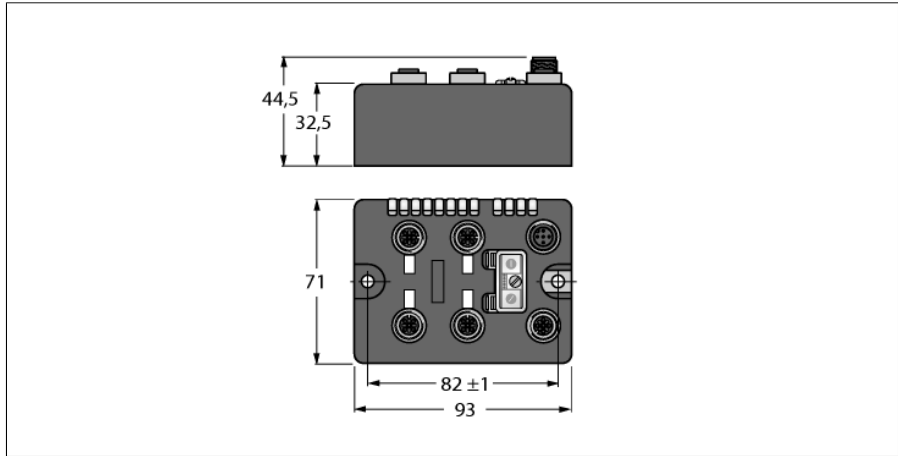


**BL Compact Fieldbus Station for DeviceNet**  
**4 Analog Current or Voltage Inputs**  
**BLCDN-4M12S-4AI-VI**



- On-Machine™ compact fieldbus I/O blocks
- DeviceNet™ slave
- 125/250/500 kbps
- Two 5-pin M12 male receptacles for fieldbus connection
- 2 rotary coding switches for node-address
- IP 69K
- M12 I/O ports
- LEDs indicating status and diagnostics
- Electronics galvanically isolated from the field level via optocouplers
- 4 analog inputs for current or voltage
- 0/4...20 mA, -10/0...+10 VDC (selectable per channel)

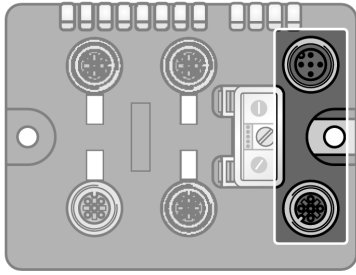
<b>Type designation</b>	BLCDN-4M12S-4AI-VI
Ident no.	6811003
<b>Nominal system voltage</b>	24 VDC
System power supply	Via DeviceNet
Admissible range V+	11...30 VDC
Nominal current V+	42 mA
Max. current V+	4 A
<b>Fieldbus transmission rate</b>	125/250/500 kbps
Adjustment transmission rate	Automatic detection
Fieldbus address range	0...63
	64...80 (programmable MACID)
	81...99 (manufacturer specific)
Fieldbus addressing	2 dec. Rotary coding switches
Fieldbus connection technology	2 × M12
	5-pin
Fieldbus termination	External
Service interface	RS232 interface
Vendor ID	48
Product type	12
Product code	11003
<b>Analog inputs</b>	from 4AI-VI
Operating modes	0/4 ... 20 mA or -10/0 ... 10 VDC
Type of input diagnostics	Channel diagnostics
Sensor supply	24 VDC, max. 1 A
Input resistance	Current: < 0.125 kΩ, Voltage: < 98.5 kΩ
Maximum limiting frequency analog	< 20 Hz
Basic fault limit at 23 °C	< 0.3 %
Repeatability	< 0.05 %
Temperature coefficient	< 300 ppm/°C of full scale
Resolution	16 Bit
Measuring principle	Sigma Delta
Measurement display	16 bit signed integer 12 bit full range left-justified

**BL Compact Fieldbus Station for DeviceNet**  
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<b>Dimensions</b>	93 x 71 x 32.5 mm
Mounting	2 × 5.4 mm diameter holes, 1.7 Nm torque
Weight	320 ± 20 g
Housing material	Glass fiber reinforced nylon, nickel-plated connector
Housing color	Black
Material screw	Nickel-plated brass
Material label	Polyester with polycarbonate overlay
Ground label material	Nickel-plated brass
Protection class	IP67 IP69K
Ambient temperature	-40...+70 °C
Storage temperature	-40...+85 °C
Relative humidity	15...95 %, non-condensing
Vibration test	Acc. to IEC 61131-2
- up to 20 g (at 10 up to 150 Hz)	For mounting on base plate or machinery
Shock test	acc. to IEC 61131-2
Electromagnetic compatibility	Acc. to IEC 61131-2
Approvals and certificates	CE, cULus

