



H7-1200 PLC

Product Catalog

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About us

Founded in 2015, Shenzhen Huceen Automation Technology Co., Ltd. focuses on the R&D, production, sales, and technical services of core industrial automation products.

With a strong R&D team and extensive industry experience, HUCEEN delivers high-quality, high-performance, and cost-competitive automation products and integrated solutions.

The company has established an international sales and service network covering major cities in China and operates multiple overseas offices. Total product shipments have exceeded one million units, and HUCEEN has cooperated with more than 40 listed companies.

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.

100W+

Quantity of shipment

40+

Cooperated Listed Company

100+

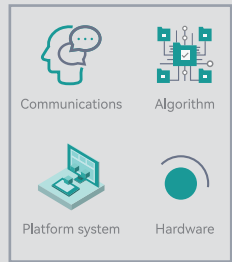
Sales and service network



National High-tech Enterprise



30+ Technology patents



4 core technologies



Huceen product system

CATALOG

PLC

- Small PLC
 - E 200 Smart
- Medium-sized PLC
 - H7-1200
- Distributed Remote I/O
 - HD Series



IoT

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



HMI

- Hpanel 700B
- Hpanel 700S



VFD

- H-Driver A300
- H-Driver A700



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H7-1200 PLC

Product Introduction

The H7-1200 PLC is a PROFINET master-capable PLC independently developed by Huceen. Designed to meet the needs of medium-sized automation system construction and industrial upgrades, it features exceptional performance, robust interference resistance and stability, rich functionality, and an open ecosystem with no barriers to entry.

The H7-1200 series PLC comprises six CPU models, featuring both transistor and relay output types. The series is complemented by ten digital modules, six analog modules, four temperature modules, and two RS485 communication modules.

CPU Port Diagram

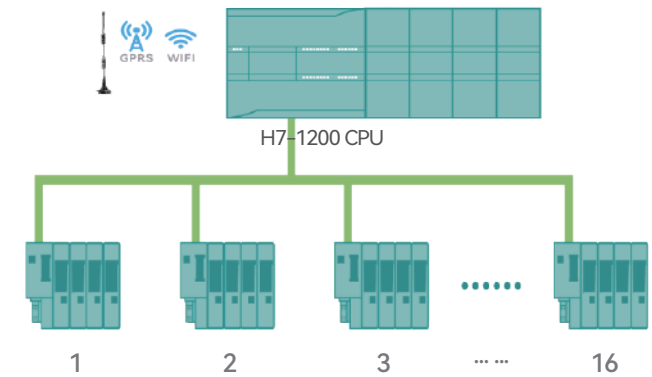


Product Features

Superior performance

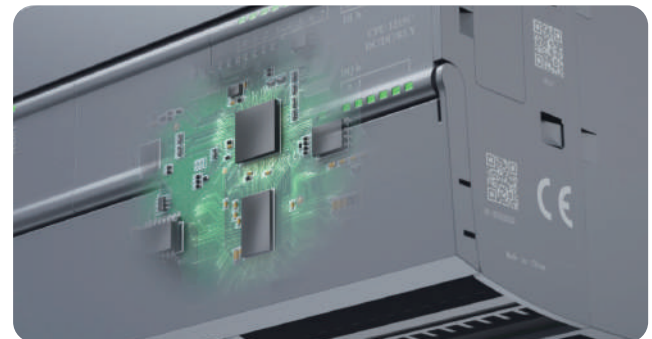
Supports PROFINET master protocol

It can connect to 16 slave stations and interact with 4096 I/O points in real time, ensuring stability and response speed for high-density control tasks. It can easily build linear, tree, and star topologies.



Large storage capacity, fast computing

Up to 250KB of ultra-large program storage, and Boolean operations as fast as 0.26μs/instruction.



Stable and anti-interference

Anti-interference capability far exceeds industry standards

Stringent product standards and multiple rounds of testing ensure greater safety and reliability.

A unique three-proof coating process protects against moisture, mold growth, and salt spray corrosion.



Surge lightning strike Power Supply Huceen: 1000V Industry Standard: 500V IO Huceen: 500V Industry Standard: 200V	Fast burst Common mode Huceen: 4KV Industry Standard: 2KV Differential mode Huceen: 4KV Industry Standard: 1KV	Electrostatics Air Huceen: ±10KV Industry Standard: ±8KV Contact Huceen: ±8KV Industry Standard: ±4KV
Port withstand voltage Continuous Huceen: ±60V Industry Standard: ±35V	High and low temperature Huceen: -30~70°C Industry Standard: -20~55°C	Load capacity Huceen: 2~4 times margin Industry Standard: 1.5 times margin

Rich Features

Built-in multi-channel digital, onboard analog

It features up to 14DI + 10DO and up to 2AI+ 2AO. This meets the needs of small to medium-sized projects and reduces the cost of additional expansion modules.

Communication expansion module, universal memory card

Supports RS485 communication module, enabling multi-serial port communication.
Supports firmware updates via universal SD card.



Onboard digital

14 inputs + 10 outputs



Onboard analog

2 inputs + 2 outputs



Communication Expansion Board

RS485 Communication Module



Memory card

Supports firmware updates for universal SD cards



A vast array of features, covering multiple fields

Communications and Networks

- PROFINET Master
- S7 Communication
- Modbus TCP
- Modbus RTU

Motion control

- 4-axis pulse motion control
- High-speed pulse output
- High-speed counter
- AB phase/single-phase counting

Featured Extensions

- PID
- IoT
- Universal Memory Card

Diagnosis and protection

- Backplane electrical isolation
- Ultra-high port withstand voltage
- Surge protection

Low barrier to entry

No need to change usage habits, continue using the standard programming environment.
Retaining the PROFINET communication architecture allows for rapid project program migration.



Electrical isolation

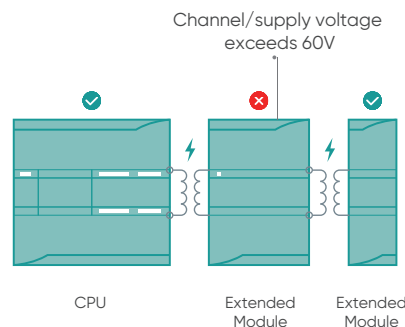
Both the H7-1200 CPU and the expansion I/O modules have added electrical isolation. In the event of a module overload, the backplane provides electrical isolation current, effectively protecting other CPUs and modules.

Dual network ports, 4mm terminals

Dual network ports meet a wider range of cable needs.
4mm terminals ensure easy and secure installation and removal.

