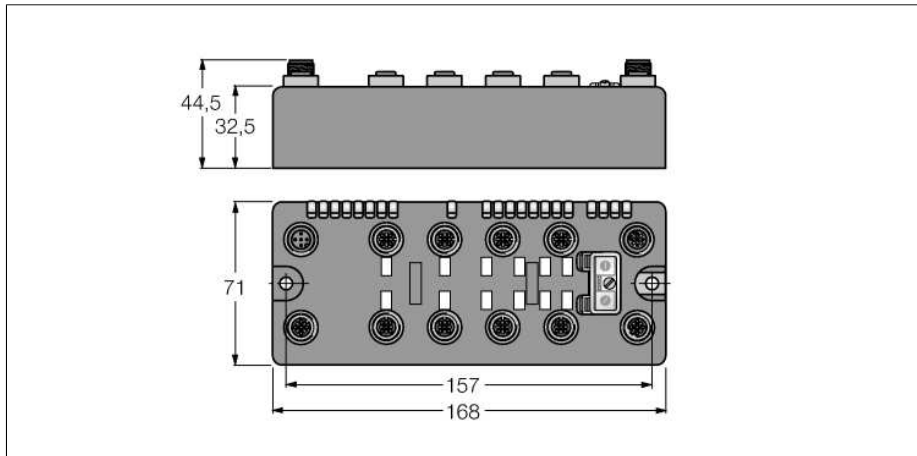


## BL compact fieldbus station for CANopen 4 Analog Inputs for Current or Voltage and 8 Configurable Digital PNP Channels

### BLCCO-8M12LT-4AI-VI-8XSG-P



- 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
- 8 Configurable digital PNP channels, 24 VDC
- Max. 0.5A per channel
- Selection of filtering times (Input delay)
- Invertible inputs
- 4 analog inputs for current or voltage
- 0/4...20 mA or -10/0...+10 VDC (selectable per channel)

<b>Type code</b>	BLCCO-8M12LT-4AI-VI-8XSG-P
Ident no.	6811315
<b>Nominal system voltage</b>	24 VDC
System power supply	via fieldbus and auxiliary
Voltage supply connection	2 x M12, 4-pole
Nominal current V+	30 mA
Max. current V+	4 A
Admissible range Vi	18...30VDC
Nominal current Vi	112 mA
Max. current Vi	2 A
Admissible range Vo	18...30VDC
Nominal current Vo	100 mA
Max. current Vo	4 A
<b>Fieldbus transmission rate</b>	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
Fieldbus termination	5-pole
Fieldbus termination	external
Service interface	RS232 interface
<b>digital inputs</b>	from 8XSG
Input type	PNP
Type of input diagnostics	group diagnostics
Sensor supply (V <sub>SENS</sub> )	24 VDC
Low level signal voltage	4.5 V
Low level signal voltage	< 4.5 VDC
High level signal voltage	7...30 VDC
Low level signal current	< 1.5 mA
High level signal current	2.1...3.7 mA
Input delay	(configurable) 0.25 or 2.5 ms
<b>Digital outputs</b>	from 8XSG
Output type	PNP
Sensor supply (V <sub>SENS</sub> )	24 VDC
Output current per channel	0.5 A
Output voltage	24 VDC
Output delay	3 ms
Load type	resistive, inductive, lamp load
Load resistance, resistive	> 48 Ω
Load resistance, inductive	< 1.2 H
Lamp load	< 3 W
Switching frequency, resistive	< 200 Hz
Switching frequency, inductive	< 2 Hz
Switching frequency, lamp load	< 20 Hz
Short-circuit protection	yes

**BL compact fieldbus station for CANopen**  
**4 Analog Inputs for Current or Voltage and 8 Configurable Digital PNP**  
**Channels**  
**BLCCO-8M12LT-4AI-VI-8XSG-P**

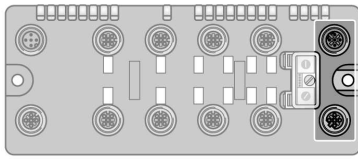
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<b>Analog inputs</b>	from 4AI-VI
Input type	0/4 ... 20 mA or -10/0 ... 10 VDC
Type of input diagnostics	channel diagnostics
Sensor supply	24 VDC
Input resistance	Current: < 0.125 K $\Omega$ , Voltage: < 98.5 K $\Omega$
Maximum limiting frequency analog	< 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

