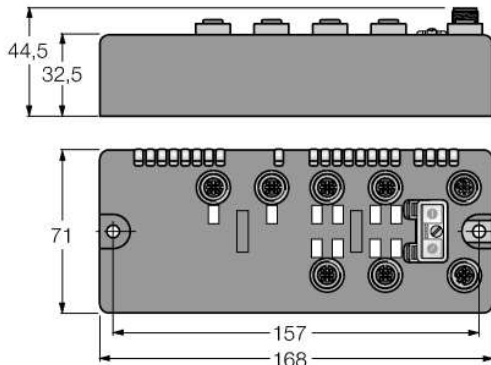


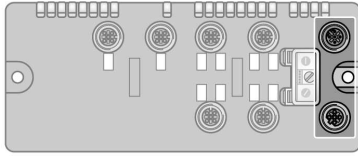


- Compact fieldbus I/O module in IP69K
- DeviceNet™ slave
- 125 / 250 / 500 kbps
- Two 5-pole M12 connectors for fieldbus connection
- 2 rotary switches for node address
- IP69K
- M12 I/O connectors
- LEDs indicating status and diagnostics
- Electronics galvanically separated from the field level via optocouplers
- 4 digital PNP inputs, 24 VDC
- 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	BLCDN-6M12L-4AI4AO-VI-4DI-P
Ident no.	6811069
Nominal system voltage	24 VDC
System power supply	via DeviceNet
Admissible range V+	11...30VDC
Nominal current V+	170 mA
Max. current V+	4 A
Fieldbus transmission rate	125 / 250 / 500 kbps
Adjustment transmission rate	auto detection
Fieldbus addressing range	0...63
	64...80 (Programmable MACID)
	81...99 (Vendor Specific)
Fieldbus addressing	2 decimally coded rotary switches
Fieldbus connection technology	2 x M12
	5-pole
Fieldbus termination	external
Service interface	RS232 interface
Vendor ID	30
Product type	12
Product code	11069
Input type	PNP
Type of input diagnostics	group diagnostics
Sensor supply (V _{SENS})	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	0.25 ms
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

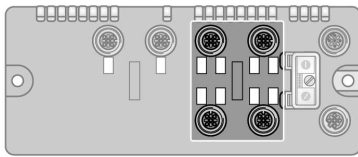
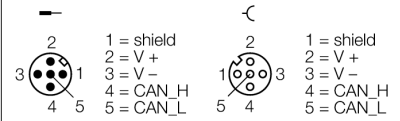
Analog outputs	from 4AI4AO-VI
Output type	-10/0 ... 10 V
Type of output diagnostics	Channel diagnostics
Sensor supply	24 VDC, 250 mA per channel
Load resistance, resistive	> 1 kΩ
Load resistance, capacitive	< 1 μF
Transmission frequency	< 100 Hz
Basic fault limit at 23 °C	< 0.3 %
Repeatability	< 0.05 %
Temperature coefficient	< 300 ppm/°C of full scale
Resolution	16 bit
Measured-value display	16 bit signed integer 12 bit full range left justified

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 according to IEC 61131-2
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



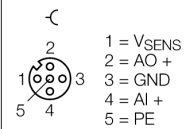
Fieldbus cable (example): RSC RKC 572-2M ident-no. U0323 or RSC-RKC572-2M ident-no. 6603629

Pin assignment

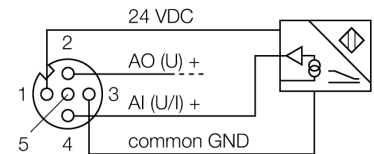
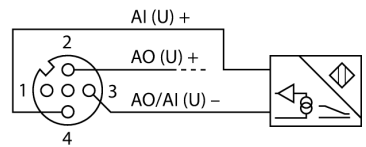
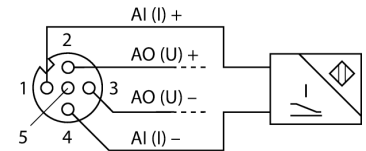


