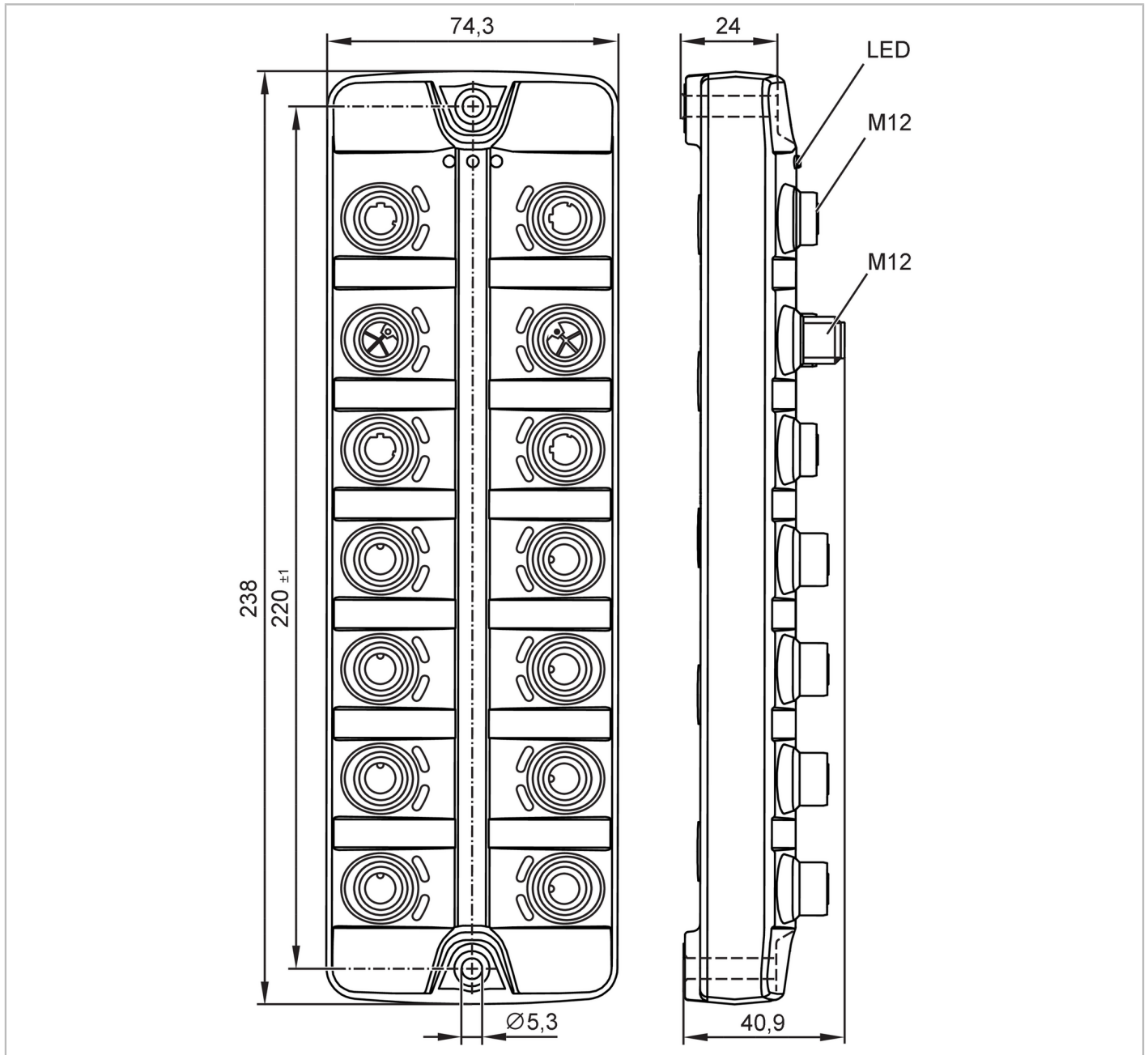


# AL1590



## IO-Link master with multiprotocol interface

IO-Link Master SOL MP 8P IP67



Application	
Application	I/O modules for field applications
Loop-through function	voltage supply; fieldbus interface; IoT interface
Electrical data	
Operating voltage [V]	20...30 DC; (US ; to PELV)
Current consumption [mA]	300...3900; (US)
Protection class	III
Additional voltage supply [V]	20...30 DC; (UA)
Actuator supply UA	
Max. current load total [A]	4

