Digital Counter/Tachometer
H7CC

New and improved design for easier use, programming, maintenance and user feedback
The improved user interface is intuitive and offers better overall visibility. Replacement time notification function notifies the user of potential preventive maintenance

Basic Features
- The white-color display offers better visual clarity and visibility, and the color universal design is used.
- Up/Down Keys are provided for all six digits, which reduces the number of button operations during setup and other processes.
- An easy operation is realized by the operation guide on which each key lights up.
- The progress can be easily understood at one glance from the status indicators of the present value and the measurement value.
- The body depth of all models with screw terminals has been reduced to 59 mm.

Safety and Reliability
- The replacement time is notified in advance by predicting the service life.
- The power supply circuit and input circuits are isolated in all models, and therefore, there is no need of any wiring restrictions.
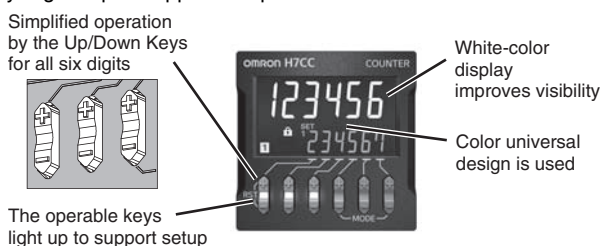
Other Features
- Follows the ratings, characteristics, and functionality of the H7CX-N.
- Equipped with the Output Allocation and Output ON/OFF Inversion Function.
- Equipped with a Memory Backup and H7AN Compatibility Function to facilitate problem-free conversion from H7CN/H7AN.

NEW

For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

⚠ Refer to *Safety Precautions* page 61.
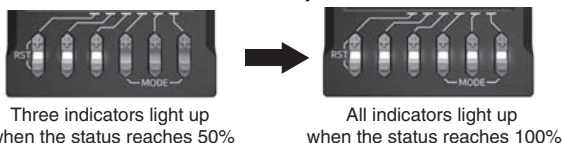
Features

Basic Features
Better visual feedback and operation
The white-color display offers better visual clarity and visibility, and the color universal design is used. The keys of all six digits can be operated up/down for easier use. The LED indicator of the operable keys lights up to support setup.

Simplified operation by the Up/Down Keys for all six digits

White-color display improves visibility

Color universal design is used

The operable keys light up to support setup

Status Notification by Status Indicator
The status can be indicated by the ratio of the present value or measurement value to the set value, which makes it easy to understand the status.

Three indicators light up when the status reaches 50%

All indicators light up when the status reaches 100%

Shortened Body
The body depth of all models with screw terminals has been reduced to 59 mm, which contributes to thinner control panels!

Models with Screw Terminals: 59 mm

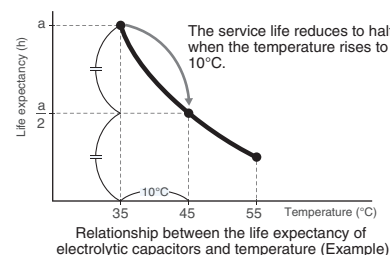Models with Sockets: 63.7 mm (case dimension)

New models Previous models
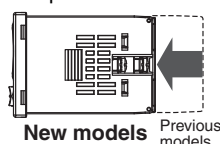
Safety and Reliability
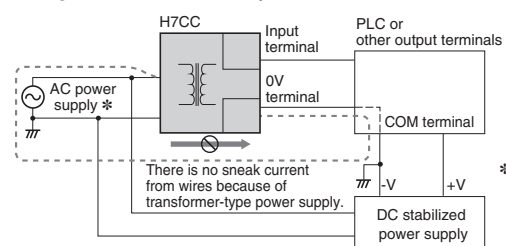### Notification of Replacement Time
The service life prerequisites of the counter include the relay output count and the deterioration of the electrolytic capacitors. In the H7CC, in addition to the relay output count, an alarm is displayed when the deterioration of electrolytic capacitors due to the cumulative run time reaches the standard value, and planned maintenance is supported.

