Model selection

Example: C7GA411CC0D00

Main unit: Basic model No. 1	2	3	Main unit: Communication 4	Main unit: Size 5	I/O: 3, 4 in col. A 6	I/O: 3, 4 in col. B 7	I/O: 1, 2 in col. A 8	I/O: 1, 2 in col. B 9	Other: Option 10	Other: Add'l proc. 11	Other: Add'l spec. 12	Other: Special 13	Description	Slot A3	Slot A4
C	7	G											Multi-loop controller with multifunction display		
			A										Ethernet, RS-485, USB communication, 7 digital I/Os		
				3									Integrated mounting*1		
				4									Standard mounting		
														Slot A3	Slot A4
					1								PV1 (full multi-range)		AI
					2								PV1 (full multi-range) + RSP1 (full multi-range)*2	AI	AI
														Slot B3	Slot B4
						0							None		
						1							PV2 (full multi-range)		AI
						2							PV2 (full multi-range) + RSP2 (full multi-range)*3	AI	AI
														Slot A1	Slot A2
							C						Current output (1 CT & 1 VT input)		AO-C
							V						Voltage pulse output (2 CT inputs)		V-P
							F						Current output (1 CT & 1 VT input) × 2	AO-C	AO-C
							W						Voltage pulse output (2 CT inputs) × 2	V-P	V-P
							N						Current output (1 CT & 1 VT input) + voltage pulse output (2 CT inputs)	V-P	AO-C
														Slot B1	Slot B2
								0					None		
								C					Current output (1 CT & 1 VT input)		AO-C
								V					Voltage pulse output (2 CT inputs)		V-P
								F					Current output (1 CT & 1 VT input) × 2	AO-C	AO-C
								W					Voltage pulse output (2 CT inputs) × 2	V-P	V-P
								N					Current output (1 CT & 1 VT input) + voltage pulse output (2 CT inputs)	V-P	AO-C
								G					Current output (1 CT & 1 VT input) + additional display units	HMI2	AO-C
								H					Voltage pulse output (2 CT inputs) + additional display units	HMI2	V-P
								L					Current output (1 CT & 1 VT input) + clock function (with battery)	Clock	AO-C
								P					Voltage pulse output (2 CT inputs) + clock function (with battery)	Clock	V-P
									0				None		
										0			None		
										D			With inspection report		
										Y			With traceability certification		
											0		CE, KC, and GB		
											A		CE, KC, GB, and UL		
												0	None		
												F	F in Fahrenheit		

Note

Selectable if digit 6 (3, 4 in col. A) is 2.

Note

Selectable if digit 8 (1, 2 in col. A) is V, C, or F.
Selectable if digit 8 (1, 2 in col. A) is C, F, or N.
Selectable if digit 8 (1, 2 in col. A) is V, C, W, or N.
Selectable if digit 8 (1, 2 in col. A) is F.
Selectable if digit 8 (1, 2 in col. A) is W or N.
Selectable if digit 8 (1, 2 in col. A) is F or N.
Selectable if digit 8 (1, 2 in col. A) is C, F, or N.
Selectable if digit 8 (1, 2 in col. A) is V, C, W, or N.
Selectable if digit 8 (1, 2 in col. A) is C, F, or N.
Selectable if digit 8 (1, 2 in col. A) is V, C, W, or N.

Note

Selectable if digit 8 (1, 2 in col. A) is C or F, and digit 9 (1, 2 in col. B) is O, C, or F.

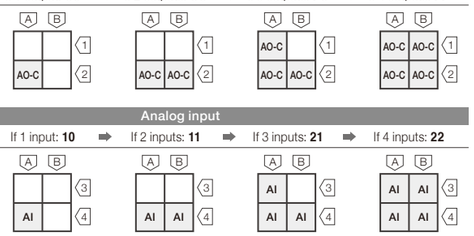
*1. With a rear mounting bracket and cable for connecting display unit.
*2. RSP1 can be switched for use as PV3.
*3. RSP2 can be switched for use as PV4.
*4. Current transformer (CT) and voltage transformer (VT) are sold separately.
*5. Additional display unit is sold separately.

Abbrev.	Block name	Description
AI	Analog input	1 full multi-range (thermocouple, RTD, DC current/voltage) input
V-P	Voltage pulse output	1 12 V DC pulse output and 2 current transformer (CT) input terminals for heater burnout/overcurrent/short-circuit detection*4
AO-C	Analog current output	1 current 4–20 or 0–20 mA DC output, 1 input terminal for current-measuring current transformer (CT), and 1 input terminal for voltage-measuring voltage transformer (VT)*4
HMI2	Second display unit	Connector for second display unit*5
Clock	Clock function	Clock function (for use with compact data storage and Health Index) with battery

■ Model No. recommendations

Current output

Digits 8 & 9 — If 1 output: **C0** ➡ If 2 outputs: **CC** ➡ If 3 outputs: **FC** ➡ If 4 outputs: **FF**

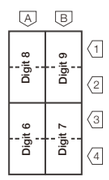


Analog input

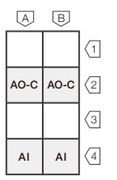
Digits 6 & 7 — If 1 input: **10** ➡ If 2 inputs: **11** ➡ If 3 inputs: **21** ➡ If 4 inputs: **22**

● Sample block implementations for model No. and slot positions

Digits 6–9 & slot positions



Example for C7GA411CC0D00



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Azbil Corporation
Advanced Automation Company

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Kanagawa 251-8522 Japan
URL: http://www.azbil.com

1st Edition : Jul. 2017-SO

azbil

Multi-loop Controller
with Multifunction Display

Model C7G

The next stage in controller evolution

A Significantly Enhanced Role for Digital Indicating Controllers

This PID controller handles up to four loops with a top sampling cycle of 10 ms at an accuracy of 0.1% F.S. In addition, its separable structure, compact data storage, and Health Index™* function make it useful in ways that conventional controllers cannot match.