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Current rating per port	[A]	4
Sensor supply US		
Max. current load total	[A]	3.6
Current rating per port	[A]	2
<b>Inputs / outputs</b>		
Total number of inputs and outputs		16; (configurable)
Number of inputs and outputs		Number of digital inputs: 12; Number of digital outputs: 12
<b>Inputs</b>		
Number of digital inputs		12; (IO-Link Port Class A: 4 x 2; IO-Link Port Class B: 4 x 1)
Switching level high	[V]	11...30
Switching level low	[V]	0...5
<b>Outputs</b>		
Number of digital outputs		12; (IO-Link Port Class A: 4 x 1; IO-Link Port Class B: 4 x 2)
Short-circuit proof		yes
Actuator supply UA		
Max. current load per output	[mA]	4000
Sensor supply US		
Max. current load per output	[mA]	350
<b>Software / programming</b>		
Parameter setting options		Node-RED
Operating system		Embedded Linux
<b>Interfaces</b>		
Communication interface		Ethernet; IO-Link
Factory settings		EtherNet/IP
Ethernet - EtherNet/IP		
Transmission standard		10Base-T; 100Base-TX
Transmission rate		10 MBit/s; 100 MBit/s
Protocol		EtherNet/IP
Factory settings		IP address: 192.168.1.250 subnet mask: 255.255.255.255 gateway IP address: 0.0.0.0 MAC address: see type label
Note on interfaces		DHCP, BOOTP, static DLR (Device Level Ring) supported network topologies: line ring
Ethernet - PROFINET		
Transmission standard		100Base-TX
Transmission rate		100 MBit/s
Protocol		PROFINET



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Factory settings	IP address: 0.0.0.0
	subnet mask: 0.0.0.0
	gateway IP address: 0.0.0.0
	MAC address: see type label
Note on interfaces	IO-Link Integration Edition 2
	CC-C (Conformance Class C) (IRT-Switch)
	Netload Class III
	SNMP (Simple Network Management Protocol)
	MRP (Media Redundancy Protocol)
	supported network topologies: line ring
<b>Ethernet - Internet of Things</b>	
Transmission standard	10Base-T; 100Base-TX
Transmission rate	10 MBit/s; 100 MBit/s
Protocol	MQTT JSON; OPC UA
Factory settings	IP address: 169.254.x.x
	subnet mask: 255.255.0.0
	gateway IP address: 0.0.0.0
	MAC address: see type label
Note on interfaces	Secure protocol: HTTPS, MQTTS, TLS
<b>IO-Link Master</b>	
Transmission type	COM1 (4,8 kBaud); COM2 (38,4 kBaud); COM3 (230,4 kBaud)
IO-Link revision	1.1
Number of ports class A	4
Number of ports class B	4
<b>Operating conditions</b>	
Ambient temperature [°C]	-25...60
Storage temperature [°C]	-25...85
Max. relative air humidity [%]	90
Protection	IP 65; IP 66; IP 67
Protection rating (NEMA 250)	6P
Pollution degree	2
Chemical media	ISO 16750-5 AA, BA, BD, HLP, CC, DB, DC, DD, CA NEMA 250 5.13.1 AA
<b>Tests / approvals</b>	
EMC	EN 61000-6-2 EN 61000-6-4
Shock resistance	DIN EN 60068-2-27
Vibration resistance	DIN EN 60068-2-64 2009-04 DIN EN 60068-2-6 2008-10
MTTF [years]	38
<b>Mechanical data</b>	
Weight [g]	650.3
Housing	rectangular
Type of mounting	backplane mounting
Dimensions [mm]	238 x 74.3 x 24

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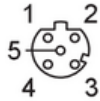
## IO-Link master with multiprotocol interface

IO-Link Master SOL MP 8P IP67

Materials	housing: PA orange; socket: brass nickel-plated
Sealing material	FKM
<b>Remarks</b>	
Remarks	For further information please see the operating instructions.
Pack quantity	1 pcs.

### Electrical connection - Ethernet

Connector: 2 x M12; coding: D; Contacts: 4; Sealing: FKM



#### IN/OUT XF1, XF2

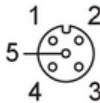
- 1: DATA TX +
- 2: DATA RX +
- 3: DATA TX -
- 4: DATA RX -
- 5: n.c.

#### IN/OUT XI1, XI2

- 1: DATA TX +
- 2: DATA RX +
- 3: DATA TX -
- 4: DATA RX -
- 5: n.c.

### Electrical connection - IO-Link

Connector: 8 x M12; coding: A; Contacts: 4; Sealing: FKM



#### IO-Link Port Class B X1...X4

- 1: L+ (US; Sensor supply)
- 2: L+ (UA; actuator supply/ DO2)
- 3: L- (US; Sensor supply)
- 4: IO-Link/ DI1/ DO1
- 5: L- (UA; actuator supply)

#### IO-Link Port Class A X5...X7

- 1: L+ (US; Sensor supply)
- 2: DI2
- 3: L- (US; Sensor supply)
- 4: IO-Link/ DI1/ DO1
- 5: n.c.

#### Port X8

- 1: L+ (US; Sensor supply)
  - 2: DI2
  - 3: L- (US; Sensor supply)
  - 4: IO-Link/ DI1/ DO1
  - 5: Reserved Recovery-Pin
- DI: digital input; DO: digital output; n.c.: not used

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## IO-Link master with multiprotocol interface

IO-Link Master SOL MP 8P IP67

### Electrical connection - voltage supply IN

Connector: 1 x M12; coding: L; Contacts: 5



#### XD1

1:	L+ (US)
2:	L- (UA)
3:	L- (US)
4:	L+ (UA)
5:	FE

### Electrical connection - voltage supply OUT

Connector: 1 x M12; coding: L; Contacts: 5; Sealing: FKM



#### XD2

1:	L+ (US)
2:	L- (UA)
3:	L- (US)
4:	L+ (UA)
5:	FE