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IO Product Catalog

H7-1200
H7-300
ET-200SP

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About us

Shenzhen Huceen Automation Technology Co., Ltd. is specialized in industrial automation products R & D, production, sales and technical services, We rely on professional R & D team and years of industry technology accumulation, to supply high-quality, high-performance, highly competitive automation products and total solutions for customers.

Our company has HUCEEN brand H7 series PLC, Hpanel series HMI, HBox Internet of Things module and HCloud industrial cloud platform and other products.It provides system solutions for auto industry, electric power, chemical industry, metallurgy, environmental protection, water treatment, new energy, rail transportation and other industries, and it is widely used in electronic equipment, plastic machinery, packaging machinery, ceramic machinery, textile machinery, HVAC equipment, medical equipment, CNC equipment and many other industries.

We adhere to the business philosophy of integrity and truth-seeking. We build on the industrial automation with our own intellectual property rights, and promote the competitiveness and profitability of our customers. We work with our customers to create a win-win situation, realize enterprise value and customer value grow together.

700K
Quantity of shipment

30+
Cooperated Listed Company

80+
Sales and service network

National High-tech Enterprise

30+ Technology patents

4 core technologies

Mission

To help customers become industry leaders

Vision

To become a respected and global supplier of industrial automation products and solutions

Value

Integrity, specialty, innovation, sharing

Operation philosophy

Improve customers competitiveness continuously , we not only provide excellent products and services, but also supply customers with more industry knowledge and more professional technical solutions.

Huceen product system

PLC

H7-1200
H7-300
ET-200SP
E7-200Smart
E5-200Smart
E3-200Smart

Internet of Things

H-Box
Smart Box
IOT PLC E7 200 Smart
HCloud industrial cloud platform

HMI

Hpanel 7-inch
Hpanel 10-inch

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CATALOG

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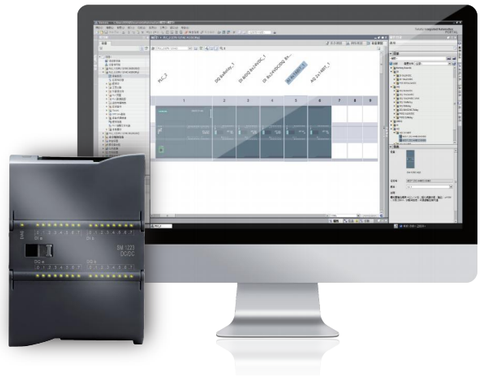
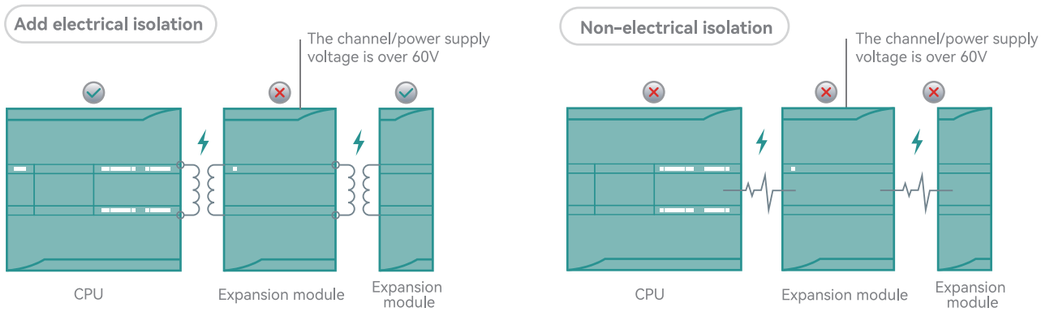
H7 -1200



Function Features

Add the function of electrical isolation

The channel detection circuit of the H7-1200AI/AO module and the backplane circuit of the module are added electrical isolation, If the module channel or power supply is connected to a high voltage, there is one thing would be realizable that only the module detection circuit can be damaged without affecting the backplane circuit.



In the absence of electrical isolation, the overload current of the module will be transmitted through the backplane to all the PLCS in the entire rack, it will be resulting in damage.

Perfect compatibility with TIA Portal programming software

- H7-1200 PLC uses "TIA Portal" software programming, does not change the programming habits of engineers, there is no need to repeat learning.

It can be used with S7-1200 series

- It can be used directly as an expansion module for the S7-1200 CPU.
- The module configuration in TIA Portal is the same as that of S7-1200 modules of the same series. The connection model of the module is the same as that of the S7-1200 module of the same series.

The port of analog module has strong tolerance

- Both I/O and power supply can withstand 60V high voltage.

The freezing function of I/O module diagnosis and output

- The input channel supports noise suppression and filtering.
- The input channel supports overflow, downflow, and disconnection diagnosis function.
- The output channel supports the output freezing function when the CPU stops.

Digital input modules

Model No.	SM 1221 DI 8x24 V DC	SM 1221 DI 16x24 V DC
Order No.	H7 221-1BF32-0XB0	H7 221-1BH32-0XB0
Picture		
Product Description	digital input module DI8 x 24V DC , sinking/sourcing type	digital input module DI16 x 24V DC , sinking/sourcing type
Standard		
Dimensions W x H x D	45x100x75mm	
Power Consumption	1.5W	2.5W
Current Consumption (SM bus)	105mA	130mA
Current Consumption (24V DC)	4mA for each input point used	
Digital input		
Number of Inputs	8	16
Input Type	The sinking type /sourcing type	
Rated Voltage	24V DC at 4mA, Rated Value	
Allowable Continuous Voltage	max. 30VDC	
Surge Voltage(Max)	35V DC, lasting 0.5s	
Logic 1 Signal (Min)	15V DC at 2.5mA	
Logic 0 Signal (Max)	5V DC at 1mA	
Optical Isolation (field side and logic side)	500V AC, lasting 1 min	
Isolation Group	2	4
Filter time	0.2, 0.4, 0.8, 1.6, 3.2, 6.4 and 12.8 ms (optional, 4 inputs form one group)	

Digital output modules

Model No.	SM 1222 DQ 8x24 V DC	SM 1222 DQ 16x24 V DC	SM 1222 DQ 8xRLY	SM 1222 DQ 16xRLY
Order No.	H7 222-1BF32-0XB0	H7 222-1BH32-0XB0	H7 222-1HF32-0XB0	H7 222-1HH32-0XB0
picture				
Product Description	digital output module DQ8 x 24VDC, Transistor	digital output module DQ16 x 24VDC, Transistor	digital output module DQ8 x Relay	digital output module DQ16 x Relay
Standard				
Dimension (W×H×D)	45x100x75			
Power Consumption	1.5W	2.5W	4.5W	8.5W
Current Consumption (SM bus)	120mA	140mA	120mA	135mA
Current Consumption (24V DC)	50mA	100mA	Each relay coil used is 11mA	
Digital Output				
Number of Outputs	8	16	8	16
Output Type	Solid-MOSFET (source type)		Relay, dry contact	
Voltage Range	20.4-28.8V DC		5-30V DC or 5-250V AC	
Logic 1 Signal at Maximum Current	min 20V DC		–	
Logic 0 Signal with 10KΩ Load	max 0.1V DC		–	
Electric Current (Max)	0.5A		2A	
Lamp Load	5W		30W DC/200W AC	
Flood Leakage Current of Each Point	Maximum 10μA		–	
Surge Current	8A, max. lasting 100ms		it is 7A when the contact is closed	
Isolation(field side and logic side)	500V AC, lasting 1 min		1500V AC, lasting 1 min(Coil and contact) ; None(coil and logic side)	
Isolation Group	1		2	4
Current of Each Public Terminal (Max)	4A	8A	10A	
Switching Delay	from the disconnection to connection(Max): 50μs; from the connection to disconnection(Max): 200μs		Up to 10ms	
Mechanical Lifetime (non-responsible)	–		10,000,000 break/close cycles	
Lifetime under Rated Load	–		100,000 break/close cycles	
Behavior at RUN-STOP	previous value or replacement value (default is 0)			

Digital input/output modules

Model No.	SM 1223 DI 8x24 V DC DQ 8x24 V DC	SM 1223 DI 16x24 V DC DQ 16x24 V DC	SM 1223 DI 8x24 V DC DQ 8xRLY	SM 1223 DI 16x24 V DC DQ 16xRLY
Order No.	H7 223-1BH32-0XB0	H7 223-1BL32-0XB0	H7 223-1PH32-0XB0	H7 223-1PL32-0XB0
Picture				
Product Description	digital input & output module DI8 x 24V DC sinking /sourcing type & DQ8 x 24V DC, Transistor output	digital input & output module DI16 x 24V DC sinking/sourcing type & DQ16 x 24V DC, Transistor output	digital input & output module DI8 x 24V DC sinking/sourcing type & DQ8 x relay, relay output	digital input & output module DI16 x 24V DC sinking/sourcing type & DQ16 x relay, relay output
Standard				
Dimension (W×H×D)	45x100x75	70x100x75	45x100x75	70x100x75
Power Consumption	2.5W	4.5W	5.5W	10W
Current Consumption (SM bus)	145mA	185mA	145mA	180mA
Current Consumption (24V DC)	4mA for each input point used		4mA for each input point used, each relay coil used is 11mA	
Digital Input				
Number of Inputs	8	16	8	16
Input Type	The sinking /sourcing type			
Surge Voltage	35V DC, lasting 0.5s			
Logic 1 Signal (Min)	15V DC at 2.5mA			
Logic 0 Signal (Max)	5V DC at 1mA			
Optical Isolation (field side and logic side)	500 V AC, lasting 1 min			
Isolation Group	2			
Filter Time	0.2, 0.4, 0.8, 1.6, 3.2, 6.4 and 12.8 ms (optional, 4 inputs form one group)			
Digital Output				
Number of Outputs	8	16	8	16
Output Type	Solid-MOSFET (source type)		Relay, dry contact	
Voltage Range	20.4-28.8V DC		5-30V DC or 5-250V AC	
Logic 1 Signal at Maximum Current	min 20V DC		–	
Logic 0 Signal with 10KΩ Load	max 0.1V DC		–	
Electric Current (Max)	0.5A		2A	
Lamp Load	5W		30W DC/200W AC	
Flood Leakage Current of Each Point	max 10μA		–	
Surge Current	8A, max. lasting 100ms		it is 7A when the contact is closed	
Isolation (field side and logic side)	500V AC, lasting 1 min		1500V AC, lasting 1 min(Coil and contact) ; None(coil and logic side)	
Isolation Group	1		2	4
Current of Each Public Terminal (Max)	4A	8A	10A	8A
Switching Delay	from the disconnection to connection(Max): 50μs; from the connection to disconnection(Max): 200μs		Up to 10ms	
Mechanical Lifetime (non-responsible)	–		10,000,000 break/close cycles	
Lifetime under Rated Load	–		100,000 break/close cycles	
Behavior at RUN-STOP	previous value or replacement value (default is 0)			

