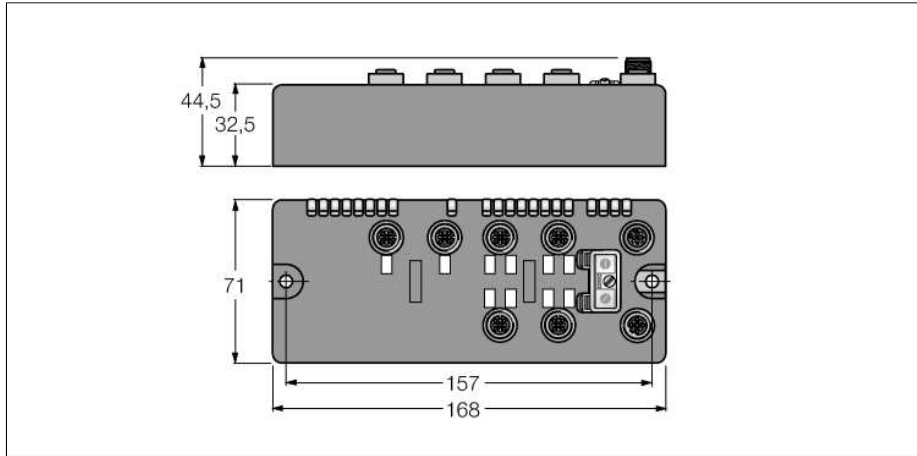


BL compact fieldbus station for CANopen 4 Analog Inputs for Current or Voltage, 4 Analog Outputs for Voltage, and 2 Analog Outputs for Current BLCCO-6M12L-4AI4AO-VI-2AO-I



- Compact fieldbus I/O module in IP69K
- CANopen slave
- 10, 20, 50, 125, 250, 500, 800, or 1000 kbps
- Two 5-pole M12 connectors for fieldbus connection
- 2 rotary switches for node address
- IP69K
- M12 I/O connectors
- LEDs indicating status and diagnostics
- Electronics galvanically separated from the field level via optocouplers
- 2 analog current outputs
- 0/4...20 mA
- 4 analog inputs for current or voltage
- 0/4...20 mA or -10/0...+10 VDC (selectable per channel)
- 4 analog voltage outputs
- -10/0...+10 VDC

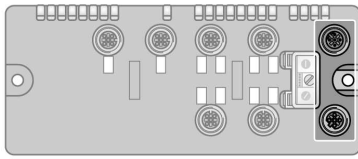
Type code	BLCCO-6M12L-4AI4AO-VI-2AO-I
Ident no.	6811328
<hr/>	
Nominal system voltage	24 VDC
System power supply	via CANopen
Admissible range V+	18...30VDC
Nominal current V+	180 mA
Max. current V+	4 A
<hr/>	
Fieldbus transmission rate	10 kbps ... 1 Mbps
Adjustment transmission rate	auto detection
Fieldbus addressing range	1...99
Fieldbus addressing	2 decimally coded rotary switches
Fieldbus connection technology	2 x M12
	5-pole
Fieldbus termination	external
Service interface	RS232 interface
<hr/>	
Analog inputs	from 4AI4AO-VI
Input type	0/4 ... 20 mA or -10/0 ... 10 VDC
Type of input diagnostics	channel diagnostics
Sensor supply	24 VDC
Input resistance	Current: < 0.065 KΩ, Voltage: < 225 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
Measured-value displayed	16 bit signed integer 12 bit full range left justified
<hr/>	
Analog outputs	from 4AI4AO-VI
Output type	-10/0 ... 10 V
Type of output diagnostics	Channel diagnostics
Sensor supply	24 VDC, 250 mA per channel
Load resistance, resistive	> 1 kΩ
Load resistance, capacitive	< 1 μF
Transmission frequency	< 100 Hz
Basic fault limit at 23 °C	< 0.3 %
Repeatability	< 0.05 %
Temperature coefficient	< 300 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 CANopen**4 Analog Inputs for Current or Voltage, 4 Analog Outputs for Voltage, and 2 Analog Outputs for Current****BLCCO-6M12L-4AI4AO-VI-2AO-I**

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

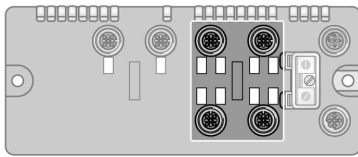
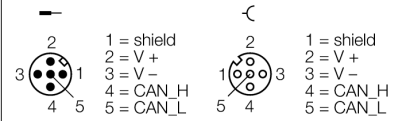
Dimensions	1680x 710x 325 mm
Operating temperature	-40...+70 °C
Storage temperature	-40...+85 °C
Relative humidity	15 to 95% (non-condensing)
Vibration test	according to IEC 61131-2
Extended vibration resistance - up to 20 g (at 10 to 150 Hz)	For mounting on base plate or machinery
Shock test	according to IEC 61131-2
Electro-magnetic compatibility	according to IEC 61131-2
Protection class	IP69K
Housing material	Glass-filled nylon, nickel plated brass connectors
Housing color	Black
Window material	Lexan
Screw material	Nickel plated brass
Label material	Polyester with Polycarbonate overlay
Ground tab material	Nickel plated brass
Weight	540 ± 20 g
Approvals and certificates	CE, cULus

