sDot

Compact XB6S I/O System

V1.3

Smart, productive, and economic

NANJING SOLIDOT ELECTRONIC TECHNOLOGY CO., LTD.

COMPANY INTRODUCTION

The core team of Solidot Technology was established in 2012, and developed the domestic slice I/O module the following year. In 2018, Solidot Technology focused on the research and development of bus I/O technology and products. It has completed multiple rounds of equity financing, was successfully selected into the list of unicorn enterprises to be cultivated in Nanjing, and established the Nanjing Automation Bus I/O Module Control Engineering Technology Research Center. Related products have been widely used in 3C, new energy, logistics, welding, water treatment, smart buildings and other industries.

At present, the Solidot Technology Bus I/O R&D team has nearly 100 people, including more than 10 industry experts, with complete system integration testing, EMC and environmental testing and aging testing laboratories; it has its own 5,000 square meter bus I/O production base, equipped with a 100,000-level dust-free fully automatic SMT production workshop, an automated assembly and testing workshop, and an intelligent logistics warehouse.

2012 Year
Team Building

100+
Intellectual property

8000+
Domestic transaction customers

300+
Overseas transaction customers

DEVELOPMENT HISTORY

2024

Launched the XBF series of distributed I/O products with reduced wiring.
Certified as "Nanjing Automation Fieldbus I/O Module Control Engineering Technology Research Center".

2023

Released X-bus2.0 backplane protocol.
Launched a new generation of slice I/O XB6S. Released a protocol conversion gateway that supports multiple bus protocols.

2022

Completed multiple rounds of financing and won the favor of industrial capital.
Released slice multi-channel temperature controller.
Supports multiple bus protocols.

2021

Selected into the list of unicorn enterprises to be cultivated in Nanjing. Released slice stepper driver.
Supports multiple bus protocols.

2020

Won the high-tech enterprise certification. Released horizontal I/O, supporting multiple bus protocols.

2019

Completed Pre-A round of financing, led by well-known government capital. Released X-bus1.0 backplane protocol.
The XB6 series slice I/O is released based on this protocol.

2018

Solidot Technology conducts key business planning.
Released vertical I/O, supporting multiple bus protocols. Completed angel round financing.

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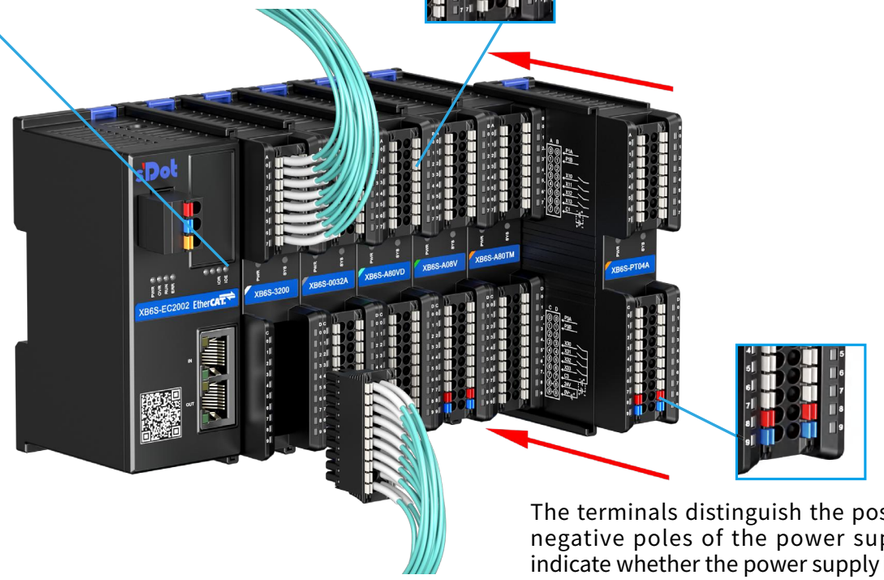
Specialist in Fieldbus I/O

Product Advantages

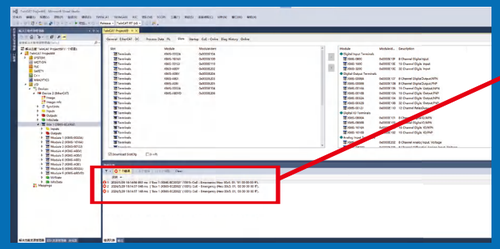
Separate the upper and lower wiring to increase the line Slot utilization.

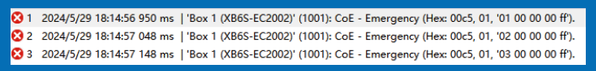
Channels and indicator lights correspond one to one, and the communication status is clear at a glance.



The terminals distinguish the positive and negative poles of the power supply, and indicate whether the power supply is missing or reversely connected.

The XB6S series products have diagnostic, alarm, and exception log recording functions, which can automatically diagnose bus problems without the need to check each module one by one.



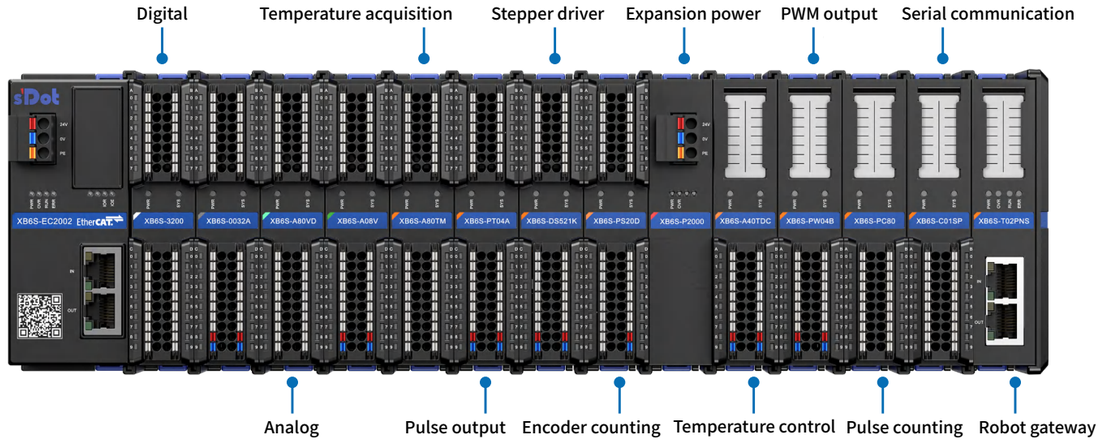


No need to check bus abnormal modules one by one

Automatic diagnosis directly displays alarm information

- **Real-time monitoring** Channel Status
- **Visualization** Network
- Easy **Firmware Upgrade**

Adapt to various bus protocols, with rich functional modules and flexible combination



