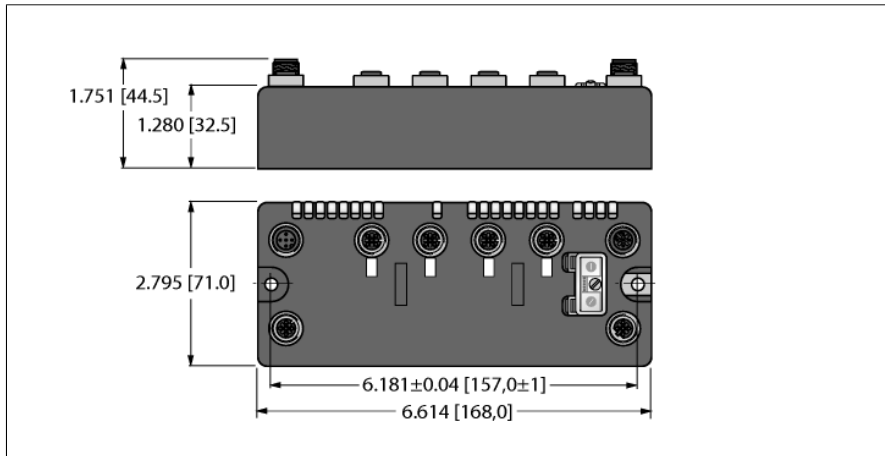


**BL compact™ fieldbus station for PROFIBUS-DP**  
**4 Analog Inputs for Pt and Ni Sensors**  
**BLCDP-4M12LT-2AI-PT-2AI-PT**

- On-machine Compact fieldbus I/O block
- PROFIBUS-DP slave
- 9.6 kbps ... 12 Mbps
- Two 5-pole M12, reverse-keyed, 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
- 4 analog inputs for RTDs
- Pt100, Pt200, Pt500, Pt1000, Ni100, Ni1000, 0...100Ω, 0...200Ω, 0...400Ω, or 0...1000Ω (selectable per channel)

|                         |                            |
|-------------------------|----------------------------|
| <b>Type designation</b> | BLCDP-4M12LT-2AI-PT-2AI-PT |
| <b>Ident-No.</b>        | 6811184                    |

|                               |                     |
|-------------------------------|---------------------|
| <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            | 190 mA              |
| Max. current Vi               | 2 A                 |

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| <b>Fieldbus transmission rate</b> | 9.6 kbps ... 12 Mbps              |
| Adjustment transmission rate      | Automatic detection               |
| Fieldbus address range            | 0...99                            |
| Fieldbus addressing               | 2 decimally coded rotary switches |
| Fieldbus connection technology    | 2 x M12                           |
|                                   | 5-pole, reverse keyed             |
| Fieldbus termination              | external                          |
| Service interface                 | RS232 interface                   |

|                            |                                                           |
|----------------------------|-----------------------------------------------------------|
| <b>Analog inputs</b>       |                                                           |
| Operating modes            | Pt100, 200, 500, 1000 & Ni100, 1000                       |
| Type of input diagnostics  | Channel diagnostics                                       |
| Sensor supply              | 24 VDC, 1 amp max.                                        |
| Basic fault limit at 23 °C | < 0.2 %                                                   |
| Repeatability              | < 0.05 %                                                  |
| Temperature coefficient    | < 300 ppm / °C of full scale                              |
| Resolution                 | 16 bit                                                    |
| Measurement display        | 16 bit signed integer<br>12 bit full range left-justified |

|                                   |                                                    |
|-----------------------------------|----------------------------------------------------|
| <b>Dimensions</b>                 | 168 x 71 x 32.5 mm                                 |
| Mounting                          | 2 x 5.4 mm diameter holes, 1.7 Nm torque           |
| Weight                            | 530 ± 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<br>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                           |
| Approvals and certificates        | CE, cULus                                          |