Multi-loop Controller with Multifunction Display

Model C7G

Meets a variety of needs!

Excellent usability

FEATURE 01

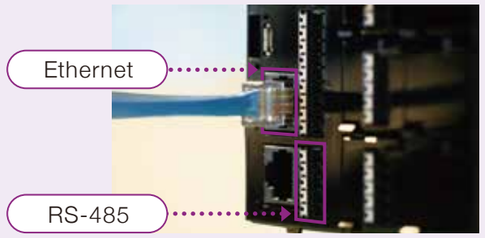
We developed the hardware from the user's viewpoint in order to achieve a high level of usability.

- Better usability and readability of display
- Separable structure
- Screwless-clamp terminal block

Seamless coordination with other equipment maximizes value

FEATURE 02

Ethernet as a standard interface provides high-speed communication with a variety of devices. RS-485 is also a standard feature, allowing improved flexibility in network construction. A PLC link function, which provides an easy Ethernet connection with Mitsubishi Electric's PLC, is also available.

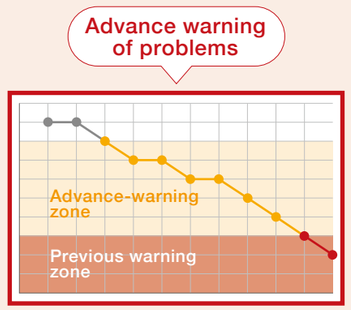


Diagnostic and management information for problem-solving

FEATURE 03

The advanced C7G, in addition to faster and more reliable process control, is capable of detecting warning signs of trouble with connected equipment through the use of its data-processing technology.

- Faster speed
- Compact data storage
- Data processing



Health Index function

*Diagnostic parameters for prediction or detection of production equipment failure (see p. 11 for the Health Index)

Note: Diagrams are for illustrative purposes. The actual product may differ.

Excellent usability

Excellent usability and readability

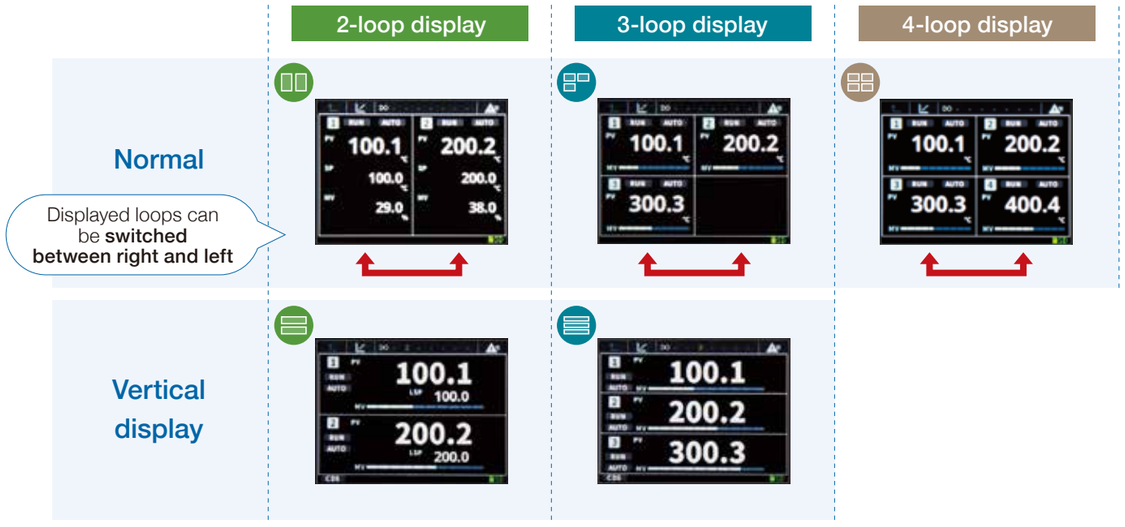
- 3.5-inch full dot matrix LCD offers crystal-clear display of values and graphs during control operation.
- Touch panel provides user-friendly operability. If lost, just press the home button.

Withstands a variety of environments

- Display unit features an IP67 protection rating. Resistance to dust and water drops allows use in a range of environments.
- Resistive touch-panel is easy to operate in cleanrooms, etc., where gloves are worn.

Selectable home screen

One controller handles up to 4 loops. The C7G breaks the single-loop controller mold, allowing user selection of the required number of loops.

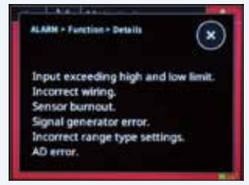


Clarity at a glance— set for full name display of C7G alarms and settings

Parameter settings and controller alarms can be displayed by name rather than by code number, reducing the need to refer to the manual during setup or alarm handling. Both English and Japanese are available, and can be seamlessly switched during operation.

- Sample display 1 -

English
(Controller alarm indication)



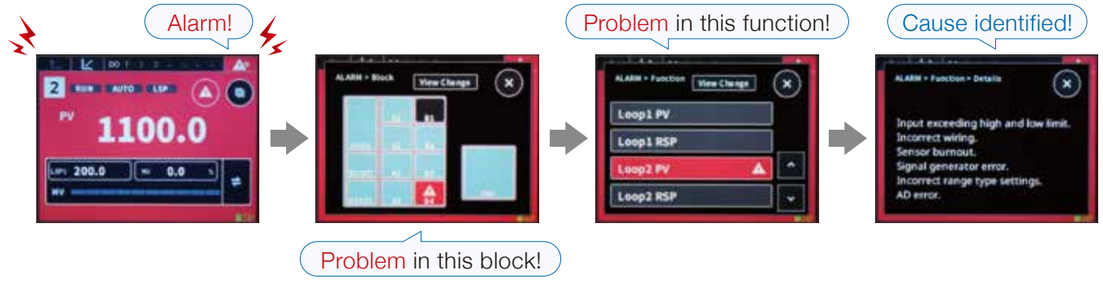
- Sample display 2 -

Japanese
(Parameter settings indication)

Easily identify the cause of alarms

The hierarchical design of the alarm screen allows easy identification of the location and cause of generated alarms.

