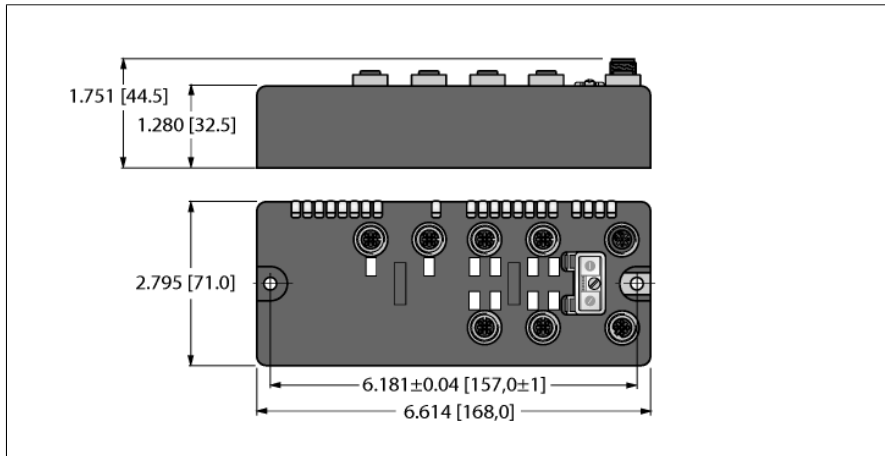


BL compact™ fieldbus station for DeviceNet™**4 Analog Inputs for Current or Voltage and 2 Analog Outputs for Current****BLCDN-6M12L-4AI-VI-2AO-I**

- 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
- 4 analog inputs for current or voltage
- 0/4...20 mA or -10/0...+10 VDC (selectable per channel)
- 2 analog current outputs
- 0/4...20 mA

Type designation	BLCDN-6M12L-4AI-VI-2AO-I
Ident-No.	6811048
Nominal system voltage	24 VDC
System power supply	Via DeviceNet
Admissible range V+	18...30VDC
Nominal current V+	92 mA
Max. current V+	4 A
Fieldbus transmission rate	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 decimally coded rotary switches
Fieldbus connection technology	2 × M12
	5-pole
Fieldbus termination	external
Service interface	RS232 interface
Vendor ID	48
Product type	12
Product code	11048
Analog inputs	from 4AI-VI
Operating modes	0/4 ... 20 mA or -10/0 ... 10 VDC
Type of input diagnostics	Channel diagnostics
Sensor supply	24 VDC, 1 amp max.
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
Analog outputs	from 2AO-I
Output type	0/4 ... 20 mA
Type of output diagnostics	Channel diagnostics
Sensor supply	24 VDC
Load resistance, resistive	< 0.45
Load resistance, inductive	< 1 mH
Transmission frequency	< 200 Hz
Basic fault limit at 23 °C	< 0.2 %
Repeatability	< 0.05 %
Temperature coefficient	< 150 ppm/°C of full scale
Resolution	16 bit
Measured-value display	16 Bit Signed Integer
	12 bit full range left justified

BL compact™ fieldbus station for DeviceNet™**4 Analog Inputs for Current or Voltage and 2 Analog Outputs for Current****BLCDN-6M12L-4AI-VI-2AO-I**

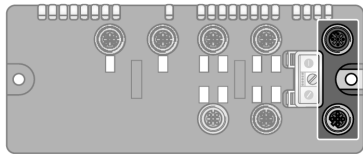
Dimensions	168 x 71 x 32.5 mm
Mounting	2 × 5.4 mm diameter holes, 1.7 Nm torque
Weight	540 ± 20 g
Housing material	Glass-filled nylon, nickel plated brass connectors
Housing color	Black
Window material	Lexan
Material screw	Nickel-plated brass
Material label	Polyester with polycarbonate overlay
Ground 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
Approvals and certificates	CE, cULus