# BL compact™ fieldbus station for PROFIBUS-DP

## 4 Analog Inputs for Pt and Ni Sensors

### BLCDP-4M12LT-2AI-PT-2AI-NI

#### Pinning and wiring diagram

|  |                                                                                                                                                                                                                                                |                                                                                           |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
|  | <b>PROFIBUS-DP</b><br>Fieldbus cable (example): RSSW RKSW 455-2M ident-no. U0350<br>or RSSW-RKSW455-2M ident-no. 6602222                                                                                                                       | <b>Pin Assignment (M12, B-Code)</b><br>                                                   |
|  | <b>Slot 1: RTD Inputs</b><br>Extension cable (example): RK 4T-2-RS 4T/S3041 ident-no.<br>U-1666 or RKC4.5T-2-RSC4.5/TEL ident no. 6625212<br>NOTE: Do not connect Pin 3. Use only sensor cables without pin 3<br>or field-wireable connectors. | <b>Pin Assignment</b><br><br><b>2-wire Technology</b><br><br><b>3-wire Technology</b><br> |
|  | <b>Slot 2: RTD Inputs</b><br>See slot 1                                                                                                                                                                                                        | <b>Pin Assignment</b><br>                                                                 |
|  | <b>Auxiliary Power</b><br>Extension cable (example): RKC 4.4T-2-RSC 4.4T ident-no.<br>U5264 or RKC4.4T-2-RSC4.4T/TEL ident-no. 6625208                                                                                                         | <b>Pin Assignment</b><br>                                                                 |

**BL compact™ fieldbus station for PROFIBUS-DP**  
**4 Analog Inputs for Pt and Ni Sensors**  
**BLCDP-4M12LT-2AI-PT-2AI-PT****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             | No field bus communication                          |
|     | GREEN | ON              | Field bus communication active                      |
|     | GREEN | FLASHING (1 Hz) | No field bus communication active, device status OK |
|     | RED   | ON              | Bus error at the gateway; no data exchange          |
|     | RED   | FLASHING        | Faulty PROFIBUS-DP address                          |
| BUS |       | OFF             | No field bus communication                          |
|     | GREEN | ON              | Field bus communication active                      |
|     | GREEN | FLASHING (1 Hz) | No field bus communication active, device status OK |
|     | RED   | ON              | Bus error at the gateway; no data exchange          |
|     | RED   | FLASHING        | Faulty PROFIBUS-DP address                          |

**I/O LED status slot 1**

| LED                  | Color | Status           | Description                                     |
|----------------------|-------|------------------|-------------------------------------------------|
| D1 *                 |       | OFF              | No diagnostics active                           |
|                      | RED   | ON               | Station error/ module bus communication failure |
|                      | RED   | FLASHING (0.5Hz) | Diagnostics active (Slot 1)                     |
| AI channels<br>0 / 1 |       |                  | Not connected                                   |

\* D1 LED also indicates gateway diagnostics

**I/O LED status slot 2**

| LED                  | Color | Status           | Description                                     |
|----------------------|-------|------------------|-------------------------------------------------|
| D2 *                 |       | OFF              | No diagnostics active                           |
|                      | RED   | ON               | Station error/ module bus communication failure |
|                      | RED   | FLASHING (0.5Hz) | Diagnostics active (Slot 2)                     |
| AI channels<br>0 / 1 |       |                  | Not connected                                   |

\* D2 LED also indicates gateway diagnostics

**BL compact™ fieldbus station for PROFIBUS-DP**  
**4 Analog Inputs for Pt and Ni Sensors**  
**BLCDP-4M12LT-2AI-PT-2AI-PT**

**I/O Data Map**

| INPUT             | BYTE | Bit 7                 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
|-------------------|------|-----------------------|-------|-------|-------|-------|-------|-------|-------|
| AI 1 <sub>0</sub> | 0    | AI 1 <sub>0</sub> LSB |       |       |       |       |       |       |       |
|                   | 1    | AI 1 <sub>0</sub> MSB |       |       |       |       |       |       |       |
| AI 1 <sub>1</sub> | 2    | AI 1 <sub>1</sub> LSB |       |       |       |       |       |       |       |
|                   | 3    | AI 1 <sub>1</sub> MSB |       |       |       |       |       |       |       |
| AI 2 <sub>0</sub> | 4    | AI 2 <sub>0</sub> LSB |       |       |       |       |       |       |       |
|                   | 5    | AI 2 <sub>0</sub> MSB |       |       |       |       |       |       |       |
| AI 2 <sub>1</sub> | 6    | AI 2 <sub>1</sub> LSB |       |       |       |       |       |       |       |
|                   | 7    | AI 2 <sub>1</sub> MSB |       |       |       |       |       |       |       |