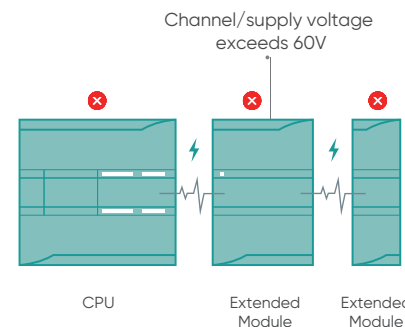


With electrical isolation



When some modules are overloaded, the backplane provides electrical isolation current protection for other CPUs and modules.

Without electrical isolation



When some modules are overloaded, the overload current is transmitted through the backplane, damaging other CPUs and modules.

H7-1200 CPU

DC Transistor Type

- 4-axis pulse motion control
- Pulse output up to 100 kHz
- Multi-axis coordinated motion, precise positioning, and speed control

RLY Relay Type

- 14 DI / 10 DO
- Built-in analog I/O
- High-power direct drive capability



1215C High-standard

- Dual network ports
- 250 KB storage
- Built-in 4-channel analog I/O



1214C Great value

- 6 high-speed counters
- 2 built-in analog inputs
- High-speed processing performance
- More competitive pricing



1212S Economical

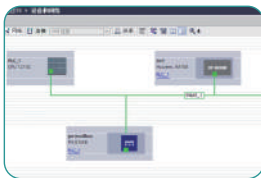
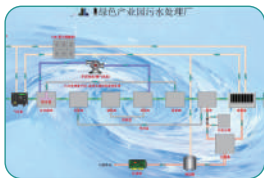
- 14 digital I/O channels
- 2 built-in analog inputs
- 4 high-speed counters
- Low-cost, budget-friendly

Service Case

Build Smart Water Management Systems

With urban development, urban sewage treatment systems face pain points such as insufficient expansion capabilities of traditional PLCs, difficulty in meeting the needs of different system locations due to inconsistent protocols, and data silos. Huceen provides the Profinet solution, which uses the H7-1200 series CPU as the core and the IM155 slave interface module as the node.

This solution simplifies cabling and maintenance through a unified Profinet network architecture, is compatible with multiple series of modules and third-party devices, and supports cloud platform access. It not only solves the control and coordination problems under complex processes, but also reduces costs, providing reliable technical support for smart water management and environmental sustainability.

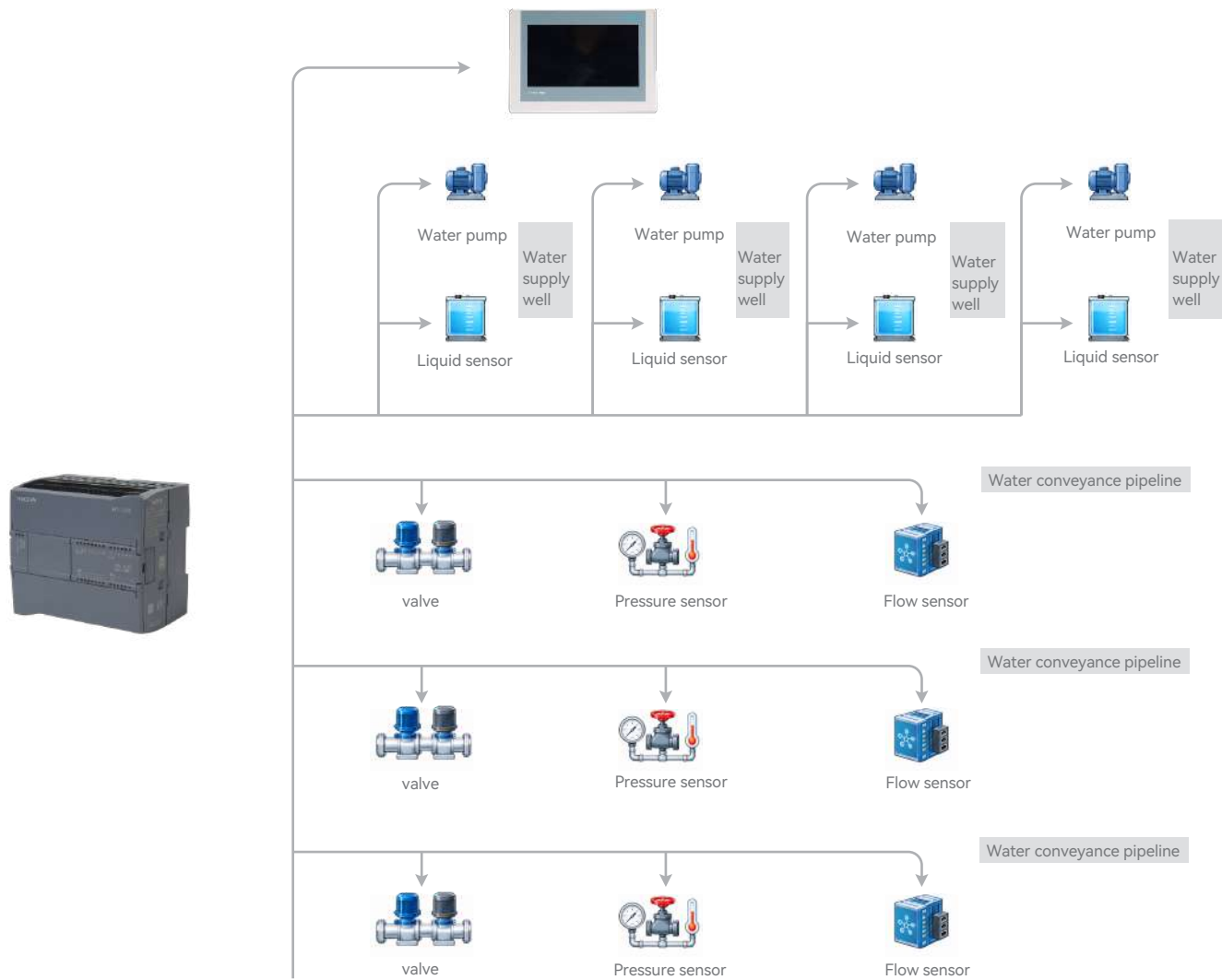


Large-scale deployment of water supply projects

A project involving over a hundred water supply wells in Xuzhou, China, faced challenges such as wide geographical distribution, complex power supply conditions, and stringent reliability requirements. Leveraging the H7-1200 PLC as the core component and a PROFINET bus architecture, Huceen provided a standardized control solution: each well station is equipped with a 1214C master PLC and utilizes IM155 remote I/O for signal acquisition, with two distinct hardware configuration templates developed for standard wells and integrated wells, respectively.



This solution standardizes the entire design and commissioning process, significantly shortening delivery times. By utilizing unified control logic and standardized spare parts, it effectively reduces the complexity and cost of operations and maintenance. The H7-1200 PLC features channel diagnostics and robust interference resistance, enabling it to withstand harsh outdoor environments and ensure long-term, stable system operation. The project has demonstrated the maturity and reliability of Huceen PLCs for large-scale deployment in infrastructure applications.