Analog input modules

Model No.	SM1231 AI4 x 13 Bits	SM1231 AI8 x 13 Bits	SM1231 AI4 x 16 Bits
Order No.	H7 231-4HD32-0XB0	H7 231-4HF32-0XB0	H7 231-5ND32-0XB0
Picture			
Product Description	Analog input module AI4 x 13 bits	Analog input module AI8 x 13 bits	Analog input module AI4 x 16 bits
Standard			
Dimension (W×H×D)	45x100x75mm		
Power Consumption	2.2W	2.3W	2.0W
Current Consumption (SM bus)	80mA	90mA	80mA
Current Consumption (24V DC)	45mA		65mA
Analog Input			
Number of Inputs	4	8	4
Input Type	voltage or current (differential): 2 can be selected as a group range		Voltage or current (differential)
Input Range	±10V, ±5V, ±2.5V or 0—20mA		±10V, ±5V, ±2.5V, ±1.25V, 0—20mA or 4—20 mA
Full scale Range (Data Word)	-27648—27648		
Overshoot/ undershoot Range (Data Word)	Voltage: 32,511—27,649/-27,649 — -32,512 Current: 32,511—27,649/0 — -4,864		Voltage: 32,511—27,649/ -27,649 — -32,512 Current 0-20mA: 32,511—27,649/ 0 — -4,864; 4—20mA: 32511—27,649/-1 — -4,864
Overflow/Underflow (Data Word)	Voltage: 32,767—32,512/-32,513 — -32,768 Current: 32,767—32,512/-4865 — -32,768		Voltage: 32,767—32,512/ -32,513 — -32,768 Current 0—20mA: 32,767—32,512/ -4,865 — -32,768; 4—20mA: 32,767—32,512/-4,865 — -32,768
Data format	12 bits + signal bits		15 bits + signal bits
Max. Voltage/ Current Resistance	±60V/±40mA		
Smoothness	None, weak, medium or strong		
Noise Supression	400、60、50 or 10Hz		
Isolation(field side and logic side)	None		
Precision(25℃/0-55℃)	full range ±0.1%/±0.2%		full range ±0.1%/±0.3%
Working Signal Range	signal plus common mode voltage must be <+12V and >-12V		
Diagnosis: Overflow/underflow	Support		
Circuit Break(Current Mode Only)	not applicable		4—20mA range only (If input is below -4,164; 1.0mA)

Analog output modules

Model No.	SM1232 AQ2 x 14 Bits	SM1232 AQ4 x 14 Bits
Order No.	H7 232-4HB32-0XB0	H7 232-4HD32-0XB0
Picture		
Product Description	analog output module AQ2 x 14 bits	analog output module AQ4 x 14 bits
Standard		
Dimension (W×H×D)	45x100x75mm	
Power Consumption	1.5W	
Current Consumption (SM bus)	80mA	
Current Consumption (24V DC)	45mA（no load）	
Analog Output		
Number of Outputs	2	4
Output Type	Voltage or current	
Output Range		
Current Output	0—20mA or 4—20mA	
Voltage Output	±10 V	
Data Word Format		
Voltage	-27648—27648	
Current	0-27648	
Resolution		
Voltage Mode	14 bits	
Current Mode	13 bits	
Max. Voltage Resistance	±60 V	
Isolation (field side and logic side)	500VAC	
Precision (25℃/0-55℃)	full range ±0.3% /±0.6%	
Stability Time	Voltage: 300μS(R), 750μS(1 uF); Current: 600μS(1 mH), 2 ms(10 mH)	
Load Impedance	Voltage: ≥ 1000 Ω; Current: ≤ 600 Ω	
Output Status in STOP Mode	previous value or replacement value (default is 0)	
Diagnosis		
Overflow/underflow	Support	
Voltage Mode: short circuit to ground	Support	
Current Mode: Circuit break mode	Support	

Analog input/output modules

Model No.	SM1234 AI4 x 13 Bits & AQ2 x 14 Bits		
Order No.	H7 234-4HE32-0XB0		
Picture			
Product Description	Analog input & output module AI4 + AQ2, Input: 13 bits		
Standard			
Dimension (W×H×D)	45x100x75mm		
Power Consumption	2W		
Current Consumption (SM bus)	80mA		
Current Consumption (24V DC)	60mA(no load)		
Analog Input			
Number of Inputs	4		
Input Type	voltage or current (differential): 2 can be selected as a group range		
Input Range	±10V, ±5V, ±2.5V, 0—20mA or 4—20mA		
Full scale Range (Data Word)	-27648-27648		
Overshoot/ undershoot Range (Data Word)	Voltage: 32,511—27,649/-27,649 — -32,512; Current: 32,511—27,649/0 — -4864		
Overflow/Underflow (Data Word)	Voltage: 32,767—32,512/-32,513 — -32,768; Current: 32,767—32,512/-4865 — -32,768		
Resolution	12 bits + signal bits		
Max Voltage/ Current Resistance	±60V/±40mA		
Precision (25℃/0-55℃)	full range ±0.1 %/±0.2 %		
Analog to digital Conversion Time	625μs (400 Hz inhibited)		
Working Signal Range	signal plus common mode voltage must be <+12V and >-12V		
Common mode Rejection	40dB, DC—60Hz		
Analog Output			
Number of Outputs	2		
Output Type	Voltage or current	Isolation (field side and logic side)	500VAC
Output Range	±10V, 0—20mA or 4—20mA	Precision (25℃/0-55℃)	full range ±0.3% /±0.6%
Current Output	0—20mA or 4—20mA		
Voltage Output	±10 V	Stability Time	Voltage: 300μS(R), 750μS(1 uF); Current: 600μS(1 mH), 2 ms(10 mH)
Data Word Format			
Voltage	-27648-27648	Load Impedance	Voltage: ≥ 1000 Ω; Current: ≤ 600 Ω
Current	0-27648	Output Status in STOP Mode	previous value or replacement value (default is 0)
Resolution		Diagnosis	
Voltage Mode	14 bits	Overflow/underflow	Support
Current Mode	13 bits	Voltage Mode: short circuit to ground	Support
Max Voltage Resistance	±60 V	Current Mode: circuit break mode	Support

