

Specifications

PV Input	Type	Input group selectable by model No. (thermocouple, RTD, DC voltage/current).
	Sampling cycle	50, 100, 300, 500 ms
	Indication accuracy	±0.3% FS ±1 digit (thermocouple input) ±0.2% FS ±1 digit (RTD input, DC voltage/current input)
Control Output	Control modes	ON/OFF, time proportional PID, current proportional PID
	Output type (selectable by model No.)	- Relay output: 1c (SPDT) 250 V AC / 30 V DC, 3 A - Voltage pulse output: 19 V DC ±15%, internal resistance 18 Ω, allowable current 24 mA DC max. - Current output: 0-20, 4-20 mA DC, allowable load resistance 600 Ω max.
Event Output	Number of outputs	3 max.
	Output type	Relay output: 1a (SPST)
Digital Input	Number of inputs	2 max.
	Input type	Non-voltage (dry) contacts or open collector
CT Input		2 max.
		Measurement current 0.4-50.0 A, indication resolution 0.1 A
RS-485 Comm.	Protocols	CPL, Modbus compliant or PLC link
	Connectable units	31 max.
	Comm. Speed	38,400 bps max.
General	Ambient temperature	-10 to +55 °C (-10 to +45 °C for tight mounting)
	Rated supply voltage	100-240 V AC, 50/60 Hz
	Power consumption	8 VA max.
	Standards compliance	EN 61010-1, EN 61326-1 (for use in industrial locations), EN IEC 63000
	Protective structure	IP66 (device front panel)
	Mass	130 g (including mounting bracket)

Model Selection

Basic model No.	Installation	Control output	PV input	Power	Options	Add'l proc		Specifications
						1	2	
C11M								Basic model No.
								Screw terminal block
								Control output 1 Control output 2
		R	0					Relay output (C.O. contacts) None
		V	0					Voltage pulse None
		V	C					Voltage pulse Current
		V	V					Voltage pulse Voltage pulse
		C	0					Current None
		C	C					Current Current
			T					Thermocouple input
			R					RTD input
			L					DC voltage/current input
				A				AC power supply (100-240 V)
				0	0			None
				0	1			3 event outputs
				0	2			3 event outputs, 2 CT inputs, 2 DIs
				0	3			3 event outputs, 2 CT inputs, RS-485 comm.
				0	4			2 event outputs (independent contacts)
				0	5			2 event outputs (independent contacts), 2 CT inputs, 2 DIs
				0	6			2 event outputs (independent contacts), 2 CT inputs, RS-485 comm.
				0	9			RS-485 comm.
				0				None
				D				With inspection report
				Y				With traceability certificate
				0				None
				A				UL compatible model

Notes on the use of the PID simulator

- The PID simulator simulates optimal operation of the control system.
- Estimates from the PID simulator may not match actual control results depending on equipment characteristics (such as nonlinearity).
- The PID simulator does not support heating/cooling control.

* For more information, please contact one of our sales representatives.

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<https://www.azbil.com/products/factory/order.html>

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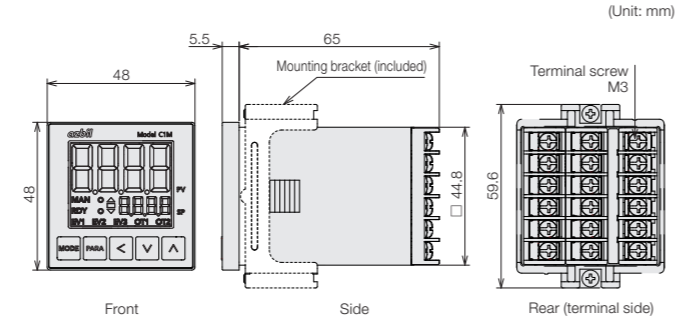
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1st Edition : Feb. 2022-SO
 4th Edition: Apr. 2024-SO

Dimensions



Input Types and Ranges

Sensor	Sensor type	Range	Sensor	Sensor type	Range
Thermocouple	K	-200 to +1200 °C	RTD	Pt100	-200 to +500 °C
		0 to 1200 °C		JPt100	-200 to +500 °C
		0.0 to 800.0 °C		Pt100	-200 to +200 °C
		0.0 to 600.0 °C		JPt100	-200 to +200 °C
		0.0 to 400.0 °C		Pt100	-100.0 to +300.0 °C
		-200.0 to +400.0 °C		JPt100	-100.0 to +300.0 °C
		0.0 to 800.0 °C		Pt100	-50.0 to +200.0 °C
		0.0 to 600.0 °C		JPt100	-50.0 to +200.0 °C
		-200.0 to +400.0 °C		Pt100	-50.0 to +100.0 °C
		0.0 to 600.0 °C		JPt100	-50.0 to +100.0 °C
		-200.0 to +400.0 °C		Pt100	0.0 to 200.0 °C
		0.0 to 1600 °C		JPt100	0.0 to 200.0 °C
		0.0 to 1600 °C		Pt100	0.0 to 500.0 °C
		0.0 to 1800 °C		JPt100	0.0 to 500.0 °C
DC voltage/current	PLII	0 to 1300 °C	0 to 1 V	Scaling from -1999 to +9999 (decimal point position is variable)	
		0 to 1300 °C	1 to 5 V		
		0 to 1400 °C	0 to 5 V		
		0 to 2300 °C	0 to 10 V		
		0 to 1900 °C	0 to 20 mA		
		-200.0 to +400.0 °C	4 to 20 mA		
		-100.0 to +800.0 °C			

Note: 1. The accuracy of the B thermocouple and of the PR40-20 thermocouple differ from the "Indication accuracy" stated in the Specifications.
 2. One decimal place is displayed for ranges that contain fractional values.