CPU 1215C

Model	CPU 1215C DC/DC/RLY	CPU 1215C DC/DC/DC
Order No.	H7 215-1HG40-0XB0	H7 215-1AG40-0XB0
Picture		
Standard		
Dimensions W × H × D (mm)	130×100×75	
Weight:	585 g	520 g
Power Loss, Typ.	12 W	
Available Current (SM and CM Bus)	Max. 1600 mA (5 VDC)	
Available Current (24 VDC)	Max. 400 mA (Sensor Power)	
Digital Input Current Consumption (24 VDC)	4 mA per input point	
CPU Features		
User Memory		
Working	250 KB	
Load	Built-in 4 MB	
Retention	10 KB	
Onboard Digital I/O	14 inputs / 10 outputs	
Onboard Analog I/O	2 inputs / 2 outputs	
Process Image Size	1024 bytes input (I) / 1024 bytes output (Q)	
Bit Memory (M)	8192 bytes	
Temporary (Local) Memory	16 KB for startup and program cycle (including FBs and FCs) 4 KB for standard interrupt events (including FBs and FCs) 4 KB for error interrupt events (including FBs and FCs)	
Signal Module Expansion	Up to 8 signal modules	
SB, CB, BB Expansion	Up to 1	
Communication Module Expansion	Not supported	
High-Speed Counters	6 total Single-phase: 3 x 100 kHz (Ia.0 to Ia.5) and 3 x 30 kHz (Ia.6 to Ib.5) Quadrature phase: 3 x 80 kHz (Ia.0 to Ia.5) and 3 x 20 kHz (Ia.6 to Ib.5)	
Pulse Output	-	Up to 4 can be configured: 100 kHz (Qa.0 and Qa.2) 20 kHz (Qa.4 and Qa.6)
Pulse Capture Inputs	14	
Timed / Cyclic Interrupts	4, with 1 ms accuracy	
Edge Interrupts	12 rising edges and 12 falling edges	
Memory Card	Supports TF cards (firmware upgrades)	
Real-Time Clock Accuracy	±60 s/month	
RTC Retention	Typically 20 days, minimum 12 days at 40°C (maintenance-free super capacitor)	
Performance		
Boolean Operation Speed ^{Note 1}	0.26 μs/instruction	
Word Move Speed ^{Note 1}	0.43 μs/instruction	
Floating-Point Add Speed ^{Note 1}	1.36 μs/instruction	

Note 1: Many variables affect the measurement time. The above performance times apply to this class and the fastest instructions in an error-free program.

Communication	
Ports	2
Type	Ethernet
HMI Devices	4
Programming Device (PG)	1
Connections	• 8 for open user communication (active or passive): TSEND_C, TRCV_C, TCON, TDISCON, TSEND, TRCV • 8 for server GET/PUT (CPU-to-CPU S7 communication) • 8 for client GET/PUT (CPU-to-CPU S7 communication)
Data Transfer Rate	10/100 Mb/s
Isolation (External Signal vs PLC Logic)	Transformer isolation, 1500V AC (short-term event only)
Cable Type	Shielded CAT5e
Power Supply	
Voltage Range	20.4 — 28.8 V DC
Power frequency	-
Input Current (Max)	
CPU only	500 mA at 24 VDC
CPU with all expansions	1500 mA at 24 VDC
Surge Current (Max)	12 A at 28.8 VDC
Isolation (Input Power vs Logic)	None
Leakage current, AC line to functional ground	-
Hold Time (Power Loss)	10 ms at 24 VDC
Internal Fuse (User Non-Replaceable)	3 A, 60 V, PTC self-resetting
Sensor Power	
Voltage Range	L + - 4 VDC (min)
Rated Output Current (Max)	400 mA (short-circuit protected)
Maximum Ripple (<10 MHz)	Same as input line
Isolation (CPU Logic vs Sensor Power)	None

CPU 1215C

Digital Inputs		
Number of Inputs	14	
Type	Sink/Source (IEC Class 1 Sink)	
Rated Voltage	24 VDC at 4 mA	
Permissible Continuous Voltage	Max 35 VDC	
Surge Voltage	60 VDC for 1 min	
Logic 1 Signal (Min)	15 VDC at 2.5 mA	
Logic 0 Signal (Max)	5 VDC at 1 mA	
Isolation (Field side vs. Logic side)	500 VAC, 1 min continuous	
Isolation group	1	
Filter time	0.2, 0.4, 0.8, 1.6, 3.2, 6.4, and 12.8 ms (selectable, 4 per group)	
Maximum HSC clock input frequency (Logic 1 level = 15 to 26 VDC)	Single-phase: 100 kHz (Ia.0 to Ia.5) and 30 kHz (Ia.6 to Ib.5) Quadrature phase: 80 kHz (Ia.0 to Ia.5) and 20 kHz (Ia.6 to Ib.5)	
Number of simultaneously active inputs	• 7, No adjacent points, 60°C (horizontal) or 50°C (vertical) • 14, 55°C (horizontal) or 45°C (vertical)	
Cable length (m)	500 m (shielded); 300 m (unshielded); 50 m (shielded, HSC input)	
Digital Outputs		
Number of outputs	10	
Type	Relay, dry contact	Solid-state – MOSFET (source type)
Voltage range	5 to 30 VDC or 5 to 250 VAC	20.4 — 28.8 V DC
Logic 1 voltage at max. current	–	Min 20 V DC
Logic 0 voltage with 10 kΩ load	–	Max 0.1 V DC
Current (max)	2.0 A	0.5 A
Lamp load	30 W DC / 200 W AC	5 W
On-state resistance	Max 0.2 Ω (new device)	Max 0.6 Ω
Leakage current per point	–	Max 10μA
Surge current	7 A when contacts closed	8 A, lasting up to 100 ms
Overload protection	None	
Isolation (Field side vs. Logic side)	1500 VAC, 1 min (coil-to-contact); None (coil-to-logic)	500 VAC, 1 min
Insulation between contacts	750 VAC, 1 min	—
Isolation group	2	1
Inductive clamping voltage	–	L+ – 48 V DC, 1W power loss
Switching delay (Qa.0 to Qa.3)	Max 10 ms	The longest time from disconnect to connection is 1.0 μs. The longest time from connection to disconnect is 3.0 μs.
Switching delay (Qa.4 to Qb.1)	Max 10 ms	The longest time from disconnect to connection is 5 μs. The longest time from connection to disconnect is 200 μs.
Maximum relay switching frequency	1 Hz	–
Pulse train output frequency (Qa.0 and Qa.2)	Not recommended	Max 100 kHz, Min 2 Hz
Mechanical lifetime (no load)	10,000,000 make/break cycles	–
Contact lifetime at rated load	100,000 make/break cycles	–
RUN-to-STOP behavior	Previous value or replacement (default = 0)	
Number of simultaneously active outputs	• 5, No adjacent points, 60°C (horizontal) or 50°C (vertical) • 10, 55°C (horizontal) or 45°C (vertical)	
Cable length (m)	500 m (shielded); 150 m (unshielded)	