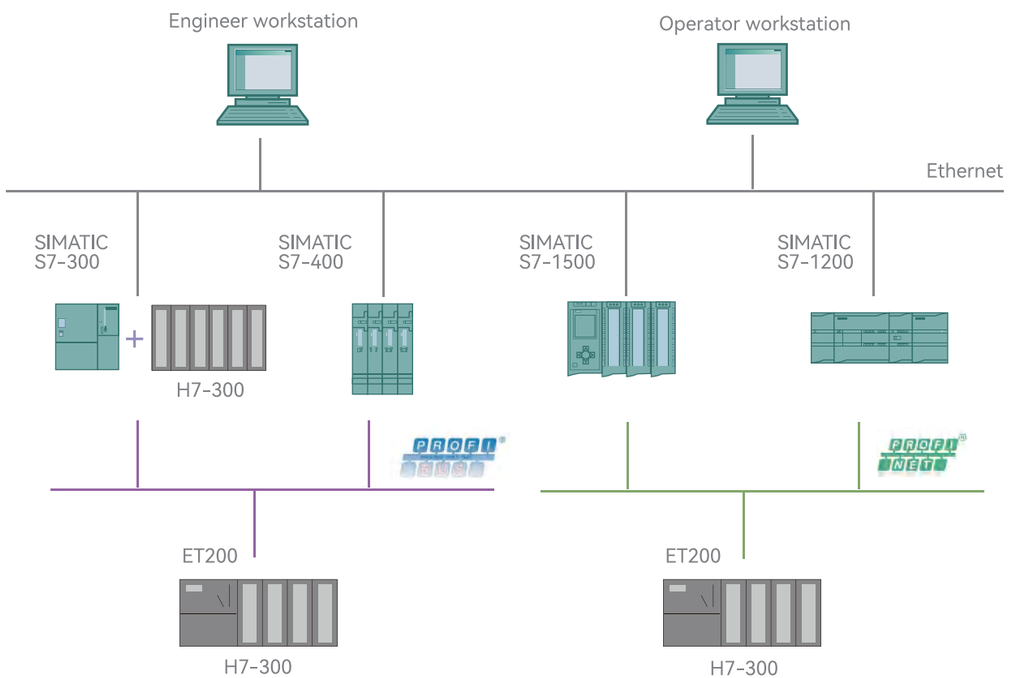
Temperature modules

Model No.	SM1231 AI4 x 16 Bits TC	SM1231 AI8 x 16 Bits TC	SM1231 AI4 x 16 Bits RTD	SM1231 AI8 x 16 Bits RTD
Order No.	H7 231-5QD32-0XB0	H7 231-5QF32-0XB0	H7 231-5PD32-0XB0	H7 231-5PF32-0XB0
Picture				
Product Description	Analog input module AI4 x TC	Analog input module AI8 x TC	Analog input module AI4 x RTD	Analog input module AI8 x RTD
Standard				
Dimension (W×H×D)		45x100x75		70x100x75
Power Consumption	1.5W			
Current Consumption (SM bus)	80mA			90mA
Current Consumption (24V DC)	40mA			
Analog Input				
Number of Inputs	4	8	4	8
Input Type	TC		RTD and Resistance	
Type	J, K, T, E, R, S, B, N, C, TXK/XK (L) , Voltage Range: +/-80 mv		Platinum (Pt), copper (Cu), nickel (Ni), LG-Ni or resistance	
Resolution				
Temperature	0.1 ºC/0.1 ºf			
Resistance	15 bits + signal bits			
Voltage Resistance	Max. ±60V			
Isolation	500VAC			
Noise Supression	85dB at 10Hz/50Hz/60Hz/400Hz			
Channel to channel Isolation	120V AC		None	
Common mode Rejection	> 120dB at 120VAC		>120 dB	
Repeatability	±0.05 % FS			
The cold end temperature error	±1.5 ºC		-	
Cable Resistance	max. 100 Ω		20 Ω, 2.7 Ω, for 10 pcs Ω RTD	
Diagnosis: Overflow/underflow	Support			
Circuit Break	Support			

H7-300

H7-300 series PLC products, mainly have digital value input and output module, analog value input and output module, temperature measurement module, communication interface module, and its variety is complete, flexible configuration combination. The products have been tested for many years in different markets and different industries, and have the advantages of stability, reliability and extremely high cost performance.

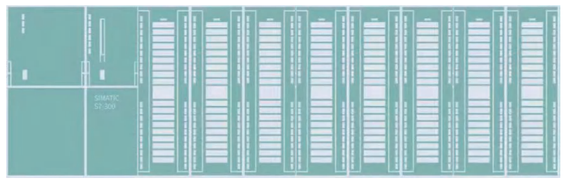
- Fully compatible with all cpus of the S7-300 series and the ET200M
- Seamless connection to the S7-1500 PROFINET remote IO
- Supports the redundant system S7-400H hot-swap
- Support S7-300 and H7-300 hybrid applications, flexible configuration, high cost effective
- The TIA Portal can be used for programming



Application Scenario

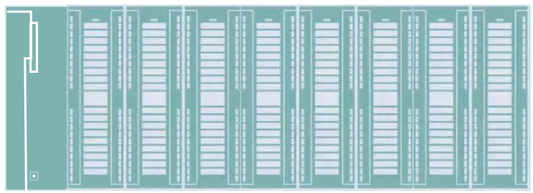
Compatible as 300 IO module

The H7-300 PLC can be used as the IO expansion module of the S7-300 CPU, which is directly connected to the CPU through the backplane, and its application method is the same with the S7-300 PLC IO module.



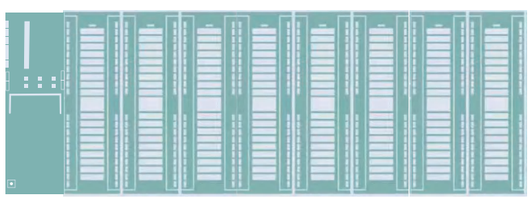
As a slave station module for ET200M

H7-300 PLC can be used as ET200M station, it has Profibus DP bus protocol interface module, and support to connect to S7-300/S7-400 Profibus DP master station CPU.



As a slave station module of PN 153-4

H7-300 PLC can be used as an extension of 153-4 Profinet bus protocol interface module.
It supports applications as remote IO sites for Profinet main station CPUS such as the S7-1500.



Digital input modules

Model No.	SM 321 DI 16x24V DC	SM 321 DI 32x24V DC
Order No.	H7 321-1BH02-0AA0	H7 321-1BL00-0AA0
Picture		
Product Description	16-digital input, 24DC	32-digital input, 24DC
Standard		
Dimension(WxHxD)	40x125x117mm	
Power Consumption	Typical value 3.5W	Typical value 6.5W
Backplane bus current	30mA	35mA
Supply voltage	DC24V	
Front connector	20-pin	40-pin
Digital Input		
Number of Inputs	16	32
Input Type	Sinking type	
Input Voltage		
Rated Value	24 VDC	
Signal "0"	- 30 V to + 5 V	
Signal "1"	13V to 30V	
Input Current	Typical value 7mA	–
Input Delay		
"0" to "1" transition	1.2ms-4.8ms	
"1" to "0" transition	1.2ms-4.8ms	
Electrical isolation		
Between channel group	Support	
Counting each group between channels	16	
Between channel and backplane	Support	
Encoder		
2-wire system sensor	Support	
Allowable static current	Max. 1.5mA	
Cable Length(Max)		
Shield	500	
Unshielded	300	

Digital output modules

Model No.	SM 322 DO 16x24V DC	SM 322 DO 16xRLY	SM 322 DO 32x24V DC
Order No.	H7 322-1BH01-0AA0	H7 322-1HH01-0AA0	H7 322-1BL00-0AA0
Picture			
Product Description	16-digital output,24VDC	16-digital output, RLY	32-digital output, 24VDC
Standard			
Dimension(WxHxD)	40x125x117mm		
Power Consumption	Typical value 4.9W		Typical value 6.6W
Backplane bus current	30mA	50mA	35mA
Supply voltage	DC24V		
Front connector	20-pin	20-pin	40-pin
Digital Output			
Number of Outputs	16		32
Switching frequency			
Resistive load	max.100Hz	max.10Hz	max.100Hz
Inductive load	max.0.5Hz		
Lamp Load	max.10Hz	max.1Hz	max.10Hz
Output short circuit protection	Support, electronic type	Not support	Support, electronic type
Output delay			
"0" to "1" transition	max.100us	–	max.100us
"1" to "0" transition	max.500us	–	max.500us
Electrical isolation			
Between channel group	Support		
Counting each group between channels	8		
Between channel and backplane	Support		
Cable Length (Max)			
Shield	500		
Unshielded	300		

Digital input/output module

Model No.	SM323 16DI/16DO
Order No.	H7 323-1BL00-0AA0
Picture	
Product Description	16-digital input /16-digital output, 24VDC
Standard	
Dimension(WxHxD)	40 x 125 x 117mm
Power Consumption	Typical value 6.5W
Backplane bus current	35mA
Supply voltage	DC24V
Front connector	40-pin
Digital Input	
Number of Inputs	16
Input Type	Sinking type
Input Voltage	
Rated Value	24 VDC
Signal "0"	-30 V to +5 V
Signal "1"	13 V to 30 V
Input Current	Typical value 7 mA
Input Delay	
"0" to "1" transition	1.2 ms-4.8 ms
"1" to "0" transition	1.2 ms-4.8 ms
Electrical isolation	
Between channel group	Support
Counting each group between channels	16
Between channel and backplane	Support
Encoder	
2-wire system sensor	Support
Allowable static current	max.1.5 mA
Digital Output	
Number of Outputs	16
Output short circuit protection	Support, electronic type
Output delay	
"0" to "1" transition	max.100 μs
"1" to "0" transition	max.500 μs
Electrical isolation	
Between channel group	Support
Counting each group between channels	8
Between channel and backplane	Support

Analog output modules

Model No.	SM332 4AO Current/Voltage	SM332 8AO Current/Voltage
Order No.	H7 332-5HD01-0AB0	H7 332-5HF00-0AB0
Picture		
Product Description	4-chanel analog output module; Resolution 12 bits	8-chanel analog output module; Resolution 12 bits
Standard		
Dimension(WxHxD)	40 x 125 x 117mm	
Power Consumption	Typical value 3 W	
Backplane bus current	30mA	
Supply voltage	DC24V	
Front connector	20-pin	40-pin
Analog Output		
Number of Outputs	4	8
Short circuit protection	Support	
Output range		
Supply voltage	±10V、0V to 10V、1V to 5V	
Electric current	±20mA, 0mA to 20 mA, 4mA to 20mA	
Basic error limitation(operating limits at 25°C)		
Supply voltage	± 0.4 %	
Electric current	± 0.6 %	
Stability Time		
Resistive load	0.2 ms	
Capacitive load	3.3 ms	
Inductive load	0.5 ms(1mH)、3.3 ms (10mH)	
Interrupt/diagnosis/ status information		
diagnosis interrupt	Can be programmable	
The diagnosis information can be readable	Support	
Resolution	12 bits	
Conversion time (each channel)	max. 0.8 ms	
Replacement value of shutdown setting	Support	Not support
Electrical isolation		
Between channel and backplane bus	Support	
Between channel and power supply	Support	
Between channel and load voltage L+	Support	
Conductor length	200m	
Maximum load capacity		
Voltage output	min. 5000Ω	
Current output	max. 500Ω	

