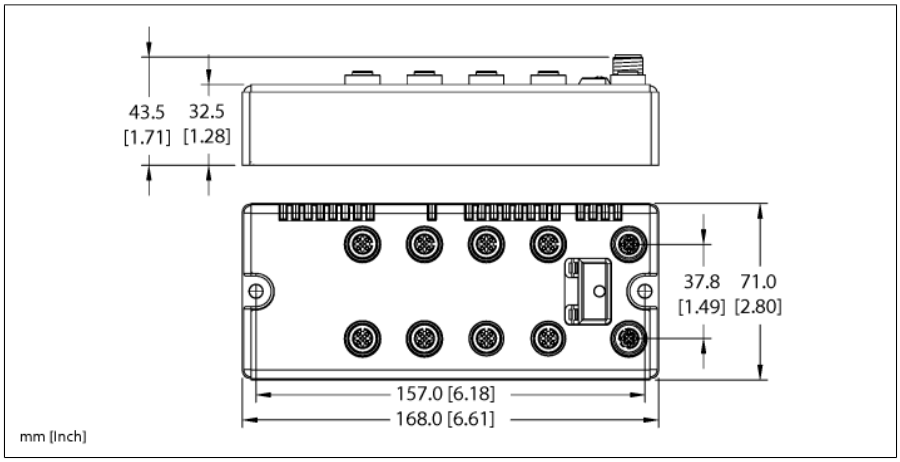
BL compact™ fieldbus station for DeviceNet™ 8 Analog Inputs for Thermocouple Elements BLCDN-8M12L-4AI-TC-4AI-TC



- 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
- 8 analog inputs for Thermo Couples
- Types B, C, E, G, J, K, N, R, S or T (selectable per channel)
- Cold-junction compensation via a Pt1000 in special connector

ID	6811071
Nominal system voltage	24 VDC
System power supply	Via DeviceNet
Admissible range V+	18…30 VDC
Nominal current V+	90 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 (MacID programmable)
	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	11071
Analog inputs	
Operating modes	Types B, C, E, G, J, K, N, R, S, T
Type of input diagnostics	Channel diagnostics
Sensor supply	24 VDC, 1 amp max.
Input resistance	> 7 MΩ
Voltage resolution	± 50 mV: < 2 µV
	± 100 mV: < 4 µV
	± 500 mV: < 20 µV
	± 1000 mV: < 50 µV
Maximum limiting frequency analog	< 70 Hz
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
	12 bit full range left-justified

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Dimensions	168 x 71 x 32.5 mm
Mounting	2 × 5.4 mm diameter holes, 1.7 Nm torque
Weight	550 ± 20 g
Housing material	Glass-filled nylon, nickel plated brass connectors
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 to 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	according to IEC 61131-2
Electromagnetic compatibility	Acc. to IEC 61131-2
Approvals and certificates	CE, cULus

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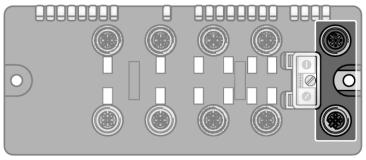
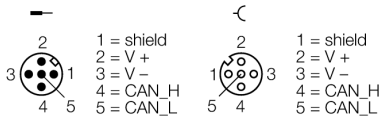
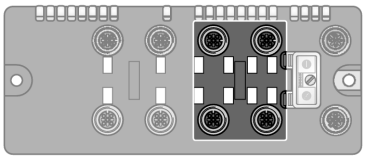
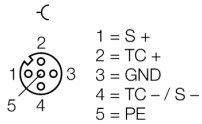
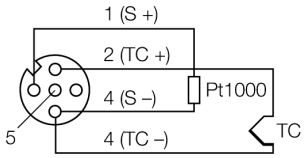
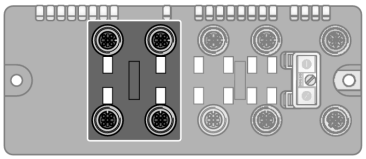
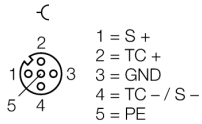
Pinning and wiring diagram

	**DeviceNet** Fieldbus cable (example): RSC RKC 572-2M ident-no. U0323 or RSC-RKC572-2M ident-no. 6603629	Pin Assignment 
	**Slot 1: Thermocouple Inputs** TC compensating connector BL67-WAS5-THERMO ident-no. 6827197	Pin Assignment  Wiring Diagram 
	**Slot 2: Thermocouple Inputs** See slot 1	Pin Assignment 

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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 channel 0 / 1	AI channel 2 / 3		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)

* D2 LED also indicates gateway diagnostics

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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							
AI 2_0	8	AI 2_0 LSB							
	9	AI 2_0 MSB							
AI 2_1	10	AI 2_1 LSB							
	11	AI 2_1 MSB							
AI 2_2	12	AI 2_2 LSB							
	13	AI 2_2 MSB							
AI 2_3	14	AI 2_3 LSB							
	15	AI 2_3 MSB							
Diagnostics	16	Module number reporting diagnostic data							
	17	Replace Station	-	Diagnostics Active	-	-	-	-	-
Slot X* (ref. Byte 16)	18	-	-	-	-	-	-	Open Circuit AI X_0	Range Error AI X_0
	19	-	-	-	-	-	-	Open Circuit AI X_1	Range Error AI X_1
	20	-	-	-	-	-	-	Open Circuit AI X_2	Range Error AI X_2
	21	-	-	-	-	-	-	Open Circuit AI X_3	Range Error AI X_3

* The scheduled diagnostic information changes every 125 ms between Slot 1 and Slot 2, if both slots send active diagnostics.

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