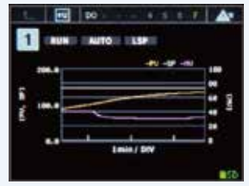
[Example: sensor input error]



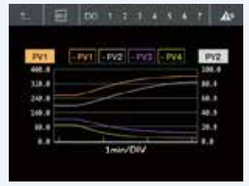
Graphs are helpful in trial-run adjustments

Control status can be conveniently checked on a graph while making trial-run adjustments.

1-loop graph



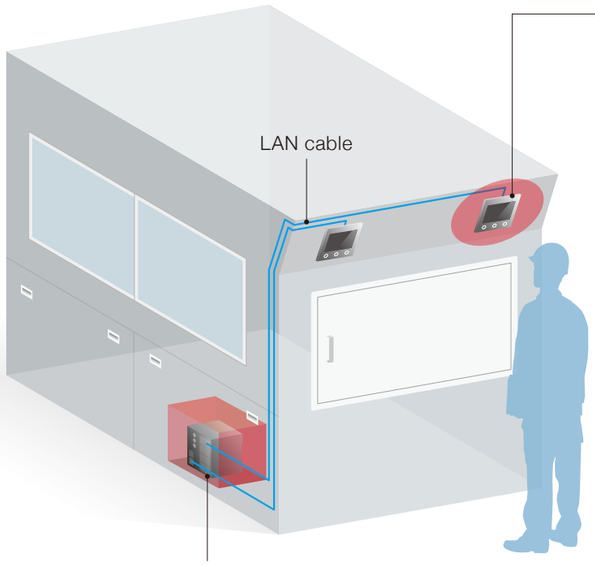
Multi-loop graph



Note: Diagrams are for illustrative purposes. The actual product may differ.

Excellent usability

Separable display allows for flexible positioning.



Display unit

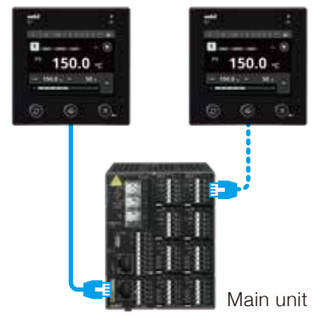
Since power is supplied from the main unit, **no power wiring is needed for a display installed within 30 meters or less.** A separate power supply is required for greater distances (to 100 m max.)

Main unit

Easy DIN-rail mounting.
In addition to reducing the wiring to the panel, this structure greatly improves installation flexibility.

Additional display unit block

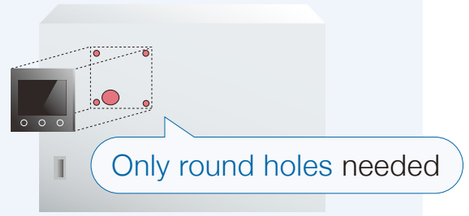
Unlike conventional controllers, a second display can be added.



POINT 01

Simplified panel cutout mounting holes

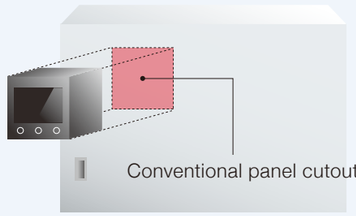
Panel mounting requires only round holes. The tools previously required to make panel cutouts are not needed, allowing much simpler mounting.



POINT 02

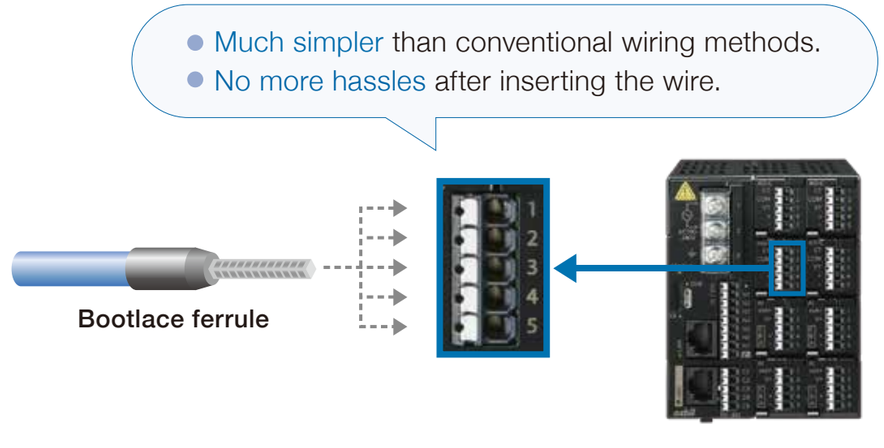
Conventional panel cutouts also OK

As with conventional controllers, integrated mounting of the display unit attached to the main unit is also fine.



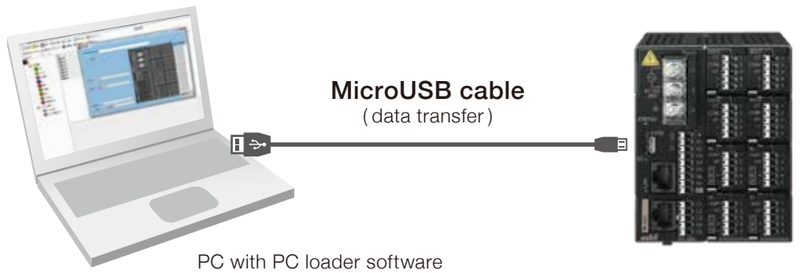
Insert wire. Spring-type terminals are that easy !

