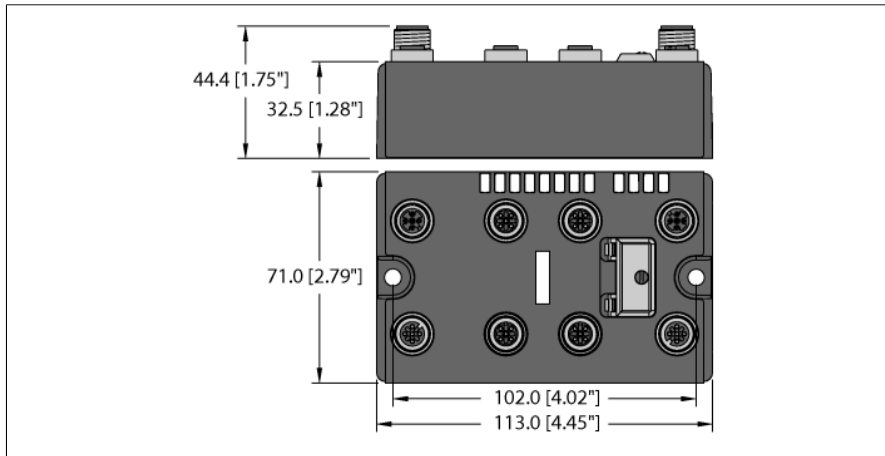


BL compact™ fieldbus station for DeviceNet™**4 Analog Inputs for Current or Voltage and 4 Analog Outputs for Voltage****BLCDN-4M12WMT-4AI4AO-VI/CS30028**

- 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
- Reverse keyed M12 I/O connectors
- LEDs indicating status and diagnostics
- Electronics galvanically separated from the field level via optocouplers
- 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
- CS30028: Scheduled and Summarized diagnostics data disabled (I/O data size reduced)

Type designation	BLCDN-4M12WMT-4AI4AO-VI/CS30028
Ident-No.	6811067

Nominal system voltage	24 VDC
System power supply	Via fieldbus and auxiliary power
Voltage supply connection	2 x M12, 4-pin
Admissible range V+	11...30VDC
Nominal current V+	30 mA
Max. current V+	4 A
Admissible range Vi	11...30VDC
Nominal current Vi	50 mA
Max. current Vi	1 A
Admissible range Vo	11...30VDC
Nominal current Vo	50 mA
Max. current Vo	4 A

Fieldbus transmission rate	125/250/500 kbps
Adjustment transmission rate	Automatic detection
Fieldbus address range	0...63
	64...80 (programmable MACID)
	81...99 (manufacturer 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	48
Product type	12
Product code	11067

Analog inputs	from 4AI4AO-VI
Operating modes	0/4 ... 20 mA or -10/0 ... 10 VDC
Type of input diagnostics	Channel diagnostics
Sensor supply	24 VDC, 1 amp max.
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
Measurement display	16 bit signed integer
	12 bit full range left-justified

BL compact™ fieldbus station for DeviceNet™**4 Analog Inputs for Current or Voltage and 4 Analog Outputs for Voltage****BLCDN-4M12WMT-4AI4AO-VI/CS30028**

Analog outputs	from 4AI4AO-VI
Operating modes	-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 %
Repeat accuracy	< 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

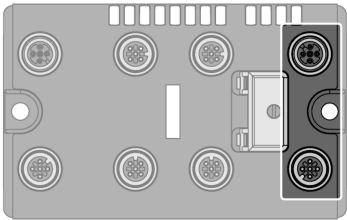
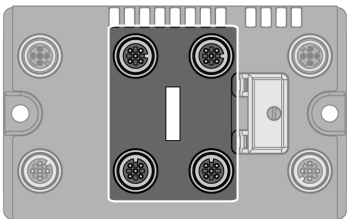
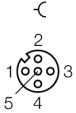
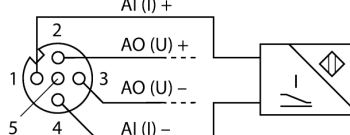
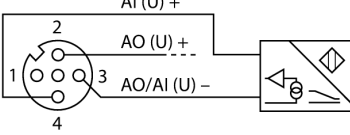
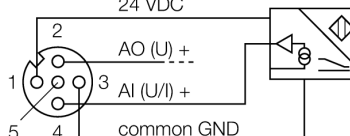
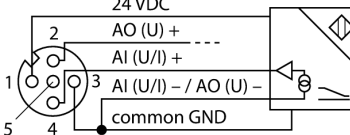
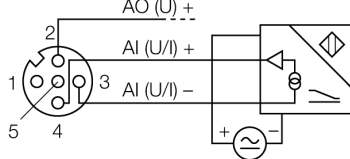
Dimensions	113 x 71 x 32.5 mm
Mounting	2 × 5.4 mm diameter holes, 1.7 Nm torque
Weight	390 ± 20 g
Housing material	Glass-filled nylon, nickel plated brass connectors
Housing color	Black
Window material	Lexan
Material screw	Nickel-plated brass
Material label	Polyester with polycarbonate overlay
Ground label material	Nickel plated brass
Protection class	IP67 IP69K
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 up to 150 Hz)	For mounting on base plate or machinery
Shock test	according to IEC 61131-2
Electromagnetic compatibility	according to IEC 61131-2
Approvals and certificates	CE, cULus

BL compact™ fieldbus station for DeviceNet™

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

BLCDN-4M12WMT-4AI4AO-VI/CS30028

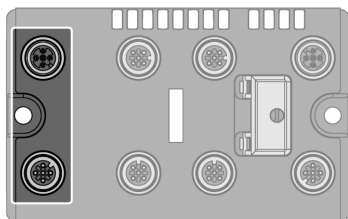
Pinning and wiring diagram

	DeviceNet™ Fieldbus cable (example): RSC RKC 572-2M ident-no. U0323 or RSC-RKC572-2M ident-no. 6603629	Pin Assignment  1 = shield 2 = V + 3 = V - 4 = CAN_H 5 = CAN_L  1 = shield 2 = V + 3 = V - 4 = CAN_H 5 = CAN_L
	Analog Inputs and Outputs	Pin Assignment (M12, B-Code)  1 = V_{SENS} 2 = AO + 3 = GND 4 = AI + 5 = PE 2-wire Technology (Current)  2-wire Technology (Voltage)  3-wire Technology  4-wire Technology  4-wire Technology (External Power) 

BL compact™ fieldbus station for DeviceNet™

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

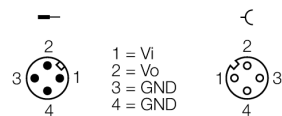
BLCDN-4M12WMT-4AI4AO-VI/CS30028



Auxiliary Power

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 DeviceNet™**4 Analog Inputs for Current or Voltage and 4 Analog Outputs for Voltage****BLCDN-4M12WMT-4AI4AO-VI/CS30028****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

LED	Color	Status	Description
D *		OFF	No diagnostics active
	RED	ON	Station error/ module bus communication failure
	RED	FLASHING (0.5Hz)	Diagnostics active
AI channels 0...3		OFF	Channel inactive
	GREEN	ON	Channel active
	GREEN	FLASHING (0.5 Hz)	Underflow diagnostics
	GREEN	FLASHING (4 Hz)	Overflow diagnostics
AO channels 4...7			Not connected (The analog outputs do not have a LED)

* D LED also indicates gateway diagnostics

BL compact™ fieldbus station for DeviceNet™**4 Analog Inputs for Current or Voltage and 4 Analog Outputs for Voltage****BLCDN-4M12WMT-4AI4AO-VI/CS30028****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							
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							