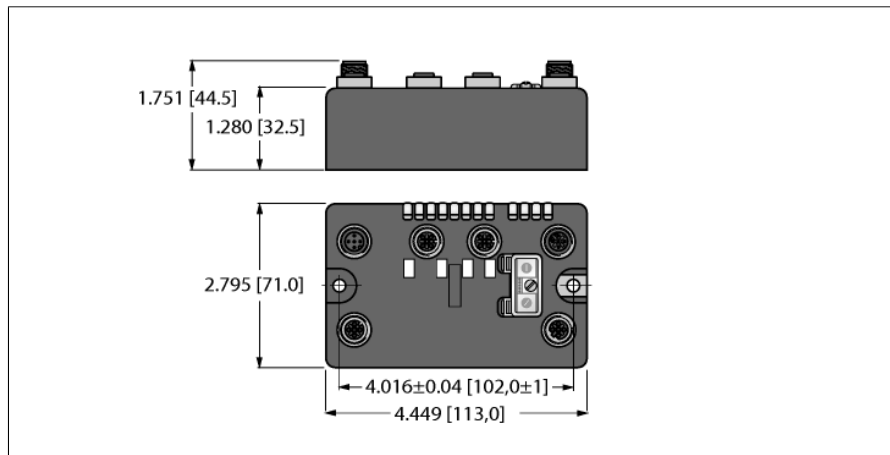




- On-machine Compact fieldbus I/O block
- PROFINET slave
- Integrated Ethernet Switch
- 10 Mbps / 100 Mbps supported
- Two 4-pole M12, D-coded, connectors for fieldbus connection
- 2 rotary switches for node address
- IP67, IP69K
- M12 I/O connectors
- LEDs indicating status and diagnostics
- Electronics galvanically separated from the field level via optocouplers
- Advanced RFID interface
- Software function block (PIB) required for control
- Connection of 2 BL ident® read/write heads
- Max cable length of 50 m

|                                   |                                                |
|-----------------------------------|------------------------------------------------|
| <b>Type designation</b>           | BLCEN-2M12MT-2RFID-A                           |
| Ident-No.                         | 6811484                                        |
| <b>Nominal system voltage</b>     | 24 VDC                                         |
| System power supply               | Via auxiliary power                            |
| Voltage supply connection         | 2 x M12, 5-pin                                 |
| Admissible range Vi               | 18...30VDC                                     |
| Nominal current Vi                | 150 mA                                         |
| Max. current Vi                   | 1 A                                            |
| <b>Fieldbus transmission rate</b> | 10/100 Mbps                                    |
| Adjustment transmission rate      | Automatic detection                            |
| Fieldbus address range            | 1...92                                         |
|                                   | 0 (192.168.1.254)                              |
|                                   | 93 (BootP)                                     |
|                                   | 94 (DHCP)                                      |
|                                   | 95 (PGM)                                       |
|                                   | 96 (PGM-DHCP) *Recommended for PROFINET        |
|                                   | 97...99 (manufacturer specific)                |
| Fieldbus addressing               | 2 decimally coded rotary switches              |
| Fieldbus connection technology    | 2 x M12                                        |
|                                   | 4-pole, D-coded                                |
| Protocol detection                | automatic                                      |
| Web server                        | Integrated                                     |
| Service interface                 | Ethernet                                       |
| Vendor ID                         | 48                                             |
| Product type                      | 12                                             |
| <b>Modbus TCP</b>                 |                                                |
| Addressing                        | Static IP, BOOTP, DHCP                         |
| Supported function codes          | FC1, FC2, FC3, FC4, FC5, FC6, FC15, FC16, FC23 |
| Number of TCP connections         | 6                                              |
| <b>EtherNet/IP™</b>               |                                                |
| Addressing                        | acc. to EtherNet/IP™ specification             |
| Device Level Ring (DLR)           | supported                                      |
| Class 1 connections (CIP)         | 6                                              |
| <b>PROFINET</b>                   |                                                |
| Addressing                        | DCP                                            |
| Conformance class                 | B (RT)                                         |
| MinCycleTime                      | 1 ms                                           |
| Diagnostics                       | acc. to PROFINET alarm handling                |
| Topology detection                | supported                                      |
| Automatic addressing              | supported                                      |
| Media Redundancy Protocol (MRP)   | supported                                      |
| Input Data Size                   | max. 4 BYTE                                    |
| Output Data Size                  | max. 4 BYTE                                    |