Note: For details, refer to *Replacement Time Notification Function* on pages 41 and 57.

The service life reduces to half when the temperature rises to 10°C.

Life expectancy (h)

10°C

35   45   55   Temperature (°C)

Relationship between the life expectancy of electrolytic capacitors and temperature (Example)

Isolated Power Supply and Input Circuits
In all models, the power supply circuit and input circuits are isolated. Previous non-isolated counters had wiring restrictions and could be damaged if wired incorrectly. The H7CC removes these worries.

H7CC

Input terminal

0V terminal

PLC or other output terminals

COM terminal

AC power supply ✱

There is no sneak current from wires because of transformer-type power supply.

-V   +V

DC stabilized power supply

✱ Grounding of AC power supply implies grounding at the commercial power supply side.

Other Features

### Equipped with a Key Protect Function
Any abnormality in the device due to malfunctioning or setting errors can be prevented.

Follows the Ratings, Characteristics, and Functionality of the H7CX-N
The H7CC follows the ratings, characteristics, and functionality of the H7CX-N. Other than the H7CC-A8□, all models are equipped with power supply to external devices, which reduces the load on wiring.

Output Allocation Function
The allocation of outputs 1 and 2 (OUT1 and OUT2) can be changed. In the conventional 2-stage output models, output 1 (OUT1) was fixed as SPST, and output 2 (OUT2) was fixed as SPDT, however, in the H7CC, the allocation of outputs 1 and 2 (OUT1 and OUT2) can be changed to SPST or SPDT, which reduces the man-hours involved when it is necessary to change the wiring.
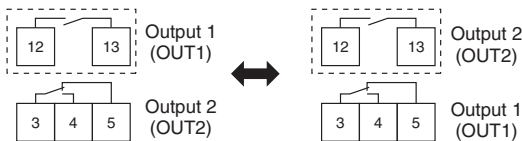
Output ON/OFF Inversion Function
Conventionally, the output turns ON when the set value is reached, however, when this function is used, the output can be turned OFF when the set value is reached. As a result, the man-hours involved in checking the wiring can be reduced.

Memory Backup Function
Conversion from the H7CN/H7AN is supported by enabling the setting of the present value and the output state memory backup.

H7AN Compatibility Function
Conversion from the H7AN is supported by enabling the setting to start counting from 999999 when the present value being decremented exceeds 0.

Model Number Structure

Model Configuration

H7CC Series			
	H7CC-A Series Digital Counter		**H7CC-R Series Digital Tachometer**
Model			
Classification	Preset counter	Preset counter/Tachometer	Tachometer
Model	H7CC-A□	H7CC-AW□/AU□	H7CC-R11□	H7CC-R11W□

Function	**1-stage preset counter**	Yes	Yes	No
	2-stage preset counter	No	Yes	No
	Total and preset counter	Yes	Yes	No
	Batch counter	No	Yes	No
	Dual counter	No	Yes	No
	Twin counter	No	Yes	No
	Tachometer	No	Yes *	Yes

Tachometer Input	---	1 input or 2 inputs (independent measurements, differential, absolute ratio value and error ratio value)	Yes 1 input	Yes 2 inputs (independent measurement only)
Settings	1-stage	2-stage	1-stage	
External connections	8-pin socket, 11-pin socket, Screw terminals	Screw terminals	11-pin socket	
Display digits	6 digits			

* Set the tachometer input mode from the function setting mode to switch to the tachometer function.

Model Number Legend (Not all possible combinations of functions are available.)

H7CC-☐☐☐☐☐
1 2 3 4 5

1. Type

Symbol	Meaning
A	Standard type
R	Tachometer

2. External connections

Symbol	Meaning
None	Screw terminals
8	8-pin socket
11	11-pin socket

3. Settings

Symbol	Meaning
None	1-stage setting
W	2-stage setting ✻
U	1-stage contact+1-stage Solid state

✻ The H7CC-R11W☐ is a 1-stage (2 inputs and outputs) rather than a 2-stage counter.

