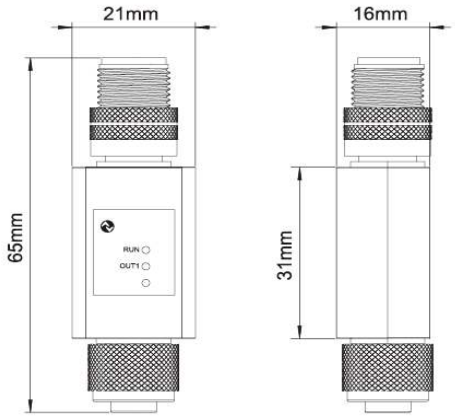
IO-Link Converter

Single-channel 4—20mA/0—20mA Output

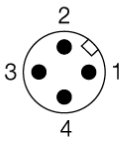
CIOL-1AO-SC



- 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

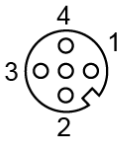
Model	CIOL-1AO-SC
Supply voltage	24VDC ± 10%
Operating current	< 50mA
External Power Supply Output	Max 500mA(Note: External supply via pin 1 and pin 3 of M12 female connector)
Analog output	
Number of channels	1
Connectivity inputs	M12 A-coded,4-pin female
output type	4-20mA/0-20mA analog output
output 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℃

IO-Link M12 interface 4-pin male



1 = +24VDC
2 = NC
3 = 0V
4 = C/Q

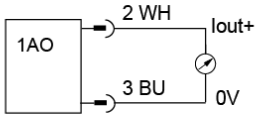
Output Signal M12 interface 4-pin female



1 = +24VDC
2 = OUT1
3 = 0V
4 = NC

注：OUT1:Analog output channel
NC：null

Wiring Diagram



Three-wire 4-20mA output

User Manual



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;