**BL compact™ fieldbus station for PROFINET®****Interface for Connection of 2 BL ident Read/Write Heads (HF/UHF)****BLCEN-2M12MT-2RFID-A**

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**Technology**

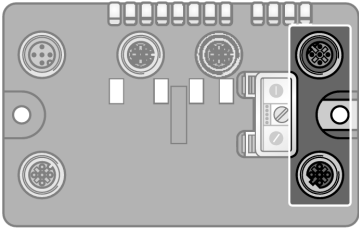
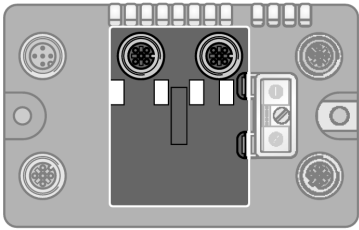
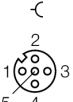
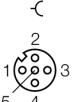
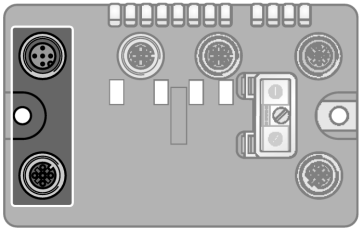
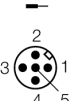
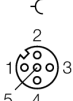
|                      |                                                           |
|----------------------|-----------------------------------------------------------|
| Signal type          | Advanced RFID Interface                                   |
| Number of channels   | 2                                                         |
| Sensor supply        | 0.5 A per channel, short-circuit proof                    |
| Simultaneity factor  | 1                                                         |
| Transmission rate    | 115.2 kbps                                                |
| Cable length         | 50 m                                                      |
| Electrical isolation | isolation of electronics and field level via optocouplers |

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**Dimensions**

|                                   |                                                    |
|-----------------------------------|----------------------------------------------------|
| Mounting                          | 113 x 71 x 32.5 mm                                 |
| Weight                            | 2 × 5.4 mm diameter holes, 1.7 Nm torque           |
| Weight                            | 360 ± 20 g                                         |
| Housing material                  | Glass-filled nylon, nickel plated brass connectors |
| Housing color                     | Black                                              |
| Window material                   | Lexan                                              |
| Material screw                    | Nickel-plated brass                                |
| Material label                    | Polyester with polycarbonate overlay               |
| Ground label material             | Nickel plated brass                                |
| Protection class                  | IP67                                               |
|                                   | IP69K                                              |
| Operating temperature             | -40...+70 °C                                       |
| Storage temperature               | -40...+85 °C                                       |
| Relative humidity                 | 15 to 95% (non-condensing)                         |
| Vibration test                    | according to IEC 61131-2                           |
| Extended vibration resistance     |                                                    |
| - up to 20 g (at 10 up to 150 Hz) | For mounting on base plate or machinery            |
| Shock test                        | according to IEC 61131-2                           |
| Electromagnetic compatibility     | according to IEC 61131-2                           |
| MTTF                              | 148 years                                          |
| MTTF note                         | acc. to SN 29500 (Ed. 99) 20 °C                    |
| Approvals and certificates        | CE, cULus                                          |

Pinning and wiring diagram

|                                                                                     |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>Ethernet</b><br/>Fieldbus cable (IP67 example): RSSD RSSD 441-2M ID number U-02482 or RSSD-RSSD-441-2M/S2174 ID number 6914218</p>         | <p>Pin Assignment (M12, D-code)</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>1 = TD +<br/>2 = RD +<br/>3 = TD -<br/>4 = RD -</p> </div> <div style="text-align: center;">  <p>1 = TD +<br/>2 = RD +<br/>3 = TD -<br/>4 = RD -</p> </div> </div>                                             |
|    | <p><b>RFID Channels</b><br/>Extension cable (example): RK 4.5T-2-RS 4.5T/S2501 ident-no. U3-01243 or RK4.5T-2-RS4.5T/S2500 ident-no. 6699200</p> | <p>Connector .../S2500</p> <div style="text-align: center;">  <p>1 = BN (+)<br/>2 = BK (Data)<br/>3 = BU (GND)<br/>4 = WH (Data)<br/>5 = shield</p> </div> <p>Connector .../S2501</p> <div style="text-align: center;">  <p>1 = BN (+)<br/>2 = WH (Data)<br/>3 = BU (GND)<br/>4 = BK (Data)<br/>5 = shield</p> </div>                               |
|  | <p><b>Auxiliary Power</b><br/>Extension cable (example): RKC 4.4T-2-RSC 4.4T ident-no. U5264 or RKC4.4T-2-RSC4.4T/TEL ident-no. 6625208</p>      | <p>Pin Assignment</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>1 = V<sub>i</sub><br/>2 = V<sub>0</sub><br/>3 = GND<br/>4 = GND<br/>5 = PE</p> </div> <div style="text-align: center;">  <p>1 = V<sub>i</sub><br/>2 = V<sub>0</sub><br/>3 = GND<br/>4 = GND<br/>5 = PE</p> </div> </div> |