Analog Inputs	
Number of input channels	2
Type	Voltage (single-ended)
Full-scale range	0 to 10 V
Full-scale range (digital value)	0 to 27,648
Overshoot range	10.001 to 11.759 V
Overshoot range (digital value)	27,649 to 32,511
Overflow range	11.760 to 11.852 V
Overflow (digital value)	32,512 to 32,767
Resolution	10-bit
Maximum withstand voltage	60VDC 1min (Class B standard)
Smoothing	None / Weak / Medium / Strong
Noise suppression	10 / 50 / 60 Hz
Input impedance	≥100 kΩ
Isolation (field vs. logic)	None
Accuracy (25 °C / -20 to 60 °C)	0.5% / 1.0% of full scale
Cable length (m)	100 m, shielded twisted pair
Analog Outputs	
Number of outputs	2
Type	Current
Range	0 to 20 mA
Full-scale range (digital value)	0 to 27,648
Maximum voltage/ current rating	60 VDC / 40 mA 1min (Class B standard)
Overshoot range	20.01 to 23.52 mA
Overshoot range (digital value)	27,649 to 32,511
Overflow range	On overflow, analog output behavior follows device configuration. For the “Response to CPU STOP” parameter, choose either replacement value or hold previous value.
Overflow range (digital value)	32,512 to 32,767
Resolution	10-bit
Output driving impedance	Max 700 Ω
Isolation (field vs. logic)	None
Accuracy (25°C / -20 to 60°C)	0.5% / 1.0% of full scale
Stabilization time	2 ms
Cable length (m)	100 m, shielded twisted pair

CPU 1214C

Model	CPU 1214C DC/DC/RLY	CPU 1214C DC/DC/DC
Order No.	H7 214-1HG40-0XB0	H7 214-1AG40-0XB0
Picture		
Standard		
Dimensions W × H × D (mm)	110 x 100 x 75	
Weight	435g	
Power Loss, Typ.	12 W	
Available Current (SM and CM Bus)	Max. 1600 mA (5 VDC)	
Available Current (24 VDC)	Max. 400 mA (Sensor Power)	
Digital Input Current Consumption (24 VDC)	4 mA per input point	
CPU Features		
User Memory		
Working	200 KB	
Load	Built-in 4 MB	
Retention	10 KB	
Onboard Digital I/O	14 inputs / 10 outputs	
Onboard Analog I/O	2 inputs	
Process Image Size	1024 bytes input (I) / 1024 bytes output (Q)	
Bit Memory (M)	8192 bytes	
Temporary (Local) Memory	16 KB for startup and program cycle (including FBs and FCs) 4 KB for standard interrupt events (including FBs and FCs) 4 KB for error interrupt events (including FBs and FCs)	
Signal Module Expansion	Up to 8 signal modules	
SB, CB, BB Expansion	Up to 1	
Communication Module Expansion	Not supported	
High-Speed Counters	6 total Single-phase: 3 x 100 kHz (Ia.0 to Ia.5) and 3 x 30 kHz (Ia.6 to Ib.5) Quadrature phase: 3 x 80 kHz (Ia.0 to Ia.5) and 3 x 20 kHz (Ia.6 to Ib.5)	
Pulse Output	/	Up to 4 can be configured: 100 kHz (Qa.0 and Qa.2) 20 kHz (Qa.4 and Qa.6)
Pulse Capture Inputs	14	
Timed / Cyclic Interrupts	4, with 1 ms accuracy	
Edge Interrupts	12 rising edges and 12 falling edges	
Memory Card	Supports TF cards (firmware upgrades)	
Real-Time Clock Accuracy	±60 s/month	
RTC Retention	Typically 20 days, minimum 12 days at 40°C (maintenance-free super capacitor)	
Performance		
Boolean Operation Speed ^{Note 1}	0.26 μs/instruction	
Word Move Speed ^{Note 1}	0.43 μs/instruction	
Floating-Point Add Speed ^{Note 1}	1.36 μs/instruction	

Note 1: Many variables affect the measurement time. The above performance times apply to this class and the fastest instructions in an error-free program.

Communication	
Ports	1
Type	Ethernet
HMI Devices	4
Programming Device (PG)	1
Connections	• 8 for open user communication (active or passive): TSEND_C, TRCV_C, TCON, TDISCON, TSEND, TRCV • 8 for server GET/PUT (CPU-to-CPU S7 communication) • 8 for client GET/PUT (CPU-to-CPU S7 communication)
Data Transfer Rate	10/100 Mb/s
Isolation (External Signal vs PLC Logic)	Transformer isolation, 1500V AC (short-term event only)
Cable Type	Shielded CAT5e
Power Supply	
Voltage Range	20.4 — 28.8 V DC
Power frequency	-
Input Current (Max)	
CPU only	500 mA at 24 VDC
CPU with all expansions	1500 mA at 24 VDC
Surge Current (Max)	12 A at 28.8 VDC
Isolation (Input Power vs Logic)	None
Hold Time (Power Loss)	10 ms at 24 VDC
Internal Fuse (User Non-Replaceable)	3 A, 60 V, PTC self-resettin
Sensor Power	
Voltage Range	L + - 4 VDC (min)
Rated Output Current (Max)	400 mA (short-circuit protected)
Maximum Ripple (<10 MHz)	Same as input line
Isolation (CPU Logic vs Sensor Power)	None