Analog input modules

Model No.	SM331 8AI Current/Voltage/RTD	SM331 8AI Full Function Type
Order No.	H7 331-1KF02-0AB0	H7 331-7KF02-0AB0
Picture		
Product Description	8-chanel analog input; Current/voltage/RTD module Resolution 13 bits	8-channel analog input, full function temperature measurement module; External mechanical range switch; Current input with overcurrent protection; Resolution is 14 bits
Standard		
Dimension(WxHxD)	40 x 125 x 117mm	
Power Consumption	Typical value 1W	
Backplane bus current	120mA	30mA
Supply voltage	–	DC 24V
Front connector	40-pin	20-pin
Input Path		
Standard	8	
Resistive sensor	8	4
Constant current of resistive sensor		
Resistance thermometer and resistance measurement 0Ω to 600Ω	0.8mA	
Resistance measurement 0 to 6 kΩ, PTC, silicon temperature sensor	0.2mA	None
Input type and range		
Supply voltage	±50mV, ±500mV, 0V to 10V, ±1V, ±5V, ±10V, 1V to 5V	±80mV, ±250mV to ±500mV, ±1V, ±2.5V, ±5V, 1-5V, ±10V
Current (4 wires)	±20mA, 0mA to 20mA, 4mA to 20mA	±3.2mA,±10mA,±20mA, 0mA to 20mA,4mA to 20mA
Current (2 wires)	–	4 mA to 20 mA
Resistor /PTC	0kΩ to 6kΩ, 0Ω to 600Ω, PTC	150Ω, 300Ω, 600Ω
RTD	Pt100（standard/climatic） Ni100（standard/climatic） Ni1000（standard/climatic） LG-Ni1000（standard/climatic） KTY83/110, KTY84/130	Pt100, Ni100
Thermocouple	None	Type E、N、J、K、L
Basic error limitation (operating limits at 25℃)		

Analog input modules

Model No.	SM331 8AI Current/Voltage/RTD	SM331 8AI Full Function Type
Order No.	H7 331-1KF02-0AB0	H7 331-7KF02-0AB0
Supply voltage	±0.3%	±0.6%
Electric current	±0.3%	±0.5%
Resistance	±0.3%	±0.5%
Temperature	RTD Standard type: ±1K、 RTD Cimatic type : ±2 K	Pt100/Ni100: ±0.5 % Thermocouple: ±0.7 %
Temperature compensation		
Internal temperature compensation	None	Support
External temperature compensation via compensation socket	None	
Temperature compensation of 0℃ reference junction	None	Support
Interrupt/diagnosis/ status information		
Overrun interrupt	None	The channel 0 and 2
Diagnosis interrupt	None	Can be programmable
The diagnosis information can be readable	None	Support
Resolution	12 bits + symbol bits	13 bits + symbol bits
Electrical isolation		
Between channels	None	
Between channel and backplane bus	Support	
Conductor length	200m; max. 50m at 50mV	200m; 50m at 80mV, with thermocouple

IM153 Communication interface module

Model No.	IM153 Profibus DP Slave Interface Module
Order No.	H7 153-1AA03-0XB0
Picture	
Product Description	Interface modules for Profibus DP distributed I/O system Each slave station can connect 8 expansion modules of H7-300
Standard	
Dimension (WxHxD)	40×125×120mm
Power Consumption	3W
Supply voltage	DC 24V
Node Address	Allow 1-125
Max. expansion module	8
Communication Function	
Line protocol	PROFIBUS DP
Port	
Profibus DP output current	max. 90mA
Communication prt	
Point of junction	9-pin SUB-D
Transmission method	RS-485
Max. communication rate	12 Mbit/s automatic identification bus system
Address space	
Output (Max.)	128 Byte
Input (Max.)	128 Byte
Configuration software	STEP7/COM PROFIBUS/application software of the third party, using GSD file
Isolation voltage	500V
Output voltage	5V DC
Output current (at 5V DC)	Max. 1A (for backplane bus)

ET 200SP Series Product Features

- Perfect Compatibility and Easy Operation: Fully compatible with the S7 series ET 200SP, plug & play functionality, and support for hot swapping.
- High Flexibility and Modular I/O System: Enables I/O data exchange via interface modules.
- Supports PROFINET Fieldbus.
- Expandable with up to 16 I/O modules.

PN Interface Module Technical Specifications

Model	155-6 Standard Module	
Order No.	P7 155-6AA01-0BN0	
Picture		
Product Description	IM155-6 PN ST Interface Module	Integrated with 2 RJ45 ports
Standard		
Supply Voltage	Rated Value (DC): 24 V Permissible Lower Limit (DC): 19.2 V Permissible Upper Limit (DC): 28.8 V	
Reverse Polarity Protection	√	
Power Loss, Typ.	4.5 W	
Maximum Current Consumption	550 mA	
Maximum Power Consumption for Backplane Bus	4.5 W	
Number of PROFINET Ports	1; 2 Ports (Switch)	
PROFINET Interface	2 X RJ45	
Environmental Conditions		
STEP 7 TIA Port, Configurable	V14	
STEP 7 Configurable / Integrated	V5.5 SP4 and higher	
PROFINET Version GSD or higher	V2.3 / -	
Number of Supported Modules	16	
Module Address Space	Maximum 256 bytes	
Station Address Space	Maximum 512 bytes	
Profisafe Fail-safe	\	
PROFINET Standard		
RT:	Supported	
IRT:	\	
PROFINET Shared Devices:	\	
Supports Fastest PN Bus Scanning Cycle	8 ms	
Ring Redundancy (MRP)	Supported	
Diagnostic Functions:	Supported	
Status Display	Supported	
Alarm	Supported	
Diagnostic Function	Supported	
Interrupt	Supported	
Status Display:		
• RUN LED	Yes; Green LED	
• ERROR LED	Yes; Red LED	
• MAINT LED	Yes; Yellow LED	
• Power Supply Voltage Monitoring (PWR-LED)	Yes; Green PWR-LED	
• LINK TX/RX Connection Display	Yes; 2 Green Link LEDs	
Operating Ambient Temperature:	Horizontal Mounting, Minimum: 0°C Horizontal Mounting, Maximum: 60°C Vertical Mounting, Minimum: 0°C Vertical Mounting, Maximum: 50°C	
Maximum Installation Altitude:	5 000 m	
Weight:	147 g	
Dimensions W x H x D (mm):	50 × 117 ×74	

PN Interface Module Wiring Diagram

Pin assignment
24V DC power supply voltage (X80)

Pin assignment
for 24V DC power supply voltage

View		Signal name		Description
Connector	IM connection			
		1	1L+	+24V DC power supply voltage
		2	1M	Ground of the supply voltage
		3	2M	Ground of the supply voltage for loop-through
		4	2L+	The supply voltage for loop-through

IL+ and 2L+as well as 1M and 2M are internally bridged
Maximum 10A permitted

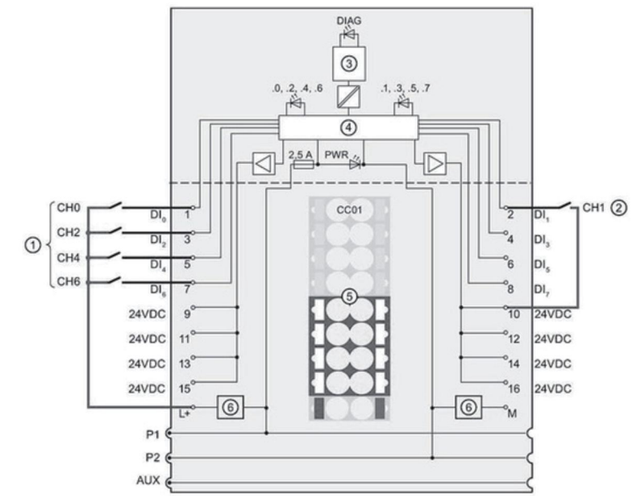
DI Module Technical Specifications

Model	8DI Standard Digital Input Module	16DI Standard Digital Input Module
Order No.	P7 131-6BF01-0BA0	P7 131-6BH01-0BA0
Picture		
Product Description	DI 8x24VDC ST	DI 16x24VDC ST
Standard		
Supply Voltage	Rated Value (DC): 24 V Permissible Lower Limit (DC): 19.2 V Permissible Upper Limit (DC): 28.8 V	
Reverse Polarity Protection	√	
Power Loss, Typ.	1 W	1.7 W
Environmental Conditions		
STEP 7 TIA Portal	V14 and higher	
STEP 7 V5.5	SP3 and higher	
Number of Digital Inputs Channels	8	16
Input Characteristic Curve	IEC 61131, Type 1, 3	
Input Type	Leakage Input	
Rated Input Voltage	DC 24V	
Maximum Cable Length	Shielded: 600 m Unshielded: 600 m	
Base Unit	A0	
Diagnostic Interrupt	√	√
Diagnostic Functions	L+ Power Supply Missing Ground Short Circuit Wire Break Channel Enabled	L+ Power Supply Missing Wire Break Channel Enabled
Input Delay	None, 0.05 ms, 0.1 ms, 0.4 ms, 0.8 ms, 1.6 ms 3.2 ms (default), 12.8 ms, 20 ms	
Isolation Between Channels and Backplane Bus	√	
Operating Ambient Temperature	Horizontal Mounting, Minimum: -30°C Horizontal Mounting, Maximum: 60°C Vertical Mounting, Minimum: -30°C Vertical Mounting, Maximum: 50°C	
Module Width	15mm	

8 DI 8x24VDC ST Wiring Diagram

Connection: 1-wire and 2-wire connection

The figure below shows the block diagram and an example of the terminal assignment of the digital input module DI 8x24V DC ST on the BaseUnit BU type A0 without AUX terminals (1-wire and 2-wire connection).