- Standards for input sensors**
- Thermocouple K, J, E, T, R, S, B, N: JIS C 1602-2015. PL II: Engelhard Industries documents (ITS90) WRe5-26: ASTM E988-96 (reapproved 2002). DIN U, DIN L: DIN 43710-1985
 - Resistance temperature detector Pt100: JIS C 1604-2013. JPt100: JIS C 1604-1989

Optional Products (sold separately)

Name	Model No.	Note (model No., etc.)
Mounting bracket	84515488-001	For maintenance
Gasket	84515487-001	For maintenance (qty. 20)
Hard cover	84515988-001	
Soft cover	84515985-001	
Terminal cover	84515888-001	
DIN rail mounting bracket	84515986-001	
Current transformer	QN206A	800 turns, hole diameter 5.8 mm
	QN212A	800 turns, hole diameter 12 mm
Smart Loader Package	SLP-C1FJA0	USB loader cable for model C1M (model 81441177-001) included
	SLP-C1FJA1	Without USB loader cable
USB loader cable	81441177-001	USB loader cable

Note: The software can be downloaded for free from our website.
<https://www.azbil.com/products/factory/factory-product/controller-recorder-communication-gateway/controller/index.html>

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Single Loop Controller
 Model C1M



The already proven single loop controller with a worldwide track record has evolved

User-friendly and easy-to-use controller solves process control problems

Large-screen LCD shows control status at a glance.

New features have been added to help with PID adjustment and engineering.

Data at a glance

15.4 mm

Liquid-crystal display

The large 15.4-mm display (about 1.4 times larger than the previous model) shows the process value (PV) in bright white.

This improves visibility in the field.

A variety of other information can be displayed, allowing you to see the process control status at a glance.

[Operation status display]

RUN/READY, AUTO/MANUAL, event output, control output, communication status, SP gradient, auto tuning in progress, and others



Size: 48 x 48 mm (H x W)

All-in-one

Improved smart loader package

Useful in a variety of situations: setup, trial run adjustment, operation check, etc.

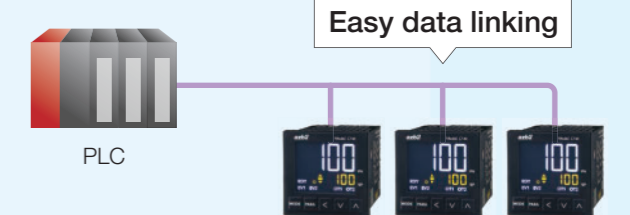
A high-performance PID simulator that brings Azbil's technologies together can also be used as part of this one package.



Quick connection

PLC link function

Data is transmitted by RS-485 serial communication without the need for a communication program, saving you time and engineering work.

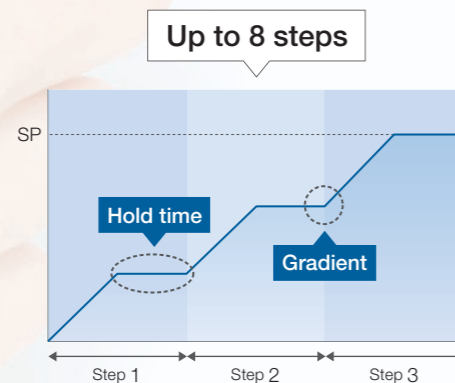


Supported protocol	Connectable model examples
Mitsubishi/QnA-compatible 3C frame model 4	MELSEC iQ-R, MELSEC Q from Mitsubishi Electric
Omron FINS (host link)	CJ2, CP2 from Omron
Modbus™/RTU	KV-8000/7000, KV Nano from Keyence S7-1200 from Siemens AG

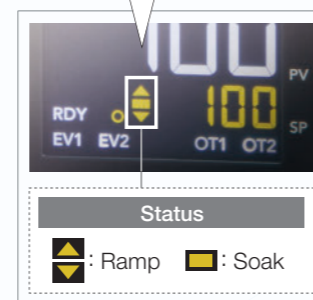
IMPROVED CONTROL FUNCTIONS

Pattern operation

Up to eight set points can be set. Each SP has settings for hold time and gradient, enabling pattern operation with up to 8 steps (16 segments). In addition, the status can be easily checked on the front display.



Sequence status can be checked on the front display.



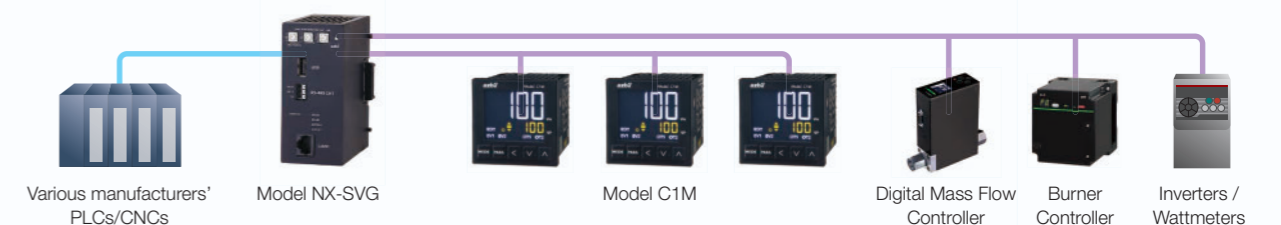
EXAMPLE OF NETWORK EXPANSION

Network Instrumentation Module

Smart Device Gateway*

Model NX-SVG

The model NX-SVG is a multi-vendor IoT gateway that links data between devices connected by Ethernet and RS-485 without the need to create communication programs. Using it in combination with model C1M reduces system development time significantly.



* A communication gateway that allows the interchange of information between various kinds of control device without programming, enabling smarter development work.