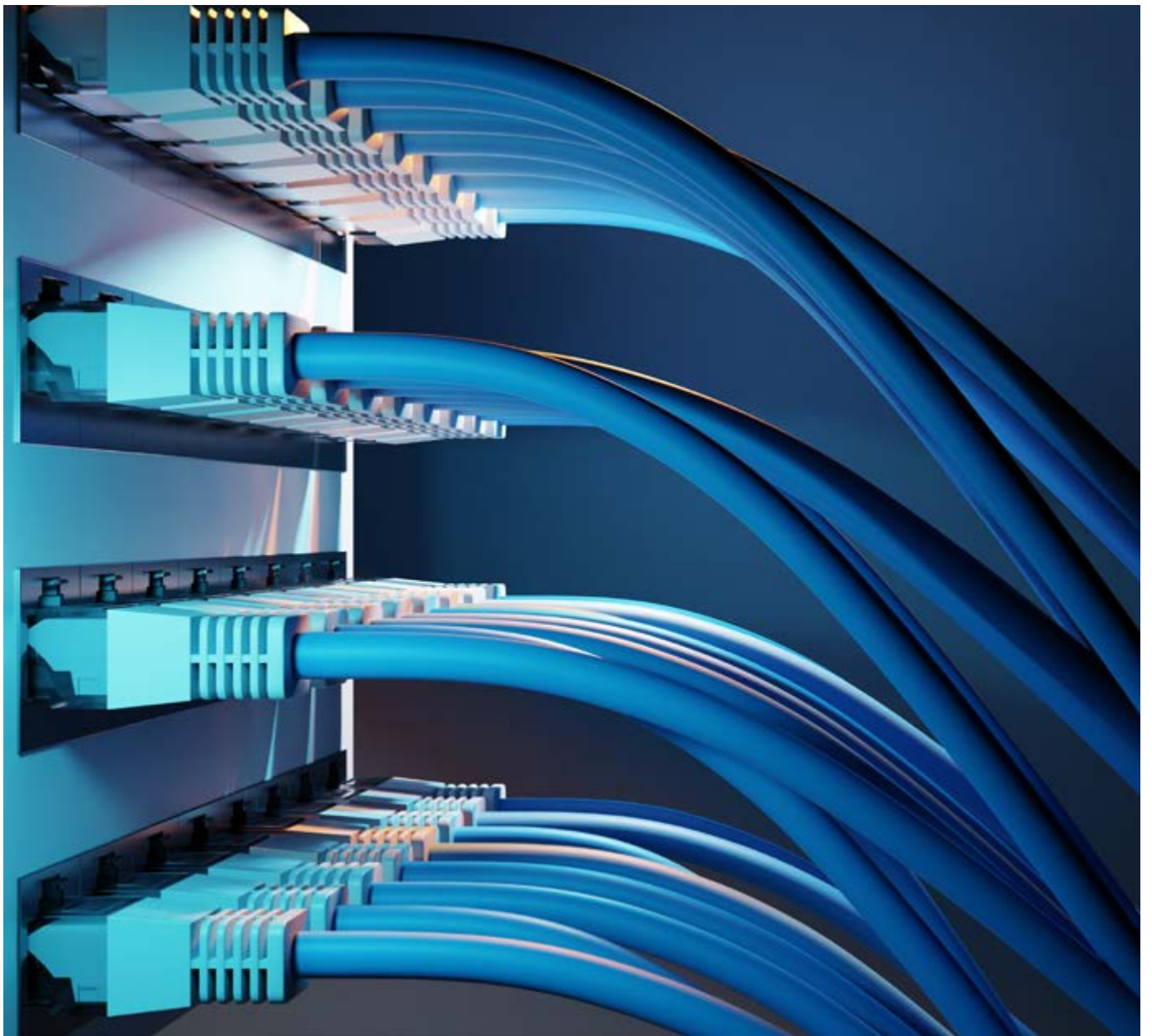


Hitachi Industrial Equipment Systems Europe



DRIVES & AUTOMATION GENERAL CATALOG



HITACHI

The Hitachi Group in Europe is a leading global technology and engineering conglomerate. Founded in Japan in 1910, Hitachi has grown to become a well recognised and well respected global industrial brand with more than 100 years experience in motor-related business.

Our mission is to rapidly grasp the changes in society and support our customers with all our strength, with creativity and flexible ideas around the world.

We will keep on pushing forward to the next challenge, to provide our customers with products and services that deliver high added value and meet their needs.

Hitachi products are renowned for being extremely reliable. All functional parts are manufactured in-house.

As with all Hitachi products, quality and reliability are its main USPs (Unique Selling Points), as well as its low TCO (Total Cost of Ownership). Environmental considerations are also of core importance, and Hitachi continuously strives to provide more efficient, environmentally sound solutions.

Hitachi's World of Automation

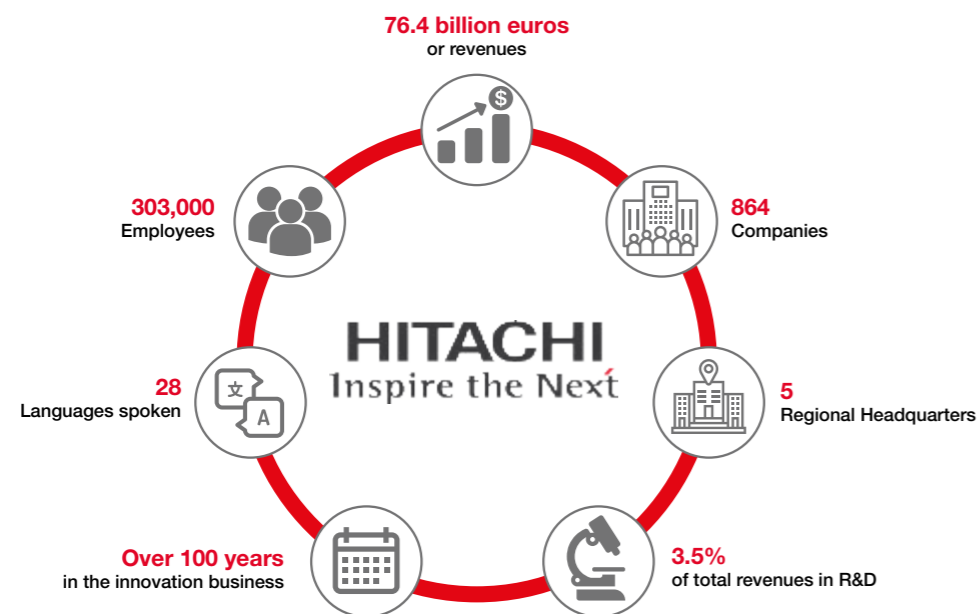
Hitachi partners and softwares:



Discover Hitachi

In 1910, Hitachi was founded as a mining machinery repair shop. At a time when Japan was relying on imported products and technology, one team chose to rely on a different resource – themselves.

With unrelenting effort and enduring passion, the team created, developed and delivered original products and technologies.



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SJ-P1 Series

The SJ Series, Type P1 is at the cutting edge of technology for premium inverters. Highly flexible, it is suitable for a wide variety of demanding applications.