Screwless-clamp terminals allow easy wiring by simply inserting the bootlace ferrules. This method achieves simple wiring as well as improved reliability. Furthermore, since there are no screws, there is no need for retorquing.



Configuration without a power supply

Parameters can be loaded and stored with the Smart Loader Package when the main unit is connected to a PC with a MicroUSB* cable.



* MicroUSB-A/-B(USB2.0)

Smart Loader Package*

The free version* of the Smart Loader Package can **be downloaded** from our webpage.

http://www.azbil.com/products/factory/factory-product/controller-recorder/controller/index.html

- Free version (SLP-C7FJ91) Includes configuration, monitoring, and Health Index functions.
- Paid version (SLP-C7-J91) Includes additional functions not available in the free version (advanced monitoring function and Health Index screen).

* Configuration and monitoring software tool

Note: Diagrams are for illustrative purposes. The actual product may differ.

A diversity of built-in functions

Various Functions

High-speed control

Up to 4 loops can be controlled at speeds of up to 10 ms. Ideal for heater control and other high-gain processes that require high-speed control.

Cascade control

Compatible with internal cascade control functions. Especially effective for large-scale process control with slow dynamics.

Broken-line approximation

Equipped **with broken-line approximation function for input and output.** Controllability is improved by utilizing this feature for functions such as non-linear sensor output and output to high-gain actuators.

Resistance value indicated function

When current output to a thyristor is used, together with CT and VT input, **the controller can calculate and indicate the resistance** from the measured current and voltage.

Display unit settings

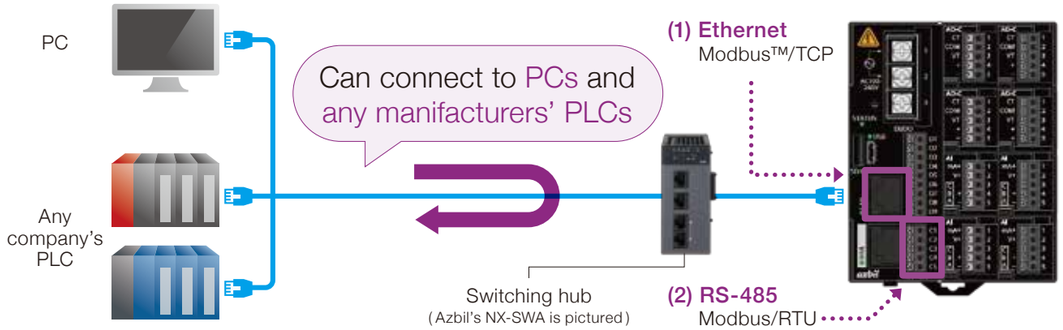
The display can show, separately for each loop, **the units of measurement desired for the application.**

FEATURE 02

Value is maximized by seamless coordination with other equipment

Comes standard with two communication ports

Both Ethernet and RS-485 support is a standard feature. With high-speed (Ethernet) communication and serial (RS-485) communication, a high degree of flexibility is ensured for equipment-internal instrumentation networks and controller-controller instrumentation networks.

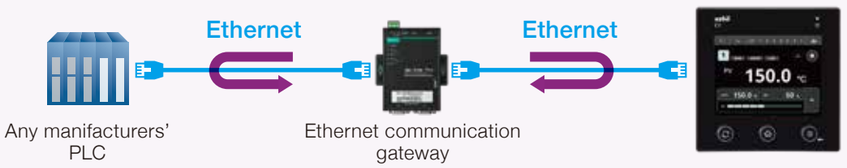


PLC link function

The PLC link function utilizes Ethernet to exchange data with a Mitsubishi Electric PLC (MC Protocol / SLMP) or communication converter(gateway)-less/programming-less controller.

Even easier instrumentation with an NX-MGW Ethernet connection gateway

Our NX-MGW Ethernet communication gateway allows easy instrumentation using Ethernet.



Data transfer can be easily configured by simply setting the source and target devices. Easy setup of data transmission is achieved without requiring communication programs by PLC ladder programming.

Note: For details on the NX-MGW Ethernet communication gateway, please refer to CP-PC-1585E.

Note: Diagrams are for illustrative purposes. The actual product may differ.

Diagnostic and management information for problem-solving

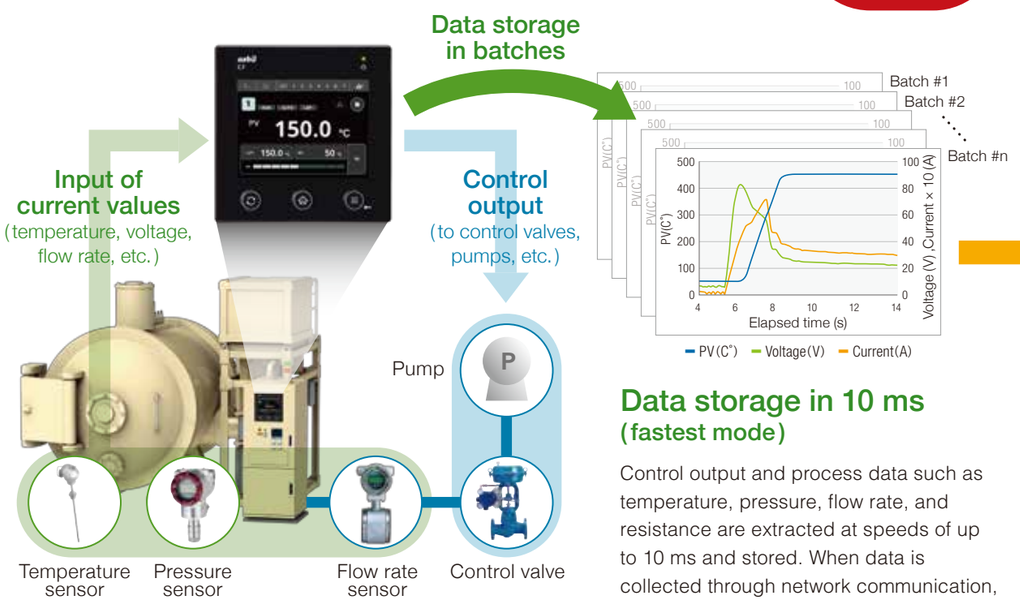
Compact data storage function

Azbil's unique compact data storage function utilizes advanced technology to store data efficiently. Instead of simply storing data at fixed intervals, only the necessary pieces of data are prioritized and stored.