CPU 1214C

Digital Inputs		
Number of Inputs	14	
Type	Sink/Source (IEC Class 1 Sink)	
Rated Voltage	24 VDC at 4 mA	
Permissible Continuous Voltage	Max 35 VDC	
Surge Voltage	60 VDC (Class B standard, no time limit)	
Logic 1 Signal (Min)	15 VDC at 2.5 mA	
Logic 0 Signal (Max)	5 VDC at 1 mA	
Isolation (Field side vs. Logic side)	500 VAC, 1 min continuous	
Isolation group	1	
Filter time	0.2, 0.4, 0.8, 1.6, 3.2, 6.4, and 12.8 ms (selectable, 4 per group)	
Maximum HSC clock input frequency (Logic 1 level = 15 to 26 VDC)	Single-phase: 100 kHz (Ia.0 to Ia.5) and 30 kHz (Ia.6 to Ib.5) Quadrature phase: 80 kHz (Ia.0 to Ia.5) and 20 kHz (Ia.6 to Ib.5)	
Number of simultaneously active inputs	• 7 , No adjacent points, 60°C (horizontal) or 50°C (vertical) • 14, 55°C (horizontal) or 45°C (vertical)	
Cable length (m)	500 m (shielded); 300 m (unshielded); 50 m (shielded, HSC input)	
Digital Outputs		
Number of outputs	10	
Type	Relay, dry contact	Solid-state – MOSFET (source type)
Voltage range	5 to 30 VDC or 5 to 250 VAC	20.4 — 28.8 V DC
Logic 1 voltage at max. current	–	Min 20 V DC
Logic 0 voltage with 10 kΩ load	–	Max 0.1 V DC
Current (max)	2.0 A	0.5 A
Lamp load	30 W DC / 200 W AC	5 W
On-state resistance	Max 0.2 Ω (new device)	Max 0.6 Ω
Leakage current per point	–	Max 10μA
Surge current	7 A when contacts closed	8 A, lasting up to 100 ms
Overload protection	–	–
Isolation (Field side vs. Logic side)	1500 VAC, 1 min (coil-to-contact); None (coil-to-logic)	500 VAC, 1 min
Insulation between contacts	750 VAC, 1 min	–
Isolation group	2	1
Inductive clamping voltage	–	L+ – 48 V DC, 1W power loss
Switching delay (Qa.0 to Qa.3)	Max 10 ms	The longest time from disconnect to connection is 1.0 μs. The longest time from connection to disconnect is 3.0 μs.
Switching delay (Qa.4 to Qb.1)	Max 10 ms	The longest time from disconnect to connection is 5 μs. The longest time from connection to disconnect is 200 μs.
Maximum relay switching frequency	1 Hz	–
Pulse train output frequency (Qa.0 and Qa.2)	Not recommended	Max 100 kHz, Min 2 Hz
Mechanical lifetime (no load)	10,000,000 make/break cycles	–
Contact lifetime at rated load	100,000 make/break cycles	–
RUN-to-STOP behavior	Previous value or replacement (default = 0)	
Number of simultaneously active outputs	• 5 , No adjacent points, 60°C (horizontal) or 50°C (vertical) • 10, 55°C (horizontal) or 45°C (vertical)	
Cable length (m)	500 m (shielded); 150 m (unshielded)	

Analog Inputs	
Number of input channels	2
Type	Voltage (single-ended)
Full-scale range	0 to 10 V
Full-scale range (digital value)	0 to 27,648
Overshoot range	10.001 to 11.759 V
Overshoot range (digital value)	27,649 to 32,511
Overflow range	11.760 to 11.852 V
Overflow (digital value)	32,512 to 32,767
Resolution	10-bit
Maximum withstand voltage	60VDC 1min (Class B standard)
Smoothing	None / Weak / Medium / Strong
Noise suppression	10 / 50 / 60 Hz
Input impedance	≥100 kΩ
Isolation (field vs. logic)	None
Accuracy (25 °C / -20 to 60 °C)	0.5% / 1.0% of full scale
Cable length (m)	100 m, shielded twisted pair

CPU 1212S

Model	CPU 1212S DC/DC/RLY		CPU 1212S DC/DC/DC
Order No.	H7 212-1HE40-0SB0		H7 212-1AE40-0SB0
Picture			
Standard			
Dimensions W × H × D (mm)	90 x 100 x 75		
Weight	385g	370g	
Power Loss, Typ.	9W		
Available Current (SM and CM Bus)	Max. 1600 mA (5 VDC)		
Available Current (24 VDC)	Max. 400 mA (Sensor Power)		
Digital Input Current Consumption (24 VDC)	4 mA per input point		
CPU Features			
User Memory			
Working	150 KB		
Load	Built-in 4 MB		
Retention	10 KB		
Onboard Digital I/O	8 inputs / 6 outputs		
Onboard Analog I/O	2 inputs		
Process Image Size	1024 bytes input (I) / 1024 bytes output (Q)		
Bit Memory (M)	8192 bytes		
Temporary (Local) Memory	16 KB for startup and program cycle (including FBs and FCs) 4 KB for standard interrupt events (including FBs and FCs) 4 KB for error interrupt events (including FBs and FCs)		
Signal Module Expansion	Up to 2 signal modules		
SB, CB, BB Expansion	Up to 1		
Communication Module Expansion	Not supported		
High-Speed Counters	4 total Single-phase: 3 x 100 kHz (Ia.0 to Ia.5) and 1 x 30 kHz (Ia.6 to Ia.7) Quadrature phase: 3 x 80 kHz (Ia.0 to Ia.5) and 1 x 20 kHz (Ia.6 to Ia.7)		
Pulse Output	/	Up to 4 can be configured: 100 kHz (Qa.0 and Qa.2) 20 kHz (Qa.4 and Qa.6)	
Pulse Capture Inputs	8		
Timed / Cyclic Interrupts	4, with 1 ms accuracy		
Edge Interrupts	8 rising edges and 8 falling edges		
Memory Card	Supports TF cards (firmware upgrades)		
Real-Time Clock Accuracy	±60 s/month		
RTC Retention	Typically 20 days, minimum 12 days at 40°C (maintenance-free super capacitor)		
Performance			
Boolean Operation Speed ^{Note 1}	0.26 μs/instruction		
Word Move Speed ^{Note 1}	0.43 μs/instruction		
Floating-Point Add Speed ^{Note 1}	1.36 μs/instruction		

Note 1: Many variables affect the measurement time. The above performance times apply to this class and the fastest instructions in an error-free program.

Communication	
Ports	1
Type	Ethernet
HMI Devices	4
Programming Device (PG)	1
Connections	• 8 for open user communication (active or passive): TSEND_C, TRCV_C, TCON, TDISCON, TSEND, TRCV • 8 for server GET/PUT (CPU-to-CPU S7 communication) • 8 for client GET/PUT (CPU-to-CPU S7 communication)
Data Transfer Rate	10/100 Mb/s
Isolation (External Signal vs PLC Logic)	Transformer isolation, 1500V AC (short-term event only)
Cable Type	Shielded CAT5e
Power Supply	
Voltage Range	20.4 — 28.8 V DC
Power frequency	-
Input Current (Max)	
CPU only	500 mA at 24 VDC
CPU with all expansions	1500 mA at 24 VDC
Surge Current (Max)	12 A at 28.8 VDC
Isolation (Input Power vs Logic)	None
Hold Time (Power Loss)	10 ms at 24 VDC
Internal Fuse (User Non-Replaceable)	3 A, 60 V, PTC self-resettin
Sensor Power	
Voltage Range	L + - 4 VDC (min)
Rated Output Current (Max)	400 mA (short-circuit protected)
Maximum Ripple (<10 MHz)	Same as input line
Isolation (CPU Logic vs Sensor Power)	None

