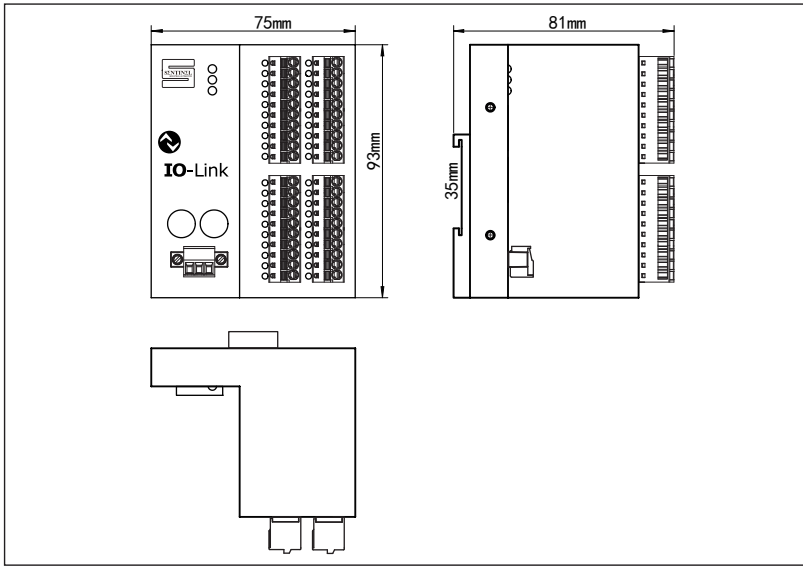


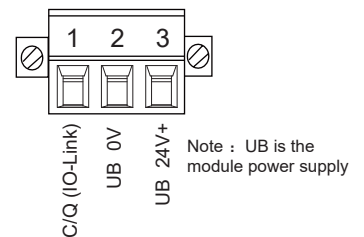
16 Digital PNP/NPN inputs, 16 Digital PNP outputs  
SIOL-TL-16DIO



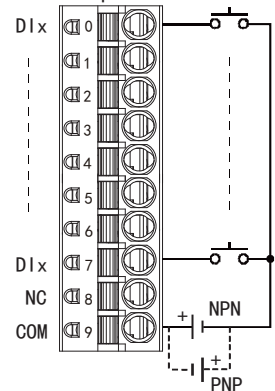
- IO-Link remote I/O device
- Four groups of IO terminals are independently powered
- 16 Digital PNP/NPN inputs
- 16 Digital outputs, 0.2A per channel
- DIN guide rail installation
- Metal housing, Protection class IP20

Supply voltage	24VDC ± 10%
Operating current	< 200mA
Module and load power supply	UB and UL are internally isolated and need to be powered separately
Load power group	Divided into 4 groups, which need separate power supply
<b>Input</b>	
Number of channels	16
Input type	PNP or NPN
Input impedance	3K
Input rated current	7mA
Input delay	5ms
Switch threshold	7V/14V 2mA/4mA
Electrical Isolation mode	Optocoupler isolation
<b>Output</b>	
Number of channels	16
Output type	The common terminal is 0V
Output current	0.2A
Output protection	Overload protection, overheating protection
Output protection reaction time	approximately 20ms
Switching frequency	100HZ
Output voltage drop	0.6V
Electrical Isolation mode	Optocoupler isolation
<b>IO-Link</b>	
Vendor ID	1317 (0x0525)
Device ID	66384(0x010350)
Number of ports	1
IO-Link specification	V1.1
IO-Link port type	Class A
Frame type	TYPE_2_v
Transmission rate	COM2 38.4 kbit/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	-20~55°C

Power supply and communication interface

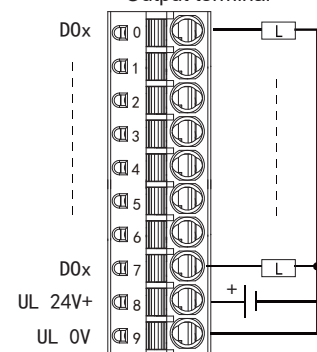


Input terminal



If COM is negative, connect the PNP sensor  
If COM is positive, connect the NPN sensor

Output terminal



Note: UL is the Load power supply

**Module LEDS** Zone: I

**POWER:** Green LED light  
ON : The module power supply (UB) is normal.

**RUN:** Green LED light  
ON : The IO-Link communication is normal;  
OFF: The IO-Link communication is not established  
Flash : Communication is being established, but not yet established

