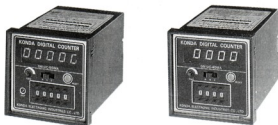


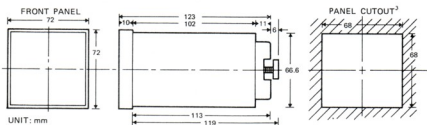
KONDA SINGLE PRESET COUNTERS



■ AVAILABLE TYPES

| OPERATING MODE | | UP MODE | DOWN MODE | UP/DOWN MODE |
|---------------------------|----------|---------------------------|---------------------------|---------------------------|
| MEMORY FUNCTION | | YES | YES | YES |
| DISPLAY | | 7 SEGMENTS 0.3" LED (RED) | 7 SEGMENTS 0.3" LED (RED) | 7 SEGMENTS 0.3" LED (RED) |
| TYPE AND NUMBER OF DIGITS | 2 DIGITS | DN-UC-2DMA | DN-DC-2DMA | DN-UDC-2DMA |
| | 3 DIGITS | DN-UC-3DMA | DN-DC-3DMA | DN-UDC-3DMA |
| | 4 DIGITS | DN-UC-4DMA | DN-DC-4DMA | DN-UDC-4DMA |
| | 5 DIGITS | DN-UC-5DMA | DN-DC-5DMA | DN-UDC-5DMA |
| | 6 DIGITS | DN-UC-6DMA | DN-DC-6DMA | DN-UDC-6DMA |

■ DIMENSION



NOTE 3: The standard panel cutout is as shown in the left (for conforming to DIN 43 700).

■ RATING

| | |
|--|--|
| Supply Voltage ¹ | 110 or 220 VAC, 50/60 HZ. operating voltage range: 85~115% |
| Power Consumption | Approx. 3.5VA (AC 110 or 220V, 50/60 HZ) |
| Count and Reset Input | Contact Input: By short-circuiting or opening contacts. Contactless Input: [H] +6~+24 VDC, [L] 0~+2 VDC. Input Impedance: 4.7 kΩ |
| Counting Speed ² | Contact Input: 30 cps. Min. pulse width: 16.7 msec. Contactless Input: 300~1000 cps. Min. pulse width: 0.5 msec. (Max. up to 5 kcps according to user's inquiring.) |
| Reset System | External and Manual reset (operating mode: N), Reset time: 0.02 sec. Automatic reset: Please refer to following operating MODE: R and C (Page 4). |
| Control Output | Contact type: SPDT 250 VAC 5A $\cos\phi = 1$ Contactless type: Open collector 12 VDC, 11 mA max. |
| Power Supply for External Connected Pulse Generators | 12 VDC $\pm 10\%$ 50 mA (permissible ripple factor: 5% max.) |

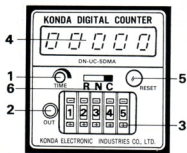
NOTE 1: Various supply voltage is available by changing one transformer according to user's inquiring.

NOTE 2: The counting system of KONDA counter: 1 PULSE = 1 FIGURE (input signal).

■ CHARACTERISTICS

| | | |
|----------------------------|---|------------------|
| Insulation Resistance | 50M Ω min. | |
| Vibration | Mechanical durability: 10~50 HZ, 0.1 mm double amplitude. Malfunction durability: 10~50 HZ, 0.5 mm double amplitude. | |
| Shock | Mechanical durability: 300 m/S ² (Approx. 50 G's). Malfunction durability: 100 m/S ² (Approx. 10 G's). | |
| Dielectric Strength | 2,000 VAC, 50/60 HZ for 1 minute. | |
| Ambient Temperature | Operating: 0°C~50°C (Without condensation). | |
| Humidity | 45~85% RH. | |
| Service Life | Relay Output: Mechanically → 10,000,000 operations min. Electronically → 1,000,000 operations min. | |
| Input Signal Voltage Level | H | +6 VDC ~ +24 VDC |
| | L | 0 VDC ~ +2 VDC |
| Input Resistance | 4.7 k Ω | |
| Weight | 600g \pm 10% | |

■ DESCRIPTION OF FRONT PANEL



- TIME ADJUSTER⁴ (1)
Adjust the output operation time by this screw
- OUTPUT LED INDICATOR (2)
Only for -5 DMA type. (other types' output Indicator is beside the left side of DISPLAY BOARD.) For indicating the relay's operation when counting upto the set value.
- THUMBWHEEL SWITCHES (3)
For Presetting a certain number.
- RED LED 7 SEGMENTS DIGITAL DISPLAY (4)
- RESET BUTTON⁵ (5)
- R.N.C. OPERATION SELECTOR (6)
(Please read p. 4)

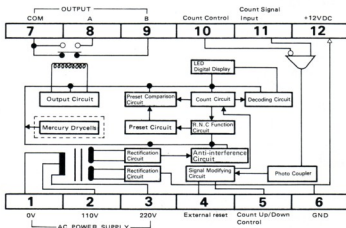
NOTE 4: When the Output Relay of the Counter Starts, the operation durations can be adjusted through the Time-Adjuster, the range of adjustment is from 0.1 sec through 3.5 sec.