The products have been strictly EMC testing, super strong anti-interference, no disconnection

ESD (Electrostatic discharge Immunity) Contact Discharge IEC 61000-4-2

Peer standard: ±4kV （Performance criteria B)

XB6S standard: ±8kV （Performance criteria B)

EFT/B （Electrical Fast Transient/Burst Immunity) IEC 61000-4-4

Peer standard: ±2kV （power cable Performance criteria B)

XB6S standard: ±4kV (power cable Performance criteria A)

Peer standard: ±1kV (signal cable Performance criteria B)

XB6S standard: ±2kV (signal cable Performance criteria A)

SURGE (Surge immunity) IEC 61000-4-5

Peer standard: ±0.5kV (cable to cable Performance criteria B)

XB6S standard: ±1kV (cable to cable Performance criteria A)

Peer standard: ±0.5kV (cable to ground Performance criteria B)

XB6S standard: ±2kV (cable to ground Performance criteria A)

Performance criteria A:
When there is interference, the module works normally within the preset range;
Performance criteria B:
When there is interference, the module performance is reduced within the preset range. When the interference disappears,Can be automatically recovered.

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Specialist in Fieldbus I/O

XB6S product disassembly diagram

Coupler protocol type
- PROFINET
- EtherCAT
- EtherNet/IP
- Modbus TCP
- CC-Link IE Field Basic
- CC-Link
- CC-Link IE TSN

Coupler (with integ-rated power supply)

- 32, 16, 8-channel digital input/output
- 12 relay outputs

Digital module

- 8, 4 analog inputs Input/output, support voltage/current type
- 8, 4-channel temperature acquisition, supporting thermal resistors/ thermocouples/ resistance

Analog module

- 4-channel PTO pulse output module
- 2-channel incremental encoder counting module
- 2-channel absolute encoder counting module
- 8-channel pulse counting & frequency measurement module

Motion control module

- Expand system power supply and increase the number of expansion modules

Extension power module

- RS485/232/422 interface
- Modbus RTU/ASCII
- Freeport

Serial communication module

- 32digital input/output
- Packages MIL Connector Cables and Terminal Blocks

MIL Connector module

- Backplane bus termination

Terminal cover

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Module model overview

Coupler			Page
1	XB6S-EC2002	EtherCAT Bus coupler (integrated power supply, with cover)	01
2	XB6S-PN2002	PROFINET Bus coupler (integrated power supply, with cover)	02
3	XB6S-EI2002	EtherNet/IP Bus coupler (integrated power supply, with cover)	03
4	XB6S-MT2002	Modbus TCP Bus coupler (integrated power supply, with cover)	04
5	XB6S-CB2002	CC-Link IE Field Basic Bus coupler (integrated power supply, with cover)	05
6	XB6S-CL2002	CC-Link Bus coupler (integrated power supply, with cover)	06
7	XB6S-CT2002	CC-Link IE TSN Bus coupler (integrated power supply, with cover)	07

Digital Module			Page
8	XB6S-3200	32-channel digital input, input NPN/PNP compatible	08
9	XB6S-1616A	16-channel digital input, 16-channel digital output, input NPN/PNP compatible, output NPN type, 0.5A	10
10	XB6S-0032A	32-channel digital output, output NPN type, 0.5A	12
11	XB6S-1616B	16-channel digital input, 16-channel digital output, input NPN/PNP compatible, output PNP type, 0.5A	10
12	XB6S-0032B	32-channel digital output, output PNP type, 0.5A	12
13	XB6S-3200N	32-channel digital input, input NPN/PNP compatible, input filter default 3ms, MIL connector type	08
14	XB6S-0032AN	32-channel digital output, output NPN type, 0.1A, MIL connector type	13
15	XB6S-0032BN	32-channel digital output, output PNP type, 0.1A, MIL connector type	13
16	XB6S-1600	16-channel digital input, input NPN/PNP compatible	09
17	XB6S-0016A	16-channel digital output, output NPN type, 0.5A	14
18	XB6S-0016B	16-channel digital output, output PNP type, 0.5A	14
19	XB6S-0800	8-channel digital input, input NPN/PNP compatible	09
20	XB6S-0008A	8-channel digital output, output NPN type, 0.5A	14
21	XB6S-0008B	8-channel digital output, output PNP type, 0.5A	14
22	XB6S-0012J/6	12-channel relay output, 2A	15

Analog Module			Page
23	XB6S-A80VD	8-channel analog voltage input, differential signal, ±0.1% accuracy, multiple adjustable ranges	16
24	XB6S-A80ID	8-channel analog current input, differential signal, ±0.1% accuracy, multiple adjustable ranges	16
25	XB6S-A80V	8-channel analog voltage input, single-ended signal, ±0.1% accuracy, multiple adjustable ranges	17
26	XB6S-A80I	8-channel analog current input, single-ended signal, ±0.1% accuracy, multiple adjustable ranges	17
27	XB6S-A40VD	4-channel analog voltage input, differential signal, ±0.1% accuracy, multiple adjustable ranges	18
28	XB6S-A40ID	4-channel analog current input, differential signal, ±0.1% accuracy, multiple adjustable ranges	18
29	XB6S-A40V	4-channel analog voltage input, single-ended signal, ±0.1% accuracy, multiple adjustable ranges	19
30	XB6S-A40I	4-channel analog current input, single-ended signal, ±0.1% accuracy, multiple adjustable ranges	19
31	XB6S-A08V	8-channel analog voltage output, single-ended signal, ±0.1% accuracy, multiple adjustable ranges	20
32	XB6S-A08I	8-channel analog current output, single-ended signal, ±0.1% accuracy, multiple adjustable ranges	20
33	XB6S-A04V	4-channel analog voltage output, single-ended signal, ±0.1% accuracy, multiple adjustable ranges	21
34	XB6S-A04I	4-channel analog current output, single-ended signal, ±0.1% accuracy, multiple adjustable ranges	21

Temperature Module			Page
35	XB6S-A80TM	8-channel of RTD and thermocouple input	22
36	XB6S-A40TM	4-channel RTD and thermocouple input	22

Functional module			Page
37	XB6S-PC80	8-channel pulse counting, 24V-NPN&PNP type, 100kHz	23
38	XB6S-PL20	2-channel incremental encoder counting, 24V-NPN&PNP type, 1MHz	24
39	XB6S-PL20D	2-channel incremental encoder counting, 5V- differential, 1MHz	25
40	XB6S-PS20D	2-channel SSI absolute encoder counting, 5V-differential, 2MHz	26
41	XB6S-PT04A	4-channel PTO pulse output, 24V-NPN type, 200kHz	28
42	XB6S-C01SP	1 channel RS485, RS232, RS422 three-in-one serial communication	29
43	XB6S-XBF02	X-bus Slave to X-bus Field Master Gateway Module	30

