Specifications

PV Input	Type	Input group selectable by model No. (thermocouple, RTD, DC voltage/current).
	Range	Refer to "Input Types and Ranges"
	Sampling cycle	50, 100, 300, 500 ms (selectable by setting)
	Indication accuracy	±0.2% FS ±1 digit (RTD input, DC voltage/current input) ±0.3% FS ±1 digit (thermocouple 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: DC 0–20 mA, 4–20 mA (selectable by setting) Allowable load resistance 600 Ω max.
Event Output	No. of outputs	3 max.
	Output type	Relay output: 1a (SPST)
	Event Type	PV high limit, deviation high limit, loop diagnosis, timer, heater disconnection, etc.
Digital Input	No. of inputs	2 max.
	Functions	Auto/manual changeover, run/ready changeover, LSP set selection, PID set selection, etc.
CT Input	Compatible current transformers	2 inputs max. Separate purchase: CT model QN206A or QN212A
RS-485 Comm.	Protocols	CPL, Modbus/RTU compliant
	No. of connectable units	31 units max.
	Communication speed	38,400 bps max.
Loader Port	Connection type	USB loader cable (model 81441177-001)
	Cable length	2 m max.
General	Ambient temperature	–10 to +55 °C (–10 to +45 °C for tight mounting)
	Supply voltage	100–240 V AC, 50/60 Hz
	Power consumption	8 VA max.
	Standards compliance	EN 61010-1, EN 61326-1
	Protective structure	IP66 (front panel)
	Mass	130 g (including mounting bracket)

Model Selection

Basic model No.	Installation	Control output	PV input	Power	Options	Add'l proc 1	Add'l proc 2	Specifications	
C1M								Basic model No.	
	T							Screw terminal block	
								Control output 1	Control output 2
		R0						Relay output (C.O. contacts)	None
		V0						Voltage pulse	None
		VC						Voltage pulse	Current
		VV						Voltage pulse	Voltage pulse
		C0						Current	None
		CC						Current	Current
			T					Thermocouple input	
			R					RTD input	
			L					DC voltage/current input	
				A				AC power supply (100–240 V)	
					00			None	
					01			3 event outputs	
					02			3 event outputs, 2 CT inputs, 2 DIs	
					03			3 event outputs, 2 CT inputs, RS-485 comm.	
					04			2 event outputs (independent contacts)	
					05			2 event outputs (independent contacts), 2 CT inputs, 2 DIs	
					06			2 event outputs (independent contacts), 2 CT inputs, RS-485 comm.	
					09			RS-485 comm.	
						0		None	
						D		With inspection report	
						Y		With traceability certificate	
							0	None	
							A	UL compatible model *Available soon	

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.

Please read "Terms and Conditions" from the following URL before ordering and use.
https://www.azbil.com/products/factory/order.html

Azbil Corporation
Advanced Automation Company

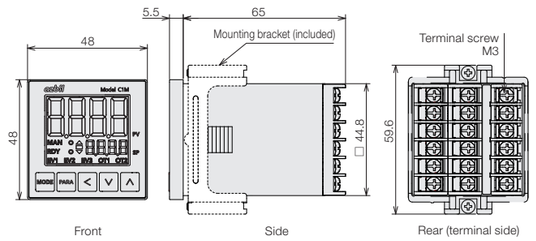
1-12-2 Kawana, Fujisawa
Kanagawa 251-8522 Japan

URL: https://www.azbil.com

1st Edition : Feb. 2022-SO
3rd Edition: Jun. 2023-SO

Dimensions

(Unit: mm)



Input Types and Ranges

Sensor	Sensor type	Range
Thermocouple	K	-200 to +1200 °C
		0 to 1200 °C
		0.0 to 800.0 °C
		0.0 to 600.0 °C
		0.0 to 400.0 °C
		-200.0 to +400.0 °C
	J	0.0 to 800.0 °C
		0.0 to 600.0 °C
		-200.0 to +400.0 °C
	E	0.0 to 600.0 °C
	T	-200.0 to +400.0 °C
	R	0 to 1600 °C
	S	0 to 1600 °C
	B	0 to 1800 °C
	N	0 to 1300 °C
	PLII	0 to 1300 °C
	WRe5-26	0 to 1400 °C
		0 to 2300 °C
	PR40-20	0 to 1900 °C
	DIN U	-200.0 to +400.0 °C
	DIN L	-100.0 to +800.0 °C

Sensor	Sensor type	Range
RTD	Pt100	-200 to +500 °C
	JPt100	-200 to +500 °C
	Pt100	-200 to +200 °C
	JPt100	-200 to +200 °C
	Pt100	-100.0 to +300.0 °C
	JPt100	-100.0 to +300.0 °C
	Pt100	-50.0 to +200.0 °C
	JPt100	-50.0 to +200.0 °C
	Pt100	-50.0 to +100.0 °C
	JPt100	-50.0 to +100.0 °C
	Pt100	0.0 to 200.0 °C
	JPt100	0.0 to 200.0 °C
	Pt100	0.0 to 500.0 °C
	JPt100	0.0 to 500.0 °C
DC voltage/ current	0 to 1 V	Scaling from –1999 to +9999 (decimal point position is variable)
	1 to 5 V	
	0 to 5 V	
	0 to 10 V	
	0 to 20 mA	
	4 to 20 mA	