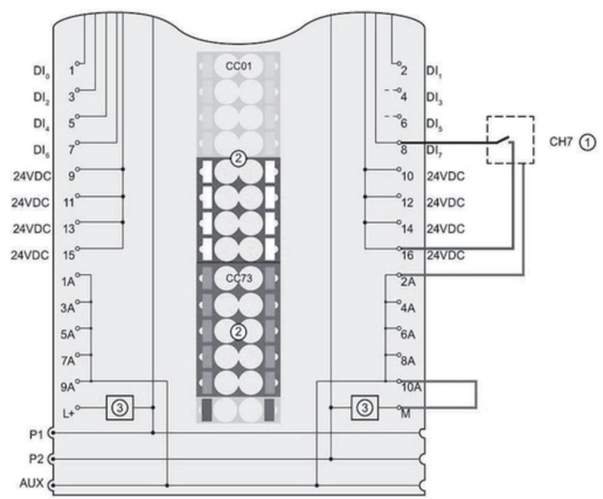
①	1-wire connection
②	2-wire connection
③	Backplane bus interface
④	Input electronics
⑤	Color identification label CCxx (optional)
⑥	Filter connection supply voltage (only when light-colored BaseUnit is present)
P1、P2、AUX	nternal self-assembling voltage buses Connection to left （dark-colored BaseUnit) Connection to left interrupted (light-colored BaseUnit)
DIn	Input signal, channel n
24 V DC	Transducer supply, channel n
L+	Feed for light-colored BaseUnit only
M	Ground
DIAG	Error or diagnostic LED (green, red)
.0 - .7	Channel status LED (green)
PWR	Power LED (green)

Wiring and block diagram for 1-wire and 2wire connection of transducers

8 DI 8x24VDC ST Wiring Diagram

Connection: 3-wire connection

The figure below shows the block diagram and an example of the terminal assignment of the digital input module DI 8x24VDC ST on the BaseUnit BU type A0, with AUX terminals, for 3-wire connection.



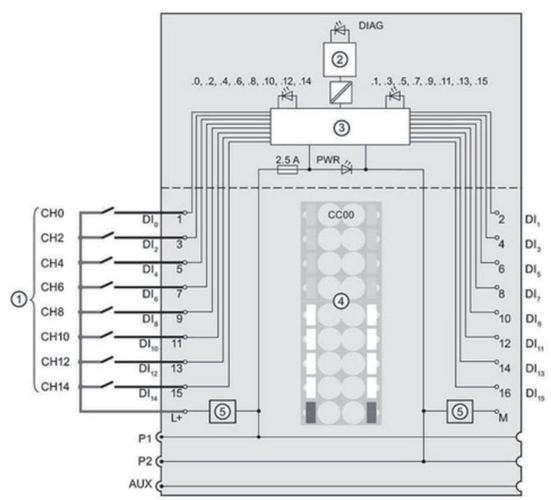
①	3-wire connection
②	Color identification label CCxx (optional)
③	Filter connection supply voltage (only when light-colored BaseUnit is present)
DIn	Input signal, channel n
L+	Feed for light-colored BaseUnit only
M	Ground
1 A EU 10 A	AUX terminals
P1, P2. AUX	Internal self-assembling voltage buses Connection to left (dark-colored BaseUnit) Connection to left interrupted (light-colored BaseUnit)

Wiring diagram and block diagram for 3-wire connection of transducers

16 DI 16x24VDC ST Wiring Diagram

Connection: 1-wire connection

The figure below provides an example of the block diagram and terminal assignment for the digital input module DI 16x24VDC ST on a BaseUnit BU type A0, without AUX terminals, for 1-wire connection.

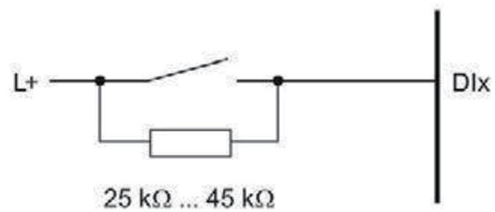


①	1-wire connection	DI	Input signal, channel n
②	Backplane bus interface	n	Feed for light-colored BaseUnit only
③	Input electronics	L+	Ground
④	Color-codedlabel CC00 (optional)	M	Error or diagnostic LED (green, red)
⑤	Filter connection supply voltage (only when light-colored BaseUnit is present)	0.0 - 0.15	Channel status LED(green)
P1、P2 AUX	Internal self-assembling voltage buses Connection to left (dark-colored BaseUnit) Connection to left interrupted (light-colored BaseUnit)	PWR	Power LED (green)

Wiring diagram and block diagram for 1-wire connection of transmitter

Wire-break detection

If the module is configured with wire-break detection, a low quiescent current is required at the digital input when monitoring a "0" signal. To ensure the flow of this quiescent current when the mechanical transducer contacts are open, a 25 kΩ to 45 kΩ resistor must be connected in parallel.
If wire-break detection is disabled in the configuration, no parallel resistor is required
If wire-break detection is configured, a 25 kΩ to 45 kΩ resistor must be connected in parallel to each mechanical transducer contact.



Connecting the resistor to the mechanical transducer contacts

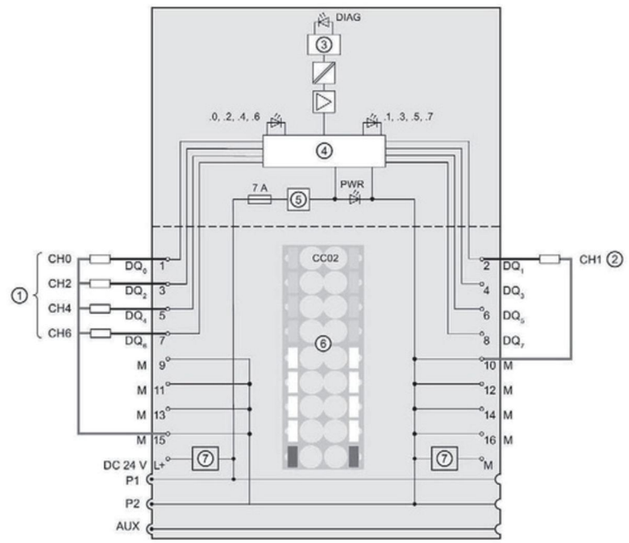
DO Module Technical Specifications

Model	8DO Standard Digital Output Module	16DO Standard Digital Output Module
Order No.	P7 132-6BF01-0BA0	P7 132-6BH01-0BA0
Picture		
Product Description	DQ 8x24VDC/0.5A ST	DI 16x24VDC ST
Standard		
Supply Voltage	Rated Value (DC): 24 V Permissible Lower Limit (DC): 19.2 V Permissible Upper Limit (DC): 28.8 V	
Reverse Polarity Protection	√	
Power Loss, Typ.	1W	
Environmental Conditions		
.STEP 7 TIA Portal	V14 and higher	
.STEP 7 V5.5	SP3 and higher	
Digital Output		
Number of Output Channels	8	16
Output Type	Source Output	
Rated Output Voltage	DC 24V	
Rated Output Current (per point)	0.5 A	
Maximum Total Output Current for Module	4A	8A
Maximum Shielded Cable Length	1,000 m	
Maximum Unshielded Cable Length	600 m	
Base Unit	A0	
Diagnostic Interrupt	√	
Diagnostic Functions	Short Circuit Wire Break Parameter Assignment Error Power Supply Voltage Missing	
Isolation Between Channels and Backplane Bus	√	
Operating Ambient Temperature	Horizontal Mounting, Minimum: -30°C Horizontal Mounting, Maximum: 60°C Vertical Mounting, Minimum: -30°C Vertical Mounting, Maximum: 50°C	
Module Width	15mm	

8 DQ 8x24VDC/0.5A ST Wiring Diagram

Connection: 1-wire and 2-wire connection for actuators

The figure below shows an example of the terminal assignment for the digital output module DQ 8×24VDC/0.5A ST on the BaseUnit BU type A0, without AUX terminals, for 1-wire and 2-wire connections.



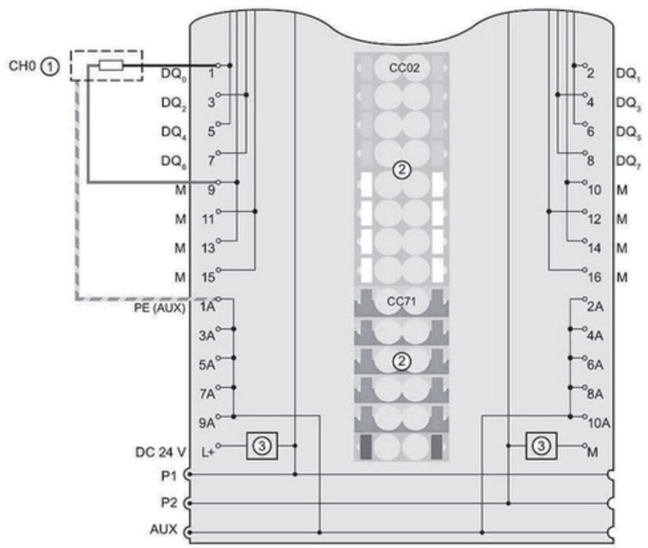
①	1-wire connection	24 V D C	Power supply L+ (Feed for light-colored BaseUnit only)
②	2-wire connection	M	Ground
③	Backplane bus interface	P1、P2 AUX	Internal self-assembling voltage buses Connection to left (dark-colored BaseUnit) Connection to left interrupted (light-colored BaseUnit)
④	Output electronics	DQn	Output signal, channel n
⑤	Reverse polarity protection	DIAG	Error or diagnostic LED (green, red)
⑥	Color-coded label CC02 (optional)	.0 - .7	Channel status LED(green)
⑦	Filter connection supply voltage (only when light-colored BaseUnit is present)	PWR	Power LED (green)

Block diagram and terminal assignment for 1-wire and 2-wire connection of actuators

8 DQ 8x24VDC/0.5A ST Wiring Diagram

Connection: 3-wire connection for actuators

The figure below shows an example of the terminal assignment for the digital output module DQ 8x24VDC/0.5A ST on the BaseUnit BU type A0, with AUX terminals, for 3-wire connection.



