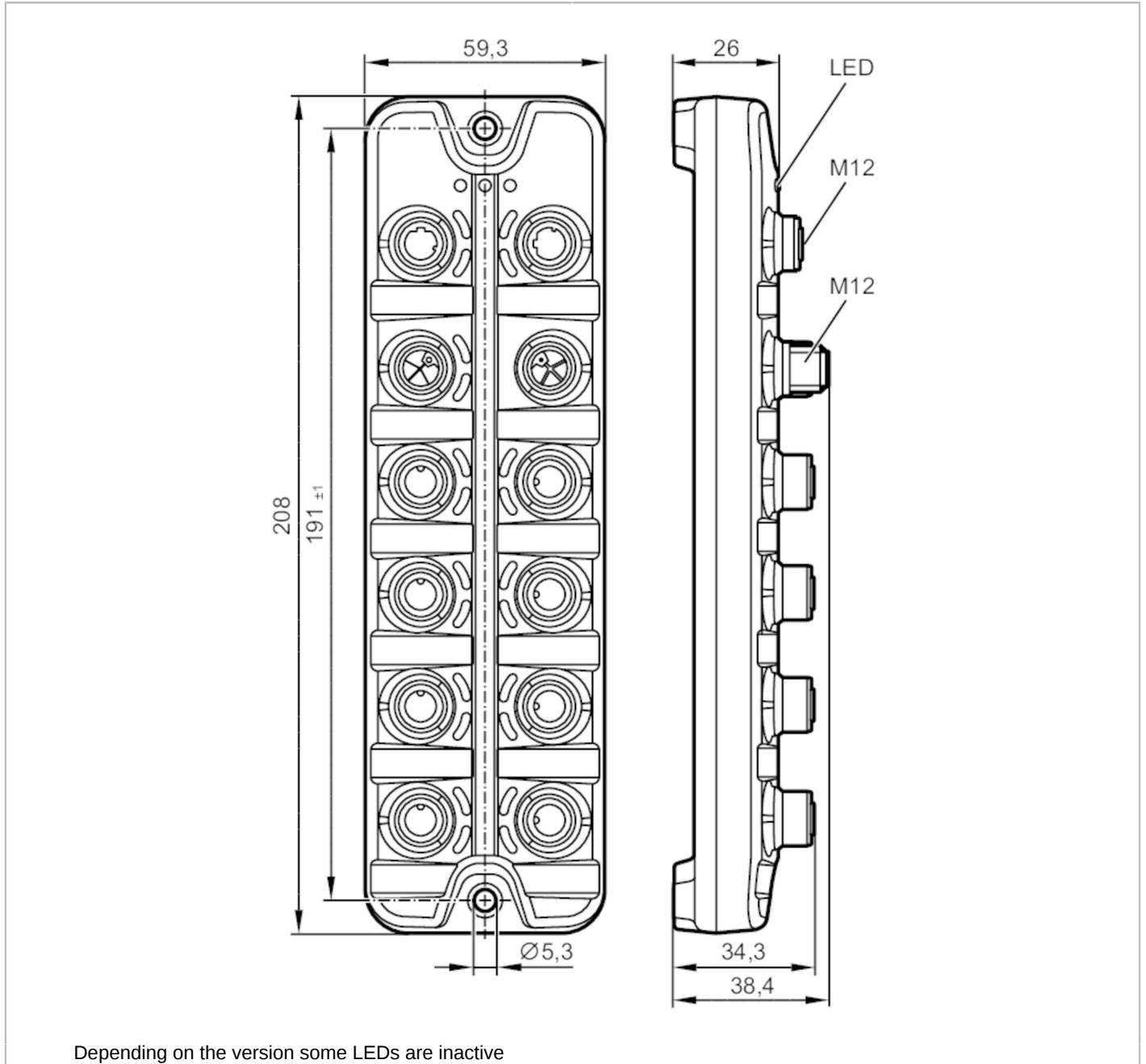# AL4142

Ethernet module with Modbus TCP interface

ETH Module PFL MB 16DI IP67

Depending on the version some LEDs are inactive

CE UKCA

Application	
Application	I/O modules for field applications
Daisy-chain function	voltage supply; fieldbus interface
Electrical data	
Operating voltage [V]	20...30 DC; (US ; to SELV/PELV)
Current consumption [mA]	200...3900; (US)
Protection class	III
Sensor supply US	
Max. current load total [A]	3.6

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Inputs / outputs

Number of inputs and outputs		Number of digital inputs: 16	

Inputs

Number of digital inputs		16; (type 2 according to IEC 61131-2)	
Switching level high	[V]	11...30	
Switching level low	[V]	0...5	
Digital inputs protected against short circuits		yes	

Software / programming

Parameter setting options		Counter function	
Functions and parameters		Function	CTU (Up Counter), CTD (Down Counter), CTUD (Up-Down Counter), CTDIR (Direction Counter)
		number	8 (1 counter for each port)
		count frequency	4500 Hz
		main counter	32 Bit (0…4.294.967.295)
		batch counter	16 Bit (0…65.535)

Interfaces

Communication interface		Ethernet	

Ethernet - Modbus TCP

Transmission standard		10Base-T; 100Base-TX	
Transmission rate		10 MBit/s; 100 MBit/s	
Protocol		Modbus TCP	
Factory settings		IP address: 192.168.1.250	
		subnet mask: 255.255.255.0	
		gateway IP address: 0.0.0.0	
		MAC address: see type label	

Operating conditions

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	
Degree of soiling		2	
Chemical media		ISO 16750-5	AA, BA, BD, HLP, CC, DB, DC, DD, CA
		NEMA 250 5.13.1	AA

Tests / approvals

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	

Mechanical data

Weight	[g]	420.9	
Material		housing: PA orange; Socket: brass nickel-plated	
Sealing material		FKM	

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Remarks

Remarks	Further information is available in the manual.
Pack quantity	1 pcs.

Electrical connection - Ethernet
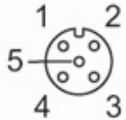
Connector: M12; coding: D; sealing: FKM

IN / OUT XF1, XF2

1	TX +
2	RX +
3	TX -
4	RX -
5	not used

Electrical connection - Process connection

Connector: M12; coding: A; sealing: FKM

Digital Input X1...X8

1	Sensor supply (US) L +
2	Digital input 1
3	Sensor supply (US) L-
4	Digital input 2
5	functional earth

Electrical connection - voltage supply IN

Connector: M12; coding: L

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XD1	
1	+ 24 V DC (US) brown
2	GND (UA) white
3	GND (US) blue
4	+ 24 V DC (UA) black
5	FE grey

Electrical connection - voltage supply OUT

Connector: M12; coding: L; sealing: FKM

XD2	
1	+ 24 V DC (US) brown
2	GND (UA) white
3	GND (US) blue
4	+ 24 V DC (UA) black
5	FE grey