CPU 1212S

Digital Inputs		
Number of Inputs	8	
Type	Sink/Source (IEC Class 1 Sink)	
Rated Voltage	24 VDC at 4 mA	
Permissible Continuous Voltage	Max 35 VDC	
Surge Voltage	60 VDC (Class B standard, no time limit)	
Logic 1 Signal (Min)	15 VDC at 2.5 mA	
Logic 0 Signal (Max)	5 VDC at 1 mA	
Isolation (Field side vs. Logic side)	500 VAC, 1 min continuous	
Isolation group	1	
Filter time	0.2, 0.4, 0.8, 1.6, 3.2, 6.4, and 12.8 ms (selectable, 4 per group)	
Maximum HSC clock input frequency (Logic 1 level = 15 to 26 VDC)	Single-phase: 100 kHz (Ia.0 to Ia.5) and 30 kHz (Ia.6 to Ib.5) Quadrature phase: 80 kHz (Ia.0 to Ia.5) and 20 kHz (Ia.6 to Ib.5)	
Number of simultaneously active inputs	8 (no adjacent points; at 70°C (horizontal) or 60°C (vertical))	
Cable length (m)	500 m (shielded); 300 m (unshielded); 50 m (shielded, HSC input)	
Digital Outputs		
Number of outputs	6	
Type	Relay, dry contact	Solid-state – MOSFET (source type)
Voltage range	5 to 30 VDC or 5 to 250 VAC	20.4 — 28.8 V DC
Logic 1 voltage at max. current	–	Min 20 V DC
Logic 0 voltage with 10 kΩ load	–	Max 0.1 V DC
Current (max)	2.0 A	0.5 A
Lamp load	30 W DC / 200 W AC	5 W
On-state resistance	Max 0.2 Ω (new device)	Max 0.6 Ω
Leakage current per point	–	Max 10μA
Surge current	7 A when contacts closed	8 A, lasting up to 100 ms
Overload protection	–	–
Isolation (Field side vs. Logic side)	1500 VAC, 1 min (coil-to-contact); None (coil-to-logic)	500 VAC, 1 min
Insulation between contacts	750 VAC, 1 min	–
Isolation group	2	1
Inductive clamping voltage	–	L+ – 48 V DC, 1W power loss
Switching delay (Qa.0 to Qa.3)	Max 10 ms	The longest time from disconnect to connection is 1.0 μs. The longest time from connection to disconnect is 3.0 μs.
Switching delay (Qa.4 to Qb.1)	Max 10 ms	The longest time from disconnect to connection is 5 μs. The longest time from connection to disconnect is 200 μs.
Maximum relay switching frequency	1 Hz	–
Pulse train output frequency (Qa.0 and Qa.2)	Not recommended	Max 100 kHz, Min 2 Hz
Mechanical lifetime (no load)	10,000,000 make/break cycles	–
Contact lifetime at rated load	100,000 make/break cycles	–
RUN-to-STOP behavior	Previous value or replacement (default = 0)	
Number of simultaneously active outputs	6 (no adjacent points; at 70°C (horizontal) or 60°C (vertical))	
Cable length (m)	500 m (shielded); 150 m (unshielded)	

Analog Inputs	
Number of input channels	2
Type	Voltage (single-ended)
Full-scale range	0 to 10 V
Full-scale range (digital value)	0 to 27,648
Overshoot range	10.001 to 11.759 V
Overshoot range (digital value)	27,649 to 32,511
Overflow range	11.760 to 11.852 V
Overflow (digital value)	32,512 to 32,767
Resolution	10-bit
Maximum withstand voltage	60VDC 1min (Class B standard)
Smoothing	None / Weak / Medium / Strong
Noise suppression	10 / 50 / 60 Hz
Input impedance	≥100 kΩ
Isolation (field vs. logic)	None
Accuracy (25 °C / -20 to 60 °C)	0.5% / 1.0% of full scale
Cable length (m)	100 m, shielded twisted pair

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°C/0-55°C)	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 232-4HB32-0XB0
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°C/0-55°C)	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°C/0-55°C)	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°C/0-55°C)	full range ±0.3% /±0.6%
Current Output	0—20mA or 4—20mA	Stability Time	Voltage: 300μS(R), 750μS(1 uF); Current: 600μS(1 mH), 2 ms(10 mH)
Voltage Output	±10 V	Load Impedance	Voltage: ≥ 1000 Ω; Current: ≤ 600 Ω
Data Word Format		Output Status in STOP Mode	previous value or replacement value (default is 0)
Voltage	-27648-27648	Diagnosis	
Current	0-27648	Overflow/underflow	Support
Resolution		Voltage Mode: short circuit to ground	Support
Voltage Mode	14 bits	Current Mode: circuit break mode	Support
Current Mode	13 bits		
Max Voltage Resistance	±60 V		

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 °C/0.1 °f			
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 °C		-	
Cable Resistance	max. 100 Ω		20 Ω, 2.7 Ω, for 10 pcs Ω RTD	
Diagnosis: Overflow/underflow	Support			
Circuit Break	Support			

RS485 Signal Board

Model No.	CB 1241 RS485	CB 1241 RS485
Order No.	H7 241-1CH30-1XB0	H7 241-1CH30-2XB0
Picture		
Product Description	Communication Signal Board – 1 Port RS485	Communication Signal Board – 2 Port RS485
Standard		
Dimensions (W x H x D) (mm)	38×62×21	
Weight	40 g	
Type	RS485(2-wire half-duplex)	
Number of Ports	1	2 (RS485-0/RS485-1)
Common-mode voltage range	-7 V to +12 V, 1 second; 3 Vrms continuous	
Transmitter differential output voltage	Min 2V when RL = 100Ω; min 1.5V when RL = 54Ω.	
Termination and biasing	10k resistor from B to +5V 10k resistor from A to GND	10k resistor from RS485-B0 to +5V 10k resistor from RS485-A0 to GND 10k resistor from RS485-B1 to +5V 10k resistor from RS485-A1 to GND
Optional terminals	Short pin TB to pin T/RB; effective termination impedance is 127Ω;connect to RS485 pin 3. Short pin TA to pin T/RA; effective termination impedance is 127Ω;connect to RS485 pin 4.	none
Receiver input impedance	Minimum 5.4 kΩ, including termination	
Receiver Threshold/Sensitivity	Minimum +/- 0.2V, typical hysteresis 60 mV	
Isolation		
RS485 Signal and Chassis Ground	707 V DC (Type Test)	
RS485 signal and CPU logic common terminal		
Cable length, shielding	Maximum 1000 m	
Baud rate	300 baud, 600 baud, 1.2 Kb, 2.4 Kb, 4.8 Kb, 9.6 Kb (default), 19.2 Kb, 38.4 Kb, 57.6 Kb, 76.8 Kb, 115.2 Kb	
Parity check	None (default), Even, Odd, Mark (parity bit always set to 1), Space (parity bit always set to 0)	
Number of stop bits	1 (default), 2	
Flow control	Not supported	
Waiting time	0 – 65535 ms	
Power loss	1 W	1.5 W
Max current consumption (SM bus)	200 mA	300 mA