Data processing with the controller's hierarchical structure

Compact data storage (CDS)

Proprietary **data collection** function



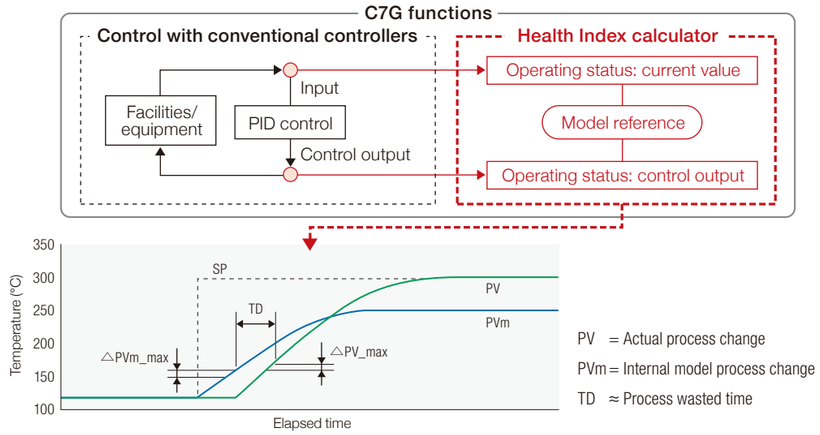
Data storage in 10 ms (fastest mode)

Control output and process data such as temperature, pressure, flow rate, and resistance are extracted at speeds of up to 10 ms and stored. When data is collected through network communication, rapid variations can occur that cause some data to be lost, but the C7G saves data to an SD card so that nothing is lost.

Clock function block (with battery)
Recorded timestamp data is backed up by a battery.

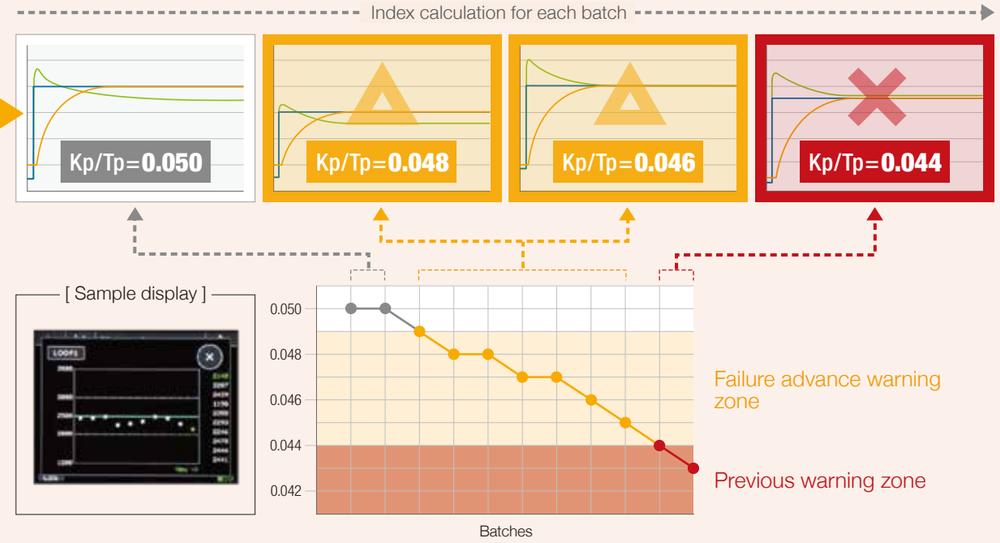
Control loop characteristics are quantified using the process data used for control.

Even if the process value is miniscule, any change in the status of the equipment can be quickly detected.



By comparing the maximum amount of process change in a transient response (ΔPV_max) and the same value for the model installed in the controller (ΔPVm_max), the value of "Gain (Kp) ÷ time constant (Tp)" is calculated as the Health Index (control loop quality). The Health Index is calculated while CDS is activated, and is then stored on the microSD memory card. (Depending on processing conditions, calculation may sometimes not be possible.)

How to use The Health Index is an approximation of loop soundness. By storing data in batches and comparing it with initial values, equipment status changes can be detected **before a failure occurs**.



Processing

Data **collection and extraction**

Data **processing**
The Health Index is based on our proprietary data-processing technology.

Advance warning

Note: Diagrams are for illustrative purposes. The actual product may differ.

