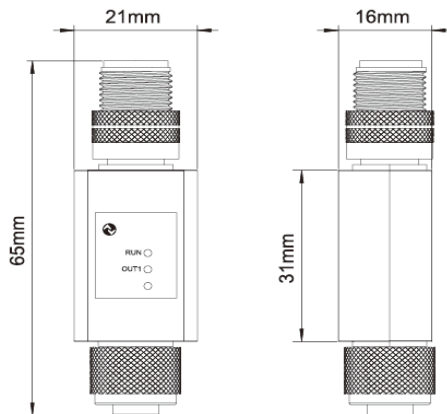


IO-Link Converter

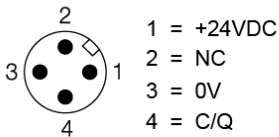
Single-channel 4–20mA/0–20mA Output
CIOL-1AO-SC



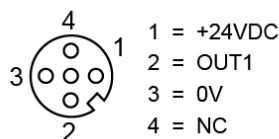
- IO-Link Device Converters
- Single-channel 4–20mA/0–20mA Output M12, 4-pin female
- IO-Link V1.1
- IO-Link class A, M12, A-code, 4-pin male
- Transparent Housing with LED Indicators

Model	CIOL-1AO-SC
Supply voltage	24VDC ± 10%
Operating current	< 50mA
External Power Supply Output	Max 500mA(Note: External supply via pin 1 and pin 3 of M12 female connector)
Analog output	
Number of channels	1
Connectivity inputs	M12 A-coded, 4-pin female
output type	4–20mA/0–20mA analog output
output resolution	≤12 bits
output accuracy	0.1%F.S
Data format	data in uA
Max output range	0–20mA
Analog Output Max Load	500Ω
IO-Link	
Vendor ID	1317 (0x0525)
Device ID	262690(0x040222)
Number of ports	1(M12 A-code 4-pin male)
IO-Link specification	V1.1
IO-Link port type	Class A
IO-Link output byte	2bytes
Frame type	TYPE_2_4
Transmission rate	COM2 38.4kbit/s
Minimum cycle time	2400us
ISDU	Supported
Block parameter operation	Not support
Data storage(DS)	Supported
Data storage lock	Supported
Note: This function is supported for compatibility, but the device will not perform this operation.	
Operating temperature	–25...80°C

IO-Link M12 interface 4-pin male

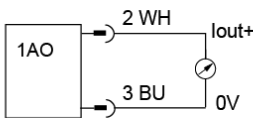


Output Signal M12 interface 4-pin female

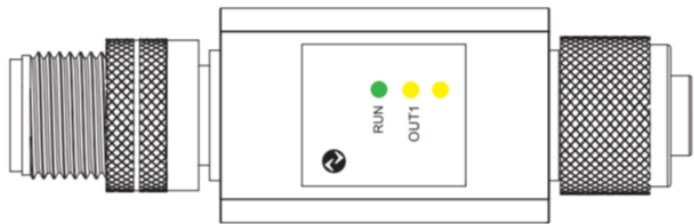


注：OUT1: Analog output channel
NC: null

Wiring Diagram



Three-wire 4-20mA output



LED State

RUN	green On:IO-Link communication established Off:Communication not Blinking:Communication is being established
OUT1	Output Channel 1,Yellow On:Signal Output Off:No signal Output Note: If the given output exceeds 20mA,the output will be limited to 20mA and the yellow LED will flash.

Process Data Output Data

OUT1	BYTE	BYTE0								BYTE1							
	BIT	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	DATA	bit15	bit14	bit13	bit12	bit11	bit10	bit9	bit8	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0

Note:Each port's 16-bit data is an unsigned value in μA .; output range 0-20mA corresponding 0-20000.

Direct Parameter page 1

Direct parameters are used to identify the device.Direct parameters are operated by index0.
The Subindex 0 represents operating the entire index;Subindex 1 represents address 0;Subindex 16 represents address 0x0F

Index	Address	Parameter name	Length	Authority	Description
0	0x07 7	Vendor ID(High)	1Byte	Read	0x05 5
0	0x08 8	Vendor ID(Low)	1Byte	Read	0x25 37
0	0x09 9	Device ID(High)	1Byte	Read	0x04 4
0	0x0A 10	Device ID(Median)	1Byte	Read	0x02 2
0	0x0B 11	Device ID(Low)	1Byte	Read	0x22 34

Parameter data/Request data/ISDU indexed service data unit

Index	Subindex	Parameter name	Length	Authority	Description
0x02 2	0	System command	1Byte	Write	0x80 128 Reset device 0x82 130 Restore factory settings
0x10 16	0	Manufacturer name	8Byte	Read	Sentinel
0x11 17	0	Manufacturer description	41Byte	Read	Sentinel Industrial Ethernet manufacturer
0x12 18	0	Device name	12Byte	Read	CIOL-1AO-SC
0x13 19	0	Device ID	8Byte	Read	26269001
0x14 20	0	Device description	34Byte	Read	Converter io-link to analog output
0x15 21	0	Serial-Number	9Byte	Read	2626900101
0x16 22	0	Hardware version	8Byte	Read	HW-V0.01
0x17 23	0	Software release	8Byte	Read	FW-V0.01
0x18 24	0	ApplicationSpecific Tag	Maximum 32Byte	Read Write	This item is defined in the IODD file, Included in the DataStorage(DS)
0x19 25	0	Function Tag	Maximum 32Byte	Read Write	This item is not defined in the IODD file, It can be set directly through Index.
0x1A 26	0	Local Tag	Maximum 32Byte	Read Write	This item is not defined in the IODD file, It can be set directly through Index.
0x24 36	0	Device state	1Byte	Read	0: The equipment operating normally; 1: Need to maintain; 2: Running incorrect environment or parameters; 3: Device abeyance; 4: Device failed to run;