The diagram illustrates the terminal block connections for the CPU 1215C DC/DC/RLY (H7 215-1HG40-0XB0). It is divided into three main sections:

- Power Section (Top Left):** Features two DC power input terminals labeled ① and ②. Terminal ① is connected to a DC source with a negative sign (-). Terminal ② is connected to a DC source with a positive sign (+). Below these terminals are two 24VDC power supply modules, each with a 1A current rating. A 24VDC input terminal is also shown.
- Analog Section (Top Right):** Includes two 24VDC input terminals, two 24VDC output terminals, and two 24VDC input terminals. The output terminals are labeled "ANALOG OUTPUTS" and the input terminals are labeled "ANALOG INPUTS".
- Relay Section (Bottom):** Features a 24VDC input terminal and a 24VDC output terminal. The output terminal is labeled "RELAY OUTPUTS". Below the output terminal are two sets of relay output terminals, labeled "DO a" and "DO b". Each set has 16 terminals, with the first 8 terminals labeled 1 through 8 and the next 8 terminals labeled 9 through 16. The output terminals are connected to a common ground (N) and a positive terminal (+).

The diagram illustrates the internal architecture of the CPU 1215C DC/DC/DC (H7 215-1AG40-0XB0). It shows the power input section with DC input, a 24VDC output, and a 24VDC input. The central section contains a 24VDC output and a 24VDC input. The bottom section shows the 24VDC output and a 24VDC input. The diagram also includes a section for ANALOG OUTPUTS and ANALOG INPUTS, and a section for 24VDC OUTPUTS. The diagram is labeled with various components and connections, including X10, X11, X12, and X13.

[illegible]

Diagram of the CPU 1214C DC/DC/DC (H7 214-1AG40-0XB0) showing its internal components and connections. The diagram includes a DC input section with terminals 1 and 2, a 24VDC input section with terminals L+, M, and 0, and a 24VDC output section with terminals 3L+, 3M, and 0. It also shows 24VDC inputs (DIa, DIb) and 24VDC outputs (DQa, DQb) with 16 channels each. The diagram is labeled "CPU 1214C DC/DC/DC (H7 214-1AG40-0XB0)".

The diagram illustrates the terminal block configuration for the CPU 1212S. It is divided into two main sections: DC/DC and Relay outputs.

DC/DC Section:

- Inputs:**
 - 24VDC:** Terminals 1 through 7 are labeled "24VDC INPUTS". They are connected to a DC source (indicated by a battery symbol) through a fuse (F1) and a terminal block (X10).
 - 24VDC:** Terminals 8 through 14 are labeled "24VDC". They are connected to a DC source (indicated by a battery symbol) through a terminal block (X11).
- Outputs:**
 - 24VDC:** Terminals 15 through 21 are labeled "24VDC". They are connected to a DC source (indicated by a battery symbol) through a terminal block (X12).

Relay Section:

- Relay Outputs:** Terminals 22 through 28 are labeled "RELAY OUTPUTS". They are connected to a relay (indicated by a coil symbol) through a terminal block (X13).

Terminal Block Details:

- X10:** 24VDC INPUTS (Terminals 1-7)
- X11:** 24VDC (Terminals 8-14)
- X12:** 24VDC (Terminals 15-21)
- X13:** RELAY OUTPUTS (Terminals 22-28)

Legend:

- 1:** DC
- 2:** DC
- 3:** DC
- 4:** DC
- 5:** DC
- 6:** DC
- 7:** DC
- 8:** DC
- 9:** DC
- 10:** DC
- 11:** DC
- 12:** DC
- 13:** DC
- 14:** DC
- 15:** DC
- 16:** DC
- 17:** DC
- 18:** DC
- 19:** DC
- 20:** DC
- 21:** DC
- 22:** DC
- 23:** DC
- 24:** DC
- 25:** DC
- 26:** DC
- 27:** DC
- 28:** DC

The diagram illustrates the internal structure and connections of the CPU 1212S DC/DC/DC (H7 212-1AE40-0SB0). It shows a top view of the module with a 24VDC input, a 24VDC output, and a 24VDC input. The diagram also shows a side view with a 24VDC output and a 24VDC input. The diagram is labeled with 'CPU 1212S DC/DC/DC (H7 212-1AE40-0SB0)' and '212-1AE40-0XB0'.

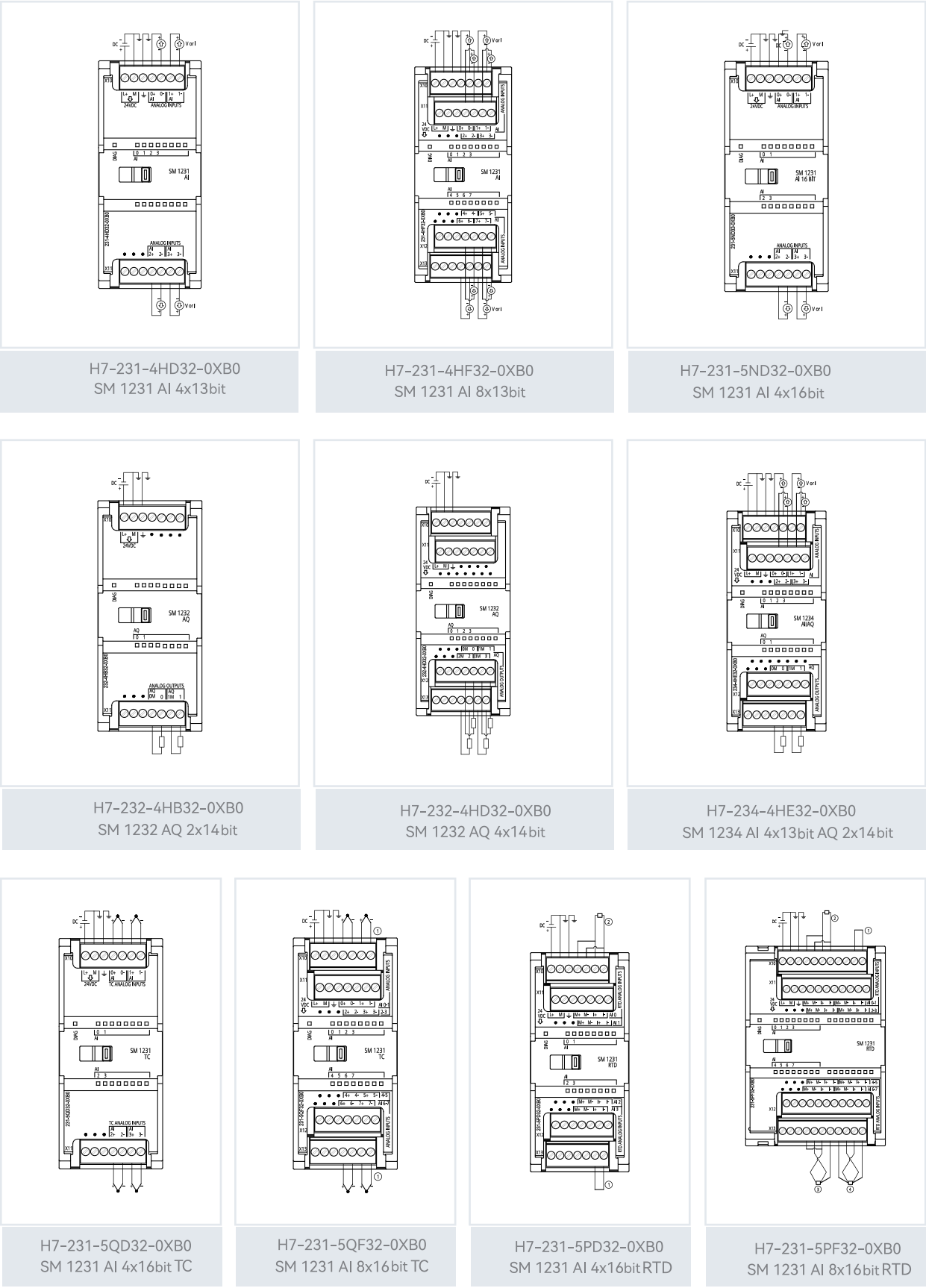
Appendix 2: H7-1200 Expansion Module Wiring Diagram