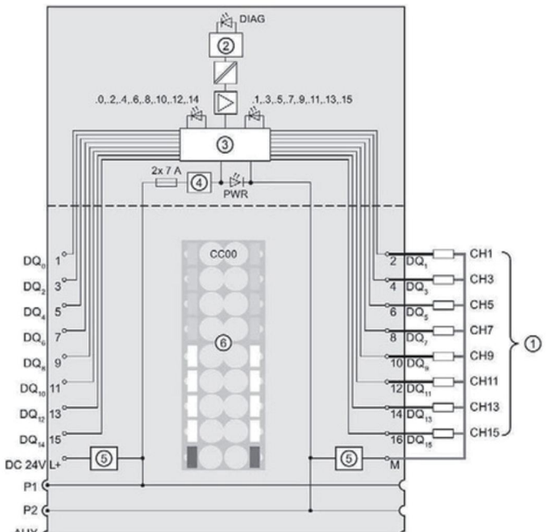
①	3-wire connection	1A-1 0A	1A to 10A AUX terminals
②	Color-coded labels CC02 and CC71 (optional)	PE（AUX）	PE (AUX) Protective conductor connection
③	Filter connection supply voltage (only when light-colored BaseUnit is present)	24 V DC	Power supply L+ (only for powering the light-colored BaseUnit)
DQn	Output signal, channel n	M	Ground
		P1、P2、AUX	Internal self-assembling voltage buses Connection to left (dark-colored BaseUnit) Connection to left interrupted (light-colored BaseUnit)

Terminal assignment for 3-wire connection of actuators

16 DQ16x24VDC/0.5A ST Wiring Diagram

Connection: 1-wire connection for actuators

The figure below shows the block diagram and an example of the terminal assignment for the digital output module DQ 16×24VDC/0.5A ST on the BaseUnit BU type A0 (1-wire connection).



①	1-wire connection	DQ n	Output signal, channel n
②	Backplane bus interface	24 V DC	Power supply L+ (Feed for light-colored BaseUnit only)
③	Output electronics	M	Ground
④	Reverse polarity protection	P1、P2 AUX	Internal self-assembling voltage buses Connection to left (dark-colored BaseUnit) Connection to left interrupted (light-colored BaseUnit)
⑤	Filter connection supply voltage (only when light-colored BaseUnit is present)	DIAG	Diagnostics LED (green, red)
		.0 - .15	Channel status LED (green)
⑥	Color-coded label CC02 (optional)	PWR	Power LED (green)

Block diagram and terminal assignment for 1-wire connection of actuators

4AI Module Technical Specifications

Model	4AI Standard Analog Input Module for Current	
Order No.	P7 134-6GD01-0BA1	P7 134-6HD01-0BA1
Picture		
Product Description	AI 4xI 2-/4-wire ST	AI 4xU/I 2-wire ST
Standard		
Supply Voltage	Rated Value (DC): 24 V Permissible Lower Limit (DC): 19.2 V Permissible Upper Limit (DC): 28.8 V	
Reverse Polarity Protection	√	
Power Loss, Typ.	0.85 W	
Environmental Conditions		
.STEP 7 TIA Portal	V14 and higher	
.STEP 7	V5.6 and higher	V5.5 SP3 and higher
Number of Analog Input Channels	4	
Input Signal (Resolution)	0 to 20 mA (15-bit) 4 mA to 20 mA (15-bit) -20 mA to +20 mA (15-bit, including sign)	±5 V (16-bit, including sign) ±10 V (16-bit, including sign) 1 to 5 V (15-bit) 0 to 10 V (15-bit) 0 mA to 20 mA (15-bit) 4 mA to 20 mA (15-bit)
Conversion Time (per Channel)	180/60/50 ms	
Suppression Frequency	16.6/50/60 Hz	
Maximum Shielded Cable Length	1,000 m	1000 m, Voltage Signal 200 m
Smoothing Level	None, 4/8/16 times	
Base Unit	A0 A1	
Diagnostic Interrupt	√	
Diagnostic Functions	Power Supply Voltage Monitoring Wire Break (for 4 to 20 mA) Short Circuit (for 2-wire) Cumulative Fault Overflow/Underflow	Power Supply Voltage Monitoring Wire Break (for 4 to 20 mA) Short Circuit (for 1 to 5 V or 2-wire) Cumulative Fault Overflow/Underflow
Basic Accuracy (at 25°C)	±0.3%	Voltage:±0.3% Current:±0.3%
Full Temperature Range Accuracy (-30°C to 60°C)	±0.5%	Voltage:±0.5% Current:±0.5%
Isolation Between Channels and Backplane Bus	√	
Isolation Between Channels	√	
Operating Ambient Temperature	Horizontal Mounting, Minimum: -30°C Horizontal Mounting, Maximum: 60°C Vertical Mounting, Minimum: -30°C Vertical Mounting, Maximum: 50°C	
Module Width	15mm	

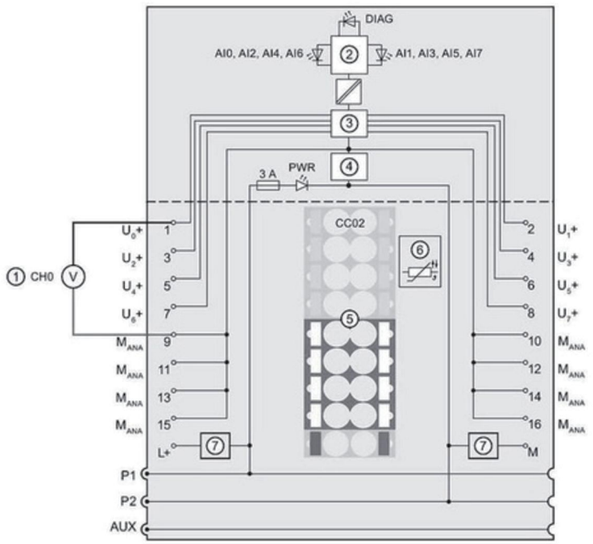
8AI Module Technical Specifications

Model	8AI Basic Analog Input Module for Voltage	8AI Basic Analog Input Module for Current
Order No.	P7 134-6FF00-0AA1	P7 134-6GF00-0AA1
Picture		
Product Description	AI 8xU BA	AI 8x1 2-/4-wire BA
Standard		
Supply Voltage	Rated Value (DC): 24 V Permissible Lower Limit (DC): 19.2 V Permissible Upper Limit (DC): 28.8 V	
Reverse Polarity Protection	√	
Power Loss, Typ.	0.7 W	
Environmental Conditions		
STEP 7 TIA Portal	V13 SP1 and higher	
STEP 7 V5.5	SP3 and higher	
Number of Analog Input Channels	8	
Input Signal(Resolution)	0 to +10V (15 bits) -10V to +10V (16 bits, including sign)	0 to 20mA (15 bits) 4mA to 20mA (15 bits) -20mA to +20mA (16 bits, including sign)
Interference Suppression Frequency (Hz)	16.67/50/60/4800	
Conversion Time (ms per channel)	180/60/50/0.625	
Smoothing Level	None, 4/8/16 times	
Maximum Shielded Cable Length:	200 m	
Basic Accuracy (at 25°C)	±0.3%	
Full Temperature Range Accuracy (-30°C to 60°C)	±0.5%	
Base Unit:	A0, A1	
Diagnostic Interrupt:	√	
Diagnostic Function	Power supply voltage monitoring Configuration error Overflow/Underflow	Power supply voltage monitoring Wire Break (for 4 to 20mA) Short circuit (based on module encoder power ground) Configuration error Overflow/Underflow
Isolation Between Channels and Backplane Bus	√	
Operating Ambient Temperature	Horizontal mounting, minimum: - 30°C lorizontal mounting, maximum: 60° Tertical mounting, minimum: -30°C Vertical mounting, maximum: 50°C	
Module Width	15mm	

AI 8xU BA Wiring Diagram

Connection: 2-wire voltage measurement connection

The figure below shows the block diagram and terminal assignment example of the analog input module AI 8xU BA on BaseUnit BU type A0/A1.



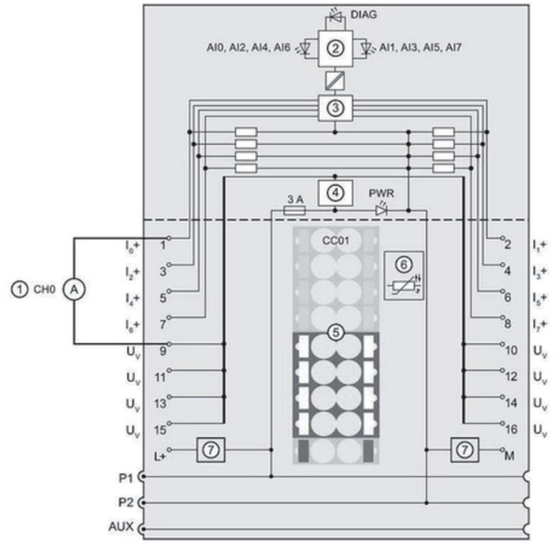
①	2-wire connection for voltage measurement	Un+	Voltage input (positive), channel n
②	Backplane bus interface	MANA	Ground for analog input
③	Analog-to-digital converter (ADC)	L+	Infeed only with light-colored BaseUnit
④	Current limitation	M	Ground
⑤	Color-coded label CCxx (optional)	P1、P2	Internal self-assembling voltage buses
		AUX	Connection to left (dark-colored BaseUnit) Connection to left interrupted (light-colored BaseUnit)
⑥	Temperature recording for BU type A1 only (function cannot be used for this module)	DIAG	Diagnostic LED (green, red)
⑦	Filtered power supply voltage connection (only when a light-colored baseUnit is present)	AI0 - AI7	Channel status LED (green)
		PWR	Power LED (green)

The wiring diagram and block diagram for 2-wire voltage measurement connection.

