

H7CC-A□ Digital Counter

INSTRUCTION MANUAL

Thank you for purchasing the OMRON Product. To ensure the safe application of the Product, read this manual carefully before using the Product and always keep it close at hand when the Product is in use.

OMRON Corporation ©All Rights Reserved 5639664-5C (Side-A)

For details, refer to the latest datasheet.

Suitability for Use

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of the products in the customer's application or use of the product.

SAFETY PRECAUTIONS

Keys to Warning Symbols

Indicates a potentially hazardous situation which, if not avoided, is likely to result in minor or moderate injury or in property damage.

CAUTION

Do not allow pieces of metal, wire clippings, or fine metallic shavings or fillings from installation to enter the product. Doing so may occasionally result in electric shock, fire, or malfunction.

Minor injury due to explosion may occasionally occur. Do not use the Counter where subject to flammable or explosive gas.

Fire may occasionally occur. Tighten the terminal screws to the rated torque.

H7CC terminals and P3GA-11/P3G-08 Socket terminals: 6.55 to 7.97 lb-in (0.74 to 0.90 N-m) P2CF Socket terminals: 4.4 lb-in (0.5 N-m)

Minor injury due to electric shock may occasionally occur. Do not touch any of the terminals while power is being supplied. Be sure to mount the terminal cover after wiring.

The life expectancy of the output relay varies considerably according to its usage. Use the output relay within its rated load and electrical life expectancy. If the output relay is used beyond its life expectancy, its contacts may become fused or there may be a risk of fire.

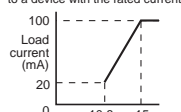
Minor electric shock, fire, or malfunction may occasionally occur. Do not disassemble, modify, or repair the Counter or touch internal components.

Precautions for Safe Use

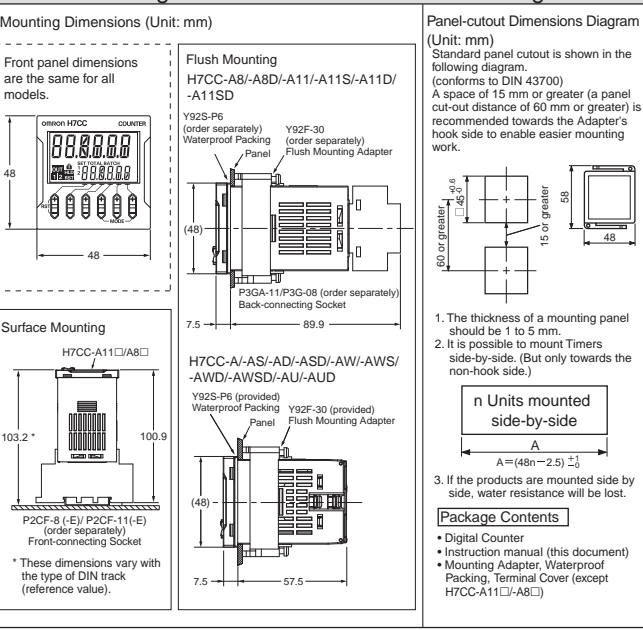
- 1) When mounting the Counter to a panel, tighten the two mounting screws alternately, a little at a time, so as to keep them at an equal tightness. If the panel screws are tightened unequally, water may enter the panel.

Precautions for Correct Use

- 1) Read this manual carefully before using the product. 2) An inrush current of approx. 10 A will flow for a short time when the power supply is turned ON.



Mounting and Panel-cutout Dimensions Diagram



Ratings (Specifications)

Table with 2 columns: Rating/Specification and Value. Includes Power supply voltage, Allowable voltage fluctuation range, Power consumption, Operating temperature range, Storage temperature range, Operating humidity range, etc.

Nomenclature

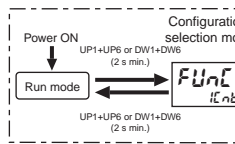
Nomenclature section including a diagram of the counter with numbered callouts (1-13) and a list of functions: Present Value, Set Value, Hold Display, etc.

