CMA-6101 Series

Non-contact

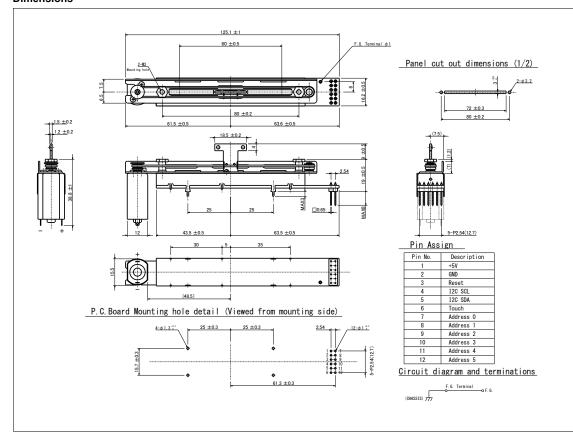
Long-term stability

Digital output

Facilitated in handling



Dimensions



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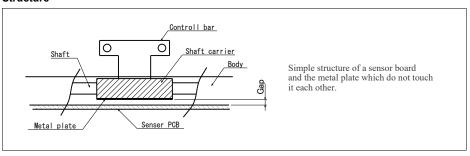
CONTROLLER

Model number

CMA-6101 - M8V

Product type CMA-6101: 60mm DC-motor M8V: 8V DC motor (MABUCHI)

Structure



Electrical specifications

	CMA-6101
Sensor system	Electrostatic capacitance type sensor
Output value	Incremental type
Communication system	I ² C Slave
Operating voltage	5V: ±0.25V
Max. operating current	4mA Max. (Motor drive electricity is excluded.)
Resolution	8bit (0~255)
Output Law	1bit = 60mm/256 (Linear)
Bit error	±2bit
Voltage proof	1 Min. at AC100V
Insulation resistance	50Mohm or more at DC100V

Mechanical specifications

	CMA-6101
Stroke length	60mm±0.5mm
Operating force	0.1~0.3N
Strength of Nut-Attached	100Ncm
Attached Parts	M3 screw (Length: Panel thickness + 3~4mm)
Stopper strength	30N
Push-pull strength	30N

General specifications

	CMA-6101
Temp.range	-10 to +70 deg C (Operating), -15 to +75 deg C (Storage)
Relative humidity	90%RH (No condensation)

Note

- * Non-waterproof.
- * Solder heat resistance: 350deg C max, 5sec max, 2 times. (Manual soldering only)
- * Do not give severe shocks.
- * Move to one end in Control-bar on the occasion of knob wearing, and can break into it slowly.

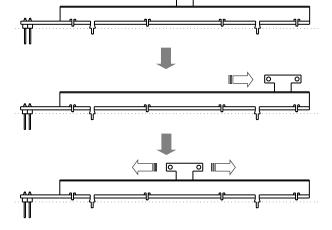
CMA-6101 Series

I²C specifications

					CMA-6101																								
I ² C Clock					400kbps / 100kbps / 50kbps																								
Slave address					0~63																								
General call ad	ddre	ess			Not Supported																								
Transfer data															1	ИSI	3 Fir	st											
Response time	9			1ms or lee (I ² C Clock: 400kbps)																									
I ² C Communic	atio	n be	ehavio	or																									
	S			Sla	Slave Address R/W A Data Byte A Data Byte A P										Р														
Master	S	0	SA5	SA4	14 SA3 SA2 SA1 SA0 1 1 0 1 P								Р																
CMA-6101										0	0	0	0	0	0	0	0	0	1	D7	D6	D5	D4	D3	D2	D1	D0	1	
I ² C Bus	S	0	SA5	SA4	SA3	SA2	SA1	SA0	1	0	0	0	0	0	0	0	0	0	0	D7	D6	D5	D4	D3	D2	D1	D0	1	Р
	S:	= St	art co	nditio	n F	= Sto	op cor	ndition	n A	= A	ckı	nov	vled	dge		SA	= S	lave	ad	dres	s [) = C	Outp	ut da	ta bi	ts			

How to use

- Power ON
 Output data 0
 Touch Stop
- 2. Reset
 Output data 0
 Touch Start
- 3. Operation start
 Output data 0~255
 Touch On or Off



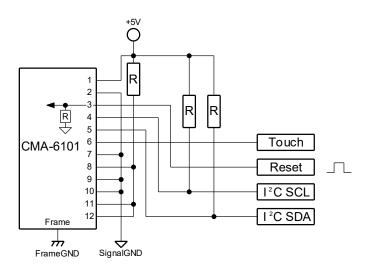
- 1. At the time of power on, output data are 0, regardless of the position of the control bar. In addition, please keep a finger off the knob.
- Resets works when the control bar is moved to the edge of the direction of the figure. A touch signal becomes effective at the same time.
- 3. After reset, position data in proportion to the movement of the control bar are output. A touch signal is output by touching the knob with a finger.
 - * In power-off, the most recent position data are not retained.

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CONTROLLER

Circuit example

I²C Slave address 50 [decimal]



Connect the frameGND with the frame, otherwise with the F.G. through-hole.

Pin Assign

Pin Assi	gn
Pin No.	Description
1	Operating voltage DC+5V
2	Ground connection
3	Active high external reset with internal pull down
4	I2C SCL
5	I2C SDA
6	Touch (On: High Off: Low)
7	I2C Slave address bit0
8	I2C Slave address bit1
9	I2C Slave address bit2
10	I2C Slave address bit3
11	I2C Slave address bit4
12	I2C Slave address bit5