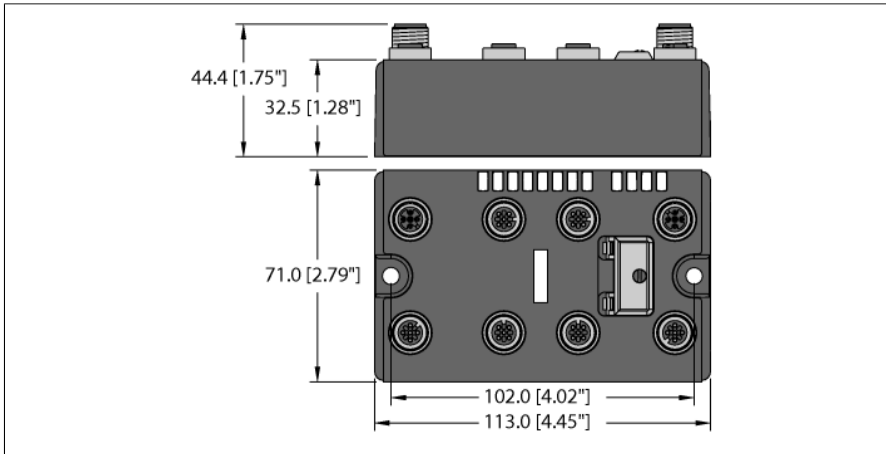


# BL compact™ fieldbus station for PROFIBUS-DP

## 4 Analog Inputs for Thermocouple Elements

### BLCDP-4M12MT-4AI-TC

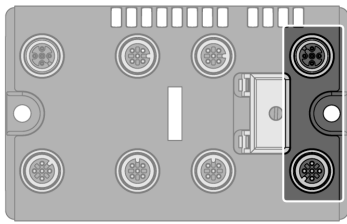


Type	BLCDP-4M12MT-4AI-TC
ID	6811185
Nominal system voltage	24 VDC
System power supply	Via auxiliary power
Voltage supply connection	2 x M12, 5-pin
Admissible range Vi	18...30 VDC
Nominal current Vi	130 mA
Max. current Vi	1 A
Fieldbus transmission rate	9.6 kbps ... 12 Mbps
Adjustment transmission rate	Automatic detection
Fieldbus address range	0...99
Fieldbus addressing	2 decimally coded rotary switches
Fieldbus connection technology	2 x M12
Fieldbus termination	5-pole, reverse keyed
Service interface	external
Service interface	RS232 interface
Analog inputs	from 4AI-TC
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

- 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 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

Dimensions	113 x 71 x 32.5 mm
Mounting	2 × 5.4 mm diameter holes, 1.7 Nm torque
Weight	390 ± 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

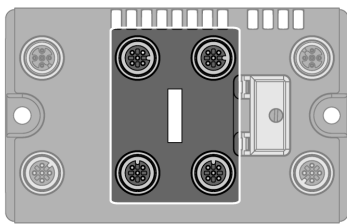
## Pinning and wiring diagram



### Accessories

Fieldbus cable (example): RSSW RKSW 455-2M ident-no. U0350  
or RSSW-RKSW455-2M ident-no. 6602222

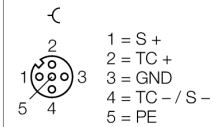
### Pin Assignment



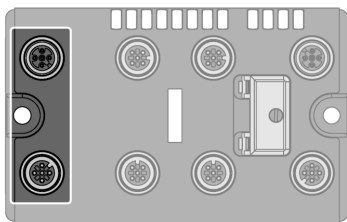
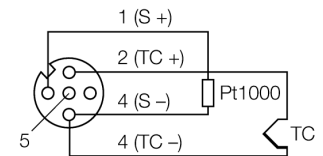
### Accessories

TC compensating connector BL67-WAS5-THERMO ident-no. 6827197

### Pin Assignment



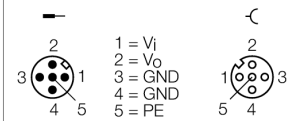
### Wiring Diagram



### Accessories

Extension cable (example): RKC 4.4T-2-RSC 4.4T ident-no. U5264 or RKC4.4T-2-RSC4.4T/TEL ident-no. 6625208

### Pin Assignment



**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**

LED	Color	Status	Description
D *		OFF	No diagnostics active
	RED	ON	Station error/ module bus communication failure
	RED	FLASHING (0.5Hz)	Diagnostics active
AI channel 0 / 1	AI channel 2 / 3		Not connected

\* D LED also indicates gateway diagnostics

**I/O Data Map**

<b>INPUT</b>	<b>BYTE</b>	<b>Bit 7</b>	<b>Bit 6</b>	<b>Bit 5</b>	<b>Bit 4</b>	<b>Bit 3</b>	<b>Bit 2</b>	<b>Bit 1</b>	<b>Bit 0</b>
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							