DIN Size Electronic Counter

DC-M SERIES

Easy operation, clear display & easy pre-set

All models provide increment/decrement counting and counter can apply to wide range of application because o voltage, 100 to 240VAC.

72× 144mm type

72× 72mm type

Specifications

72×72mm type

Type	Increment/decrement type total counter note1)	Increment/decrement type preset counter note1)
Model No.	DC-MA6-D	DC-MB6-D
Display	Red LED 7-segment LED(Height10mm, width5.7mm), Range: 999999 to -99999(Zero-suppress) note2)	
Number of preset	————————————	1
Control output	————————————	Contact: 1a relay(250VAC 3A, DC30V 3A, cos φ = 1) Transistor: NPN open-colletor(40V, 100mA)
Weight	Approx. 300g	

note1) Changeover for increment/decrement independence input an ° phase difference input 90
note2) It shows "Full" if counting value is over 999999 and "-F ull" if counting value is over -99999 and then, counting stops and it returns by reset.

72×144mm type

Type	Increment/decrement type total counter note1)	Increment/decrement type preset counter note1)	Increment/decrement type 2-preset counter note1)
Model No.	DC-MA6-E	DC-MB6-E	DC-MC6-E
Display	Red LED 7-segment LED(Height 15mm, width 8.8mm), Range: 999999 to -99999(Zero-suppress) note2)		
Number of preset	————————————	1	2
Control output	————————————	Contact: 1C relay(250VAC 3A, DC30V 3A, cos φ = 1) Transistor: NPN open-colletor(40V, 100mA)	
Weight	Approx. 530g		

note1) Changeover for increment/decrement independence input an ° phase difference input 90
note2) It shows "Full" if counting value is over 999999 and "-F ull" if counting value is over -99999 adn then, counting stops and it returns by reset.
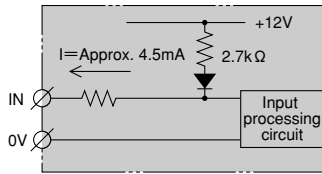
72×72mm type・72×144mm type(Common specifications)

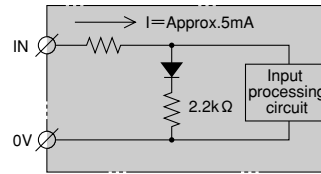|	
Power source	100V to 240VAC (50/60Hz)
Allowable fluctuation range	-15 to +10 ％
Power consumption	Approx. 4.5VA(240VAC)
Numbers of digit	6-digit(Zero-suppress system)
Counting	Contact/transistor open-collector input: Counting when OFF ON, voltage input: Counting when "L" "H"
Counting speed	30Hz: Min. signal width 16.7msec, make-ratio 1:1 5kHz: Min. signal width 100 μ sec, make-ratio 1:1(Changeover by slide switch)
Preset method note1)	Digital switch for each digit
Reset	Reset button, external reset, automatic reset
Counting prohibited	Prohibited when ON("H" level in case of voltage input) Response time: 16msec or less(when 30Hz), 100 μ sec or less(when 5kHz)
Counting／reset／ counting prohibited input	Contact/transistor open-collector input Impedance(Z_{ON}): 1kΩ or less when ON(Short-circuit), Impedance(Z_{OFF}): 5kΩ or more when OFF(Opened)
Control output operation note1)	Self-holding operation: It operates when preset value and returns by reset Single-shot operation: It operates when preset value and returns after specific time(200m s）
Power source for sensor	12VDC ± 10% 100mA(Ripple 5% or less)
Ambient temperature, humidity	-10 to +45 (-20 to +55 when stored) 45 to 85%RH
Memory time against power failure	Memory time/once: approx. 10 years, memory numbers: 0.1 million times
Case	Case: ABS resin, dust-proof cover: polycarbonate
Attachment	Dust-proof cover, fitting metal

note1) Total counter doesn't provide it.