**ERROR:** Not use  
**Dlx:** Yellow LED light  
ON : Input active  
**DOx:** Yellow LED light  
ON : Output active

**NC:** Not use  
**COM:** Not use

**Power supply and communication terminal** Zone: II

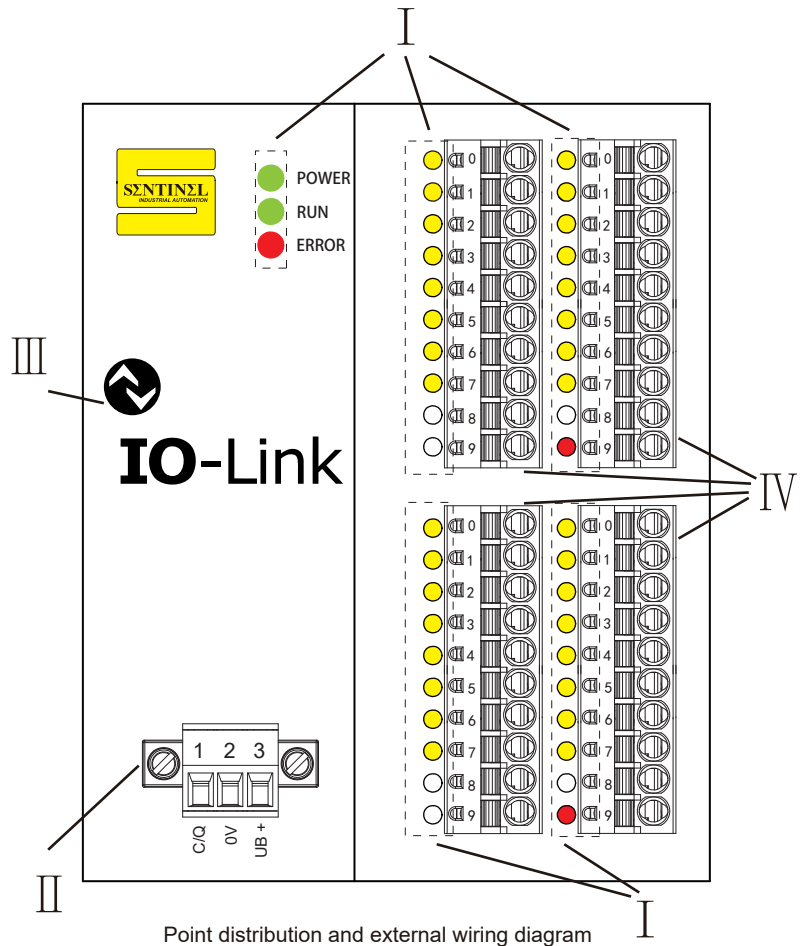
**UB+:** Module power supply 24VDC positive;  
**0V :** Module power supply 24VDC negative  
**C/Q :** IO-Link

**Protocol identification** Zone: III

IO-Link protocol identification

**IO signal terminal** Zone: IV

**Dlx :**This is the input signal  
**NC :** Not use  
**COM :** If COM is negative, connect the PNP sensor  
If COM is positive , connect the NPN sensor

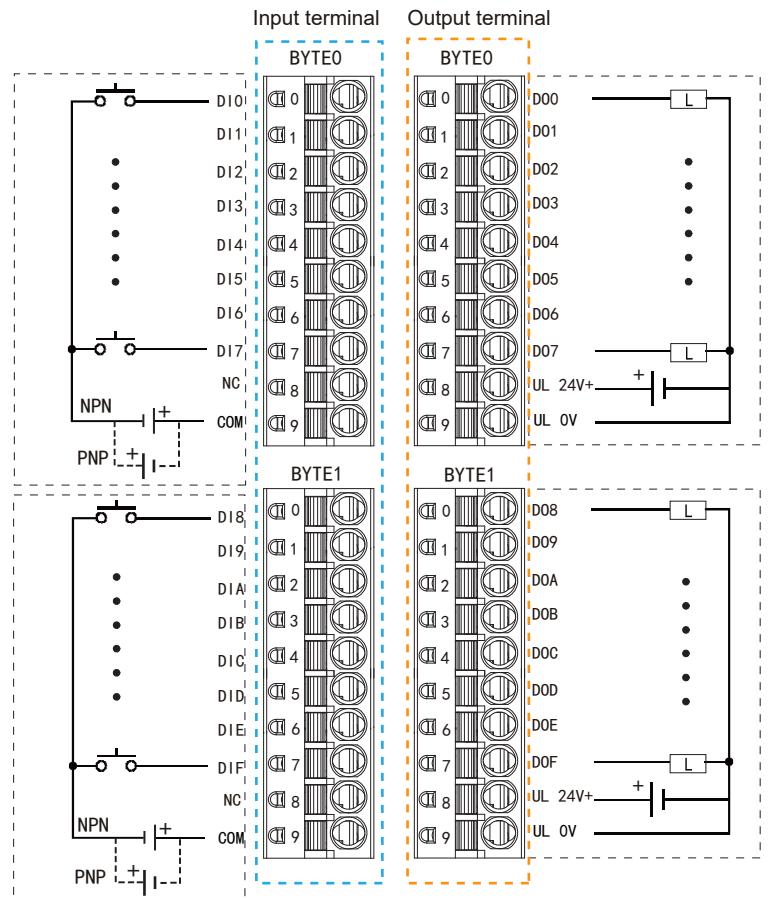


Input point mapping table

	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
BYTE0	DI7	DI6	DI5	DI4	DI3	DI2	DI1	DI0
BYTE1	DI7	DI6	DI5	DI4	DI3	DI2	DI1	DI0

Output point mapping table

	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
BYTE0	DO7	DO6	DO5	DO4	DO3	DO2	DO1	DO0
BYTE1	DO7	DO6	DO5	DO4	DO3	DO2	DO1	DO0



## Direct Parameter

Direct parameters are used to identify the device . Direct parameters are operated by index 0 .  
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
0	0x08 8	Vendor ID( low)	1Byte	Read	0x25
0	0x09 9	Device ID(High)	1Byte	Read	0x01
0	0x0A 10	Device ID(median)	1Byte	Read	0x03
0	0x0B 11	Device ID( low)	1Byte	Read	0x50

## 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 Device reset 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	14Byte	Read	SIOL-TL-16DIO
0x13 19	0	Device ID	7Byte	Read	6638401
0x14 20	0	Device description	29Byte	Read	I/O Module 16 digital input and 16 digital output
0x15 21	0	Serial-Number	9Byte	Read	663840101
0x16 22	0	Hardware version	8Byte	Read	HW-V0.01
0x17 23	0	Software release	8Byte	Read	FW-V0.01
0x18 24	0	ApplicationSpecificTag	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;