BL compact fieldbus station for CANopen 4 Analog Inputs for Current or Voltage, 4 Analog Outputs for Voltage, and 2 Analog Outputs for Current BLCCO-6M12L-4AI4AO-VI-2AO-I



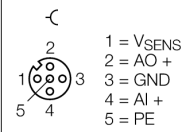
Fieldbus cable (example): RSC RKC 572-2M ident-no. U0323 or RSC-RKC572-2M ident-no. 6603629

Pin assignment

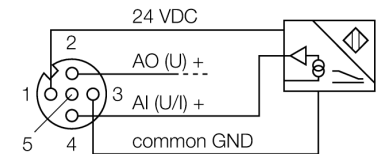
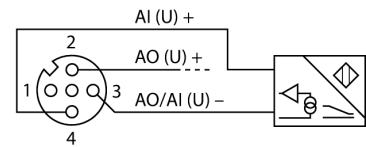
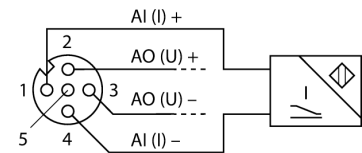


Extension cable (example): RK 4.5T-2-RS 4.5T/S653 ident-no. U2187-09 or RKC4.5T-2-RSC4.5T/TEL ident-no. 6625212

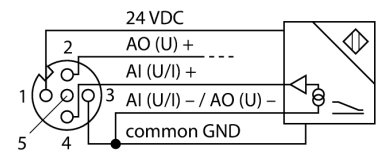
Pin assignment



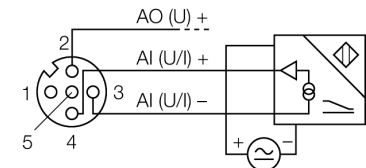
2-wire connection technology (current)



4-wire connection technology



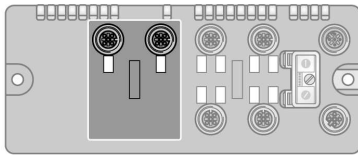
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BL compact fieldbus station for CANopen

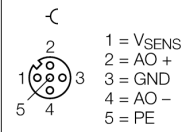
4 Analog Inputs for Current or Voltage, 4 Analog Outputs for Voltage, and 2 Analog Outputs for Current

BLCCO-6M12L-4AI4AO-VI-2AO-I



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 CANopen
4 Analog Inputs for Current or Voltage, 4 Analog Outputs for Voltage, and 2
Analog Outputs for Current
BLCCO-6M12L-4AI4AO-VI-2AO-I****Status: Station LED**

LED	Color	Status	Description
IOs		OFF	No power supply
	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
ERR	-	OFF	Normal operating mode
	RED	ON	CAN communication interrupted
BUS	GREEN	ON	NMT slave status operational
	ORANGE	ON	NMT slave status pre-operational
	RED	ON	NMT slave status stopped
ERR & BUS	RED	FLASHING (4 Hz)	Invalid node ID

Status: I/O LED, slot 1

LED	Color	Status	Description
D1 *		OFF	Diagnostic disabled
	RED	ON	Station / module bus communication failure
	RED	FLASHING (0.5Hz)	Group diagnostic
AI channels 0...3		OFF	Channel disabled
	GREEN	ON	Channel active
	GREEN	FLASHING (0.5 Hz)	Measuring range undershoot
	GREEN	FLASHING (4 Hz)	Measuring range overshoot
AO channels 4...7			Without function (no LEDs for analog outputs)

* D1 LED also indicates gateway diagnostic

I/O LED Status Slot 2

LED	Colour	Status	Description
D2 *		OFF	No diagnostics active
	RED	ON	Station error/ module bus communication failure
	RED	FLASHING (0.5Hz)	Any diagnostics active
AO channels 0 / 1			Not connected

* D2 LED also reports gateway diagnostics

I/O 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							
OUTPUT	BYTE	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
AO 1 ₀	0	AO 1 ₀ LSB							
	1	AO 1 ₀ MSB							
AO 1 ₁	2	AO 1 ₁ LSB							
	3	AO 1 ₁ MSB							
AO 1 ₂	4	AO 1 ₂ LSB							
	5	AO 1 ₂ MSB							
AO 1 ₃	6	AO 1 ₃ LSB							
	7	AO 1 ₃ MSB							
AO 2 ₀	8	AO 2 ₀ LSB							
	9	AO 2 ₀ MSB							
AO 2 ₁	10	AO 2 ₁ LSB							
	11	AO 2 ₁ MSB							