# BL compact™ fieldbus station for PROFINET®

## Interface for Connection of 2 BL ident Read/Write Heads (HF/UHF)

### BLCEN-2M12MT-2RFID-A

#### Station LED status

| LED     | Color  | Status            | Description                     |
|---------|--------|-------------------|---------------------------------|
| IOs     |        | OFF               | No power                        |
|         | RED    | ON                | Low power or station error      |
|         | RED    | FLASHING (1 Hz)   | I/O module configuration error  |
|         | RED    | FLASHING (4 Hz)   | No I/O module bus communication |
|         | GREEN  | ON                | Station ok                      |
|         | GREEN  | FLASHING          | Force mode active               |
| BUS     |        | OFF               | Power Off                       |
|         | GREEN  | ON                | Connected to Master             |
|         | GREEN  | FLASHING          | Ready                           |
|         | GREEN  | FLASHING 3x (1Hz) | ARGEE Running                   |
|         | RED    | ON                | Error                           |
|         | RED    | FLASHING          | WINK                            |
|         | YELLOW | ON                | DHCP/BOOTP Search               |
| LNK/ACT |        | OFF               | No Link                         |
|         | GREEN  | ON                | Link                            |
|         | GREEN  | FLASHING          | Traffic                         |
|         | YELLOW | ON                | 100 Mbit Linked                 |

#### I/O LED status

| LED       | Color | Status           | Description                                     |
|-----------|-------|------------------|-------------------------------------------------|
| D *       |       | OFF              | No diagnostics active                           |
|           | RED   | ON               | Station error/ module bus communication failure |
|           | RED   | FLASHING (0.5Hz) | Diagnostics active                              |
| RW0 / RW1 |       | OFF              | No tag present, no diagnostics active           |
|           | GREEN | ON               | Tag present                                     |
|           | GREEN | FLASHING (2 Hz)  | Data communication from / to tag active         |
|           | RED   | ON               | Error in the R/W head                           |
|           | RED   | FLASHING (2 Hz)  | Short circuit in the transceiver supply         |

\* D LED also indicates gateway diagnostics

**BL compact™ fieldbus station for PROFINET®****Interface for Connection of 2 BL ident Read/Write Heads (HF/UHF)****BLCEN-2M12MT-2RFID-A****PROFINET® Process Data**

|         | BYTE | Bit 7                                              | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
|---------|------|----------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Inputs  | 0    | Status Word RFID 1 <sub>0</sub> – Low Byte (LSB)   |       |       |       |       |       |       |       |
|         | 1    | Status Word RFID 1 <sub>0</sub> – High Byte (MSB)  |       |       |       |       |       |       |       |
|         | 2    | Status Word RFID 1 <sub>1</sub> – Low Byte (LSB)   |       |       |       |       |       |       |       |
|         | 3    | Status Word RFID 1 <sub>1</sub> – High Byte (MSB)  |       |       |       |       |       |       |       |
| Outputs | 0    | Control Word RFID 1 <sub>0</sub> – Low Byte (LSB)  |       |       |       |       |       |       |       |
|         | 1    | Control Word RFID 1 <sub>0</sub> – High Byte (MSB) |       |       |       |       |       |       |       |
|         | 2    | Control Word RFID 1 <sub>1</sub> – Low Byte (LSB)  |       |       |       |       |       |       |       |
|         | 3    | Control Word RFID 1 <sub>1</sub> – High Byte (MSB) |       |       |       |       |       |       |       |

**ATTENTION !**

A Proxy Ident Function Block (PIB) is necessary to control the RFID-A module. It can not be done with the Status and Control words of the process data directly!