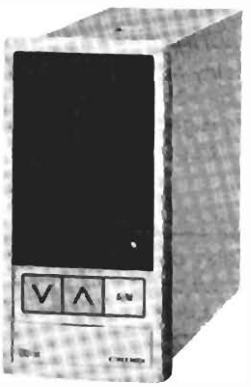
ON-OFF SERVO UNIT

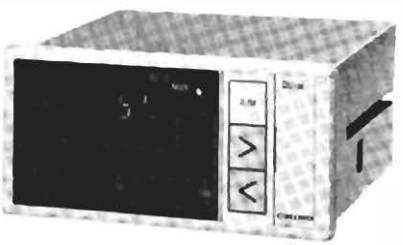
CHINO PS
PERFORMANCE SPECIFICATION

MODEL DU100

This unit is used to convert a current output signal from a current output type controller into an on-off servo signal so as to drive a control motor, a motor-operated valve, and other final control equipment.



MODEL DU11□T



MODEL DU11□D

■ GENERAL SPECIFICATIONS

No. of input points : 1 point
Input signal : 4 ~ 20mA DC
Input resistance : Approx. 100Ω
Output signal : On-off servo signal
* I/O isolation
Feedback resistance: Adjustable within a range of 100Ω ~ 2kΩ
Contact capacity : Resistive load ; 100V AC, 2A
200V AC, 1A
Inductive load ; 100V AC, 1A
200V AC, 0.5A
Dead band : 1 ~ 20%, variable
Hysteresis : 0.5%, fixed
Direct/reverse output is selectable.
Auto/Manual selection is provided.
Output display : 0 ~ 100%
50-segment bar graph LED indication
Ambient temperature: (-)10 ~ 50°C
Ambient humidity : Lower than 90%RH
Power supply : 85 ~ 264V AC, free power supply, 50/60Hz
Power consumption : Approx. 8VA
Weight : Approx. 300g

■ MODEL

DU11□□ - □□

OUTPUT
1 : Relay output
(Load current : Higher than about 0.5A)
2 : Relay output
(Load current : Lower than about 0.5A)
3 : Relay output (corresponding to an auxiliary relay)
4 : Open collector output (option)

Types
T : Vertical type
Y : Horizontal type
D: Horizontal type plus digital indication
(Valve opening and input quantity are indicated selectively by interlocking the digital indication with bar graph each other.)
E : Horizontal type plus digital display
(Digital display indicates the valve opening and input quantity selectively, while the bar graph indicates the valve opening fixedly.)

External selection, status output (option)
N : Not provided
1 : External A/M selection
2 : Status output
3 : External A/M selection plus status output

Preset manual (option)
N : Not provided
1 : Preset manual

■ SPECIFICATIONS BY OUTPUTS

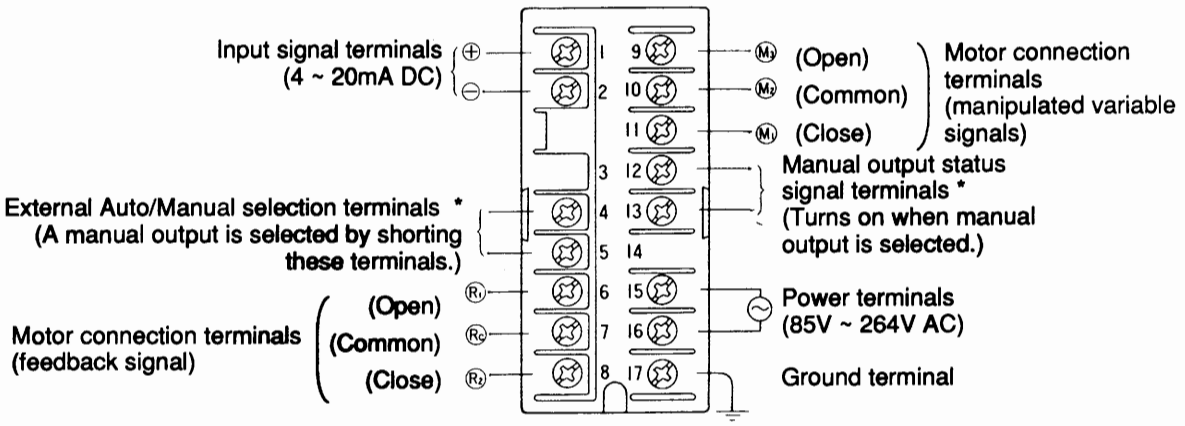
This unit is provided with four types of outputs. If the output type does not meet the final control equipment, a control failure may occurs or this unit may be broken. Select an optimum output after fully understanding the characteritics of the control equipment to be combined.