SJ-P1 has premium drive characteristics to achieve instantaneous force and efficient operation.



Key Highlights

- PID sleep mode function and loss of pressure function
- PID, Logic and time delay functions built in
- EzCOM for drive to drive master-less communications
- PM/IM motor compatible
- RS-485 Modbus RTU standard
- Arithmetic operation and delay functions
- User friendly display
- Heat sink extraction (easy to place the cooling to the outside)
- Starting torque 200% at 0.3Hz
- Main power 380Vac to 500Vac
- RoHS compliant
- Improved efficiency with 24V DC supply
- Error codes in text
- Analog input disconnection detect function
- CE/UL/cUL/c-Tick approvals
- 10-year MTBF life design
- Loss of signal protection
- Build in LCD color operator
- Multilanguage (12 languages)
- Multi-rating to support space and cost savings
- Trip avoidance functions



Special Functions



Gain mapping function
(decreasing overshoot and undershoot contributes to smooth and stabilized operation with less shock)

Induction motor & permanent magnet motor can be controlled with one inverter series

Certified “functional safety” international standard

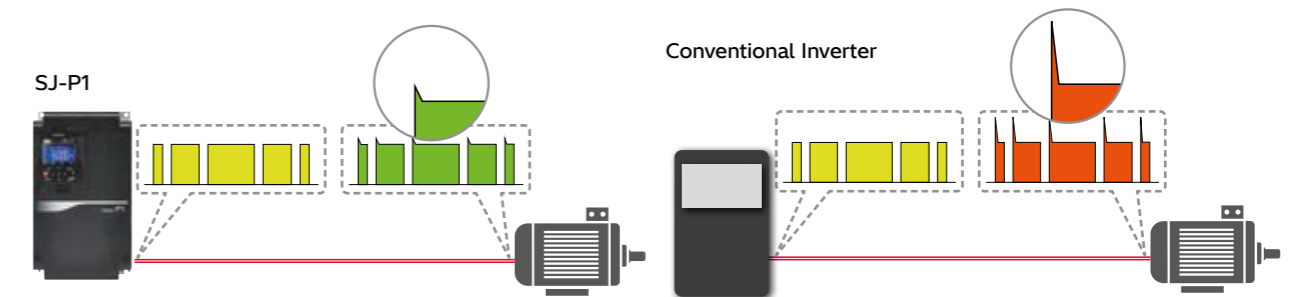
- STO as functional safety standard
- Also in compliance EN61508, IEC / EN / UL61800-5-2 SIL3
- IEC61508, IEC / EN / UL61800-5-2, IEC / EN62061 SIL3 STO

and many more...

Micro surge voltage suppress function

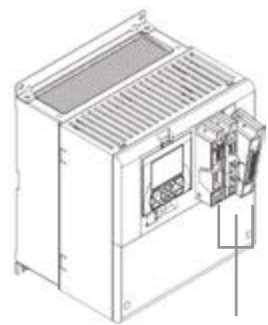
Hitachi original PWM control method limits motor terminal voltage to less than twice inverter DC bus voltage. This system significantly protects the life of the electric motor.

and many more...



Option slots
Hitachi original cassette option for flexible use.

- Up to 3 options can be used simultaneously
- Easy access from the inverter front
- Various fieldbus and I/O options available



3 Option slots



- Option modules**
- Ethernet
 - EtherCAT
 - Profibus-DB
 - PROFINET
 - Feedback
 - Safety
 - Analog input and output
 - Relay output

Technical Information

KW (HP)	0,4 (1/2)	0,75 (1)	1,5 (2)	2,2 (3)	4 (5)	5,5 (7,5)	7,5 (10)	11 (15)	15 (20)	18,5 (25)	22 (30)
3-phase 200V class	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-phase 400V class		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

KW (HP)	30 (40)	37 (50)	45 (60)	55 (75)	75 (100)	90 (125)	110 (150)	132 (175)	160 (220)	185 (250)	220 (300)
3-phase 200V class	✓	✓	✓	✓							
3-phase 400V class	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

WJ-C1 Series

Get to know our the WJ-C1 Series: Elevating Performance in Compact Design

Introducing our C1 Series—a remarkable advancement of our proven WJ200 series of compact inverters. Engineered with precision and enhanced with cutting-edge technology, the C1 achieves exceptional performance and intelligent control, making it the ideal choice for demanding industrial applications.



Whether you're driving pumps, fans, conveyors, or complex machinery, the C1 provides the control and versatility needed to optimize your operations.

Key Highlights

- **High-Performance Drive:** Built to handle rigorous industrial environments, this inverter series offers improved torque and speed control, ensuring smooth operation even under heavy loads.
- **Smart Control:** With advanced algorithms and real-time monitoring, it adapts to varying operational demands, maximizing energy efficiency and reducing downtime.
- **Compact and Robust:** Designed for space-constrained environments, this series combines a compact footprint with rugged construction, ensuring durability and ease of installation.



Special Functions



Side-by-side installation

Our C1 Series is engineered for maximum space efficiency, enabling side-by-side installation with minimal gaps.

This compact design reduces panel space requirements, creating a streamlined and efficient system layout.



Key Benefits

- Minimized Panel Space
- Efficient, Compact Design

Flexible and easy parameter setting with JOG dial

The C1 Series makes parameter management simple and efficient with its user-friendly Jog Dial and flexible display options:

- Automatic Display Reset
- Customizable Display Limitation
- Dual Monitor Function

Easy Parameter Settings

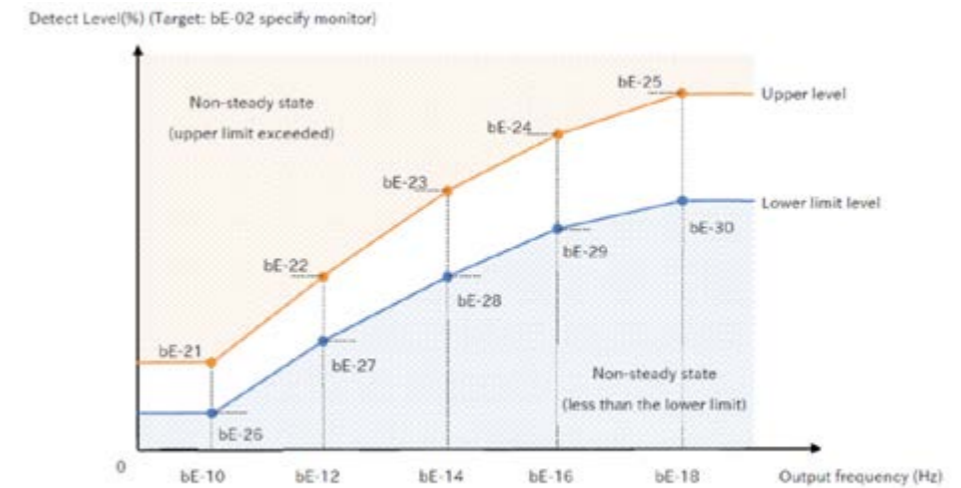
- The Jog Dial is easy to use, designed for smooth and efficient parameter setting.
- Adjust parameters seamlessly with a simple turn of the dial.