AI 8xI 2-/4-wire BA Wiring Diagram

Connection: Current measurement 2-wire connection

The figure below shows the block diagram and an example of the terminal assignment of the analog input module AI 8xI 2-/4-wire BA on the BaseUnit BU type A0/A1.



①	2-wire connection for current measurement	In+	Input signal, channel n
②	Backplane bus interface	UV	Infeed voltage
③	Analog-to-digital converter (ADC)	L+	Infeed for light-colored BaseUnit only
④	Current limitation	M	Ground
⑤	Color-coded label CCxx (optional)	P1、P2 AUX	Internal self-assembling voltage buses Connection to left (dark-colored BaseUnit) Connection to left interrupted (light-colored BaseUnit)
⑥	Temperature recording for BU type A1 only (function cannot be used for this module)	DIAG	Diagnostic LED (green, red)
⑦	Filtered power supply voltage connection (only when a light-colored BaseUnit is present)	AI0 - AI7	Channel status LED (green)
		PWR	Power LED (green)

Wiring diagram and block diagram for 2-wire connection in current measurement.

4AO Module Technical Specifications

Model	4AO Standard Analog Output Module
Order No.	P7 135-6HD00-0BA1
Picture	
Product Description	AQ 4xU/I ST
Standard	
Supply Voltage	Rated Value (DC): 24 V Permissible Lower Limit (DC): 19.2 V Permissible Upper Limit (DC): 28.8 V
Reverse Polarity Protection	√
Power Loss, Typ.	1.5 W
Programming Environment	
STEP 7 TIA Portal	V11 SP2 and higher /V13
.STEP 7 V5.5	SP3 and higher
Number of Output Channels	4
Voltage Output Range (Resolution)	0 to 10V (15-bit) 1 to 5V (13-bit) 5 to +SV (15-bit, including sign) 10 to +10V (16-bit, including sign)
Current Output Range (Resolution)	0 to 20mA (15-bit) -20 to +20mA (16-bit, including sign) 4 to 20mA (14-bit)
Conversion Time (per Channel)	Minimum 5 ms
Basic accuracy (at 25°C)	Current: ±0.3% Voltage: ±0.3%
Full temperature range accuracy (0°C to 60°C)	Current:±0.5% Voltage:±0.5%
Maximum Shielded Cable Length	1000 m; 200 m for Voltage Signal
Base unit	A0, Al
Diagnostic interrupt	√
Diagnostic function	Power Supply Voltage Monitoring Wire Break Short Circuit Overflow/Underflow
Isolation Between Channels and Backplane Bus	√
Operating Ambient Temperature	• Horizontal Mounting, Minimum: -0° • Horizontal Mounting, Maximum: 60 • Vertical Mounting, Minimum: 0°C • Vertical Mounting, Maximum: 50°C
Module Width	15mm

AQ 4xU/I ST Wiring Diagram

General terminal assignment

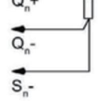
Terminal assignment for AQ 4×U/I ST (P7 135-6HD00-0BA1)

Terminal	Assignment	Terminal	Assignment	Description	BasseUnit	Color identification labels
1	Q_0+	2	Q_1+	• Analog output voltage/current (negative), channel n • Analog output voltage/current (positive), channel n • Sensor line (positive), channel n • Sensor line (negative), channel n	A0 A1	---
3	Q_2+	4	Q_3+			
5	Q_0-	6	Q_1-			
7	Q_2-	8	Q_3-			
9	S_0+	10	S_1+			
11	S_2+	12	S_3+			
13	S_0-	14	S_1-			
15	S_2-	16	S_3-			
L+	24 VDC	M	M			

Voltage 2-wire connection

Voltage 3-wire connection

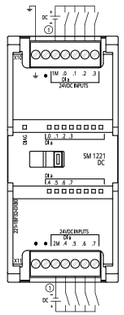
Voltage 4-wire connection



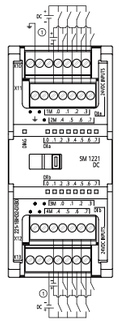
Current

The available BaseUnit type can be identified by the last two digits of the order number.

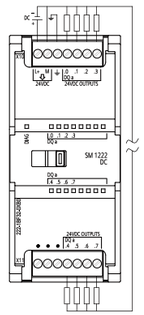
Appendix1： H7-1200 Wiring diagram



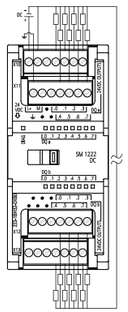
Article No.: H7-221-1BF32-0XB0
Model numbe: SM 1221 DI 8x24 V DC



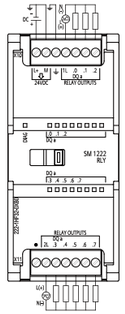
Article No.: H7-221-1BH32-0XB0
Model numbe: SM 1221 DI 16x24 V DC



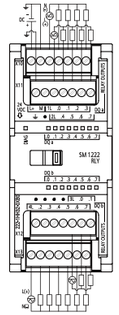
Article No.: H7-222-1BF32-0XB0
Model numbe: SM 1222 DQ 8x24 V DC



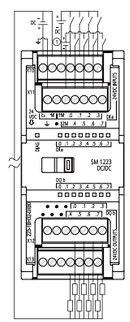
Article No.: H7-222-1BH32-0XB0
Model numbe: SM 1222 DQ 16x24 V DC



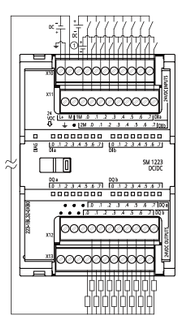
Article No.: H7-222-1HF32-0XB0
Model numbe: SM 1222 DQ 8xRLY



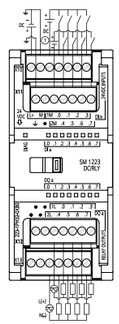
Article No.: H7-222-1HH32-0XB0
Model numbe: SM 1222 DQ 16xRLY



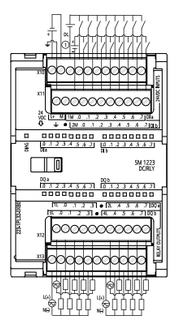
Article No.: H7-233-1BH32-0XB0
Model numbe: SM 1223 DI 8x24 V DC DQ 8x24V DC



Article No.: H7-233-1BL32-0XB0
Model numbe: SM 1223 DI 16x24 V DC DQ 16x24V DC



Article No.: H7-233-1PH32-0XB0
Model numbe: SM 1223 DI 8x24 V DC DQ 8xRLY



Article No.: H7-233-1PL32-0XB0
Model numbe: SM 1223 DI 16x24 V DC DQ 16xRLY

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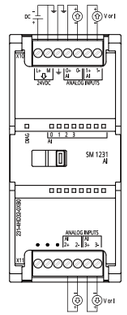
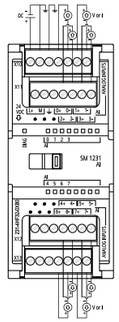
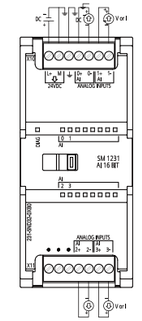
Appendix1： H7-1200 Wiring diagram



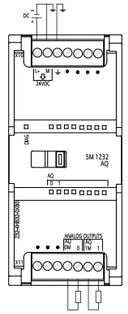
Article No.: H7-231-4HD32-0XB0
Model numbe: SM 1231 AI 4x13 bit



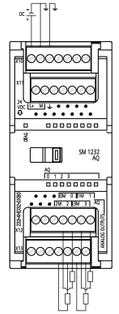
Article No.: H7-231-4HF32-0XB0
Model numbe: SM 1231 AI 8x13 bit



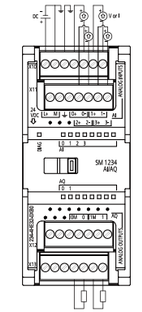
Article No.: H7-231-5ND32-0XB0
Model numbe: SM 1231 AI 4x16 bit



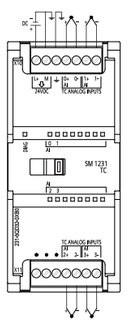
Article No.: H7-232-4HB32-0XB0
Model numbe: SM 1232 AQ 2x14 bit



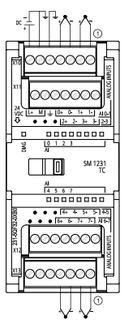
Article No.: H7-232-4HD32-0XB0
Model numbe: SM 1232 AQ 4x14 bit



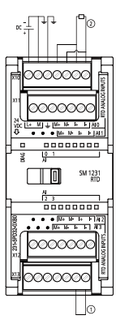
Article No.: H7-234-4HE32-0XB0
Model numbe:SM 1234 AI 4x13 bit



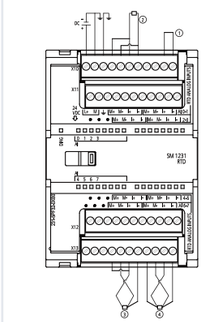
Article No.: H7-231-5QD32-0XB0
Model numbe: SM 1231 AI 4x16 bit Thermocouple