Output type		Output specifications	Applicable load	Cautions
Model	Output			
DU111	Relay output (Load current : Highter than approx. 0.5A)	Maximum allowable power : 100VA (30W) Maximum allowable voltage : 200V AC (30V DC) Maximum allowable current : 1A Minimum load : 5V DC, 10mA or over	Motors whose drive current is comparatively high (higher than approx. 0.5A) (Example) Modutrol motor manufactured by Yamatake-Honeywell Co.	Connect the attached contact protective device without fail.
DU112	Relay output (Load current : Lower than approx. 0.5A)		Motors whose load current is comparatively low (lower than approx. 0.5A) (Example) CHINO's control motor	
DU113	Relay output (corresponding to an auxiliary relay)	Maximum allowable power : 50VA (15W) Maximum allowable voltage : 200V AC (30V DC) Maximum allowable current : 0.5A Minimum load : 1V DC, 1mA or over	Applies to drive the control equipment by connecting an auxiliary relay (AC relay, DC relay). (Example) OMRON MY relay	Don't connect the unit with any motor directly, but use the unit via an auxiliary relay without fail.
DU114	Open collector output	Maximum allowable voltage : 24V DC Maximum allowable current : 50mA	Applies to drive the control equipment by connecting an auxiliary relay (DC relay) or a sequencer.	Be careful with the ⊕, ⊖ polarities. The unit may be broken, if either auxiliary relay or sequencer is connected wrongly.

■ OPTIONS

Option name	Contents
External A/M selection	Auto/Manual modes are selected by an external turn-on signal to hold a manual output value.
Status output	A manual condition is output outside as a transistor open collector output.
Open collector output	This is applicable when a control equipment is driven via an auxiliary relay (DC relay) or a sequencer. Maximum allowable voltage : 24V DC Maximum allowable current : 50mA
Preset manual	A preset value is output when the manual mode is selected.
Auxiliary mounting plate for updating the DU unit	This auxiliary mounting plate is used for updating the 96 x 96 DU series.

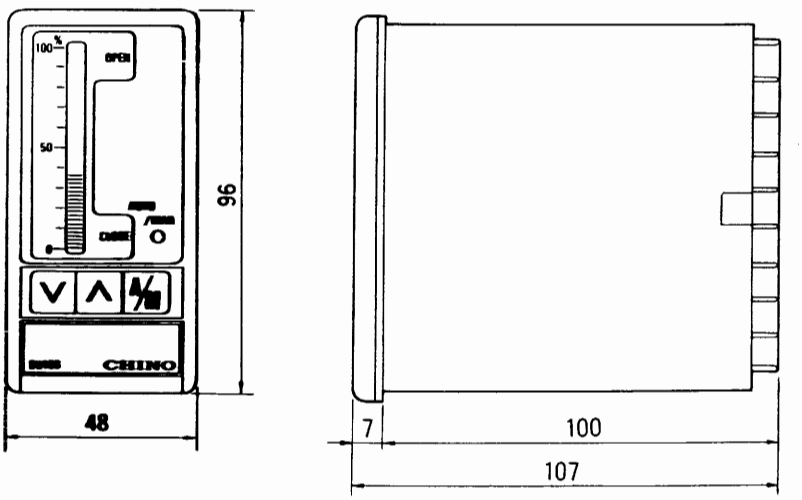
■ TERMINAL BOARD



(Note: Connect a protective device to terminal No. 9-11 and 10-11 when using DU111.)

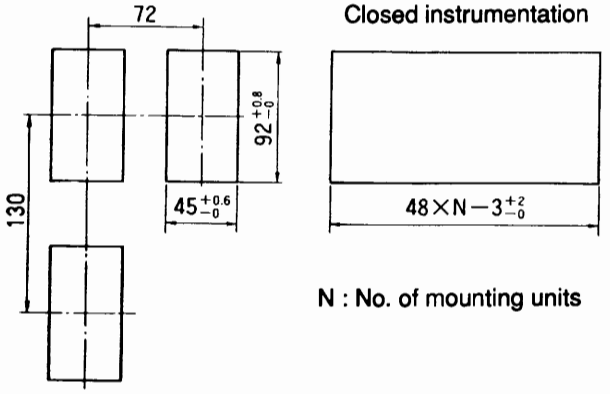
Asterisk (*) : Option

■ EXTERNAL DIMENSIONS



(Note: Both vertical and horizontal type have the same dimensions.)

• Panel cutout and minimum mounting space



N : No. of mounting units

Unit : mm

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