For Stable Operation - Protect Your Equipment with Advanced Monitoring
 Designed with internal data detection, the C1 Series supports predictive maintenance without the need for additional external measurement devices.

- Predictive Alerts
- Customizable Monitoring
- Proactively address equipment issues, enhancing reliability and minimizing downtime

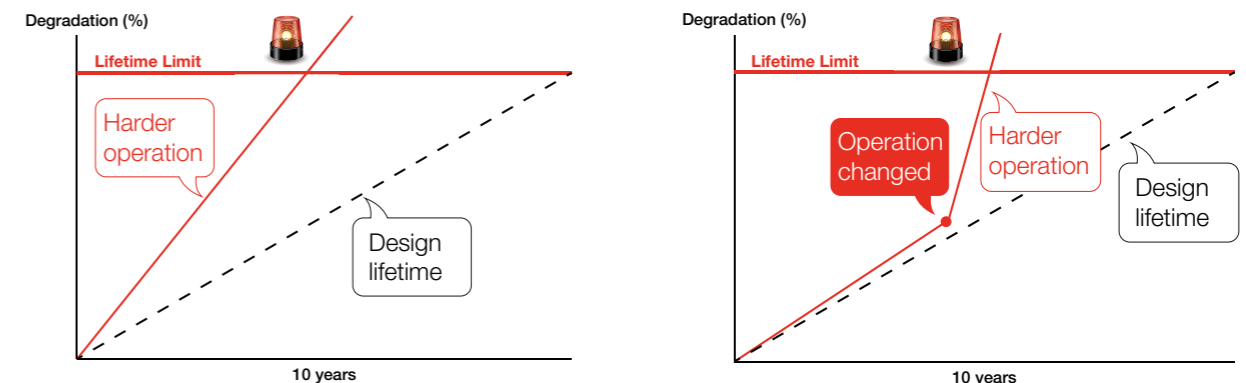
This advanced function safeguards the entire system, minimizing downtime and reducing the Total Cost of Ownership (TCO).



Next-Level Internal Diagnosis

Taking internal diagnostics to the next level, the C1 Series monitors not only cooling fan and capacitor lifetimes but also assesses the degradation of power modules, including IGBT and diode modules.

- Real-Time Monitoring
- Proactive Maintenance
- Advanced insights into your system's health, reducing maintenance surprises and safeguarding operational efficiency



Intelligent diagnosis in accordance with actual operation

Trace Function

Our C1 Series features a sophisticated trace function that visualizes sampling data for monitor parameters with exceptional accuracy.

- **High-Resolution Sampling:** Capture data with a high accuracy of 0.2 ms, significantly faster than the 100 ms accuracy provided by the ProDrive-Next software's
- **Enhanced Diagnostics:** Ideal for initial system configuration and troubleshooting, the trace function provides detailed insights to optimize performance and resolve issues efficiently.

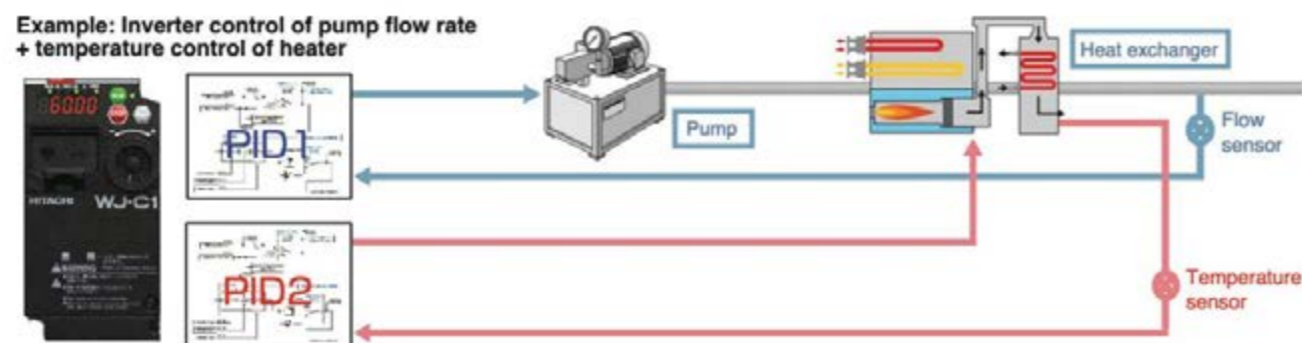


Versatile Multi PID Control

Equipped with two independent PID controllers, this series enables for versatile and integrated control.

- **Dual PID Functionality:** The first PID controller manages motor operation, for example, by using data from a flow rate meter. Simultaneously, the second PID controller handles an external device like a temperature sensor or vibration meter.
- **Integrated Control:** The C1 can independently control both the motor and external devices without the need for a host device, e.g. PLC, enabling complex control scenarios with a single, integrated solution.

With the C1 Series, you achieve seamless and efficient control, simplifying your system architecture while enhancing functionality.



Easy operation

- LED control
- Remote Operator
- Micro B USB port

VOP LCD operator

- 12 languages available
- 5-line LCD operator
- Real time clock built-in
- Two-color backlight that distinguish trip status

Password function

To ensure parameters remain consistent and to restrict access to some or all parameters.



Simplify Your Control with Easy Sequence Function [EzSQ]

At Hitachi, we understand the importance of streamlined processes.

That's why we developed our EzSQ software, allowing you to perform logic operations directly within the inverter —no need for external relays or a PLC.

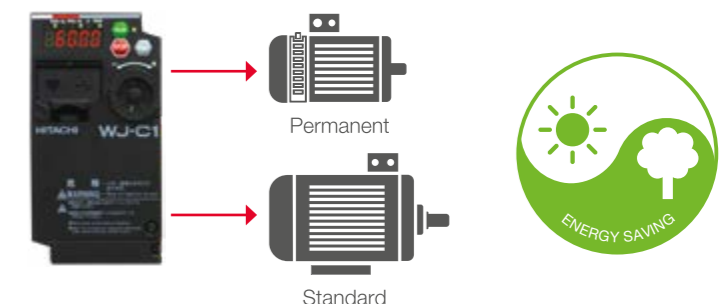
Simply compile your programs on a PC and download them to the drive.



Versatile Motor Control with only one Inverter Series

The C1 Series supports control for both induction motors (IM) and permanent magnet motors (PM) with a single inverter.

Permanent magnet motors offer enhanced energy efficiency and optimal space utilization.



S1 Series

The SJ Series, Type P1 is at the cutting edge of technology for premium inverters. Highly flexible, it is suitable for a wide variety of demanding applications.

SJ-P1 has premium drive characteristics to achieve instantaneous force and efficient operation.