Article No.: H7-231-5QF32-0XB0
Model numbe: SM 1231 AI 8x16 bit Thermocouple

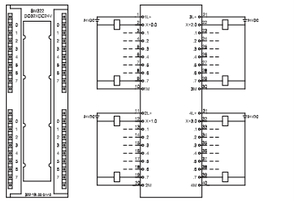


Article No.: H7-231-5PD32-0XB0
Model numbe: SM 1231 AI 4x16 bit Thermocouple

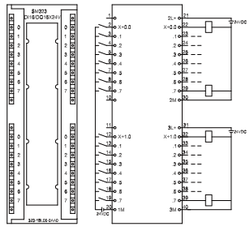


Article No.: H7-231-5PF32-0XB0
Model numbe: SM 1231 AI 8x16 bit Thermocouple

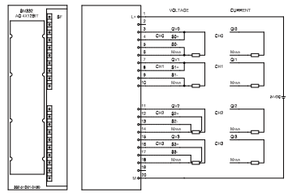
Appendix2： H7-300 Wiring diagram



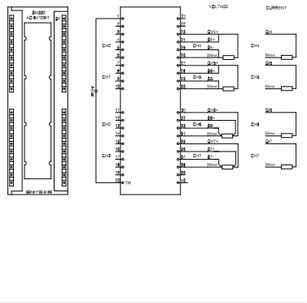
H7 322-1BL00-0AA0



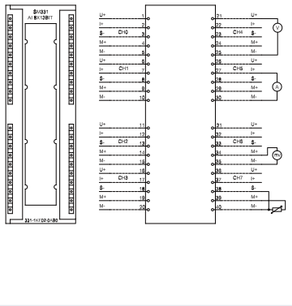
H7 323-1BL00-0AA0



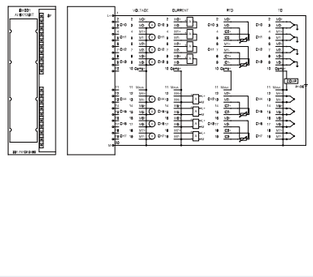
H7 332-5HD01-0AB0



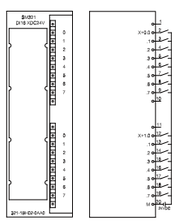
H7 332-5HF00-0AB0



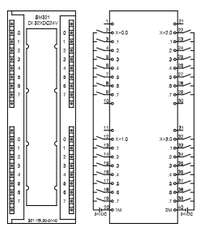
H7 331-1KF02-0AB0



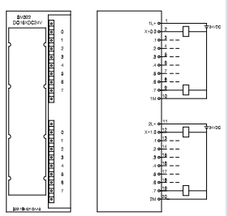
H7 331-7KF02-0AA0



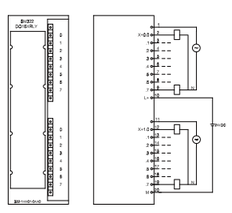
H7 321-1BH02-0AA0



H7 321-1BL00-0AA0



H7 322-1BH01-0AA0



H7 322-1HH01-0AA0

Appendix3： H7-1200 Ordering data

H7-1200 Digital Module

	Parameters	Article No.
SM1221	Digital input module DI8 x 24VDC， Drain type/source type	H7 221-1BF32-0XB0
SM1221	Digital input module DI16 x 24VDC， Drain type/source type	H7 221-1BH32-0XB0
SM1222	Digital output module DQ8x Relay type	H7 222-1HF32-0XB0
SM1222	Digital output module DQ8 x 24VDC，Transistor type	H7 222-1BF32-0XB0
SM1222	Digital output module DQ16x Relay type	H7 222-1HH32-0XB0
SM1222	Digital output module DQ16 x 24VDC，Transistor type	H7 222-1BH32-0XB0
SM1223	Digital input/output module DI8 x 24VDC Drain type/source type and DQ8 x Electric Relay，Electric Relay output	H7 223-1PH32-0XB0
SM1223	Digital input/output module DI8 x 24VDC Drain type/source type and DQ8 x 24VDC，Transistor type output	H7 223-1BH32-0XB0
SM1223	Digital input/output module DI16 x 24VDC Drain type/source type and DQ16 x Electric Relay，Electric Relay output	H7 223-1PL32-0XB0
SM1223	Digital input/output module DI16 x 24VDC Drain type/source type and DQ16 x 24VDC，Transistor type output	H7 223-1BL32-0XB0

H7-1200 Analog Module

	Parameters	Article No.
SM1231	Analog input module AI4 x 13 bit，Support 0-20mA/4-20mA/±2.5V/±5V/±10V type	H7 231-4HD32-0XB0
SM1231	Analog input module AI8 x 13 bit，Support 0-20mA/4-20mA/±2.5V/±5V/±10V type	H7 231-4HF32-0XB0
SM1231	Analog input module AI4 x 16 bit，Support 0-20mA/4-20mA/±2.5V/±5V/±10V type	H7 231-5ND32-0XB0
SM1232	Analog output module AQ2 x 14 bit，Support 0-20mA/4-20mA/±10V type	H7 232-4HB32-0XB0
SM1232	Analog output module AQ4 x 14 bit，Support 0-20mA/4-20mA/±10V type	H7 232-4HD32-0XB0
SM1234	Analog I/O module AI4 + AQ2，input:13bit,Support 0-20mA/4-20mA/±2.5V/±5V/±10V type	H7 234-4HE32-0XB0

H7-1200 Temperature Module

	Parameters	Article No.
SM1231	Analog input module AI4 x RTD Hot resistance	H7 231-5PD32-0XB0
SM1231	Analog input module AI4 x TC Thermocouple	H7 231-5QD32-0XB0
SM1231	Analog input module AI8 x RTD Hot resistance	H7 231-5PF32-0XB0
SM1231	Analog input module AI8 x TC Thermocouple	H7 231-5QF32-0XB0

Appendix3： H7-300 Ordering data

H7-300 Medium PLC Module

H7-300 Digital module		Article No.
SM321	Digital input module，16DI	H7 321-1BH02-0AA0
SM321	Digital input module，32DI	H7 321-1BL00-0AA0
SM322	Digital output module，16DO	H7 322-1BH01-0AA0
SM322	Digital output module，16DO，Electric Relay，2A	H7 322-1HH01-0AA0
SM322	Digital output module，32DO	H7 322-1BL00-0AA0
SM323	Digital input/output module，16DI/16DO	H7 323-1BL00-0AA0
H7-300 Analog Module		Article No.
SM331	Analog input module，8AI，Electric current/Supply voltage/Hot resistance	H7 331-1KF02-0AB0
SM331	Analog input module，8AI,Intelligent	H7 331-7KF02-0AB0
SM332	Analog output module，4AO	H7 332-5HD01-0AB0
SM332	Analog output module，8AO	H7 332-5HF00-0AB0
H7-300 Interface Module		Article No.
IM153-1	Profibus DP nterface Module	H7 153-1AA03-0XB0

H7 Attachment Products

300 Guide rail		Article No.
Guide rail	Installing gufde rails 160mm	H7 390-1AB60-0AA0
Guide rail	Installing gufde rails 483mm	H7 390-1AE80-0AA0
Guide rail	Installing gufde rails 530mm	H7 390-1AF30-0AA0
Guide rail	Installing gufde rails 830mm	H7 390-1AJ30-0AA0
Guide rail	Active guide rail，Hot swappable 483mm	H7 195-1GA00-0XA0
Guide rail	Active guide rail，Hot swappable 530mm	H7 195-1GF30-0XA0
Guide rail	Active guide rail，Hot swappable 620mm	H7 195-1GG30-0XA0
300 Front connector		Article No.
Front connector	20-pin front connector Screw type	H7 392-1AJ00-0AA0
Front connector	40-pin front connector Screw type	H7 392-1AM00-0AA0
PROFIBUS Product		Article No.
Bus connector	PROFIBUS Bus connector 90 degree outlet without programming port	H7 972-0BA12-0XA0
Bus connector	PROFIBUS Bus connector 90 degree outlet without programming port	H7 972-0BB12-0XA0
Bus connector	PROFIBUS Bus connector 35 degree outlet without programming port	H7 972-0BA41-0XA0
Bus connector	PROFIBUS Bus connector 35 degree outlet without programming port	H7 972-0BB41-0XA0
Bus cable	PROFIBUS Bus cable Two-core shielded twisted pair cable in Purple color	H7 830-0EH10
PROFIBUS Product		Article No.
Connector	PROFINET connector 90 degree outlet	H7 901-1BG10-0XA0
Connector	PROFINET connector 180 degree outlet	H7 901-1BB10-0XA0
Cable	PROFINET Cable，Four-core shielded twisted pair cable in Green color	H7 840-2AH10

Ordering Data

Model	Product Description	Order No.
155-6 Standard Module	IM155-6 PN Interface Module Integrated with 2RJ45 ports	P7 155-6AA01-0BN0
8DI Standard Digital input Module	DI 8x24VDC ST	P7 131-6BF01-0BA0
16DI Standard Digital input Module	DI 16x24VDC ST	P7 131-6BH01-0BA0
8DO Standard Digital Output Module	DQ 8x24VDC/0.5A ST	P7 132-6BF01-0BA0
16DO Standard Digital Output Module	DQ 16x24VDC/0.5A ST	P7 132-6BH01-0BA0
4AI Standard Analog Input Module for Current	AI 4xI 2-/4-wire ST	P7 134-6GD01-0BA1
4AI Standard Analog Input Module for Voltage and Current	AI 4xU/1 2-wire ST	P7 134-6HD01-0BA1
8AI Basic Analog Input Module for Voltage	AI 8xU BA	P7 134-6FF01-0AA1
8AI Basic Analog Input Module for Current	AI 8xI 2-/4-wire BA	P7 134-6GF01-0AA1
4AO Standard Analog Output Module	AQ 4xU/I ST	P7 135-6HD00-0BA1

Service and Warranty

The stage behind is the key to success, and after-sales service is the guarantee of life

3 years warranty

Within 3 years from the date of delivery,
we can offer the unconditional free maintenance once
occurring product quality problem.

Lifetime maintenance

We offer lifelong maintenance and
repair services for the users of
HUCEEN products