Other modules			Page
44	XB6S-P2000	Extended power supply	31
45	TM40-32AE	32-position illuminated terminal block, NPN	
46	TM40-32BE	32-position illuminated terminal block, PNP	
47	TM40-1000-1	Terminal block supporting cable 1 meter (compatible with NPN input, NPN & PNP output)	
48	TM40-3000-1	Terminal block supporting cable 3 meters (compatible with NPN input, NPN & PNP output)	
49	TM40-5000-1	Terminal block supporting cable 5 meters (compatible with NPN input, NPN & PNP output)	
50	TM40-1000-2	Terminal block supporting cable 1 meter (PNP input only)	
51	TM40-3000-2	Terminal block supporting cable 3 meters (PNP input only)	
52	TM40-5000-2	Terminal block supporting cable 5 meters (PNP input only)	

CONTENTS

Product Model	XB6S-EC2002

Product description	EtherCAT Coupler
Dimensions	106.4*43*61mm
Weight	155g
Data transmission medium	Ethernet/EtherCAT CAT5 Cables
Transfer rate	100Mbps
Minimum cycle time[1]	250μs
Transmission distance	⩽ 100m (station to station distance)
Bus connection	2×RJ45
Input and output process data volume	1024Bytes [1]
Input voltage	SELV Input 24VDC (18V...36V)
Input current	Max: 600mA (24VDC)
Backplane supply current	Max: 2A
Backplane supply voltage	5VDC
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Protection class	IP20
Electrostatic discharge	Level 3 Contact ±8KV Air ±8KV
Surge	Level 3 1KV DM 2KV CM
Electrical fast pulse group	Level 4 power cable ±4KV

Note [1]: Cycle time (scan cycle) between PLC and coupler.

Note [2]: The total length of uplink and downlink data shall not exceed 1024 bytes.

Coupler Module

Product Model	XB6S-PN2002

Product description	PROFINET Coupler
Dimensions	106.4*43*61mm
Weight	160g
Data transmission medium	Ethernet CAT5 Cable
Transfer rate	100Mbps
Minimum cycle time [1]	1ms
Transmission distance	⩽ 100m (station to station distance)
Bus connection	2×RJ45
Input and output process data volume	1024Bytes [2]
Input voltage	SELV Input 24VDC (18V...36V)
Input current	Max: 600mA (24VDC)
Backplane supply current	Max: 2A
Backplane supply voltage	5VDC
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Protection class	IP20
Electrostatic discharge	Level 3 Contact ±8KV Air ±8KV
Surge	Level 3 1KV DM 2KV CM
Electrical fast pulse group	Level 4 power cable ±4KV

Note [1]: Cycle time (scan cycle) between PLC and coupler.

Note [2]: The total length of uplink and downlink data shall not exceed 1024 bytes.

Coupler Module

Product Model	XB6S-EI2002

Product description	EtherNet/IP Coupler
Dimensions	106.4*43*61mm
Weight	160g
Data transmission medium	Ethernet CAT5 Cable
Transfer rate	100Mbps
Minimum cycle time [1]	2ms
Transmission distance	⩽ 100m (station to station distance)
Bus connection	2×RJ45
Input and output process data volume	504Bytes
Input voltage	SELV Input 24VDC (18V...36V)
Input current	Max: 600mA (24VDC)
Backplane supply current	Max: 2A
Backplane supply voltage	5VDC
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Protection class	IP20
Electrostatic discharge	Level 3 Contact ±8KV Air ±8KV
Surge	Level 3 1KV DM 2KV CM
Electrical fast pulse group	Level 4 power cable ±4KV

Note [1]: Cycle time (scan cycle) between PLC and coupler.

Coupler Module

Product Model	XB6S-MT2002

Product description	Modbus TCP Coupler
Dimensions	106.4*43*61mm
Weight	160g
Data transmission medium	Ethernet CAT5 Cable
Transfer rate	100Mbps
Minimum cycle time[1]	1ms
Transmission distance	⩽ 100m (station to station distance)
Bus connection	2×RJ45
Input and output process data volume	1024Bytes[2]
Input voltage	SELV Input 24VDC (18V...36V)
Input current	Max: 600mA (24VDC)
Backplane supply current	Max: 2A
Backplane supply voltage	5VDC
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Protection class	IP20
Electrostatic discharge	Level 3 Contact ±8KV Air ±8KV
Surge	Level 3 1KV DM 2KV CM
Electrical fast pulse group	Level 4 power cable ±4KV

Note [1]: Cycle time (scan cycle) between PLC and coupler.

Note [2]: The total length of uplink and downlink data shall not exceed 1024 bytes.

Coupler Module

Product Model	XB6S-CB2002

Product description	CC-Link IE Field Basic Coupler
Dimensions	106.4*43*61mm
Weight	160g
Data transmission medium	Ethernet CAT5 Cable
Transfer rate	100Mbps
Minimum cycle time[1]	2ms
Transmission distance	⩽ 100m (station to station distance)
Bus connection	2×RJ45
Input and output process data volume	128Bytes[2]
Input voltage	SELV Input 24VDC (18V...36V)
Input current	Max: 600mA (24VDC)
Backplane supply current	Max: 2A
Backplane supply voltage	5VDC
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Protection class	IP20

Note [1]: Cycle time (scan cycle) between PLC and coupler.

Note [2]: The total length of uplink and downlink data shall not exceed 1024 bytes.

Coupler Module

Product Model	XB6S-CL2002

Product Description	CC-Link Coupler				
Specification Dimension	106.4*43*61mm				
Weight	155g				
Data transmission medium	CC-Link special cable (three-core shielded stranded cable)				
Transmission Rate	Five speeds of 10 Mbps / 5 Mbps / 2.5 Mbps / 625 kbps / 156 kbps can be set				
Minimum cycle time	2ms				
Transmission distance	10 Mbps	5 Mbps	2.5 Mbps	625 kbps	156 kbps
	⩽ 100 m	⩽ 160 m	⩽ 400 m	⩽ 900 m	⩽ 1200 m
Bus interface	2×4P spring-loaded terminal block				
Input voltage	SELV Input 24VDC (18V~36V)				
Input current	Max: 600mA (24VDC)				
Backplane supply current	Max: 2A				
Backplane supply voltage	5VDC				
Operating Temperature	-20° C~+60° C				
Relative Humidity	95%, non-condensing				
Protection class	IP20				