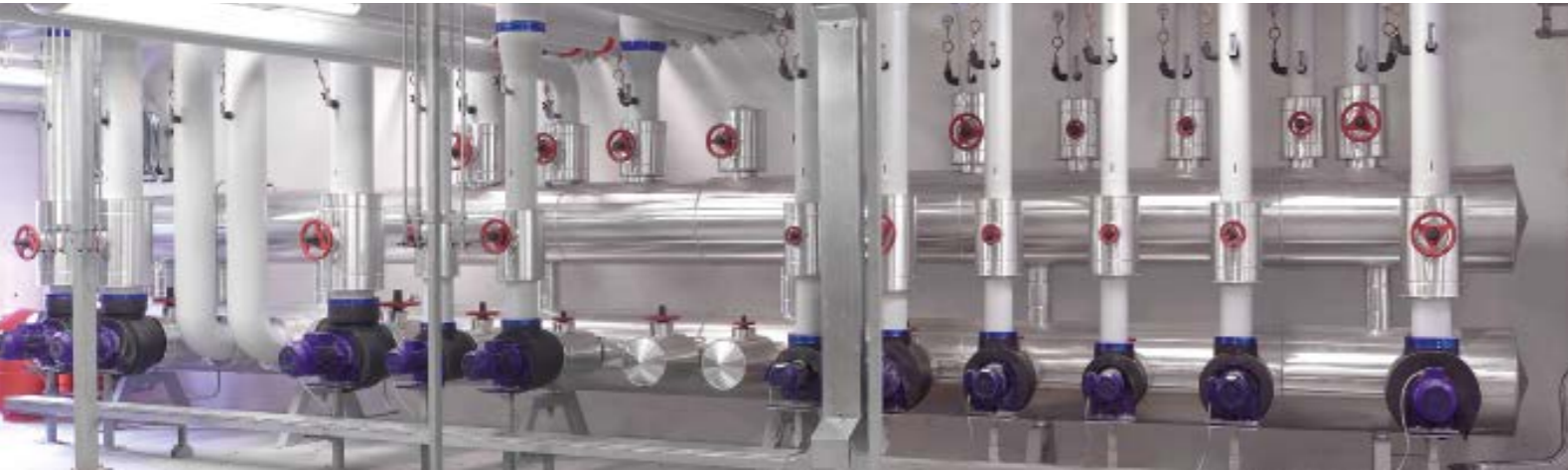


Key Highlights

- PID sleep mode function and loss of pressure function
- PID, Logic and time delay functions built in
- EzCOM for drive to drive master-less communications
- PM/IM motor compatible
- RS-485 Modbus RTU standard
- Arithmetic operation and delay functions
- User friendly display
- Heat sink extraction (easy to place the cooling to the outside)
- Starting torque 200% at 0.3Hz
- Main power 380Vac to 500Vac
- RoHS compliant
- Improved efficiency with 24V DC supply
- Error codes in text
- Analog input disconnection detect function
- CE/UL/cUL/c-Tick approvals
- 10-year MTBF life design
- Loss of signal protection
- Build in LCD color operator
- Multilanguage (12 languages)
- Multi-rating to support space and cost savings
- Trip avoidance functions



Special Functions



Compact Design (0.4kW - 2.2kW)

Feature

Thanks to the compact design, less installation space is required. Flexible installation with DIN rail and wall mounting possibilities. Available to mount multi-inverter in side-by-side installation to be more effective and space-saving.

- Easy maintenance
- Various installation ways
- Excellent performance
- Multi-function and easy to use
- Potentiometer on the front for easy frequency adjustment

Dual rating to support space and cost savings

LD- Low Duty for Applications with normal load without large temporarily overload or torque.
ND- Normal Duty for applications with heavy load and constant high torque.

Optional external keypad

- Supports optional external LED keypad
- The external LED keypad supports parameter copy function



4.0kW - 500kW / Dual Rating 22kW ... 630kW 690V versions

S1 is the new simple and easy to use inverter with top performance. Targeting for OEM equipment markets, mainly covering general applications like packaging, winding, Fan & Pump and many others.

Product Features

- Supports SVC control
- Enables high precision of speed torque control and fast speed response
- Integrates safety function-STO (Safe Torque OFF, SIL2)
- The unique I/F control is very suitable at low speed with high torque requirements
- The transition from rotating state to dc braking is very smooth. The current impact is small, and the current response of dc braking is faster
- Excellent performance at „Catch-on-the-Fly“
- Solid plastic housing 4 - 75kW
- Solid metal housing 90 - 500kW
- ≤37kW Standard built-in DBU
- Internal C3 EMC filter, Optional external C2 EMC filter
- PID control function (with sleep function).
- Automatic voltage regulation (AVR), Torque compensate function
- Optional parameter copy LED external keypad, meeting the requirements of diverse applications

S1 Series IP55 version / Dual Rating (4kW - 110kW)

S1-IP55: Well equipped for decentralized drive applications with the robust S1 in high protection class.

Many applications require that the inverter can be used in close proximity to the motor. A high protection class is therefore essential. In applications such as overhead air vents or agitators in the activated sludge tanks of sewage treatment plants as well as many other applications, it is often a mandatory requirement to be able to install the inverter in a harsh environment threatened by dust or moisture. The S1 in IP55 version offers this in an efficient version in a power range from 4kW-110kW with integrated C3 filter.