Technical drawing of the H7-222-1HH32-0XB0 SM 1222 DO 16xRLY, showing a top-down view of the terminal block. The diagram includes labels for power supply (L+, L-, N, PE), ground (GND), and signal lines (DO1-DO16, DI1-DI16).

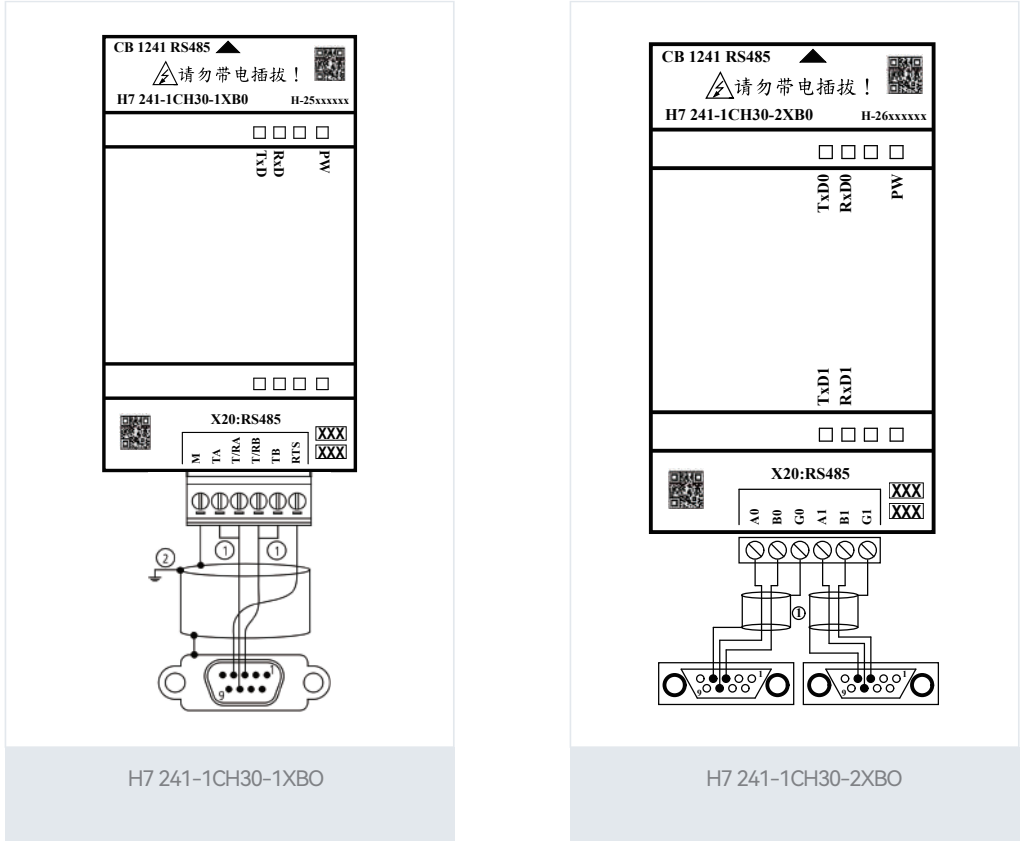
The technical drawing shows the H7-223-1BL32-0XB0 connector from two perspectives:

- Top View:** Shows a rectangular housing with a central row of 32 pins labeled X1 through X32. Above the pins are labels for pin numbers 1 through 32, grouped into four sets of eight (1-8, 9-16, 17-24, 25-32). A label "SM 123 DDC" is located near the right edge.
- Side View:** Shows the profile of the connector housing. It includes labels for dimensions and features: "H7-223-1BL32-0XB0" on the left, "X1" at the top, "X32" at the bottom, and "SM 123 DDC" on the right. A wavy line indicates a break in the middle of the housing.

Appendix 2: H7-1200 Expansion Module Wiring Diagram



Appendix 2: H7-1200 Signal Board Wiring Diagram



Appendix3: H7-1200 Ordering data

H7-1200 CPU

Parameters		Article No.
CPU 1215C DC/DC/RLY	24VDC, DC/DC/RLY, 14DI/10DO, 2AI/2AO	H7 215-1HG40-0XB0
CPU 1215C DC/DC/DC	24VDC, DC/DC/DC, 14DI/10DO, 2AI/2AO	H7 215-1AG40-0XB0
CPU 1214C DC/DC/RLY	24VDC, DC/DC/RLY, 14DI/10DO, 2AI	H7 214-1HG40-0XB0
CPU 1214C DC/DC/DC	24VDC, DC/DC/DC, 14DI/10DO, 2AI	H7 214-1AG40-0XB0
CPU 1212S DC/DC/RLY	24VDC, DC/DC/RLY, 8DI/6DO, 2AI	H7 212-1HE40-0SB0
CPU 1212S DC/DC/DC	24VDC, DC/DC/DC, 8DI/6DO, 2AI	H7 212-1AE40-0SB0

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

H7-1200 RS485 Signal Board

Parameters		Article No.
CB 1241 RS485	Communication Signal Board, 1-Port RS485	H7 241-1CH30-1XB0
CB 1241 RS485	Communication Signal Board, 2-Port RS485	H7 241-1CH30-2XB0

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