Precautions for Compliance with UL Standards and CSA Standards

Notice to Users of the H7CC in the USA and Canada. Please use the following installation information instead of the general information in the instruction manuals in order to use the product under certified conditions in the USA and Canada.

Step 1

The H7CC is a Counter that contains more than one functional counter. When using the Counter in any modes other than the default modes listed in Table 2, use the following chart to enter configuration selection mode and then refer to Table 1 and set the functions that are suitable to the application.



Operating Procedures

Table 1 Configuration Selection Mode Settings

Table 1: Configuration Selection Mode Settings. Columns: Display, Function. Rows: 1-stage preset counter, 2-stage preset counter, Total and preset counter, etc.

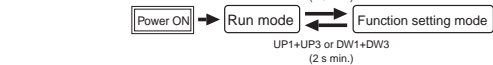
Table 2 Default Modes and Selectable Functions

Table 2: Default Modes and Selectable Functions. Columns: Model, Default mode, Selectable mode. Rows: H7CC-AW, H7CC-AU, Other models.

Operation as a Counter (1-stage Preset Counter, 2-stage Preset Counter, Total and Preset Counter, Batch Counter, Dual Counter, or Twin Counter)

Step 2

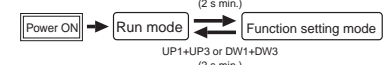
Note: Refer to the datasheet for detailed parameter settings. Change from RUN Mode to Function Setting Mode. Set the parameters using the UP Key or DOWN Key.



Operation as a Tachometer

Step 2

Note: Refer to the datasheet for detailed parameter settings. Change from RUN Mode to Function Setting Mode. Set the parameters using the UP Key or DOWN Key.



Function setting mode table. Columns: Display, Parameter name, Set value, Comments. Rows: Output mode, Counting speed, Prescale value, etc.

Function setting mode table (continued). Columns: Display, Parameter name, Set value, Comments. Rows: Output OFF delay, Key protect level, Output 1 inversion, etc.

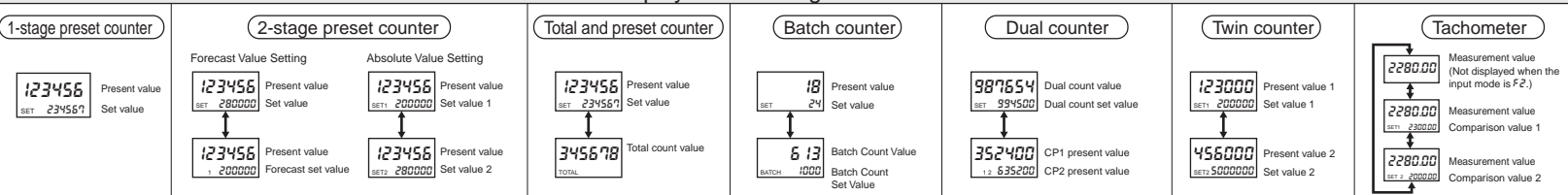
*1: When using Dual Counter operation. *2: Set each digit using the individual UP and DOWN Keys for the following configuration selection modes.

Configuration selection modes table. Columns: Mode, Set value, Comments. Rows: 2-stage Preset Counter, Batch Counter, Twin Counter.

*1: When the tachometer input mode is F2 (2 inputs), set tachometer output modes 1 and 2 using the UP or DOWN Key.