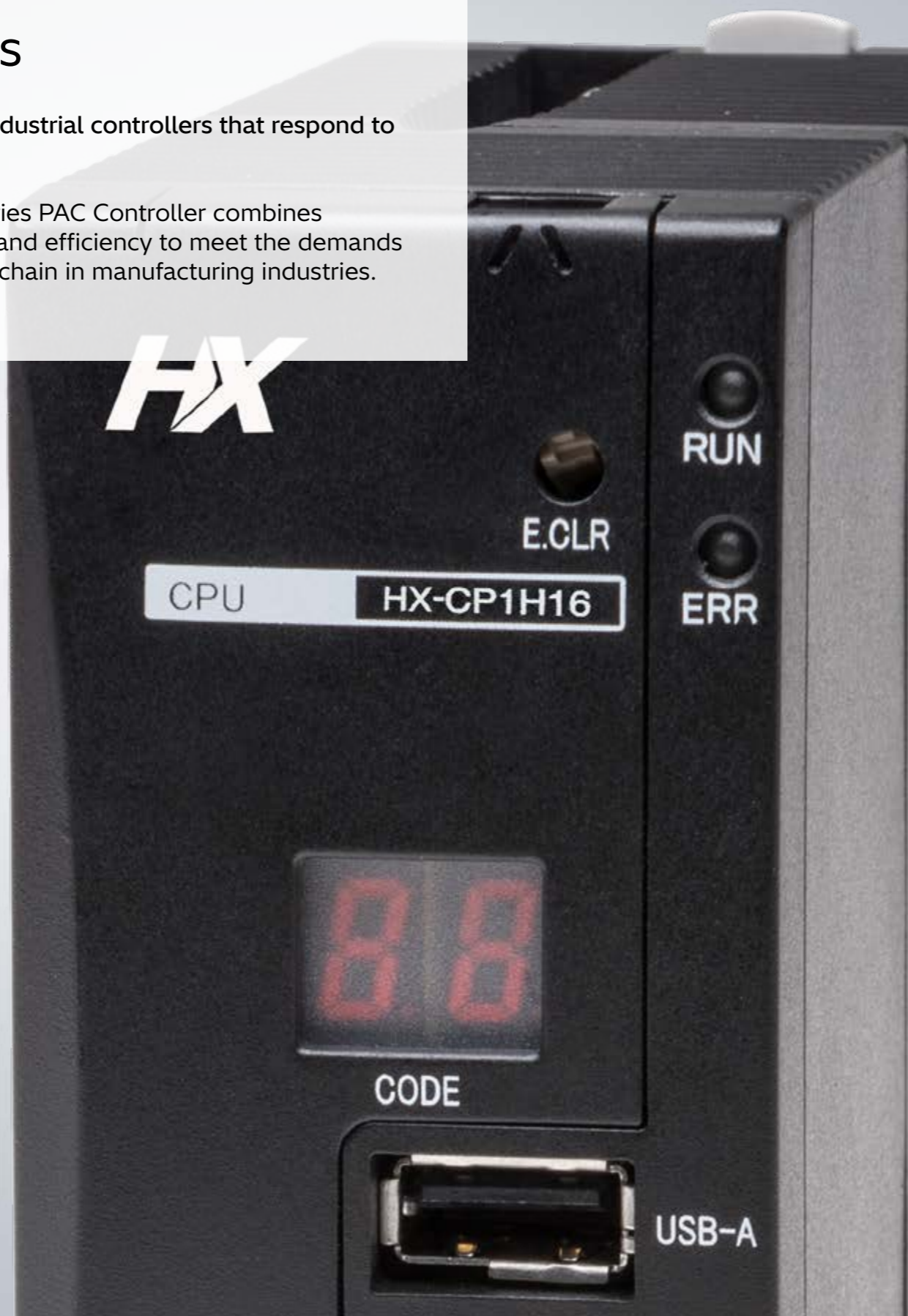
Features

- Ingress protection rating of IP55 applicable to working environments dust and water vapor conditions (NEMA rating 3S)
- The S1 IP55 inverter is also designed as a dual-rated inverter, to be used cost-effectively in ND or LD mode, depending on the application and load.
- Built-in DC reactors as standard from 18,5kW to 110kW
- Built-in brake chopper (standard from 4 to 37 kW (ND), optional from 45 to 110 kW (ND))

HX Series

Next generation industrial controllers that respond to IoT trends.

The Hitachi HX series PAC Controller combines powerful features and efficiency to meet the demands of a global supply chain in manufacturing industries.

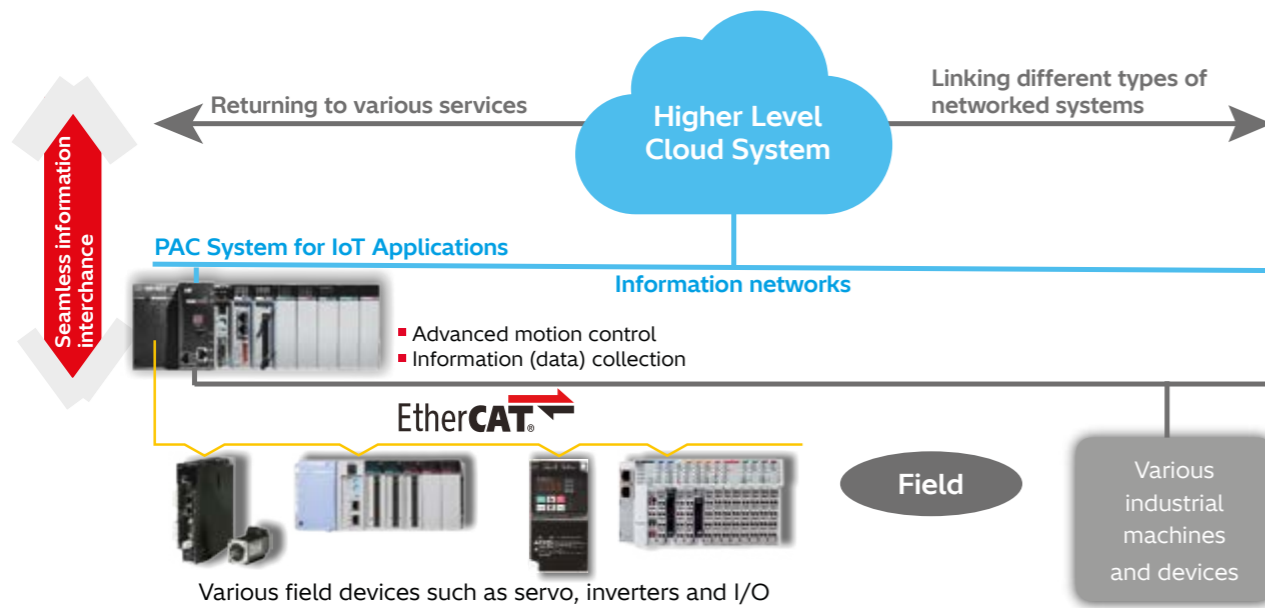


Key Highlights

- Supports OPC-UA, an interface for connecting information with industries
- Supports information communications (Ethernet) and control communications (EtherCAT)
- Supports data logging for sites using SD memory
- Supports programming languages compatible with IEC 61131-3: (LD, IL FBD, ST, SFC) + CFC
- Supports data logging using SD memory
- Sensor and actuator control (Various sensors and actuators including Hitachi inverters)
- OPC-UA for communication with higher level information systems ERP linkage, MES connection, SCADA system connection, etc.
- Supports information communications Ethernet (TCP/IP), IP communications, web support, etc.
- Connection with various control equipment and HMI
- Field network support (Partially combined use with dedicated master modules)



Special Functions



Programming languages according to IEC 61131-3: (LD, IL FBD, ST, SFC) + CFC:

- Ladder Logic Diagram (LD)
- Function Block Diagram (FBD)
- Structured Text (ST)
- Instruction List (IL)
- Sequential Function Chart (SFC)
- Continuous Function Chart (CFC)