Specification

Analog Input Block		Input type	Full multi-range for thermocouple, resistance temperature detector, DC current, and DC voltage	
		No. of control loops	4 loops max. (configurable by the SLP-C7 Smart Loader Package)	
		Range type	See Table of input types and ranges.	
		Sampling cycle	10 ms, 50 ms, 100 ms (factory default: 50 ms)	
		Decimal point position	0 to 4 digits after the decimal point are displayed. Values are displayed so that the entire value does not exceed 5 digits. (Note: Effective resolution depends on the range.)	
	Thermocouple	Cold junction compensation accuracy	±0.5 °C (at an ambient temperature of 23 °C -2/+5 °C)	
		Effects of ambient temperature on reference junction compensation	±1.0 °C (ambient temperature 0 to 50 °C; under standard conditions for other temperatures)	
		Reference junction compensation method	Compensation within the C7G	
	Resistance temperature detector (RTD)	Measuring current	1.0 mA typical (current from terminals A and B; under standard conditions)	
		Allowable wiring resistance	85 Ω max. (per wire)	
	DC voltage DC current	Input bias current	0–10 V range: 10 µA max. (under standard conditions) 1–5 V or 0–5 V range: 5 µA max. (under standard conditions)	
		Maximum allowable input	DC voltage input: –15 to +15 V DC current input: –1.5 to +1.5 V	
		Scaling	–32000 to +32000 U (Max. 5 digits within the above range, max. 4 digits after the decimal point, reverse scaling possible)	
Display unit (included) Additional display (C7D-xxxxxx)		Screen specifications	3.5-inch QVGA LCD	
		Operation buttons	Touch panel (resistive) and three hardware buttons	
		Display power source	If display is less than 30 m of the main unit (display connector/additional display unit block): power is supplied from the main unit If display is 30 to 100 m from the main unit (display connector/additional display unit block): separate 5 V DC power supply is needed	
		Protective rating	IP67 (front of display unit only)	
		Interface language	English/Japanese (switchable by setting)	
		Service life of LCD	5 years (at ambient temperature of 25 °C and brightness setting 4, for half-life of backlight brightness)	
DI (Digital Input)/ DO (Digital Output) block		No. of I/Os	7 max. (select DI/DO/TP by setting), common	
	Digital input	Compatible output type	Non-voltage contacts or open collector (sink type)	
		Function assignment	RUN/READY mode selection, AUTO/MANUAL mode selection, LSP/RSP mode selection, SP group selection, CDS stop/start, etc.	
	Digital output	Output method	Open drain (sink type)	
		Function assignment	Event: PV high / low / high and low limits, deviation high / low / high and low limits, deviation (final SP basis) high / low / high and low limits, alarm status, READY status, MANUAL status, RSP status, etc.	
Control unit		PID Control	Proportional band (P)	0.1 to 3200 % (5 digits max. within the range at the left, 4 digits max. after the decimal point)
			Integral time (I)	0 to 32000 s (5 digits max. within the range at the left, 4 digits max. after the decimal point); No integral calculation if the setting is 0.
			Derivative time (D)	0 to 32000 s (5 digits max. within the range at the left, 4 digits max. after the decimal point); No derivative calculation if the setting is 0.
			Number of PID groups	8 (for each loop)
			PID group selection	SP group interlocking system
			Auto-tuning	PID automatic setting using the limit cycle method
		No. of settings Local SP (LSP)	8 (for each loop)	
Analog current output block	Current output 1	Type	DC 4–20 or 0–20 mA	
		Output type	Control output (MV), process value (PV), set value (SP), etc.	
		Allowable load resistance	600 Ω max.	
		Output resolution	1/16000 min.	
	CT (current) input 1	Recommended current transformer	QN206A (hole diameter: 5.8 mm, 800 turns), QN212A (hole diameter: 12 mm, 800 turns). Note: Not UL-certified	
		Current measurement range	0.4–50.0 A AC, 50/60 Hz (peak current: 71 A, 800 turns, 1 power wire loop)	
	VT (voltage) input 1	Recommended voltage transformer	81406725-003	
		Measuring voltage range	24 to 240 V AC, 50/60 Hz (peak voltage: 339 V , recommended transformer primary side: 200 V, secondary side: 10 V)	
Voltage pulse output block	1 Voltage pulse output	Output voltage	12 V DC, +15/–10 % (under standard conditions)	
		Allowable current	25 mA or less	
	2 CT (current) inputs	Specifications	Same as the CT (current) input of the analog current output block	
Motor drive output block	Relay output OPEN CLOSE	Contact type	1c, 2 circuits (“a” contact side only)	
		Contact rating	250 V AC 2 A (cos Ø = 0.4); 24 V DC 2.5 A (L/R = 0.7 ms)	
		Contact voltage	250 V AC max. / 125 V DC max.	
	Motor feedback input	Allowable potentiometer range	100–2500 Ω (including wiring resistance)	
Clock function block (with battery)		Clock function	Hour/minute/second, calendar (leap-year adjusted)	
		Clock accuracy	Monthly error: less than ±65 s (under standard conditions)	
		Service life	10 years (battery life while OFF; under standard conditions)	
Additional display unit block		No. of connectable units	One unit	
		Connector	RJ-45	

External communication	Ethernet	Transmission line type	IEEE802.3u 100BASE-TX (FastEthernet)-compliant (full duplex)
		No. of connections	3
		No. of physical ports (connectors)	1 (RJ-45)
		Cable	UTP cable (4P) Cat 5e min. (straight) (ANSI/TIA/EIA-568-B both ends)
		Protocol	Modbus/TCP, Mitsubishi Electric SLMP (3E) (for PLC link communication)
	RS-485 communication	Signal level	RS-485 compliant
		Network	Multidrop (up to 31 slave stations for one host station)
		No. of communication wires	3-wire system
		Transmission speed	9600, 19200, 38400, 57600, and 115200 bps
		Protocol	Modbus/RTU
	Loader communication	Dedicated PC loader	SLP-C7FJ91 (free), SLP-C7-J91 (sold separately)
		Cable	USB-MicroUSB (Type-A/-B) cable (5 m max.) or Ethernet cable
		Power supply	When connected with a USB cable, the device can be powered by the PC and parameters can be changed.
Data storage		SD	microSD/SDHC-compliant (4 GB) (for the compact data storage and health index functions)
General specifications		Backup memory	EEPROM (Durability: 1 million erase-write cycles or less), used for parameters settings
		Power consumption	25 VA max. 10 W max.
		Case material	Main unit: Modified PPE (case), polycarbonate (board holder, front mask) Display unit: Modified PPE (case), polycarbonate (back cover), PET film (decorative sheet)
		Case color	Black
		Applicable standards	EN 61010-1 (CE-LVD), EN 61326-1 (CE-EMC), UL/cUL 61010-1 (setting of model No. required), Korean wireless regulations (Radio Waves Act: KC mark) authorization No. MSIP-REM-A2B-A131
		Overvoltage category	Category II (IEC 60364-4-443, IEC 60664-1)
		Installation	Main unit: Mounting on a DIN rail (standard) or on the display unit using the mounting bracket
		Built-in clock accuracy	Monthly error: less than ±140 s (less than ±65 s if the clock function block with battery is used)
	Standard conditions	Ambient temperature	23 °C –2/+5 °C
		Ambient humidity	60 ± 5 % RH
		Power voltage	105 V AC ± 10 %
	Operating conditions	Ambient temperature	0–50 °C, 0–40 °C (when two or more main units are mounted together)
		Ambient humidity	10 to 90 % RH (without condensation)
		Rated power voltage	100 to 240 V AC (operating input voltage: 85 to 264 V AC)
		Mounting angle	Reference plane ±10° for main unit, no restrictions for display unit