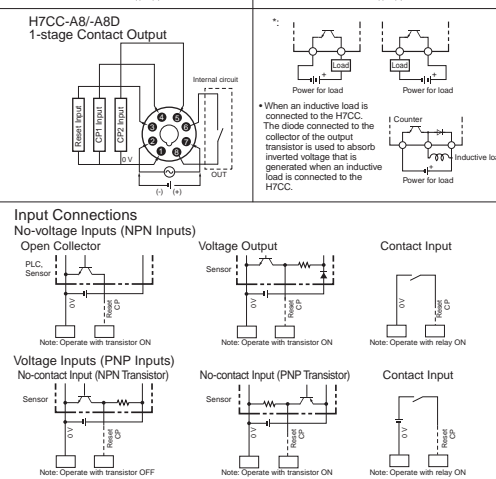
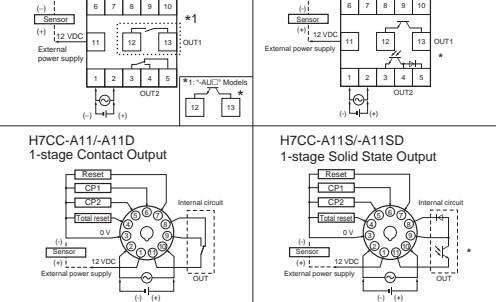
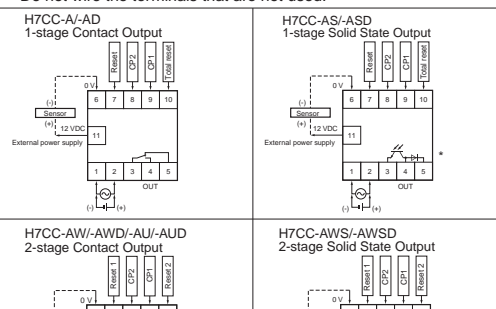
*2: Even if 10 kHz is selected when the tachometer input mode is F2 to F5, the counting speed will be 5 kHz.

Displays and Settings in Run Mode



Terminal Arrangement

- Wire properly after checking the specifications of the power supply voltage. • Do not wire the terminals that are not used.



Key-protect Switch Settings

When the key-protect switch is ON, ON (enable) individual key operations can be disabled to prevent setting errors according to the key protect levels (KP-1 to KP-7) shown in the following table.

Table with 5 columns: Level, Mode change, Display change in the run mode, Reset operation, UP/DOWN Key. Rows: KP-1 to KP-7.

* Changing mode to configuration selection mode or function setting mode.

Self-diagnostic Functions

Table with 5 columns: Main display, Sub-display, Description, Output status, Correction method, Set value after reset. Rows: Error codes like 4, 5, 6, 7, 8.

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形 H7CC-A 電子カウンタ

取扱説明書

オムロン製品をお買い上げいただきありがとうございます。この製品を安全に正しく使用していただくために、お使いになる前にこの取扱説明書をお読みになり、十分にご理解ください。

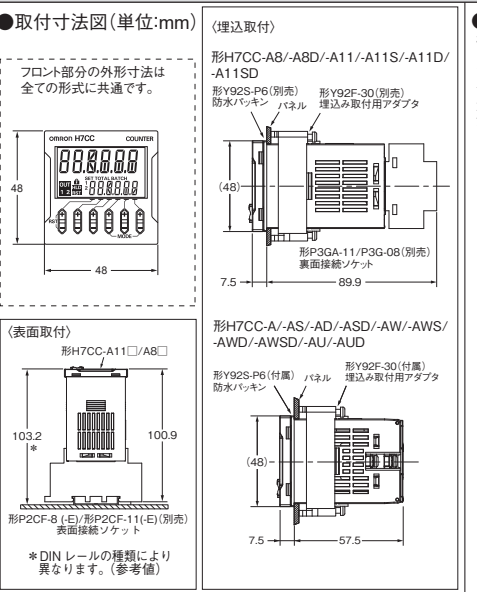
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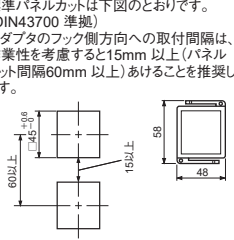
ご承諾事項

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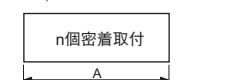
取付およびパネル加工寸法図