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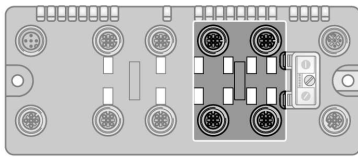
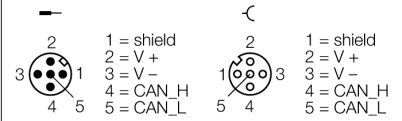
<b>Dimensions</b>	1680x 710x 325 mm
Operating temperature	-40...+70 °C
Storage temperature	-40...+85 °C
Relative humidity	15 to 95% (non-condensing)
Vibration test	according to IEC 61131-2
Extended vibration resistance - up to 20 g (at 10 to 150 Hz)	For mounting on base plate or machinery
Shock test	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	620 $\pm$ 20 g
Approvals and certificates	CE, cULus

## BL compact fieldbus station for CANopen 4 Analog Inputs for Current or Voltage and 8 Configurable Digital PNP Channels BLCCO-8M12LT-4AI-VI-8XSG-P



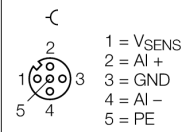
Fieldbus cable (example): RSC RKC 572-2M ident-no. U0323 or RSC-RKC572-2M ident-no. 6603629

Pin assignment

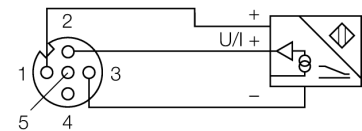
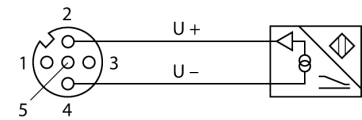
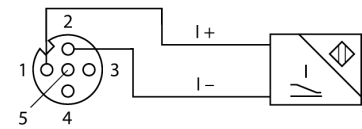


Extension cable (example): RK 4.5T-2-RS 4.5T/S653 ident-no. U2187-09 or RKC4.5T-2-RSC4.5T/TEL ident-no. 6625212

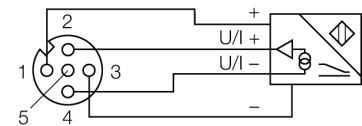
Pin assignment



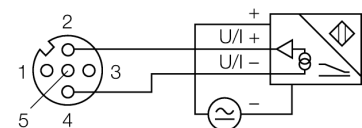
2-wire connection technology (current)



4-wire connection technology

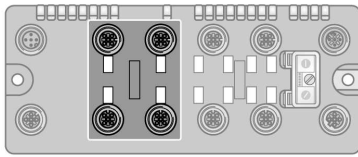


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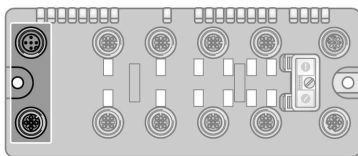
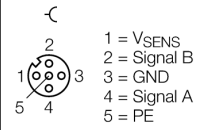
**BL compact fieldbus station for CANopen**  
**4 Analog Inputs for Current or Voltage and 8 Configurable Digital PNP**  
**Channels**

**BLCCO-8M12LT-4AI-VI-8XSG-P**



Extension cable (example): RK 4.4T-2-RS 4.4T ident-no. U2445 or  
RKC4.4T-2-RSC4.4T/TEL ident-no. 6625208

Pin assignment



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



**BL compact fieldbus station for CANopen  
4 Analog Inputs for Current or Voltage and 8 Configurable Digital PNP  
Channels  
BLCCO-8M12LT-4AI-VI-8XSG-P****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 1 <sub>0</sub> ...1 <sub>3</sub>		OFF	Channel inactive
	GREEN	ON	Channel active
	GREEN	FLASHING (0.5 Hz)	Measuring range undershoot
	GREEN	FLASHING (4 Hz)	Measuring range overshoot

\* 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
XSG channels 2 <sub>0</sub> ...2 <sub>7</sub>		OFF	Channel status x = "0" (OFF), no diagnostics active
	GREEN	ON	Channel status x = "1" (ON)
	RED	ON	Short-circuit at output

\* D2 LED also reports gateway diagnostics

**BL compact fieldbus station for CANopen**  
**4 Analog Inputs for Current or Voltage and 8 Configurable Digital PNP**  
**Channels**  
**BLCCO-8M12LT-4AI-VI-8XSG-P****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							
	8	DI 2 <sub>7</sub>	DI 2 <sub>6</sub>	DI 2 <sub>5</sub>	DI 2 <sub>4</sub>	DI 2 <sub>3</sub>	DI 2 <sub>2</sub>	DI 2 <sub>1</sub>	DI 2 <sub>0</sub>
	9	-	-	-	-	-	-	-	-
<b>OUTPUT</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>
	0	DO 2 <sub>7</sub>							
	1	-							