Note: For details, refer to specification sheet No. CP-SS-1911E.

Input types and ranges

Input type	Range type Nos.	Sensor	Range	Accuracy	Effective resolution
Thermocouple	1	K	-200 ~ +1,200℃	±0.1%FS±1digit*1	0.1℃
	2	K	0 ~ 1,200℃	±0.1%FS±1digit	0.1℃
	3	K	0 ~ 800℃	±0.1%FS±1digit	0.1℃
	4	K	0 ~ 600℃	±0.1%FS±1digit	0.1℃
	5	K	0 ~ 400℃	±0.1%FS±1digit	0.1℃
	6	K	-200 ~ +400℃	±0.1%FS±1digit*1	0.1℃
	7	K	-200 ~ +200℃	±0.1%FS±1digit*1	0.1℃
	8	J	0 ~ 1,200℃	±0.1%FS±1digit	0.1℃
	9	J	0 ~ 800℃	±0.1%FS±1digit	0.1℃
	10	J	0 ~ 600℃	±0.1%FS±1digit	0.1℃
	11	J	-200 ~ +400℃	±0.1%FS±1digit*1	0.1℃
	12	E	0 ~ 800℃	±0.1%FS±1digit	0.1℃
	13	E	0 ~ 600℃	±0.1%FS±1digit	0.1℃
	14	T	-200 ~ +400℃	±0.1%FS±1digit*1	0.1℃
	15	R	0 ~ 1,600℃	±0.1%FS±1digit*2	0.1℃
	16	S	0 ~ 1,600℃	±0.1%FS±1digit*2	0.1℃
	17	B	0 ~ 1,800℃	±0.2%FS±1digit*3	0.1℃
	20	WRe5-26	0 ~ 1,400℃	±0.1%FS±1digit	0.1℃
	21	WRe5-26	0 ~ 2,300℃	±0.1%FS±1digit	0.1℃
Resistance temperature detector (RTD)	41	Pt100	-200 ~ +500℃	±0.1%FS±1digit	0.1℃
	43	Pt100	-200 ~ +200℃	±0.1%FS±1digit	0.01℃
	45	Pt100	-100 ~ +300℃	±0.1%FS±1digit	0.01℃
	47	Pt100	-100 ~ +200℃	±0.1%FS±1digit	0.01℃
	49	Pt100	-100 ~ +150℃	±0.1%FS±1digit	0.01℃
	51	Pt100	-50 ~ +200℃	±0.1%FS±1digit	0.01℃
	53	Pt100	-50 ~ +100℃	±0.1%FS±1digit	0.01℃
	55	Pt100	-60 ~ +40℃	±0.1%FS±1digit	0.01℃
	57	Pt100	-40 ~ +60℃	±0.1%FS±1digit	0.01℃
	59	Pt100	-10 ~ +60℃	±0.1%FS±1digit	0.01℃
	61	Pt100	0 ~ 100℃	±0.1%FS±1digit	0.01℃
	63	Pt100	0 ~ 200℃	±0.1%FS±1digit	0.01℃
	65	Pt100	0 ~ 300℃	±0.1%FS±1digit	0.01℃
	67	Pt100	0 ~ 500℃	±0.1%FS±1digit	0.1℃
Linear	86	Voltage (V)	1 ~ 5V	±0.1%FS±1digit	1/90000 or better
	87	Voltage (V)	0 ~ 5V	±0.1%FS±1digit	
	88	Voltage (V)	0 ~ 10V	±0.1%FS±1digit	
	89	Current (mA)	0 ~ 20mA	±0.1%FS±1digit	
	90	Current (mA)	4 ~ 20mA	±0.1%FS±1digit	

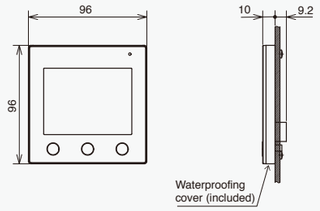
*1. For –200 to 0 °C, ±0.2 % FS ± 1 digit *2. For 0 to 100 °C, ±0.2 % FS ± 1 digit *3. For 0 to 260 °C, ±4 % FS ± 1 digit; for 260 to 800 °C, ±0.4 % FS ± 1 digit

Specification

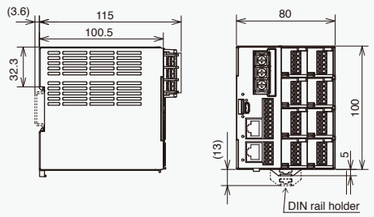
External dimensions and mounting (Unit: mm)

Standard mounting

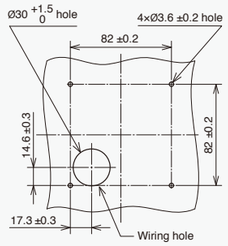
Display unit, additional display unit



Main unit

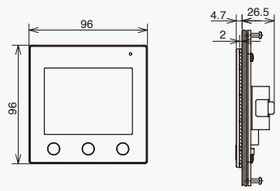


Panel cutout (front)