Extension cable (example): RK 4.5T-2-RS 4.5T/S653 ident-no. U2187-09 or RKC4.5T-2-RSC4.5T/TEL ident-no. 6625212

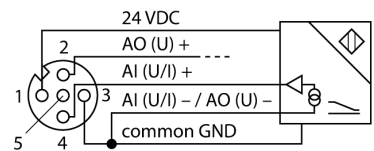
Pin assignment



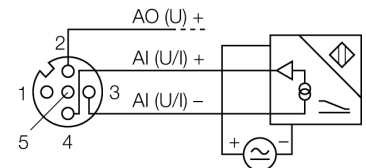
2-wire connection technology (current)

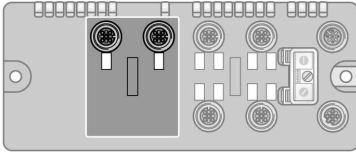


4-wire connection technology



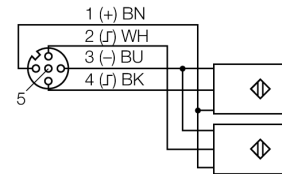
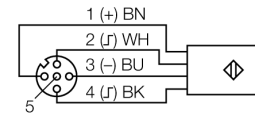
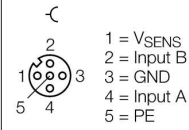
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Extension cable (example): RK 4.4T-2-RS 4.4T ident-no. U2445 or
RKC4.4T-2-RSC4.4T/TEL ident-no. 6625208

Pin assignment



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
MNS		OFF	No connection
	GREEN	ON	Fieldbus communication active
	GREEN	FLASHING (1Hz)	Fieldbus communication disabled, device status OK
	RED	ON	Double MAC-ID
	RED	FLASHING	Fieldbus communication timeout
IO	GREEN	ON	I/O slots OK
	GREEN	FLASHING (1Hz)	At least one I/O slot in idle state
	RED	ON	At least one faulty I/O slot
	RED	FLASHING	At least one I/O slot in faulty state

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
DI channels 2 ₀ ...2 ₃		OFF	Status of channel x = „0“ (OFF)
	GREEN	ON	Status of channel x = „1“ (ON)

* D2 LED also reports gateway diagnostics

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							
	8	-	-	-	-	DI 2 ₃	DI 2 ₂	DI 2 ₁	DI 2 ₀
	9	-	-	-	-	-	-	-	-
Diagnostics	10	Module number reporting diagnostic data							
	11	Replace Station	-	Diagnostics Active	-	-	-	-	-
Slot 1 (ref. Byte 10)	12	Hardware Failure	-	-	-	AI 1 ₀ Overflow/Underflow	-	Wire Break AI 1 ₀ (4...20 mA range only)	Range Error AI 1 ₀
	13	Hardware Failure	-	-	-	AO 1 ₀ Overflow/Underflow	-	-	Range Error AO 1 ₀
	14	Hardware Failure	-	-	-	AI 1 ₁ Overflow/Underflow	-	Wire Break AI 1 ₁ (4...20 mA range only)	Range Error AI 1 ₁
	15	Hardware Failure	-	-	-	AO 1 ₁ Overflow/Underflow	-	-	Range Error AO 1 ₁
	16	Hardware Failure	-	-	-	AI 1 ₂ Overflow/Underflow	-	Wire Break AI 1 ₂ (4...20 mA range only)	Range Error AI 1 ₂
	17	Hardware Failure	-	-	-	AO 1 ₂ Overflow/Underflow	-	-	Range Error AO 1 ₂
	18	Hardware Failure	-	-	-	AI 1 ₃ Overflow/Underflow	-	Wire Break AI 1 ₃	Range Error AI 1 ₃
	19	Hardware Failure	-	-	-	AO 1 ₃ Overflow/Underflow	-	-	Range Error AO 1 ₃
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							