Technical Specifications

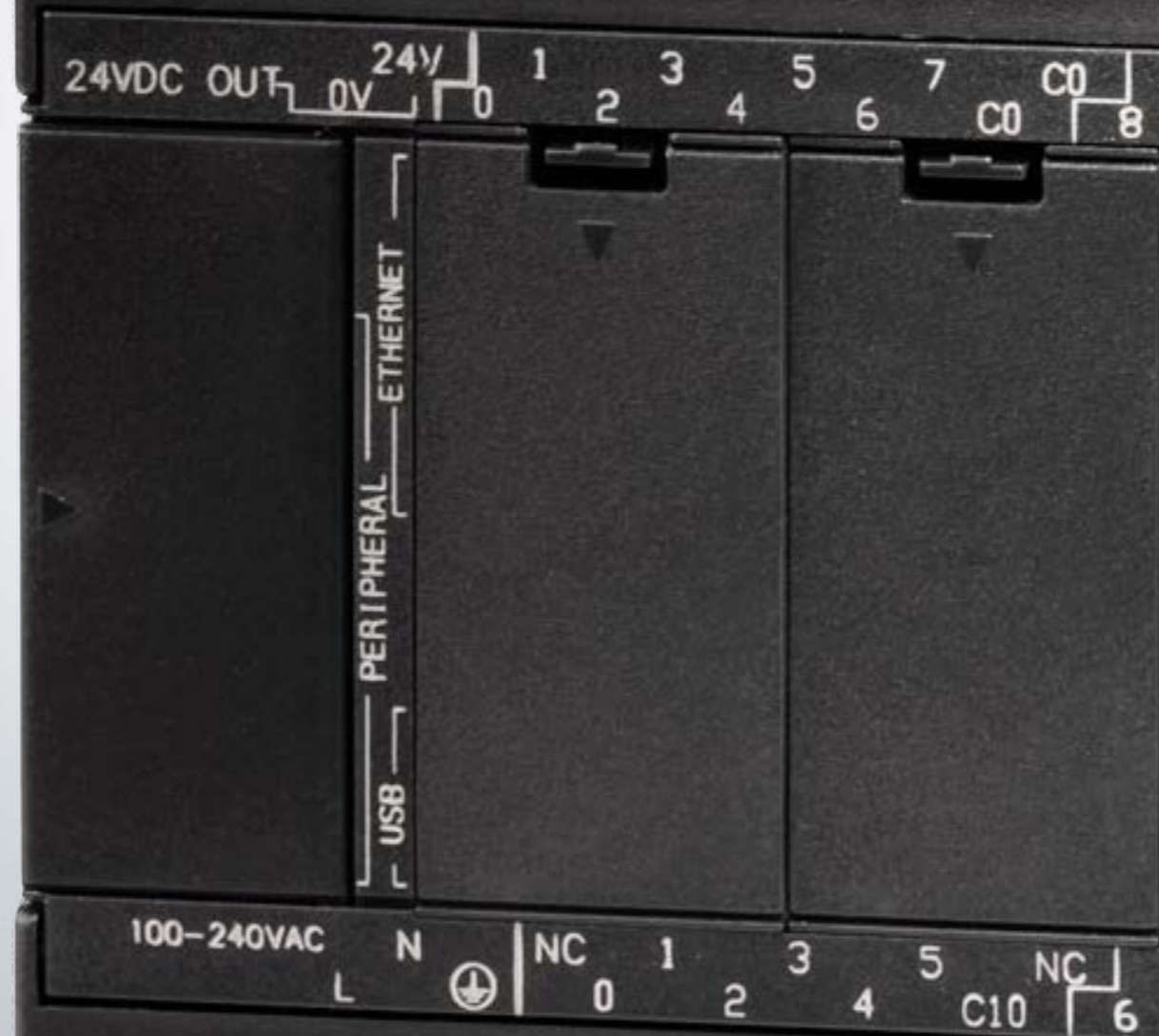
	Hardware Specifications				
Standard Model HX-CP1S08	Program data memory 8 MB	Ethernet port 2	USB Host, device		
Full Function Model HX-CP1H16	Program data memory 16 MB	Ethernet port 3	USB Host, device	SD card	Serial comm. RS-485
Motion Model HX-CP1S08M	Program data memory 8 MB	Ethernet port 2	USB Host, device		
CNC Motion Model HX-CP1H16M	Program data memory 16 MB	Ethernet port 3	USB Host, device	SD card	Serial comm. RS-485
Hybrid Model HXC-CP1H16	Program data memory 16 MB	Ethernet port 3	USB Host, device	SD card	Serial comm. RS-485
Redundant Model HX-CP1H16R	Program data memory 16 MB	Ethernet port 3	USB Host, device	SD card	Serial comm. RS-485

	Functional features			
Standard Model HX-CP1S08	EtherCAT master			
Full Function Model HX-CP1H16	EtherCAT master	Web Visualization		
Motion Model HX-CP1S08M	EtherCAT master		Soft Motion	
CNC Motion Model HX-CP1H16M	EtherCAT master	Web Visualization	Soft Motion	CNC g codes
Hybrid Model HXC-CP1H16	EtherCAT master	Web Visualization		C/C ++ program
Redundant Model HX-CP1H16R	EtherCAT master	CPU Redundancy		

Micro EHV+ Series

All-In-One Compact Type PLC

Hitachi's PLC series MICRO-EHV+ is an all-in-one type compact PLC, packed with powerful functions. It offers easy start-up for users with no experience with PLC as well as for users of other manufacturers or even high-level programming languages.



Key Highlights

Memory Capacity

- User program (RAM) up to 1024 kB
- Boot project (FLASH) up to 1024 kB
- Source file (FLASH) up to 1024 kB
- Data memory 640 kB

Programming

- Communication protocol CODESYS V3.5
- Programming languages according to IEC 61131-3: (LD, IL FBD, ST, SFC) + CFC

Communication Interfaces

- Ethernet (10BASE-T / 100BASE-TX)
- USB interface (ver. 2.0, full speed 12 Mbps)
- Serial interface (RS-232C)

Communication Protocols

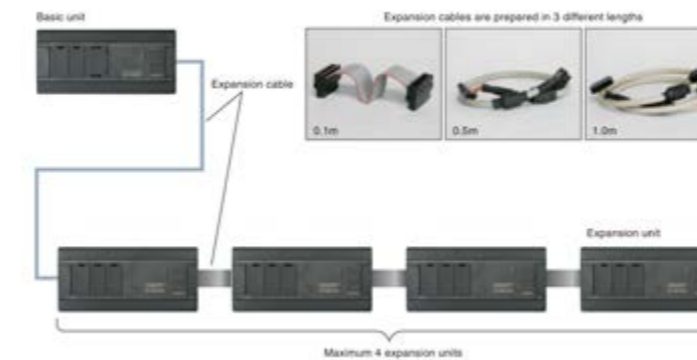
- Modbus TCP Client / Server
- Modbus RTU Master / Slave
- EtherCAT Master



Special Functions



No. of I/O is max. 320 (using 64 pts expansion unit)



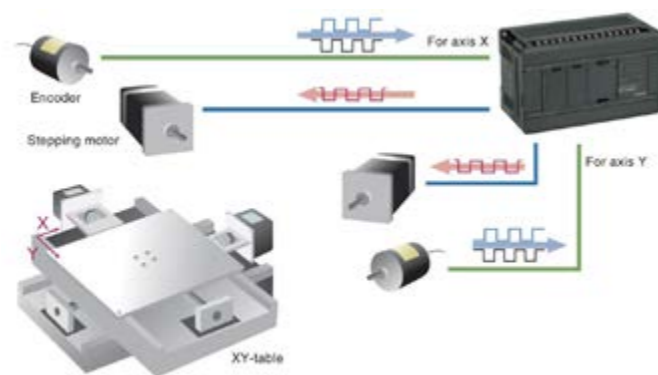
Wide range of expansion units are available.