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

Software and Software-Related Items (Sold Separately)

Model No.	Name & Specification
SLP-C1FJA0	Smart loader package (USB loader cable included)
81441177-001	USB loader cable
81441057-001	L-shaped plug adapter

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

Optional Devices (Sold Separately)

Model No.	Name & Specification
84515488-001	Mounting bracket
84515487-001	Gasket (qty. 20)
84515988-001	Hard cover
84515985-001	Soft cover
84515888-001	Terminal cover
84515986-001	Panel mounting bracket for DIN rail
QN206A	Current transformer (800 turns, hole dia. 5.8 mm)
QN212A	Current transformer (800 turns, hole dia. 12 mm)

azbil

Single Loop Controller

Model C1M

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

Azbil Corporation

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

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]

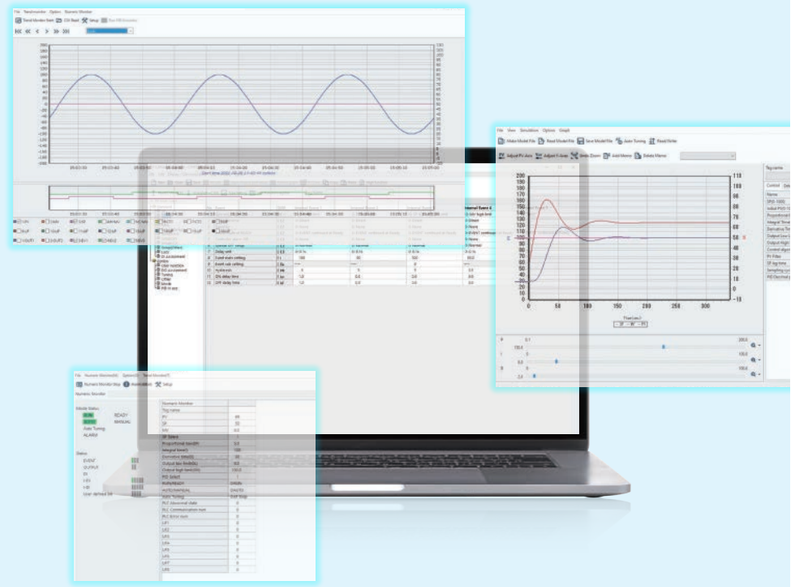
RUN/READY, AUTO/MANUAL, event output, control output, communication status, SP gradient, auto tuning in progress, and others

Size: 48 × 48 mm (H × W)

All-in-one

Improved smart loader package

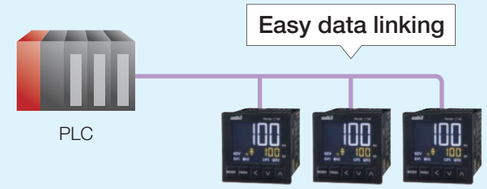
Useful in a variety of situations: setup, trial run adjustment, operation check, etc.
A high-performance PID simulator that brings Azbil's technologies together can also be used as part of this one package.



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.

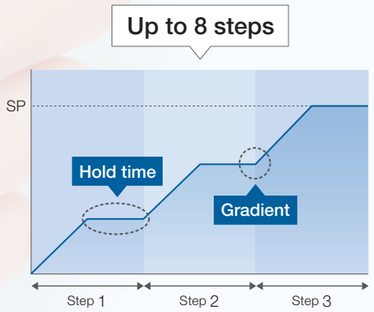


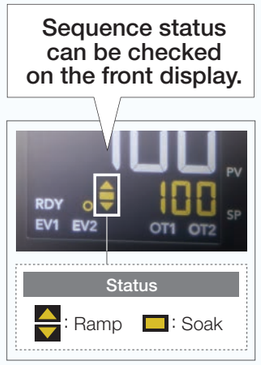
Supported protocol	Connectable model examples
Mitsubishi/QnA-compatible 3C frame model 4	MELSEC iQ-R, MELSEC Q from Mitsubishi Electric
Omron FINS (host link)	CJ2, CP2 from Omron
Modbus™/RTU	KV-8000/7000, KV Nano from Keyence S7-1200 from Siemens AG

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.

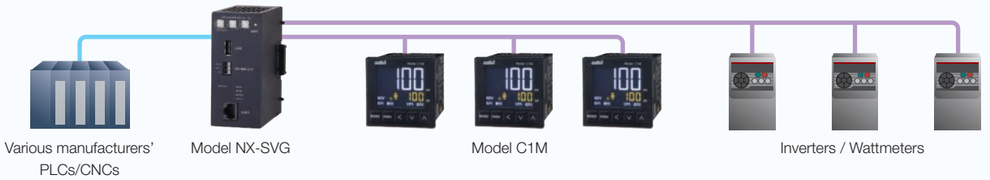




EXAMPLE OF NETWORK EXPANSION

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.