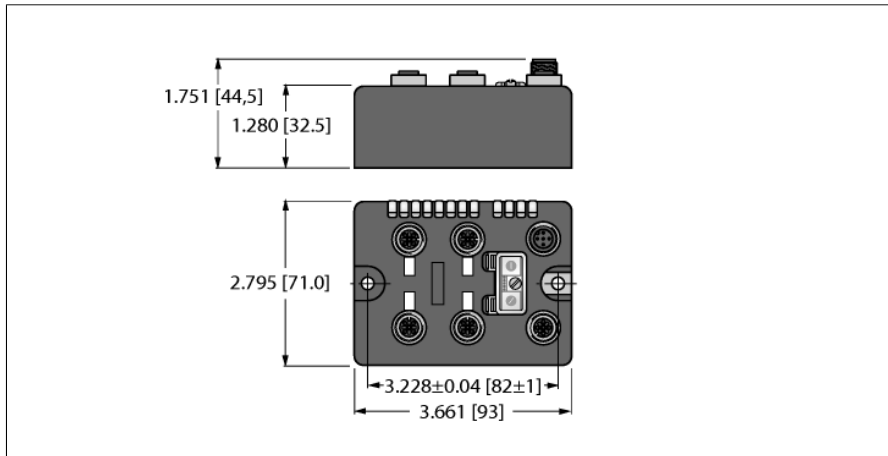


BL compact™ fieldbus station for DeviceNet™

2 Analog Inputs for Current or Voltage and 2 Analog Outputs for Voltage

BLCDN-4M12S-2AI2AO-VI

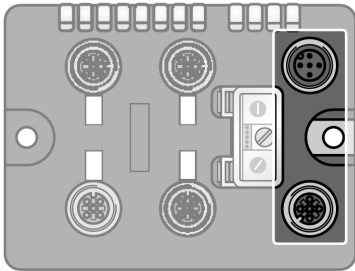


- On-machine Compact fieldbus I/O block
- DeviceNet™ slave
- 125 / 250 / 500 kbps
- Two 5-pole M12 connectors for fieldbus connection
- 2 rotary switches for node address
- IP67, IP69K
- M12 I/O connectors
- LEDs indicating status and diagnostics
- Electronics galvanically separated from the field level via optocouplers
- 2 analog inputs for current or voltage
- 0/4...20 mA or -10/0...+10 VDC (selectable per channel)
- 2 analog voltage outputs
- -10/0...+10 VDC

| | |
|-----------------------------------|--|
| Type designation | BLCDN-4M12S-2AI2AO-VI |
| Ident-No. | 6811058 |
| Fieldbus transmission rate | 125/250/500 kbps |
| Adjustment transmission rate | Automatic detection |
| Fieldbus connection technology | 2 × M12, 5-pole |
| Fieldbus address range | 0...63 |
| | 64...80 (programmable MACID) |
| | 81...99 (manufacturer specific) |
| Fieldbus addressing | 2 decimally coded rotary switches |
| Service interface | RS232 interface |
| Vendor ID | 48 |
| Product type | 12 |
| Product code | 11058 |
| Analog inputs | from 2AI2AO-VI |
| Operating modes | 0/4 ... 20 mA or -10/0 ... 10 VDC |
| Resolution | 16 bit |
| Repeatability | < 0.05 % |
| Temperature coefficient | < 300 ppm / °C of full scale |
| Analog outputs | from 2AI2AO-VI |
| Operating modes | -10/0 ... 10 V |
| Resolution | 16 bit |
| Repeat accuracy | < 0.05 % |
| Temperature coefficient | < 300 ppm/°C of full scale |
| 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 |
| Dimensions (W x L x H) | 71 x 93 x 32.5mm |
| Operating temperature | -40...+70 °C |
| Storage temperature | -40...+85 °C |
| Relative humidity | 15 to 95% (non-condensing) |
| Protection class | IP67 |
| | IP69K |
| 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 |
| Weight | 320 ± 20 g |
| Mounting | 2 × 5.4 mm diameter holes, 1.7 Nm torque |

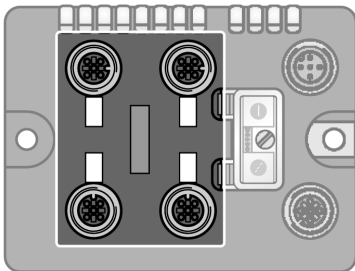
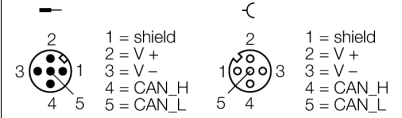
BL compact™ fieldbus station for DeviceNet™
2 Analog Inputs for Current or Voltage and 2 Analog Outputs for Voltage
BLCDN-4M12S-2AI2AO-VI