パネル加工寸法図(単位:mm)



注1. 取付パネルの板厚は1~5mmが適当です。注2. アダプタの取付により密着取付が可能です。



注3. 密着取り付け時は、耐水性が失われます。梱包内容: 製品本体、取扱説明書(本紙)、取付アダプタ、防水パッキン、端子カバー。

安全上のご注意

警告表示の意味

正しい取扱いをしなければ、この危険のために、時に軽傷・軽度の傷害をおったり、あるいは物的損害を受ける恐れがあります。

軽度の感電、発火、機器の故障が稀に起こる恐れがあります。製品の中に金属、導線または、取り付け加工中の切粉などが入らないようにしてください。

爆発により稀に軽度の傷害の恐れがあります。引火性、爆発性ガスのある所では使用しないでください。

発火が稀に起こる恐れがあります。端子ねじは下記の規定トルクで締めてください。H7CC本体端子およびP3GA-11/P3G-08ソケット端子: 6.55 ~ 7.97 Lb-In(0.74 ~ 0.90 N・m)

感電により軽度の傷害が稀に起こる恐れがあります。通電中は端子に接触しないでください。また、配線後、必ず端子カバーを取り付けてください。

出力リレーの寿命は、開閉容量、開閉条件により大きく異なるので必ず実使用条件を考慮し、定格負荷、電気的寿命回数内でご使用ください。また、負荷電流は必ず定格以下でご使用いただき、ヒータ等を使用する場合は、必ず負荷回路にサーモスタットを装着してください。

軽度の感電、発火、機器の故障が稀に起こる恐れがあります。分解、改造、修理したり、内部に触らないでください。

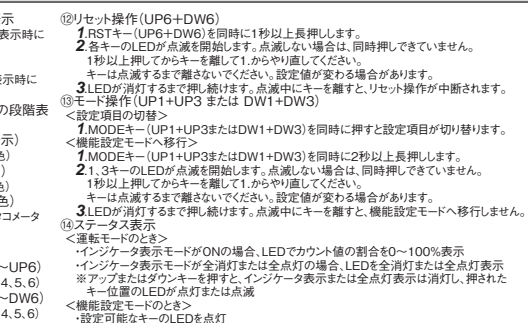
安全上の要点

- 1) パネルへの取り付けの際は2カ所のねじを交互にバランスを取りながらしっかりと締めてください。2) 電源配線は必ず定格電圧以下にしてください。また、10°C以下で保存後、使用する場合は、常速に3時間以上放置してから電源を入れてください。

定格(仕様)

Table with specifications for power supply, output, and environmental conditions. Includes AC/DC voltage ranges, power consumption, and operating temperature limits.

フロント部の名称



操作方法

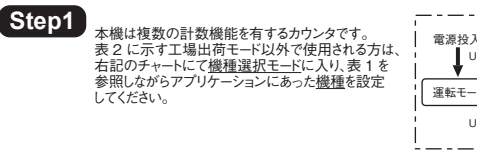
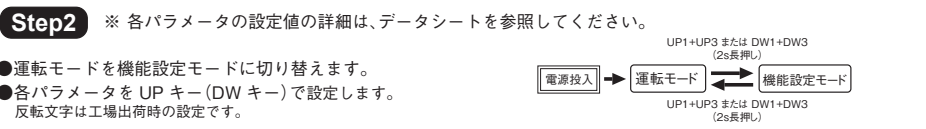


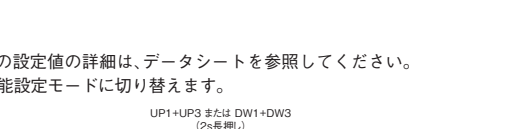
Table 1: Mode Selection Mode Overview. Lists modes like 1-segment preset counter, 2-segment preset counter, total preset counter, etc., and their corresponding key sequences.

Table 2: Output Mode Selection and Possible Modes. Details the settings for different output modes and the range of selectable modes.