BL compact™ fieldbus station for DeviceNet™

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

BLCDN-6M12L-4AI-VI-2AO-I

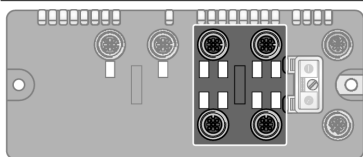
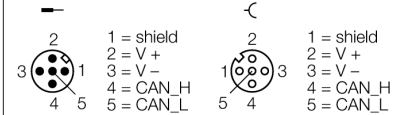
Pinning and wiring diagram



DeviceNet™

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

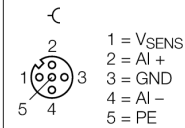
Pin Assignment



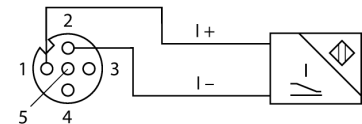
Slot 1: Analog Inputs

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

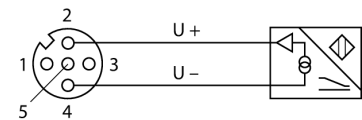
Pin Assignment



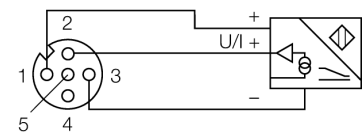
2-wire Technology (Current)



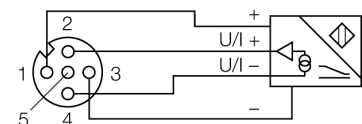
2-wire Technology (Voltage)



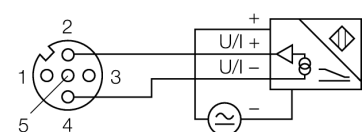
3-wire Technology



4-wire Technology



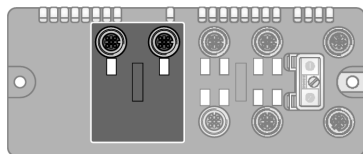
4-wire Technology (External Power)



BL compact™ fieldbus station for DeviceNet™

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

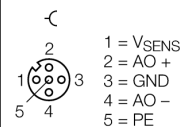
BLCDN-6M12L-4AI-VI-2AO-I



Slot 2: Analog 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



BL compact™ fieldbus station for DeviceNet™**4 Analog Inputs for Current or Voltage and 2 Analog Outputs for Current****BLCDN-6M12L-4AI-VI-2AO-I****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 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 1 ₀ ...1 ₃		OFF	Not active
	GREEN	ON	Active
	GREEN	FLASHING (0.5 Hz)	Underflow in measuring range
	GREEN	FLASHING (4 Hz)	Overflow in measuring range

* 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)
AO channels 0 / 1			Not connected

* D2 LED also indicates gateway diagnostics

BL compact™ fieldbus station for DeviceNet™
4 Analog Inputs for Current or Voltage and 2 Analog Outputs for Current
BLCDN-6M12L-4AI-VI-2AO-I
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							
AI 1 ₂	4	AI 1 ₂ LSB							
	5	AI 1 ₂ MSB							
AI 1 ₃	6	AI 1 ₃ LSB							
	7	AI 1 ₃ MSB							
Diagnostics	8	Module number reporting diagnostic data							
	9	Replace Station	-	Diagnostics Active	-	-	-	-	-
Slot 1 (ref. Byte 8)	10	-	-	-	-	-	-	Open Circuit AI 1 ₀	Range Error AI 1 ₀
	11	-	-	-	-	-	-	Open Circuit AI 1 ₁	Range Error AI 1 ₁
	12	-	-	-	-	-	-	Open Circuit AI 1 ₂	Range Error AI 1 ₂
	13	-	-	-	-	-	-	Open Circuit AI 1 ₃	Range Error AI 1 ₃
OUTPUT	BYTE	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
AO 2 ₀	0	AO 2 ₀ LSB							
	1	AO 2 ₀ MSB							
AO 2 ₁	2	AO 2 ₁ LSB							
	3	AO 2 ₁ MSB							