Product Model	XB6S-CT2002

Product Description	CC-Link IE TSN Coupler
Specification Dimension	106.4*43*61mm
Weight	160g
Data transmission medium	Connector (cable + plug) for Ethernet meeting EN 50173 or ISO/IEC 11801 standard category 5 (CAT5)
Transmission Rate	1Gbps
Transmission distance	⩽ 100m (station-to-station distance)
Bus interface	2×RJ45
Input voltage	SELV Input 24VDC (18V~36V)
Input current	Max: 600mA (24VDC)
Backplane supply current	Max: 2A
Backplane supply voltage	5VDC
Operating Temperature	-20° C~+60° C
Relative Humidity	95%, non-condensing
Protection class	IP20

Product Model	XB6S-3200	XB6S-3200N
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	110g	110g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	100mA	70mA
Input rated voltage	24VDC (20.4V...28.8V)	24VDC (20.4V...28.8V)
Typical Input current	5mA (24VDC)	5mA (24VDC)
Input signal points	32	32
Input signal type	NPN/PNP compatible	NPN/PNP compatible
Input signal form	Voltage direct input form	Voltage direct input form
	Sink input: NPN open collector input	Sink input: NPN open collector input
	Source input: PNP open collector input	Source input: PNP open collector input
OFF voltage/OFF current	-3V...+5V/0.9mA or less	-3V...+5V/0.9mA or less
ON voltage/ON current	11V...30V/2.1mA or above	11V...30V/2.1mA or above
Reaction time	<50μs	<50μs
Input filtering	No filter, 0.1ms, 0.2ms, 0.5ms, 1ms, 2ms, 3ms (factory setting), 4ms...18ms, 19ms, 20ms	No filter, 0.1ms, 0.2ms, 0.5ms, 1ms, 2ms, 3ms (factory setting), 4ms...18ms, 19ms, 20ms
Maximum input frequency	150Hz (filter time: 3ms)	150Hz (filter time: 3ms)
Input Impedance	5.4KΩ	5.4KΩ
Isolation method	Optocoupler Isolation	Optocoupler Isolation
Isolation withstand voltage	500VAC	500VAC
Power consumption	0.5W	0.35W
Digital input type	Type1/Type3	Type1/Type3
Channel indicator light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Relative humidity	95%, no condensation	95%, no condensation
Protection class	IP20	IP20

Product Model	XB6S-1600	XB6S-0800
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	90g	90g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	80mA	60mA
Input rated voltage	24VDC (20.4V...28.8V)	24VDC (20.4V...28.8V)
Typical Input current	5mA (24VDC)	5mA (24VDC)
Input signal points	16	8
Input signal type	NPN/PNP compatible	NPN/PNP compatible
Input signal form	Voltage direct input form	Voltage direct input form
	Sink input: NPN open collector input	Sink input: NPN open collector input
	Source input: PNP open collector input	Source input: PNP open collector input
OFF voltage/OFF current	-3V...+5V/0.9mA or less	-3V...+5V/0.9mA or less
ON voltage/ON current	11V...30V/2.1mA or above	11V...30V/2.1mA or above
Reaction time	<50μs	<50μs
Input filtering	No filter, 0.1ms, 0.2ms, 0.5ms, 1ms, 2ms, 3ms (factory setting), 4ms...18ms, 19ms, 20ms	No filter, 0.1ms, 0.2ms, 0.5ms, 1ms, 2ms, 3ms (factory setting), 4ms...18ms, 19ms, 20ms
Maximum input frequency	150Hz (filter time: 3ms)	150Hz (filter time: 3ms)
Input Impedance	5.4KΩ	5.4KΩ
Isolation method	Optocoupler Isolation	Optocoupler Isolation
Isolation withstand voltage	500VAC	500VAC
Power consumption	0.4W	0.3W
Digital input type	Type1/Type3	Type1/Type3
Channel indicator light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Relative humidity	95%, no condensation	95%, no condensation
Protection class	IP20	IP20

Product Model	XB6S-1616A	XB6S-1616B
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	110g	110g
Digital input		
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	130mA	100mA
Input rated voltage	24VDC (20.4V...28.8V)	24VDC (20.4V...28.8V)
Typical Input current	5mA (24VDC)	5mA (24VDC)
Input signal points	16	16
Input signal type	NPN/PNP compatible	NPN/PNP compatible
Input signal form	Voltage direct input form	Voltage direct input form
	Sink input: NPN open collector input	Sink input: NPN open collector input
	Source input: PNP open collector input	Source input: PNP open collector input
OFF voltage/current (PNP)	-3V...+5V/0.9mA or less (between COM and each signal)	-3V...+5V/0.9mA or less (between COM and each signal)
ON voltage/current (PNP)	11V...30V/2.1mA or above (between COM and each signal)	11V...30V/2.1mA or above (between COM and each signal)
OFF voltage/current (NPN)	11V...30V/2.1mA or above (between COM and each signal)	11V...30V/2.1mA or above (between COM and each signal)
ON voltage/current (NPN)	-3V...+5V/0.9mA or less (between COM and each signal)	-3V...+5V/0.9mA or less (between COM and each signal)
Reaction time	<50μs	<50μs
Input filtering	No filter, 0.1ms, 0.2ms, 0.5ms, 1ms, 2ms,3ms (factory setting), 4ms...18ms, 19ms, 20ms	No filter, 0.1ms, 0.2ms, 0.5ms, 1ms, 2ms,3ms (factory setting), 4ms...18ms, 19ms, 20ms
Maximum input frequency	150Hz (filter time: 3ms)	150Hz (filter time: 3ms)
Input Impedance	5.4KΩ	5.4KΩ
Isolation method	Optocoupler Isolation	Optocoupler Isolation
Isolation withstand voltage	500VAC	500VAC
Power consumption	0.65W	0.5W
Digital input type	Type1/Type3	Type1/Type3
Channel indicator light	Green LED light	Green LED light

Product Model	XB6S-1616A	XB6S-1616B
		
Digital output		
Output signal points	16	16
Output signal type	NPN	PNP
Output voltage drop	＜1V	＜1V
Output load type	Resistive load, inductive load, lamp load	Resistive load, inductive load, lamp load
Single channel rated current	Max: 0.5A	Max: 0.5A
Leakage Current	<10μA	<10μA
Reaction time	<150μs	<150μs
Output channel protection	Short circuit protection (automatic recovery mechanism)	Short circuit protection (automatic recovery mechanism)
Module protection	Reverse connection protection (automatic recovery mechanism), field-side Surge protection	Reverse connection protection (automatic recovery mechanism), field-side Surge protection
Isolation method	Optocoupler Isolation	Optocoupler Isolation
Isolation withstand voltage	500VAC	500VAC
Channel indicator light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Relative humidity	95%, no condensation	95%, no condensation
Protection class	IP20	IP20