■ Input/transistor output
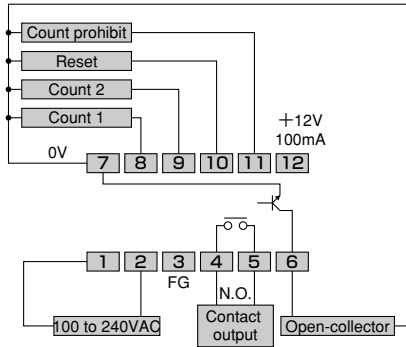
Contact/transistor open-collector input

I＝Approx. 4.5mA
+12V
2.7kΩ
IN
0V
Input processing circuit

Voltage input

I＝Approx.5mA
IN
2.2kΩ
0V
Input processing circuit

■ Connection

72 X 72mm type

● **Contact/Open-collector input**

Count prohibit
Reset
Count 2
Count 1
0V
＋12V 100mA
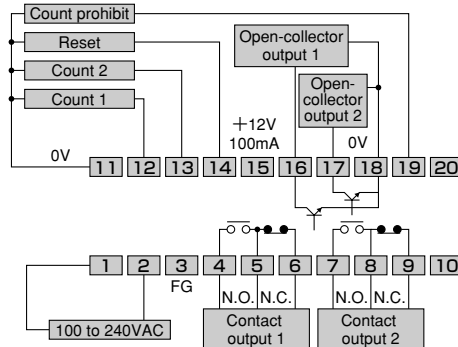| 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | 2 | 3 | 4 | 5 | 6 |
FG
N.O.
100 to 240VAC
Contact output
Open-collector

Note) Count 1 terminal ⑧ is increment, Count 2 terminal ⑨ is decrement. In case of 90°phase-difference input, when Count 1 is shifted by 90°it is increment counting, and when Count 2 is shifted by 90°, it is decrement counting.
Note) In case of Total counter, ④⑤⑥ terminals are not used.
Note) FG ③ terminals should be grounded.

72 X 144mm type

● **Contact/Open-collector input**

Count prohibit
Reset
Count 2
Count 1
Open-collector output 1
Open-collector output 2
0V
＋12V 100mA
0V
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
FG
N.O. N.C.   N.O. N.C.
100 to 240VAC
Contact output 1
Contact output 2

Note) Terminals ⑪ and ⑱ are connected inside.
Note) Count 1 ⑫ is increment counting and Count 2 ⑬ is decrement counting. In case of 90°phase-difference input, when Count 1 is shifted by 90°it is increment counting, and when Count 2 is shifted by 90°, it is decrement counting.
Note) In case of total counter, ④⑤⑥⑦⑧⑨⑯⑰ terminals are not used.
Note) In case of preset counter (1 preset type), ④⑤⑥⑯ terminals are not used.
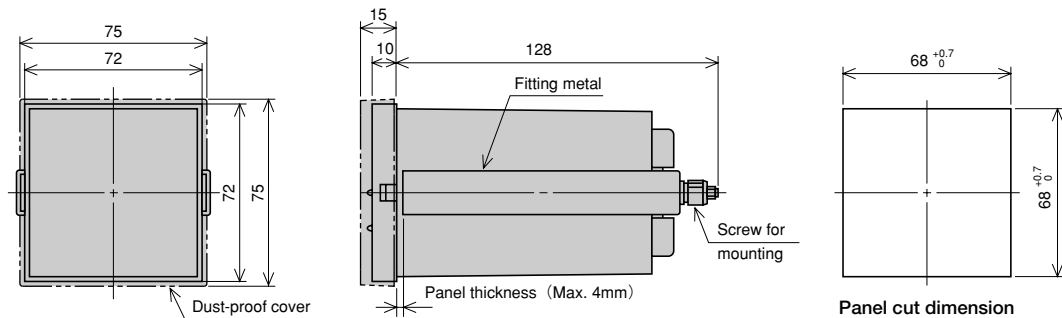Note) FG (③ terminal) should be grounded.

（Note）

● Do not use unused terminal as relay terminal.
● Each input to counting, reset and count prohibition is common use for contact and open-collector. Wire to each input and output 2-core shield wire or metal conduit tube as short as possible. Do not lay the wires close to or parallel to line cable, power cable tage line.
● For connection, use M3 pressure connection terminals.

■ External dimensions

72 X 72mm type

75
72
72
75
Dust-proof cover
15
10
128
Fitting metal
Screw for mounting
Panel thickness（Max. 4mm）
68 $^{+0.7}_{0}$
68 $^{+0.7}_{0}$
Panel cut dimension

72 X 144mm type

147
144
72
75
Dust-proof cover
15
10
128
Fitting metal
Screw for mounting
Panel thickness（Max. 4mm）
138 $^{+1}_{0}$
68 $^{+0.7}_{0}$
Panel cut dimension