**DHC® COUNTER**

**DHC1J** | **DIGITAL COUNTER** | **DHC2J**
---|---|---
- DIN-size 48×48mm(DHC1J), DIN-size 72×72mm(DHC2J),
- POWER SUPPLY VOLTAGE: AC OR DC 100V-240V
- High speed response allows 2,000 counts per second
- INPUT models: UP/ DOWN/ UP DOWN A, B, C
- N, F, R, C output models
- High visibility LCD display with built-in back light

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**MODEL LEGEND**

VOLTAGE:
- OUTPUT: (S: TRANSISTOR, R: RELAY)
- P: PRESCALE VALUE
- 1: ONE STAGE, 2: TWO STAGE
- A: AC, D: DC
- 1: SIZE (48×48mm), 2: SIZE (72×72mm)

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**SPECIFICATIONS**

- **Power supply**: DHC1J-A AC or DC 100V-240V
  DHC1J-D DC24V
- **Count range**: 0~999999
- **Counting speed**: 0.25mS (3000cps)
- **Memory backup**: ≥10 years
- **Output transistor**: 50mA 30V
- **INPUT SIGNALS**: No voltage input: 4.7KΩ MAX
  Volt INPUT: L=0 2V, H=4 30V
- **Contacts output**: 3A AC 250V (resistance load)
- **External power supply**: DC12V 100mA(max)
- **Temperature**: -10 to 40°C
- **Reset**: MIN. pulse width for external reset: 1~20ms,
  Manual reset,
  Power reset: 2s
- **Panel cutout**: 45×45mm, 68×68mm
- **Weight**: 0.25kg

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**DIMENSION**

[Diagram showing the dimensions and labels of the digital counter]
<table>
<thead>
<tr>
<th>Output mode</th>
<th>Input mode</th>
<th>UP</th>
<th>DOWN</th>
<th>UP/DOWN A.B.C</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td><img src="image" alt="Waveform" /></td>
<td><img src="image" alt="Waveform" /></td>
<td><img src="image" alt="Waveform" /></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td><img src="image" alt="Waveform" /></td>
<td><img src="image" alt="Waveform" /></td>
<td><img src="image" alt="Waveform" /></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td><img src="image" alt="Waveform" /></td>
<td><img src="image" alt="Waveform" /></td>
<td><img src="image" alt="Waveform" /></td>
</tr>
<tr>
<td>R</td>
<td></td>
<td><img src="image" alt="Waveform" /></td>
<td><img src="image" alt="Waveform" /></td>
<td><img src="image" alt="Waveform" /></td>
</tr>
</tbody>
</table>

Outputs and present value display are maintained until reset.

Present value display runs continuously. Outputs are maintained until reset.

Present value is placed in reset start status as soon as count up is reached. The count up is not displayed. Outputs are 1-shot and operate repeatedly. Output 1 is self-holding, and goes off after expiration of the 1-shot period for Output 2. One-shot time periods for Output 1 and 2 are independent.
## OPERATIONAL OVERVIEW

<table>
<thead>
<tr>
<th>MODE</th>
<th>SETTING ITEM</th>
<th>Display</th>
<th>SETTING PROCEDURE</th>
<th>FACTORY model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run mode</td>
<td>*Set value 1,</td>
<td>set 1</td>
<td>Sequence when change a digit using the increment keys (1 to 6)</td>
<td>0 DHC1J-A2P</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set value 2</td>
<td>set 2 [SET]</td>
<td>Sequence when change a digit using the increment keys (1 to 6)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function setting mode</td>
<td>Input mode</td>
<td>IN, U(UP), d(DOWN), Ud-A (UP/DOWN A MODE), Ud-b (UP/DOWN B MODE), Ud-C (UP/DOWN C MODE)</td>
<td>Press keys 1 to 6 to change the display mode.</td>
<td>U(UP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Output mode 2 and reset timer</td>
<td>OUT2 N, F, C 0.00S, R 0.00S</td>
<td>Press 4 to 6 Keys to change N, F mode. Press 1 to 3 Keys to change C, R mode reset timer.</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>* Output mode 1</td>
<td>OUT1 HOLD</td>
<td>Press 4 to 6 Keys to change HOLD and OUTPUT MODE. Press 1 to 3 Keys to change OUTPUT time of control.</td>
<td>HOLD DHC1J-D2P</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.00S,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Count speed</td>
<td>30CPS, 2KCPS (UP/DOWN C MODE 1K CPS)</td>
<td>Press 1 to 6 Keys to change in 30CPS mode.</td>
<td>30CPS</td>
</tr>
<tr>
<td></td>
<td>*Decimal point</td>
<td>P------, P-----., P---, ---</td>
<td>Move the decimal point position form left to right with keys, 1 to 6.</td>
<td>NO POINT DHC1J-A1P DHC1J-D2P</td>
</tr>
<tr>
<td></td>
<td>*Prescale value</td>
<td>PS 1.000</td>
<td>Change the value of digits with the corresponding keys, 1 to 5.</td>
<td>1.000 DHC1J-A1P DHC1J-D2P</td>
</tr>
<tr>
<td></td>
<td>Key protection level K/P</td>
<td>KP1, KP2, KP3, KP4</td>
<td>Press keys 1 to 6 to change the display mode. KP1 (MODE) KP2 (MODE and RESET) KP3 (1-6 keys and MODE) KP4 (1-6 keys, MODE, RESET)</td>
<td>KP1</td>
</tr>
</tbody>
</table>
### INSTALLATION

**DCH1J-A1R, DCH1J-A1PR**

**DHC1J-A2PR,**

**DHC2J**

### CONNECTIONS

**NPN Transistor**

```
Sensor → Counter
12V output
CP1 CP2 Reset
```

**PNP Transistor**

```
Sensor → Counter
12V output
CP1 CP2 Reset
```

**Contact input**

```
12V Output
```

**Reset input**

```
RESET
```

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**Note 1:** Minimum signal width; **B:** Must be at least 1/2 of minimum signal width. Signals may not be counted if the minimums for A and B are not met.

**Note 2:** Set the same counting speed for CP1 and CP2 when in UP/DOWN C mode.

**Note 3:** H and L

<table>
<thead>
<tr>
<th>Signal</th>
<th>No-voltage input</th>
<th>Voltage input</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>Short circuit</td>
<td>4 to 30 VDC</td>
</tr>
<tr>
<td>L</td>
<td>Open circuit</td>
<td>0 to 3 VDC</td>
</tr>
</tbody>
</table>