Pinning and wiring diagram



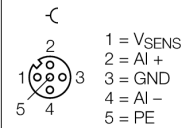
DeviceNet™
Fieldbus cable (example): RSC RKC 572-2M ident-no. U0323 or RSC-RKC572-2M ident-no. 6603629

Pin Assignment

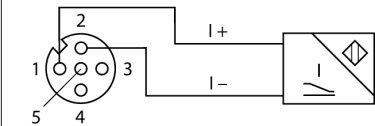


Analog Inputs and outputs
Extension cable (example): RK 4.5T-2-RS 4.5T/S653 ident-no. U2187-09 or RKC4.5T-2-RSC4.5T/TEL ident-no. 6625212

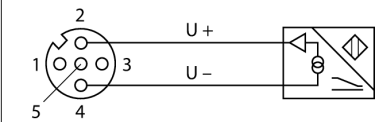
Pin Assignment (Ports 0 to 1)



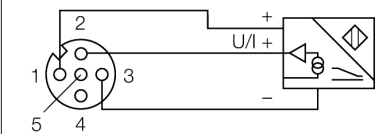
2-wire Technology (Current)



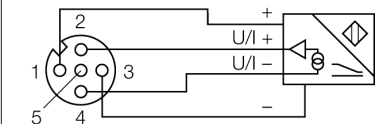
2-wire Technology (Voltage)



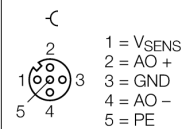
3-wire Technology



4-wire Technology



Pin Assignment (Ports 2 to 3)



BL compact™ fieldbus station for DeviceNet™

2 Analog Inputs for Current or Voltage and 2 Analog Outputs for Voltage

BLCDN-4M12S-2AI2AO-VI

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 |
| MNS | | OFF | No connection |
| | GREEN | ON | Connection established |
| | GREEN | FLASHING (1 Hz) | No connection established, device OK |
| | RED | ON | Duplicate MAC-ID |
| | RED | FLASHING | Connection time out |
| IO | GREEN | ON | I/O active |
| | GREEN | FLASHING (1 Hz) | One or more I/O in Idle State |
| | RED | ON | One or more I/O error |
| | RED | FLASHING | One or more I/O in Faulted State |

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 |
| AI channels 0...1 | | OFF | Channel inactive |
| | GREEN | ON | Channel active |
| | GREEN | FLASHING (0.5 Hz) | Underflow diagnostics |
| | GREEN | FLASHING (4 Hz) | Overflow diagnostics |
| AO channels 2...3 | | | Not connected (The analog outputs do not have a LED) |

* D LED also indicates gateway diagnostics

BL compact™ fieldbus station for DeviceNet™

2 Analog Inputs for Current or Voltage and 2 Analog Outputs for Voltage

BLCDN-4M12S-2AI2AO-VI

I/O & Diagnostic Data Map

| INPUT | BYTE | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
|----------------------|-------------|---|--------------|--------------------|--------------|--------------------------------------|--------------|---|-------------------------------|
| AI 1 ₀ | 0 | AI 1 ₀ LSB | | | | | | | |
| | 1 | AI 1 ₀ MSB | | | | | | | |
| AI 1 ₁ | 2 | AI 1 ₁ LSB | | | | | | | |
| | 3 | AI 1 ₁ MSB | | | | | | | |
| Diagnostics | 4 | Module number reporting diagnostic data | | | | | | | |
| | 5 | Replace Station | - | Diagnostics Active | - | - | - | - | - |
| Slot 1 (ref. Byte 4) | 6 | Hardware Failure | - | - | - | AI 1 ₀ Overflow/Underflow | - | Wire Break AI 1 ₀ (4...20 mA range only) | Range Error AI 1 ₀ |
| | 7 | Hardware Failure | - | - | - | AO 1 ₂ Overflow/Underflow | - | - | Range Error AO 1 ₂ |
| | 8 | Hardware Failure | - | - | - | AI 1 ₁ Overflow/Underflow | - | Wire Break AI 1 ₁ (4...20 mA range only) | Range Error AI 1 ₁ |
| | 9 | Hardware Failure | - | - | - | AO 1 ₃ Overflow/Underflow | - | - | Range Error AO 1 ₃ |
| OUTPUT | BYTE | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
| AO 1 ₂ | 0 | AO 1 ₂ LSB | | | | | | | |
| | 1 | AO 1 ₂ MSB | | | | | | | |
| AO 1 ₃ | 2 | AO 1 ₃ LSB | | | | | | | |
| | 3 | AO 1 ₃ MSB | | | | | | | |