カウンタ(1段プリセット、2段プリセット、トータルプリセット、パッチ、デュアル、ツイン)としてご使用の場合



タコメータとしてご使用の場合



Main parameter setting table for the counter. Columns include screen, parameter name, setting value, and special notes. Covers settings for input mode, output mode, counting speed, and various timing parameters.

Parameter setting table for tachometer mode. Columns include screen, parameter name, setting value, and special notes. Focuses on input mode and output mode settings.

Table for mode-specific settings. Details settings for 1-segment, 2-segment, total, patch, dual, and twin counter modes, including output timing and mode selection.

Table for mode-specific settings for tachometer mode. Details settings for input mode and output mode, including tachometer input mode and output mode.

使用上の注意

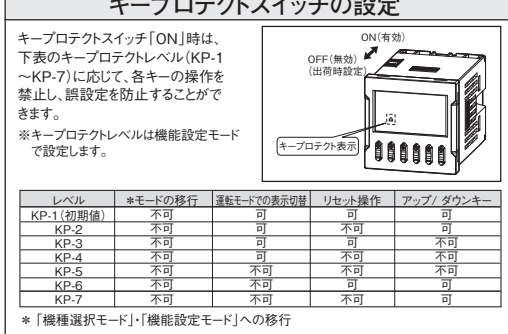
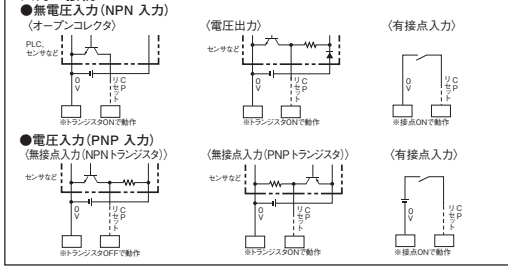
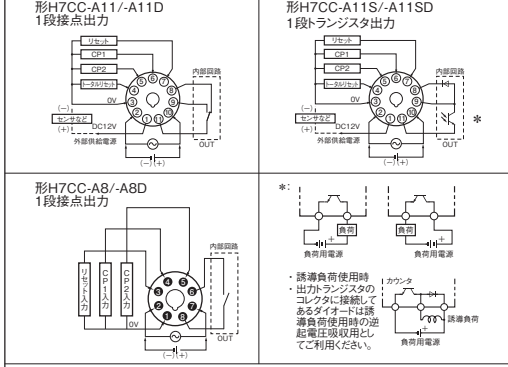
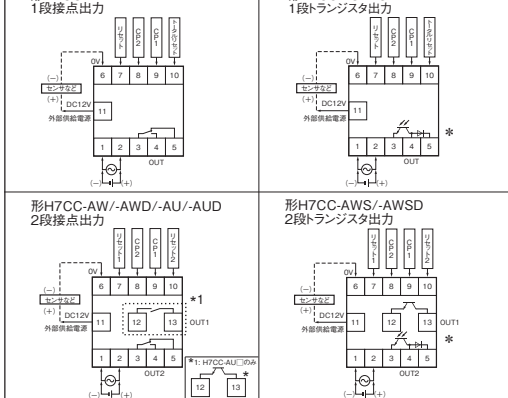
- 1) 取り扱いには本書をよく理解してからおこなってください。2) 電源投入時に短時間で大容量の電流が流れ約10A、電源の容量によっては起動しないことがあります。3) 電源電圧は必ず規定値に設定してください。

EN/IEC 規格対応について

EMCに適合するための、ケーブル選定、その他の条件については、本取扱説明書の記載内容を参照してください。この製品はclass A(工業環境用)です。住宅環境でご利用ください。

端子配置

電源仕様を確認し、配線をしてください。使用しない端子には何も接続しないでください。



自己診断機能

Table for self-diagnosis functions. Lists error codes (e.g., E1, E2, PPLC) and their corresponding meanings and recovery methods.

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運転モードでの表示/設定

