

AL4042



Ethernet module with Modbus TCP interface

ETH Module SL MB 16DI IP67



| Application             |      |                                    |
|-------------------------|------|------------------------------------|
| Application             |      | I/O modules for field applications |
| Daisy-chain function    |      | 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]                                      | 406.2                                           |                                                                                         |
| Material                                        | housing: PA orange; Socket: brass nickel-plated |                                                                                         |
| Sealing material                                | FKM                                             |                                                                                         |



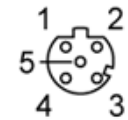
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| Remarks       |                                                 |
|---------------|-------------------------------------------------|
| Remarks       | Further information is available in the manual. |
| Pack quantity | 1 pcs.                   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

Electrical connection - Ethernet

Connector: M12; coding: D; sealing: FKM

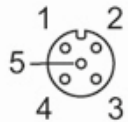


IN / OUT X21, X22

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

Electrical connection - Process connection

Connector: M12; coding: A; sealing: FKM



Digital Input X01...X08

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

Electrical connection - voltage supply

Connector: M12; coding: A



X31

|   |                |
|---|----------------|
| 1 | + 24 V DC (US) |
| 2 | not used       |
| 3 | GND (US)       |
| 4 | not used       |