Product Model	XB6S-0032A	XB6S-0032B
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	110g	110g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	150mA	110mA
Input rated voltage	24VDC (20.4V...28.8V)	24VDC (20.4V...28.8V)
Output signal points	32	32
Output signal type	NPN	PNP
Output voltage drop	＜1V	＜1V
Output load type	Resistive load, inductive load, lamp load	Resistive load, inductive load, lamp load
Single channel rated current	Max: 0.5A	Max: 0.5A
Leakage Current	<10μA	<10μA
Reaction time	<150μs	<150μs
Output channel protection	Short circuit protection(Automatic recovery mechanism)	Short circuit protection(Automatic recovery mechanism)
Module protection	Reverse connection protection (automatic recovery mechanism), field-side Surge protection	Reverse connection protection (automatic recovery mechanism), field-side Surge protection
Isolation method	Optocoupler Isolation	Optocoupler Isolation
Isolation withstand voltage	500VAC	500VAC
Power consumption	0.75W	0.55W
Channel indicator light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Relative humidity	95%, no condensation	95%, no condensation
Protection class	IP20	IP20

Product Model	XB6S-0032AN	XB6S-0032BN
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	110g	110g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	130mA	80mA
Input rated voltage	24VDC (20.4V...28.8V)	24VDC (20.4V...28.8V)
Output signal points	32	32
Output signal type	NPN	PNP
Output voltage drop	＜1V	＜1V
Output load type	Resistive load, inductive load, lamp load	Resistive load, inductive load, lamp load
Single channel rated current	0.1A	0.1A
Leakage Current	<10μA	<10μA
Reaction time	<150μs	<150μs
Output channel protection	Short circuit protection(Automatic recovery mechanism)	Short circuit protection(Automatic recovery mechanism)
Module protection	Reverse connection protection (automatic recovery mechanism), field-side Surge protection	Reverse connection protection (automatic recovery mechanism), field-side Surge protection
Isolation method	Optocoupler Isolation	Optocoupler Isolation
Isolation withstand voltage	500VAC	500VAC
Power consumption	0.65W	0.4W
Channel indicator light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Relative humidity	95%, no condensation	95%, no condensation
Protection class	IP20	IP20

Product Model	XB6S-0016A	XB6S-0016B	XB6S-0008A	XB6S-0008B
				
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	90g	90g	90g	90g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	110mA	90mA	⩽ 70mA	⩽ 60mA
Input rated voltage	24VDC (20.4V...28.8V)	24VDC (20.4V...28.8V)	24VDC (20.4V...28.8V)	24VDC (20.4V...28.8V)
Output signal points	16	16	8	8
Output type	NPN	PNP	NPN	PNP
Output voltage drop	＜ 1V	＜ 1V	＜ 1V	＜ 1V
Output load type	Resistive load, inductive load, lamp load	Resistive load, inductive load, lamp load	Resistive load, inductive load, lamp load	Resistive load, inductive load, lamp load
Single channel rated current	Max: 0.5A	Max: 0.5A	Max: 0.5A	Max: 0.5A
Leakage Current	<10μA	<10μA	<10μA	<10μA
Reaction time	<150μs	<150μs	<150μs	<150μs
Output channel protection	Short circuit protection(Automatic recovery mechanism)	Short circuit protection(Automatic recovery mechanism)	Short circuit protection(Automatic recovery mechanism)	Short circuit protection(Automatic recovery mechanism)
Module protection	Reverse connection protection (automatic recovery system), on-site surge protection	Reverse connection protection (automatic recovery system), on-site surge protection	Reverse connection protection (automatic recovery system), on-site surge protection	Reverse connection protection (automatic recovery system), on-site surge protection
Isolation method	Optocoupler Isolation	Optocoupler Isolation	Optocoupler Isolation	Optocoupler Isolation
Isolation withstand voltage	500VAC	500VAC	500VAC	500VAC
Power consumption	0.55W	0.45W	0.35W	0.3W
Channel indicator light	Green LED light	Green LED light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C	-20°C ...+60°C	-20°C ...+60°C
Relative humidity	95%, no condensation	95%, no condensation	95%, no condensation	95%, no condensation
Protection class	IP20	IP20	IP20	IP20

Product Model	XB6S-0012J/6
	
Dimensions	106.4*25.7*72.3mm
Weight	135g
Bus input power rated voltage	5VDC (4.5V...5.5V)
Bus input power rated current	100mA
Input rated voltage	24VDC (20.4V...28.8V)
Output signal points	12
Output type	Relay
Output load type	Resistive load, inductive load, lamp load
Single channel rated voltage	24VDC
Single channel rated current	Max: 2A
Hardware output response time	10ms/10ms
Module protection	Field side reverse connection protection (automatic recovery mechanism), field side Surge protection
Isolation method	Optocoupler isolation + relay isolation
Isolation withstand voltage	1500VAC
Power consumption	0.5W
Mechanical life	Minimum 20 million operations (18,000 operations/hour)
Electrical life	Minimum 100,000 operations (2A, 24VDC, inductive load)
Channel indicator light	Green LED light
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Protection class	IP20

Product Model	XB6S-A80VD	XB6S-A80ID
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	125g	125g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	210mA	210mA
Input channels	8	8
Input Type	Voltage Type	Current Type
Input signal	Disable, -10V...+10V, 0V...10V, -5V...+5V, 0V...5V, 1V...5V (range adjustable, default is -10V...+10V)	Disable, 4mA...20mA, 0mA...20mA,-20mA...+20mA (range adjustable, default is 0mA...20mA)
Input signal type	Differential signal	Differential signal
Channel response time	550μs/ch 850μs/8ch	550μs/ch 850μs/8ch
Resolution	16 bits	16 bits
Sampling rate (all channels)	⩽ 1ksps	⩽ 1ksps
Accuracy	±0.1% at 25° C, ±0.3% over the entire temperature range	±0.1% at 25° C, ±0.3% over the entire temperature range
Input filtering	support	support
Smoothing series	1...200	1...200
Input impedance (voltage type)	⩾ 1MΩ	-
Input impedance (current type)	-	⩽ 250Ω
Common mode voltage range	12VAC	-
Maximum voltage allowed by the channel (voltage type)	30V	-
Maximum current allowed by the channel (current type)	-	30mA
The system cannot be affected	When the ±15V power supply is damaged and short-circuited,The system +5V power supply cannot be affected	When the ±15V power supply is damaged and short-circuited,The system +5V power supply cannot be affected
Potential isolation	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage
Input overvoltage protection	Support clamp protection	Do not connect to voltage input
Potential isolation	±30V	±30mA
Input overvoltage protection	500VDC	500VDC
Input protection	1.05W	1.05W
Isolation withstand voltage	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Protection class	IP20	IP20

