



IO-Link

IO-Link masters for the automotive industry



IO-Link masters
PerformanceLine Coolant



4-port and 8-port IO-Link masters developed according to AIDA specifications

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

Connection of actuators up to 2 A

- Current measurement and configurable current limitation for each port
- Master and devices configurable via the LR DEVICE 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 EVC product series. The ecolink technology guarantees reliable, permanently ingress-resistant M12 connections of the connection cables.

IO-Link masters for the automotive industry

The AIDA (automation initiative of German automobile manufacturers) has defined a standard for IO-Link masters in the automotive industry. The L-coded power connection with functional earth is to be used for all future field modules. Moreover, this master complies with the AIDA labelling specifications and the most recent Profinet connection.



Advantages and customer benefits

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 mm² can be used to supply sensors and actuators with up to 16 A. The energy can be looped through the master (daisy chain).

Connection of 2A actuators requiring high voltage

Optionally, a digital output mode can be set for pin 2 of a B port. This makes it possible to switch large solenoid valves and actuators with up to 2 A.

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 LR DEVICE

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.

Connection technology

Type	Description	Order no.	
Ethernet cable (fieldbus)			
	0.5 m	RJ45 - M12	M12 - M12
	2 m	E12490	E12422
	5 m	E12491	E21139
	10 m	E12492	E21137
M12 socket, connection cable 2.5 mm², L-coded (power)			
	2 m	M12 - open	M12 - M12
	5 m	E12641	E12654
	10 m	E12642	E12655
	20 m	E12643	E12656
		E12644	E12657
M12 connection cable 0.34 mm² (sensor)			
	1 m	-	EVC042
	2 m	-	EVC043
	5 m	-	EVC044
	10 m	-	EVC493
wirable			
	M12 connector L-coded (power)	-	E12673
	M12 socket L-coded (power)	-	E12672

Products

Type	Description	Order no.
IO-Link master PerformanceLine Coolant		
	Profinet, 4-port	AL1400
	EtherNet/IP, 4-port	AL1420
	Profinet, 8-port	AL1402
	EtherNet/IP, 8-port	AL1422

Technical data

IO-Link Masters PerformanceLine Coolant	Order no.	
	AL1400 AL1420	AL1402 AL1422
Operating voltage	[V DC]	20...30
Total current consumption US	[A]	0.3...3.9
Actuator supply UA		
Total current rating	[A]	8
Current rating per port [A]		2 (configurable: 0...2; factory setting: 2)
Sensor supply US		
Total current rating	[A]	3.6
Current rating per port [A]		2 (configurable: 0...2; factory setting: 0.45)
IO-Link version		1.1
Number of IO-Link ports	4 B ports	4 A ports 4 B ports
Number of binary inputs (IO-Link in SIO mode)	4	4 + 8
Number of binary inputs (IO-Link in SIO mode)	4 + 4	4 + 8
Protection rating		IP 65, IP 66, IP 67
Ambient temperature	[°C]	-25...60
Housing materials		polyamide; socket: nickel-plated brass

Accessories

Type	Description	Order no.
	LR DEVICE (supplied on USB flash drive) software for online and offline parameter setting of IO-Link sensors and actuators	QA0011
	Coolant, Protective caps M12 (10 pcs)	E73004