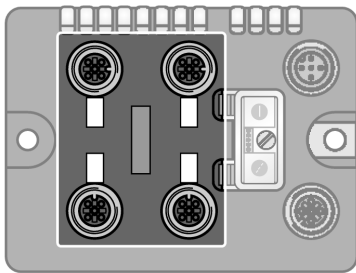
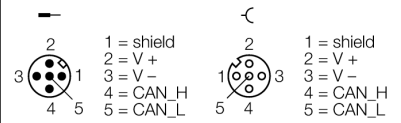
**BL Compact Fieldbus Station for DeviceNet**  
**4 Analog Current or Voltage Inputs**  
**BLCDN-4M12S-4AI-VI**



**DeviceNet**

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

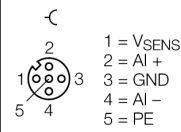
**Pin Assignment**



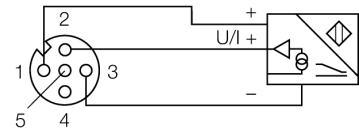
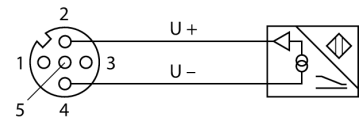
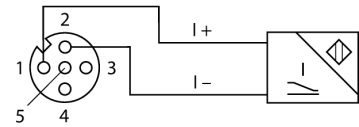
**Analog Inputs**

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

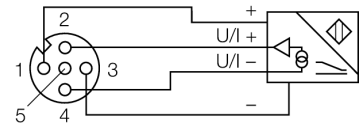
**Pin Assignment**



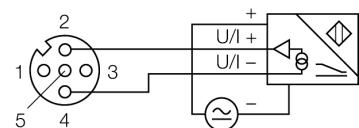
**2-wire Connection (current)**



**4-wire connection technology**



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**BL Compact Fieldbus Station for DeviceNet**  
**4 Analog Current or Voltage Inputs**  
**BLCDN-4M12S-4AI-VI****Status: Station LED**

LED	Color	Status	Description
IOs		OFF	Power off
	RED	ON	Insufficient power supply
	RED	FLASHING (1Hz)	Deviating station configuration
	RED	FLASHING (4 Hz)	No module bus communication
	GREEN	ON	Station OK
	GREEN	FLASHING	Force mode active
MNS		OFF	No connection
	GREEN	ON	Fieldbus communication active
	GREEN	FLASHING (1Hz)	Fieldbus communication disabled, device status OK
	RED	ON	Double MAC-ID
	RED	FLASHING	Fieldbus communication timeout
IO	GREEN	ON	I/O slots OK
	GREEN	FLASHING (1Hz)	At least one I/O slot in idle state
	RED	ON	At least one faulty I/O slot
	RED	FLASHING	At least one I/O slot in faulty state

**Status: I/O LED**

LED	Color	Status	Description
D *		OFF	Diagnostic disabled
	RED	ON	Station / module bus communication failure
	RED	FLASHING (0.5Hz)	Summarized diagnostic
AI channels 0...3		OFF	Channel inactive
	GREEN	ON	Channel active
	GREEN	FLASHING (0.5 Hz)	Measuring range undershoot
	GREEN	FLASHING (4 Hz)	Measuring range overshoot

\* D LED also indicates gateway diagnostic

**BL Compact Fieldbus Station for DeviceNet**  
**4 Analog Current or Voltage Inputs**  
**BLCDN-4M12S-4AI-VI**

**Mapping of I/O and Diagnostic Data**

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 1 <sub>2</sub>	4	AI 1 <sub>2</sub> LSB							
	5	AI 1 <sub>2</sub> MSB							
AI 1 <sub>3</sub>	6	AI 1 <sub>3</sub> LSB							
	7	AI 1 <sub>3</sub> MSB							
Diagnose	8	Modulnummer meldet Diagnose Daten							
	9	Austauschstation	-	Diagnose aktiv	-	-	-	-	-
Steckplatz 1 (ref. Byte 8)	10	-	-	-	-	-	-	Offener Stromkreis AI 1 <sub>0</sub>	Bereichsfehler AI 1 <sub>0</sub>
	11	-	-	-	-	-	-	Offener Stromkreis AI 1 <sub>1</sub>	Bereichsfehler AI 1 <sub>1</sub>
	12	-	-	-	-	-	-	Offener Stromkreis AI 1 <sub>2</sub>	Bereichsfehler AI 1 <sub>2</sub>
	13	-	-	-	-	-	-	Offener Stromkreis AI 1 <sub>3</sub>	Bereichsfehler AI 1 <sub>3</sub>