Product Model	XB6S-A80V	XB6S-A80I
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	125g	125g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	260mA	110mA
Input channels	8	8
Input Type	Voltage Type	Current Type
Input signal	Disable, -10V...+10V, 0V...10V, -5V...+5V, 0V...5V, 1V...5V (range adjustable, default is -10V...+10V)	Disable, 4mA...20mA, 0mA...20mA (range is adjustable, default is 0mA...20mA)
Input signal type	Single-ended signal	Single-ended signal
Channel response time	560μs/ch 770μs/8ch	560μs/ch 770μs/8ch
Resolution	16 bits	16 bits
Sampling rate (all channels)	⩽ 1ksps	⩽ 1ksps
Accuracy	±0.1% at 25° C, ±0.3% over the entire temperature range	±0.1% at 25° C, ±0.3% over the entire temperature range
Input filtering	support	support
Smoothing series	1...200	1...200
Input impedance (voltage type)	⩾ 400kΩ	-
Input impedance (current type)	-	⩽ 300Ω
Maximum voltage allowed by the channel (voltage type)	30V	-
Maximum current allowed by the channel (current type)	-	30mA
The system cannot be affected	When the ±15V power supply is damaged and short-circuited,The system +5V power supply cannot be affected	When the ±15V power supply is damaged and short-circuited,The system +5V power supply cannot be affected
Potential isolation	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage
Input overvoltage protection	Support clamp protection	Do not connect to voltage input
Input protection	±30V	±30mA
Isolation withstand voltage	500VDC	500VDC
Power consumption	1.35W	0.55W
Channel indicator light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Protection class	IP20	IP20

Product Model	XB6S-A40VD	XB6S-A40ID
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	105g	105g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	150mA	150mA
Input channels	4	4
Input Type	Voltage Type	Current Type
Input signal	Disable, -10V...+10V, 0V...10V, -5V...+5V, 0V...5V, 1V...5V (range adjustable, default is -10V...+10V)	Disable, 4mA...20mA, 0mA...20mA,-20mA...+20mA (range adjustable, default is 0mA...20mA)
Input signal type	Differential signal	Differential signal
Channel response time	300μs/ch 600μs/4ch	300μs/ch 600μs/4ch
Resolution	16 bits	16 bits
Sampling rate (all channels)	⩽ 1ksps	⩽ 1ksps
Accuracy	±0.1% at 25° C, ±0.3% over the entire temperature range	±0.1% at 25° C, ±0.3% over the entire temperature range
Input filtering	support	support
Smoothing series	1...200	1...200
Input impedance (voltage type)	⩾ 1MΩ	-
Input impedance (current type)	-	⩽ 250Ω
Common mode voltage range	12VAC	-
Maximum voltage allowed by the channel (voltage type)	30V	-
Maximum current allowed by the channel (current type)	-	30mA
The system cannot be affected	When the ±15V power supply is damaged or short-circuited, the system +5V power supply cannot be affected	When the ±15V power supply is damaged or short-circuited, the system +5V power supply cannot be affected
Potential isolation	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage
Input overvoltage protection	Support clamp protection	Do not connect to voltage input
Input protection	±30V	±30mA
Isolation withstand voltage	500VDC	500VDC
Power consumption	0.75W	0.75W
Channel indicator light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Protection class	IP20	IP20

Product Model	XB6S-A40V	XB6S-A40I
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	105g	105g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	180mA	100mA
Input channels	4	4
Input Type	Voltage Type	Current Type
Input signal	Disable, -10V...+10V, 0V...10V, -5V...+5V, 0V...5V, 1V...5V (range adjustable, default is -10V...+10V)	Disable, 4mA...20mA, 0mA...20mA (range is adjustable, default is 0mA...20mA)
Input signal type	Single-ended signal	Single-ended signal
Channel response time	400μs/ch 700μs/4ch	300μs/ch 600μs/4ch
Resolution	16 bits	16 bits
Sampling rate (all channels)	⩽ 1ksps	⩽ 1ksps
Accuracy	±0.1% at 25° C, ±0.3% over the entire temperature range	±0.1% at 25° C, ±0.3% over the entire temperature range
Input filtering	Support	Support
Smoothing series	1...200	1...200
Input impedance (voltage type)	⩾ 400kΩ	-
Input impedance (current type)	-	⩽ 300Ω
Maximum voltage allowed by the channel (voltage type)	30V	-
Maximum current allowed by the channel (current type)	-	30mA
The system cannot be affected	When the ±15V power supply is damaged and short-circuited,The system +5V power supply cannot be affected	When the ±15V power supply is damaged and short-circuited,The system +5V power supply cannot be affected
Potential isolation	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage
Input overvoltage protection	Support clamp protection	Do not connect to voltage input
Input protection	±30V	±30mA
Isolation withstand voltage	500VDC	500VDC
Power consumption	0.95W	0.5W
Channel indicator light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Protection class	IP20	IP20

Product Model	XB6S-A08V	XB6S-A08I
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	125g	125g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	100mA	100mA
Output points	8	8
Output Type	Voltage Type	Current Type
Output signal	Disable, -10V...+10V, 0V...10V, -5V...+5V, 0V...5V, 1V...5V (range adjustable, default is -10V...+10V)	Disable, 4mA...20mA, 0mA...20mA (range is adjustable, default is 0mA...20mA)
Channel response time	400μs/ch 400μs/8ch	400μs/ch 400μs/8ch
Resolution	16bits	16bits
Accuracy	±0.1% at 25° C, ±0.3% over the entire temperature range	±0.1% at 25° C, ±0.3% over the entire temperature range
Load impedance (voltage type)	⩾ 2kΩ (1kΩ Accuracy: ±3‰ at 25°C , full temperature±5‰)	
Load impedance (current type)	-	⩽ 500Ω
The system cannot be affected	When the ±15V power supply is damaged and short-circuited,The system +5V power supply cannot be affected	When the ±15V power supply is damaged and short-circuited,The system +5V power supply cannot be affected
Output protection	Overload protection, open circuit protection, short circuit protection (all with automatic recovery mechanism)	Overload protection, open circuit protection, short circuit protection (both are automatic recovery mechanisms)
Potential isolation	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage
Isolation withstand voltage	500VDC	500VDC
Power consumption	0.5W	0.5W
Clear and keep optional functions in non-OP state	Support	Support
Channel indicator light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Protection class	IP20	IP20