0.1  3.5

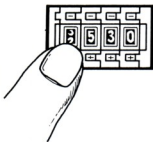
*Warning!! Only an "I" type screw driver is recommended Insert into the hole and turn it slightly, any violence can damage the adjuster.

NOTE 5: The Manual Reset button is for checking the zero resetting function, when frequent resettings are needed, please use External Resetting wiring method.

■ BLOCK DIAGRAM OF TERMINALS AND INNER CIRCUITS



- Since KONDA counter is capable of reading the input data at any time during normal condition operation, the set count could be altered during power application.



NOTE 6:
During normal operation, the set count may be changed by accidentally touching a thumbwheel switch, causing the counter to operate with the newly set count. To prevent this possibility, keep the front cover closed except when the set count must be changed.

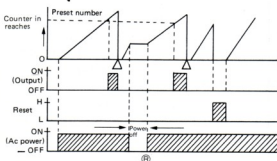
NOTE 7:
If the set count is all zeroes, there will be a momentary control output upon power application which can be used to check normal output. When altering the set count value during normal operation, pay special attention not to alter the set value to this state (all zeroes).

NOTE 8:
When changing the set count while power is being supplied, an inadequate push of the thumbwheel switches will display two numbers in one digital display window, causing the set count to drift widely. Therefore, press the thumbwheel switches surely. Take good care in the case when the other three digits are all zero, since the improper setting of the fourth switch to create four zeroes will cause a momentary output.

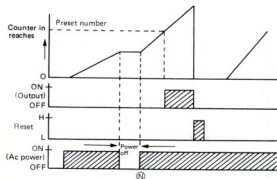
Reset can be done optionally.

● R N C reset:

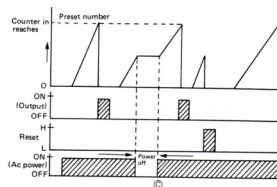
● R position: Automatic reset



● N position: Manual reset



● C position: Automatic instant reset

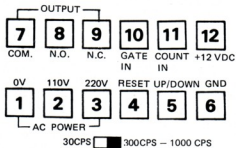


As soon as the counter operates and reaches set value, the relay will ON and display continues to count (i.e. the set count number still shown on the display window for 0.1 to 3.5 sec controlled by the TIMER.) After 0.1 to 3.5 sec, the relay will OFF and display return or reset to zero automatically.

When the counter operates and reaches the set count, the relay remains it's ON position. Relay will not OFF excepting the user pressing the RESET button on the front panel or the external Reset terminal (connection method refer to P. 5 and also please read NOTE 5 on page 3).

When the counter operates and reaches the set count, the relay will ON and numbers on the display window will return to zero instantly, relay continues to operate. The relay will OFF after 0.1 to 3.5 sec controlled by the TIMER on the front panel.

■ CONNECTIONS



● AC POWER SUPPLY



• For AC 110V

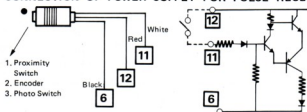


• For AC 220V

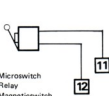
NOTE 9: Please pay especial attention to make sure whether the connection being correctly or not.

NOTE 10: Operating voltage range: 85%~115%.

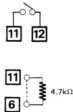
● CONNECTION OF POWER SUPPLY FOR PULSE RECEIVER



• Switch position (300 CPS)



• Switch position (30 CPS)



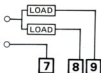
● RESET CONNECTION

• Contactless Input Signal

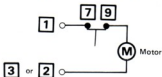
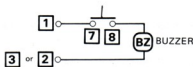
• Contact Input Signal



● LOAD CONNECTION

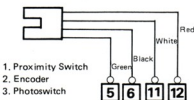


● CONNECTION FOR ALARM BELL NEEDFUL OR IF MUST STOP MOTOR



NOTE 11:
The selective connection 2 or 3 according to the AC power supply voltage is AC 110V 2 or AC 220V 3.

● CONNECTION OF UP/DOWN MODE FOR PULSE RECEIVER



NOTE 12: The operation, after reaching the set count, is shown as follow (for ex. the set value is 10)

