottom. Do not use both at the same time.
L+, L- PWR OUT Port 1...8	Power supply (A-ports) for sensors or actuators. Be aware of the current limitations.	24 V DC, max. 200 mA	If more current is needed for B-port devices, take it directly from the power supply.

Configuration

Configure IP address

You can use the following procedure with the IO-Link master embedded web interface to configure the AY1020 network settings (administrative rights required).

Note: The AY1020 is shipped from the factory with the Admin account enabled without a password.

- ▶ Open browser and enter IP address of the AY1020.

Note: The AY1020 default IP address is 192.168.1.250. You may need to change your laptop or PC network address to the same network segment to access the web interface.

- ▶ Click on [Configuration] → [NETWORK].
- ▶ Click on the button [EDIT].
- ▶ Make any necessary network setting changes and click on [SAVE].

Connect and configure devices

- ▶ Connect the IO-Link and digital I/O devices
- ▶ Use the web interface to configure IO-Link, Ethernet/IP, and Modbus/TCP settings
 - If necessary, configure the dedicated digital I/O ports.
 - If desired, upload the appropriate IODD files for the IO-Link devices.

- If desired, configure the IO-Link device parameters using the web interface.
- If desired, implement AY1020 features or options, such as: data storage mode, device validation mode, and data validation mode.
- Use the Diagnostics pages to monitor or troubleshoot the devices.

If desired, connect to a PLC or HMI/SCADA (depending on the protocol).

Electrical connection

A qualified electrician must connect the unit. The national and international regulations for the installation of electrical equipment must be adhered to.

Voltage supply to EN 50178, SELV, PELV or UL. The module must be supplied from only one common voltage source.

The inputs and outputs are not electrically isolated.

- ▶ Disconnect power.
- ▶ Connect the device as follows; only one terminal block on the top or the bottom may be connected.

Terminal connection top	
Ext. voltage supply	
1: V_ext. voltage GND DC	
2: V_ext. voltage GND DC	
3: V_ext. voltage +24 V DC	
4: V_ext. voltage +24 V DC	
Terminal connection bottom	
Internal voltage, inputs/outputs	
1: L+ sensor supply +24 V DC	
2: L- sensor supply GND DC	
3: DI digital input DI	
4: DO digital output DO	
Terminal connection IO-Link ports	
Ports 1...8	
1: L+ sensor supply +24 V DC	
2: L- sensor supply GND DC	
3: DI digital input	
4: C/Q IO-Link / DI / DO	
IP address set at the factory: 192.168.1.250	

1: Terminal connection ext. voltage supply and IO-Link ports 1,2,5,6

2: terminal connection and IO-Link ports 3,4,7,8