4. Output type

Symbol	Meaning
None	Contact output
S	Transistor output

5. Supply voltage

Symbol	Meaning
None	100 to 240 VAC at 50/60 Hz
D	24 VAC 50/60 Hz/12-48 VDC

Ordering Information

List of Models

Type	Classification	Configuration	External connections	Settings	Display digits	Outputs	Power supply voltage	Model
H7CC-A Series	Preset counter	• 1-stage preset counter • Total and preset counter	8-pin socket	1-stage	6 digits	Contact output (SPST)	100 to 240 VAC	H7CC-A8
							24 VAC/ 12 to 48 VDC	H7CC-A8D
			11-pin socket			Contact output (SPDT)	100 to 240 VAC	H7CC-A11
						Transistor output (SPST)		H7CC-A11S
						Contact output (SPDT)	24 VAC/ 12 to 48 VDC	H7CC-A11D
						Transistor output (SPST)		H7CC-A11SD
			Screw terminals			Contact output (SPDT)	100 to 240 VAC	H7CC-A
						Transistor output (SPST)		H7CC-AS
						Contact output (SPDT)	24 VAC/ 12 to 48 VDC	H7CC-AD
						Transistor output (SPST)		H7CC-ASD
	Preset counter/ Tachometer	• 1-stage preset counter • 2-stage preset counter • Total and preset counter • Batch counter • Dual counter • Twin counter • Tachometer		2-stage		Contact output (SPST+SPDT)	100 to 240 VAC	H7CC-AW
						Transistor output (DSPT)		H7CC-AWS
						Contact output (SPST+SPDT)	24 VAC/ 12 to 48 VDC	H7CC-AWD
						Transistor output (DSPT)		H7CC-AWSD
						Contact output (SPDT) + Transistor output (SPST)	100 to 240 VAC	H7CC-AU
							24 VAC/ 12 to 48 VDC	H7CC-AUD
H7CC-R Series	Tachometer	• Tachometer	11-pin socket	1-stage (1 input and output)		Contact output (SPDT)	100 to 240 VAC	H7CC-R11
							24 VAC/ 12 to 48 VDC	H7CC-R11D
				1 stage (2 inputs and outputs)		Contact output (SPDT+SPST)	100 to 240 VAC	H7CC-R11W
							24 VAC/ 12 to 48 VDC	H7CC-R11WD

Accessories (Order Separately)

Soft Cover

Model	Remarks	Page
Y92A-48F1	---	12

Hard Cover

Model	Remarks	Page
Y92A-48	---	12

Flush Mounting Adapter

Model	Remarks	Page
Y92F-30	Included with models with screw terminals.	12
Y92F-45	Use this Adapter to install the Counter/ Tachometer in a cutout previously made for a DIN 72 × 72 mm device (panel cutout: 68 × 68 mm).	

Waterproof Packing

Model	Remarks	Page
Y92S-P6	Included with models with screw terminals.	12

Connection Sockets

Model	Classification	Connectable Counter/ Tachometers	Remarks	Page
P2CF-08	Front-connecting Socket	H7CC-☐8	---	13
P2CF-08-E	Front-connecting Socket (Finger-safe Type)		Round crimp terminals cannot be used on Finger-safe Sockets. Use forked crimp terminals.	
P3GA-08	Back-connecting Sockets		A Y92A-48G Terminal Cover can be used with the Socket to create a finger-safe construction.	
P2CF-11	Front-connecting Socket	H7CC-☐11	---	
P2CF-11-E	Front-connecting Socket (Finger-safe Type)		Round crimp terminals cannot be used on Finger-safe Sockets. Use forked crimp terminals.	
P3GA-11	Back-connecting Sockets		A Y92A-48G Terminal Cover can be used with the Socket to create a finger-safe construction.	

Terminal Covers for P3GA-11 Back-connecting Socket

Model	Remarks	Page
Y92A-48G	---	14