Technical Information

	MV-A20DR	MV-D20DR	MV-D20DTPS	MV-A40DR	MV-D40DR
Power Supply	100 / 240 V AC	24 V DC		100 / 240 V AC	24 V DC
Number of Inputs (DI)	12		24		
Input Specification	DC input (24 V DC)				
Number of output (DO)	8		16		
Output Specification	Relay		Transistor		Relay

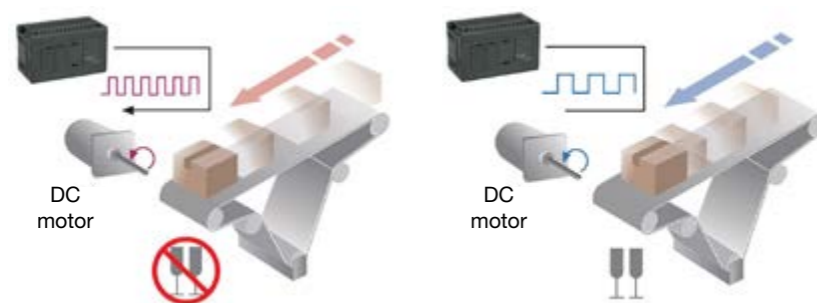
	MV-D40DTPS	MV-A64DR	MV-D64DR	MV-D64DTPS
Power Supply	24 V DC	100 / 240 V AC	24 V DC	
Number of Inputs (DI)	24	40		
Input Specification	DC input (24 V DC)			
Number of output (DO)	16	24		
Output Specification	Transistor	Relay		Transistor

Position control



Using the High-speed counter and pulse train output a simple position control system can be achieved without the need for a dedicated motion controller.

Speed control using PWM output



Speed control can be achieved without a dedicated speed control unit.

Human Machine Interface

Operating can not get any easier. Hitachi offers a wide range of operator interfaces which allow you to choose the best solution for your application.



Key Highlights

- EH-TPS
Designed for budget critical applications
- EH-TPJ
Hitachi's answer to customer's IoT demands and installation flexibility.
- EH-TP700
Advanced and sophisticated touch screen series for uncompromised performance



Special Functions



EH-TPS

Designed for budget critical applications



- Display Size 4.3", 7" and 10.1"
- Widescreen Display
- Resistive Touchscreen
- Brilliant Display with LED Backlight
- Programmable with HiMobile Studio
- Ethernet, USB and Serial Port
- Lightweight and Low-power Design
- Highly reliable, Industrial Grade Components
- CE, cULus approval

	EH-TPS04	EH-TPS07	EH-TPS07
Display - Colors	4.3" TFT 16:9 - 64K	7" TFT 16:9 - 64K	10.1" TFT 16:9 - 64K
Resolution	480x272	800x480, WVGA	1024x600, WVGA

EH-TPJ

Hitachi's answer to customer's IoT demands and installation flexibility



- Display sizes 7", 10.1", 15.6" and 21.5"
- Up to full HD resolution 1920 x 1080 pixel with a 16 M colours and dimmable backlight
- PCAP touch screen with multitouch allows gesture control (swipe & zoom)
- Robust glass front and extended operating temperature range between -20 °C and +55 °C
- Full IP67 for installation at harsh environment applications
- Integrated OPC UA Client / Server for data handling and IIOT demands
- Wi-Fi Connectivity

	EH-TPJ07	EH-TPJ10	EH-TPJ10	EH-TPJ21
Display - Colors	7" TFT - 16 M	10.1" TFT - 16 M	15.6" TFT - 16 M	21.5" TFT - 16 M
Resolution	1024 x 600	1280 x 800	1366 x 768	1920 x 1080

EH-TP700

Advanced and sophisticated touch screen series for uncompromised performance

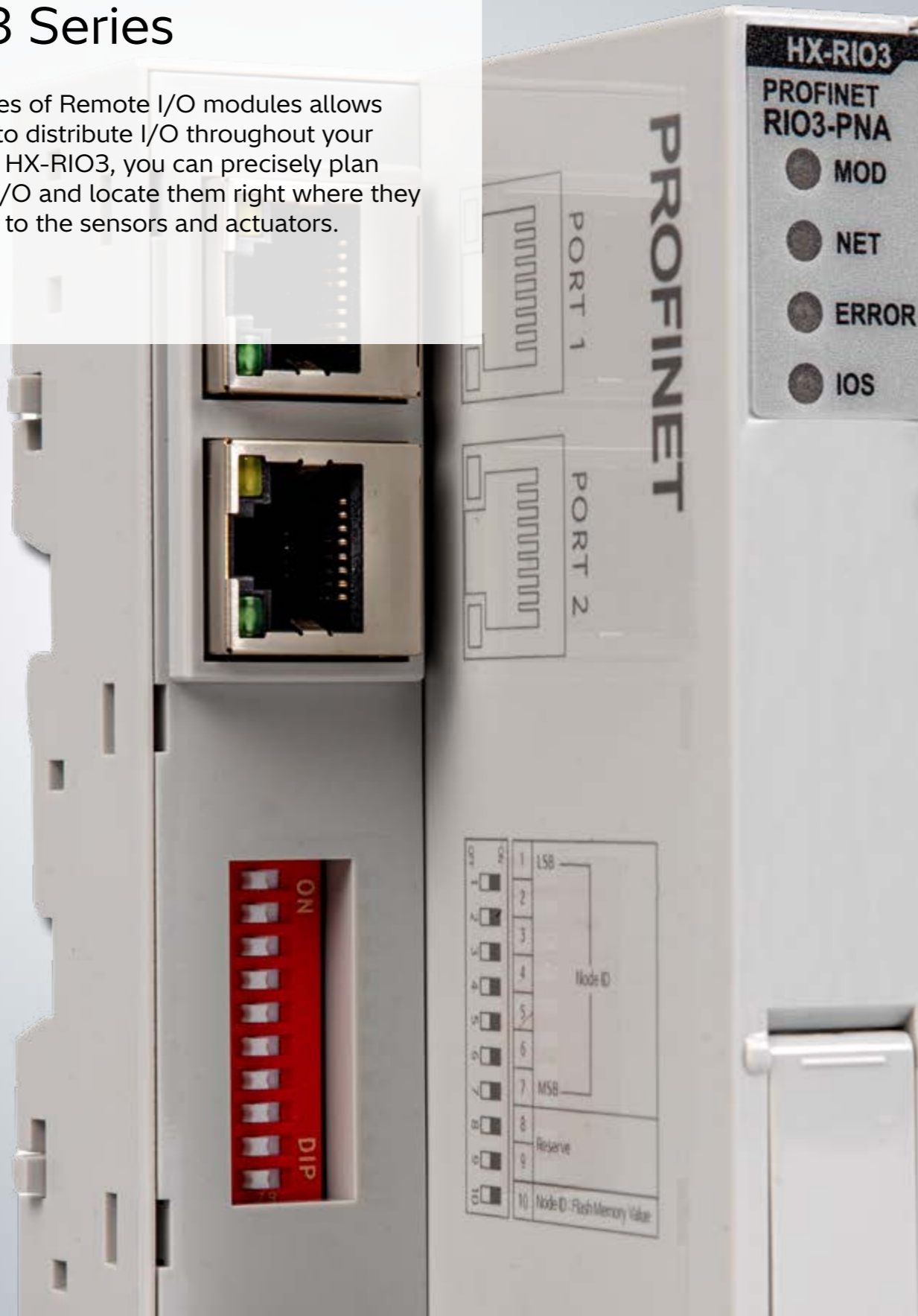


- Display sizes 5", 7", 10.1", 15.6" and 21.5"
- Up to full HD resolution 1920 x 1080 pixel with 16 M colours and dimmable backlight
- PCAP touch screen with multitouch allows gesture control (swipe & zoom)
- Up to three independent ethernet interfaces
- Robust glass front and extended operating temperature range between -20 °C and +60 °C
- Integrated OPC UA Client / Server for data handling and advanced IIOT demands
- Data transfer between different communication protocols
- Supports OPC UA, Modbus, CODESYS V3 ETH and Siemens S5 / S7 communication protocols