Product Model	XB6S-A04V	XB6S-A04I
		
Dimensions	106.4*25.7*72.3mm	106.4*25.7*72.3mm
Weight	105g	105g
Bus input power rated voltage	5VDC (4.5V...5.5V)	5VDC (4.5V...5.5V)
Bus input power rated current	80mA	80mA
Output points	4	4
Output Type	Voltage Type	Current Type
Output signal	Disable, -10V...+10V, 0V...10V, -5V...+5V, 0V...5V, 1V...5V (range adjustable, default is -10V...+10V)	Disable, 4mA...20mA, 0mA...20mA (range is adjustable, default is 0mA...20mA)
Channel response time	200μs/ch 200μs / 4ch	200μs/ch 200μs / 4ch
Resolution	16 bits	16 bits
Accuracy	±0.1% at 25° C, ±0.3% over the entire temperature range	±0.1% at 25° C, ±0.3% over the entire temperature range
Input impedance (voltage type)	⩾ 2kΩ (1kΩ accuracy: ±3‰ at 25°C , ±5‰ at full temperature)	-
Load impedance (current type)	-	⩽ 500Ω
The system cannot be affected	When the ±15V power supply is damaged and short-circuited, the system +5V power supply cannot be affected	When the ±15V power supply is damaged and short-circuited, the system +5V power supply cannot be affected
Output protection	Overload protection, open circuit protection, short circuit protection (both are automatic recovery mechanisms)	Overload protection, open circuit protection, short circuit protection (both are automatic recovery mechanisms)
Potential isolation	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage	No isolation between channels, isolation between channels and backplane bus, isolation between channels and supply voltage
Isolation withstand voltage	500VDC	500VDC
Power consumption	0.4W	0.4W
Clear and keep optional functions in non-OP state	Support	Support
Channel indicator light	Green LED light	Green LED light
Operating temperature	-20°C ...+60°C	-20°C ...+60°C
Protection class	IP20	IP20

Temperature Module

Product Model	XB6S-A80TM (8 channels) XB6S-A40TM (4 channels)		

Dimensions	106.4*25.7*72.3mm		
Weight	110g	90g	
Transfer rate	6 Mbps		
Temperature measurement units	Supports switching between Celsius, Fahrenheit, and thermodynamic temperature scale units (the default unit is Celsius) [2]		
Power supply	5VDC		
Sensor Type	Thermocouple	Thermal resistor	resistance
Connection	2-wire	2-wire, 3-wire	2-wire
Sensor code and range	B: 50...1800°C	Pt100: -200...850°C	15Ω...3kΩ
	C: (Reserved) [1]	Pt200: -200...850°C	15Ω...150Ω (reserved)
	E: -200...1000°C	Pt500: -200...850°C	15Ω...300Ω (reserved)
	J: -200...1200°C	Pt1000: -200...850°C	15Ω...600Ω (reserved)
	K: -200...1370°C	Ni120: (reserved)	
	L: (reserved)	Ni100: -60...250°C	
	N: (reserved)	Ni1000: -60...250°C	
	R: (reserved)	Ni200: (reserved)	
	S: -50...1690°C	Ni500: (reserved)	
	T: (reserved)		
	U: (reserved)		
Accuracy	±0.3% @25°C (FS)	±0.1% @25°C (FS)	±0.1% @25°C (FS)
	±0.5% @-20...60°C (FS)	±0.3% @-20...60°C (FS)	±0.3% @-20...60°C (FS)
Sensitivity	0.1°C		±0.1Ω
Resolution	16 bits (int type)		
Channel conversion time	29ms/ch 115ms/8ch	73ms/ch 290ms/8h	
Filtering	Single channel filtering, configurable (level 1 to 10)		
Disconnection Detection	Support		
Disconnection detection time	2ms		
Misconnection overvoltage protection	±30V		
Noise Suppression	50Hz, 60Hz, 10Hz, no noise suppression		
Excitation current	<2mA		
Input Impedance	⩾ 10KΩ		
Isolation method	Digital Isolation		
Isolation withstand voltage	500VDC		
Power consumption	0.45W		
Channel indicator light	Green LED light		
Operating temperature	-20°C ...+60°C		
Relative humidity	95%, no condensation		
Protection class	IP20		

Note[1]: Sensor codes C, L, N, R, T, U, Ni120, Ni200, Ni500, 15Ω ... 150Ω, 15Ω ... 300Ω, 15Ω ... 600Ω are not currently supported.
Note[2]: Fahrenheit (°F) = 32 + T (°C) × 1.8; Thermodynamic temperature scale (K) = T (°C) + 273.15.
Note[3]: 4-wire sensors need to be changed to 2-wire or 3-wire connections.

Functional module

Product Model	XB6S-PC80

Dimensions	106.4*25.7*72.3mm
Weight	85g
Process data volume: Uplink	64 Bytes
Process data volume: Downlink	2 Bytes
Channel Type	Pulse input channel: 8 channels, PNP/NPN compatible
Refresh rate	1 ms
System input power	5VDC
Input channel voltage rating (range)	24VDC (15V...30V)
Pulse input frequency range	0...100KHz
Pulse input count value range	0...2^32-1
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Protection class	IP20

Functional module

Product Model	XB6S-PL20

Dimensions	106.4*25.7*72.3mm
Weight	110g
Process data volume: Downlink	20Bytes
Process data volume: Uplink	34Bytes
Channel Type	Encoder input channel: 2 groups of channels (phase A, phase B and phase Z), PNP/NPN
	Probe input channel: 4 channels (1 encoder with 2 probe functions), PNP/NPN
	Ordinary digital input channel: 4 channels (1 encoder with 2 ordinary digital inputs), PNP/NPN
	Comparison output channel: 4 channels (1 encoder with 2 comparison outputs), NPN
	Ordinary digital output channel: 4 channels (1 encoder with 2 ordinary digital output channels)), NPN
Refresh rate	1ms
System input power	5VDC (4.5V...5.5V)
Field side power supply rating (range)	24VDC (20.4V...28.8V)
Input channel voltage rating (range)	24VDC (20.4V...28.8V)
Encoder pulse input mode	AB quadrature (ABZ), directional pulse (Pul+Dir), double pulse (CW/CCW)
Encoder pulse input frequency	1MHz
Report channel real-time speed	Support
Z phase clear	Support
Counting rate setting	4x/2x/1x (default 1x)
Ring counting	Support
Counting range	0...2^32-1 or 0... Ring counting resolution × counting magnification -1
Encoder ring count resolution setting[1]	Support (Ring count resolution setting range is 0...65535)
Count initial value setting	Support (the initial value of the count is set in the range of 0...2^32-1)
Count backwards	Support
Encoder input hardware filtering	Support (0...15 levels)
Probe function (high-speed hardware latch)	Support
Probe input frequency	1MHz
Comparison output function	Support
Compare output signal response speed	＜ 10μs
Input and output pin function selection	Support
Power-off storage	Support
Installation	35mm standard rail installation
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Protection class	IP20

Note [1]: The ring count resolution here is only used to set the ring count range of the encoder and is different from the physical resolution of the encoder itself.