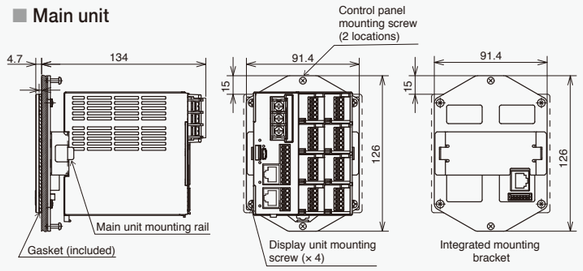


Integrated-mounting

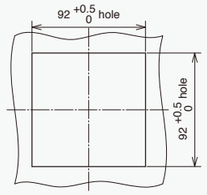
Display unit, additional display unit



Main unit

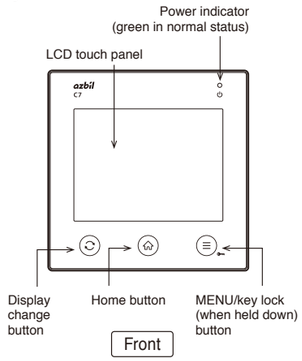


Panel cutout (front)

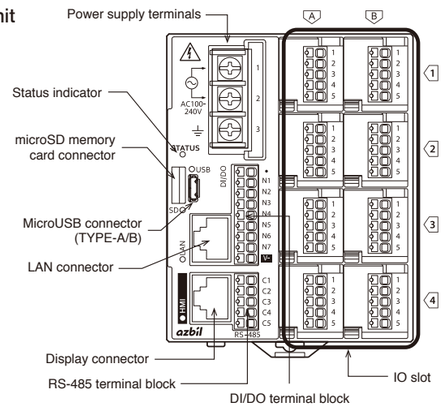


Part names and functions

Display unit



Main unit



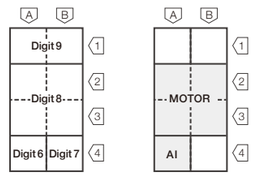
Model No. selection (for motor output)

Example: C7GA410M00D00 Available soon

Main unit: Basic model No. 1	2	3	Main unit: Communication 4	Main unit: Size 5	I/O: 4 in col. A 6	I/O: 4 in col. B 7	I/O: 2 and 3 in cols. A and B 8	I/O: 1 in col. A and B 9	Other: Option 10	Other: Add'l proc. 11	Other: Add'l spec. 12	Other: Special 13	Description		
C	7	G											Multi-loop controller with multifunction display		
			A										Ethernet, RS-485, USB communication, 7 digital I/Os		
				3									Integrated mounting*1		
				4									Standard mounting		
														Slot A4	
					1								PV1 (full multi-range)	AI	
														Slot B4	
						0							None		
						1							RSP1 (full multi-range)*2	AI	
														Slots A2, A3, B2, B3	
							M						Motor drive output (with MFB input)	MOTOR	
														Slot A1	Slot B1
								0					None		
								C					Current output (1 CT & 1 VT input)	AO-C	
								V					Voltage pulse output (2 CT inputs)	V-P	
								N					Current output (1 CT & 1 VT input) + voltage pulse output (2 CT inputs)	AO-C	V-P
								G					Current output (1 CT & 1 VT input) + additional display unit	AO-C	HMI2
								L					Current output (1 CT & 1 VT input) + clock function (with battery)	AO-C	Clock
									0				None		
										0			None		
										D			With inspection report		
										Y			With traceability certification		
											0		CE, KC, and GB		
												0	None		

● Sample block implementations for model No. and slot positions

Digits 6–9 & slot positions



Example for C7GA410M00D00

*1. A rear mounting bracket and a cable for connecting the display unit are included.

*2. RSP1 can be switched for use as PV2.

*3. Current transformer (CT) and voltage transformer (VT) are sold separately.

*4. Additional display unit is sold separately.

Abbrev.	Block name	Description
AI	Analog input	1 full multi-range (thermocouple, RTD, DC current/voltage) input
V-P	Voltage pulse output	1 12 V DC pulse output and 2 current transformer (CT) input terminals for heater burnout/overcurrent/short-circuit detection*3
AO-C	Analog current output	1 current 4–20 or 0–20 mA DC output, 1 input terminal for current-measuring current transformer (CT), and 1 input terminal for voltage-measuring voltage transformer (VT)*3
MOTOR	Motor drive output	Motor drive output (100/200 V AC), normal rotation (OPEN) output and reverse rotation (CLOSE) output, and MFB (motor feedback) input
HMI2	Additional display unit	Connector for second display*4
Clock	Clock function	Clock function (for use with compact data storage and heath index) with battery

Model No. selection (for display unit only)

Example: C7D-400D00

Main unit: Basic model No. 1	2	3	4	Main unit: Installation 5	Other: Option 1 6	Other: Option 2 7	Other: Add'l proc. 8	Other: Add'l spec. 9	Other: Special 10	Description
C	7	D	–							Additional display unit
				3						Integrated mounting
				4						Standard mounting
					0					None
						0				None
							0			None
							D			With inspection report
								0		CE, KC, and GB
									0	None

Optional parts (sold separately)

Part name		Model No.
SLP-C7 Smart Loader Package (free version)*1		SLP-C7FJ91
SLP-C7 Smart Loader Package (paid version)		SLP-C7-J91
Power terminal cover (10 covers included)	*Available soon	81447704-001
Current transformer (dia. 5.8 mm)		QN206A
Current transformer (dia. 12 mm)		QN212A
Voltage transformer (200 V AC)		81406725-003

*1. Downloadable from our website
http://www.azbil.com/products/factory/factory-product/controller-recorder/controller/index.html