	EH-TP705	EH-TP707	EH-TP710	EH-TP715	EH-TP721
Display - Colors	5" TFT 16:9 LED - 16M	7" TFT 16:9 LED - 16M	10.1" TFT 16:9 LED - 16M	15.6" TFT LED - 16M	21.5" TFT LED - 16M
Resolution	800x480, WVGA	800x480, WVGA	1280x800, WXGA	1366x768, HD	1920x1080, full HD

HX-RIO3 Series

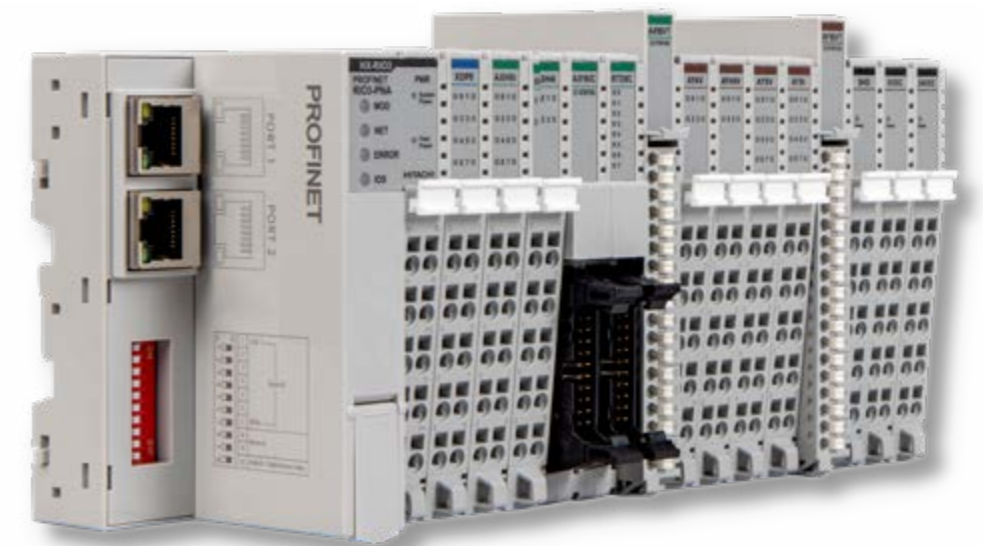
The HX-RIO3 series of Remote I/O modules allows you the flexibility to distribute I/O throughout your application. Using HX-RIO3, you can precisely plan and expand your I/O and locate them right where they are needed: close to the sensors and actuators.



Key Highlights

By mounting I/Os in a junction box directly on or near the machine, you minimize wiring and eliminate the need for further control and cabinets. Hitachi's HX-RIO3 series are designed to use the IEC61131-3 standard and offers convenient programming tools for project planning and commissioning:

- Fieldbus: PROFINET, EtherCAT, Modbus-TCP, Modbus-RTU, Profibus-DP, CANopen
- Standard and light network adapter for cost sensitive applications
- CODESYS based PLC Controllers
- Huge selection of digital IO, analog IO, Power and Special modules
- Support for HMI, OPC-UA applications and SCADA systems
- Standard DIN rail mounting



EtherCAT

PROFI
BUS

CANopen

DeviceNet

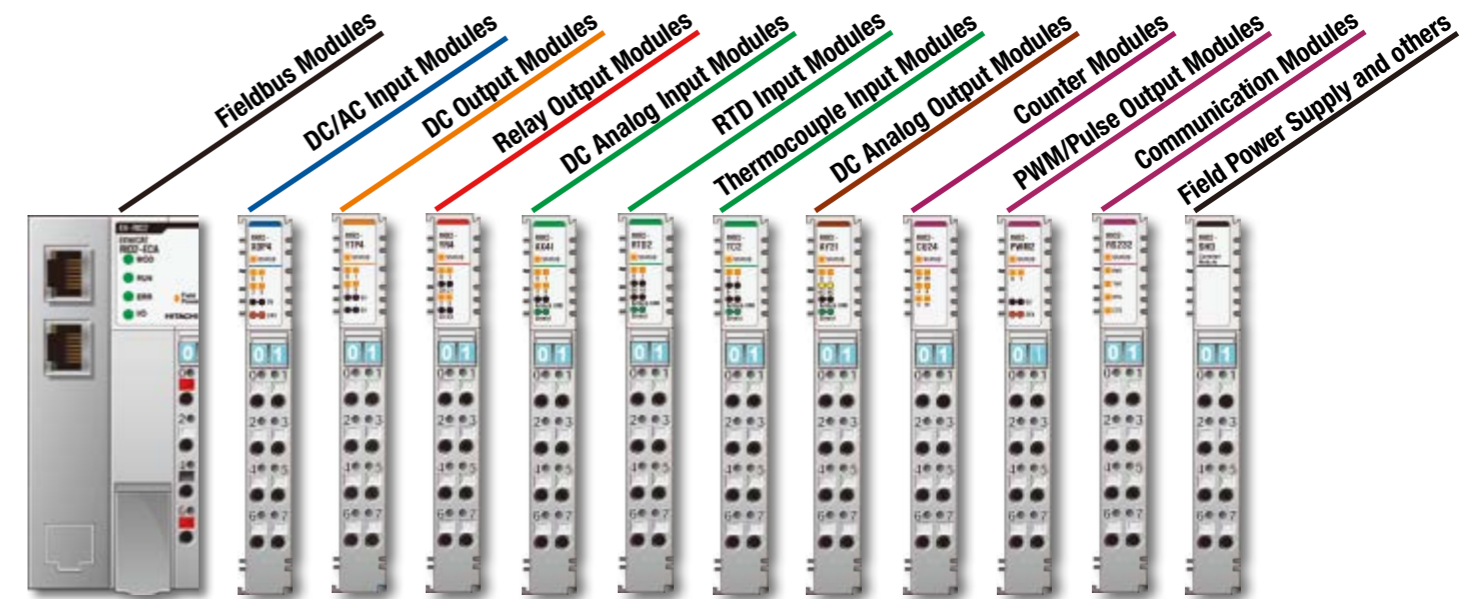
PROFI
NET

Modbus

Special Functions



Expansion Modules



Design Concept

Each I/O assembly consists of the following two components:

1. The I/O modules convert field device signals to control status indicators
2. The removeable terminal block provides 8 separate terminal locations for your field wiring.



Mounting

The I/O modules are mounted on a standard DIN rail, providing easy installation by vertically inserting the modules, without using any additional tools.



Easy Maintenance

Thanks to the incorporated unlock latch, it is possible to remove and replace individual I/O modules without reassembling the complete HX-RIO3 station.



Ease of use

The I/O Modules are equipped by default with the removable terminal block, so the module can be used out-of-the-box without the need for additional accessories.





HITACHI



**Visit our website
for more information.**

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