Functional module

Product Model	XB6S-PL20D

Dimensions	106.4*25.7*72.3mm
Weight	110g
System input power	5VDC (4.5V...5.5V)
Field side power supply rating (range)	24VDC (20.4V...28.8V)
Input channel voltage rating (range)	24VDC (20.4V...28.8V)
Encoder pulse input mode	AB quadrature (ABZ), directional pulse (Pul+Dir), double pulse (CW/CCW)
Encoder pulse input frequency	Max 1MHz
Report channel real-time speed	Support
Z phase clear	Support
Counting rate setting	4x/2x/1x (default 1x)
Ring counting	Support
Counting range	0...2^32-1 or 0... Ring counting resolution × counting magnification -1
Encoder ring count resolution setting[1]	Support (Ring count resolution setting range is 0...65535)
Count initial value setting	Support (the initial value of the count is set in the range of 0...2^32-1)
Count backwards	Support
Encoder input hardware filtering	Support (0...15 levels)
Probe function (high-speed hardware latch)	Support
Probe input frequency	1MHz
Comparison output function	Support
Compare output signal response speed	＜ 10μs
Input and output pin function selection	Support
Power-off storage	Support
Wiring method	Screw-free quick plug
Installation	35mm standard rail installation
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Protection class	IP20

Note [1]: The ring count resolution here is only used to set the ring count range of the encoder and is different from the physical resolution of the encoder itself.

Product Model	XB6S-PS20D

Dimensions	106.4*25.7*72.3mm
Weight	110g
Process data volume: Downlink	2Bytes
Process data volume: Uplink	26Bytes
Channel Type	Encoder input channel: 2 groups of SSI absolute encoder channels
	Probe input channel: 4 channels (1 encoder with 2 probe functions), PNP/NPN
	Ordinary digital input channel: 2 channels (1 encoder with 1 ordinary digital input), PNP/NPN
	Ordinary digital output channel: 8 channels (1 encoder with 4 ordinary digital output channels)), NPN
Refresh rate	1ms
Encoder input	2 channels
Encoder signal type	Differential signal, 5V
Data frame length	10...40 digits
Positional value type	Support Gray code or binary
Position value LSB/MSB	Configurable
SSI encoder clock frequency	⩽ 2.0MHz
Reading interval	Configurable
Probe function (high-speed hardware latch)	Support
Installation	35mm standard rail installation
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Protection class	IP20

Functional module

Product Model	XB6S-PS20D

Digital input

Rated voltage	24VDC (20.4V...28.8V)
Signal Points	6
Signal Type	NPN/PNP
OFF Voltage /OFF Current	-3V...+5V/0.9mA or less
ON Voltage /ON Current	11V...30V/2.1mA or above
Input current	4mA
Isolation method	Optocoupler Isolation
Isolation withstand voltage	500VAC
Channel indicator light	Green LED light

Digital output

Rated voltage	24VDC (20.4V...28.8V)
Signal Points	8
Signal Type	NPN
Load Type	Resistive load, inductive load
Single channel rated current	Max: 500mA
Port protection	Overcurrent protection
Isolation method	Optocoupler Isolation
Isolation withstand voltage	500VAC
Channel indicator light	Green LED light

Functional module

Product Model	XB6S-PT04A	

Dimensions	106.4*25.7*72.3mm	
Weight	105g	
System input power	5VDC	
Input channel voltage	24VDC (15V...30V)	
Rated current consumption	150mA	
Power consumption	0.65W	
Process data volume: Downlink	56 Bytes	
Process data volume: Uplink	48 Bytes	
Channel Type	Input: 16 Ch, PNP/NPN	Output: 4 Ch, NPN
Refresh rate	1 ms	
Pulse output voltage	Pulse high level: determined by input channel voltage (15V...30V)	
	Pulse low level: 0V	
Output Channel	4 channels	
Pulse output frequency	200kHz	
Pulse Mode	Single pulse (pulse + direction), double pulse (CW/CCW)	
Pulse output type	NPN	
Input Channels	16 channels	
Input channel function	Positive limit, negative limit, origin switch, brake (all can be reused as general digital input)	
Input Type	PNP/NPN	
Input signal logic selection	Input signal can be configured as normally open/normally closed	
Exercise	Absolute position mode, relative (incremental) position mode, speed mode, zero return mode, jog mode	
Trapezoidal acceleration and deceleration	Support	
Movement Merger	Supports configuration of single merge mode, continuous merge mode, and turning off this function	
Channel-level parameter configuration	Support	
Zero return mode	Support 4 types	
Safe Mode	Supports continued operation, deceleration stop and brake stop	
Braking	Support	
Wiring method	Screw-free quick plug	
Wire length	<30m (unshielded)	
Installation	DIN 35 mm standard rail installation	
Operating temperature	-20℃ ...+60℃	
Relative humidity	95%, no condensation	
Protection class	IP20	

Functional module

Product Model	XB6S-C01SP

Dimensions	106.4*25.7*72.3mm
Weight	90g
Number of channels	1 channel
Communication interface type[1]	RS232, RS485, RS422
Communication Protocol	Modbus RTU, Modbus ASCII, Freeport
Baud rate	1200bps...115200bps
Bus input power rated voltage	5VDC (4.5V...5.5V)
Bus input power rated current	⩽ 230mA
Power consumption	1.15W
Wiring method	Screw-free quick plug
Installation	DIN 35mm rail mounting
Operating temperature	-20℃ ...+60℃
Relative humidity	95%, no condensation
Protection class	IP20

Note[1]: Only one of the RS232, RS485, and RS422 interfaces can be used at the same time.

Functional module

Product Mode	XB6S-XBF02

Specification Dimensions	106.4*25.7*61mm
Weight	95g
XBF Expansion Module Interface	2×RJ45
Maximum Number of Slave Serial Connections for a Single XBF Interface	32
Maximum Number of Slave Serial Connections	16
XBF Data Transmission Media	Ethernet/EtherCAT CAT5 S/FTP cable
XBF Transmission Distance	⩽ 50 m (total distance from the XBF interface to the last I/O module of this branch, single XBF interface extended by 16 modules)
Input and Output Process Data Volume	1020Bytes[1]
Input Voltage	SELV Input 24VDC（18V~36V）
Input Current	Max：833mA（24VDC）
Backplane Supply Current	Max：2A
Backplane Supply Voltage	5VDC
Operating Temperature	-25°C ~+70°C
Relative Humidity	95%, no condensation
Protection Rating	IP20

Note [1]: The total length of uplink and downlink data shall not exceed 1024 bytes.

Other modules

Product Model	XB6S-P2000

Dimensions	106.4*25.7*61mm
Weight	110g
Input voltage	SELV Input 24VDC (18V...36V)
Input current	600mA (24VDC)
Output voltage	5VDC
Output Current	2A
Operating temperature	-20°C ...+60°C
Relative humidity	95%, no condensation
Short circuit protection	Support (automatic recovery mechanism)
Reverse polarity protection	Support (automatic recovery mechanism)
Surge protection	Support
Protection class	IP20

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