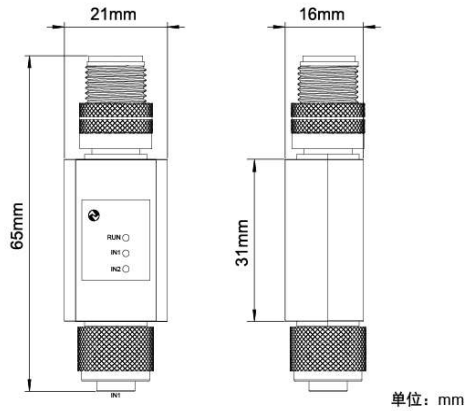
IO-Link Converter

2 channel 4-20mA/0-20mA input

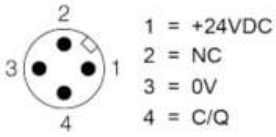
CIOL-2AI-SC



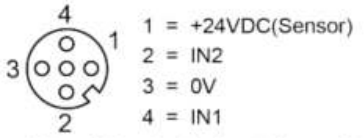
- IO-Link Device Converters
- Dual-channel 4-20mA/0-20mA Analog input,M12 4-pin female
- IO-Link V1.1
- IO-Link class A, M12, A-code,4-pin male
- Transparent Housing with LED Indicators

Model	CIOL-2AI-SC
Supply voltage	24VDC ± 10%
Operating current	< 50mA
Supply current to the sensor	Max 500mA(Note: External supply via pin 1 and pin 3 of M12 female connector)
Analog input	
Number of channels	2
Connectivity inputs	M12 A-coded,4-pin female
input type	4-20mA/0-20mA Analog input
input resolution	≤12bits
Measurement accuracy	0.5%F.S
Data format	data in uA
Max input range	0-22mA
IO-Link	
Vendor ID	1317 (0x0525)
Device ID	262673(0x040211)
Number of ports	1(M12 A-code 4-pin male)
IO-Link specification	V1.1
IO-Link port type	Class A
IO-Link input byte	4 bytes
Frame type	TYPE_2_V
Transmission rate	COM2 38.4kbit/s
Minimum cycle time	4000us
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

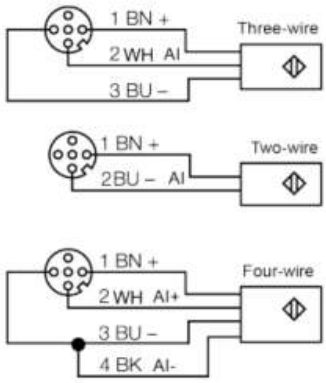


Input signal connection M12

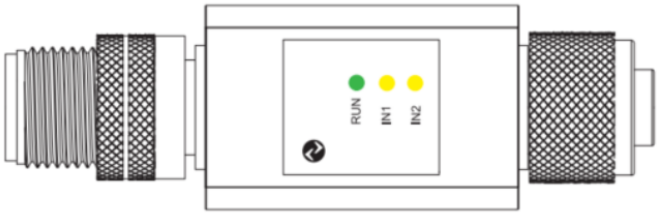


Note: IN1 – Analog input channel 1
IN2 – Analog input channel 2

Sensor Connection



User Manual



LED State

RUN	green On:IO-Link communication established Off:Communication not Blinking:Communication is being established
IN1	input Channel 1,Yellow On:Signal input detected Off:No signal input
IN2	input Channel 1,Yellow On:Signal input detected Off:No signal input

Process Data Output Data

	BYTE	BYTE0								BYTE1							
IN1	BIT	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
	DATA	bit15	bit14	bit13	bit12	bit11	bit10	bit9	bit8	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0

	BYTE	BYTE2								BYTE3							
IN2	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.
For example:Byte0=0x0F,Byte1=0×A0 represents an IN1 current input of 4000 μA(0x0FAO),i.e.,4 mA.

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 1represents address 0;Subindex 16 represents address Ox0F.

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	0x11 17

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-2AI-SC
0x13 19	0	Device ID	8Byte	Read	26267301
0x14 20	0	Device description	43Byte	Read	Converter 2 channel analog input to io-link
0x15 21	0	Serial-Number	9Byte	Read	2626730101
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 is operating normally; 1:Need to maintain; 2:Running incorrect environment or parameters; 3:Device abeyance; 4:Device failed to run;