## **RE-C700 Controller Specifications for** Ring Pump series RP-H & M Bi-polar Stepper Motors

Product Name	Low voltage bi-polar stepper motor controller	
Model Number	RE-C700 : controller unit	
Applicable Pumps	Ring Pump RP-H/M series	
Drive Voltage	RP-H /M Series: VM=5.2V	
Imput Voltage	RE-C700 : DC5V, 3.0 A (AC-DC adaptor of AC100-240V 50	/60Hz is included as accessory)
Control Method	Voltage drive method for bi-polar coil	Pump Wiring to motor connection terminal
Excitation Method	1/4 microstep drive method	de vu d
Motor Speed	1 - 1,000 pps (4 - 4,000 Hz) Digital frequency division	Brov Velli
Functions	Various controls using PC software	
	SINGL-MODE	
	Program-Mode	0000

Connection Terminals: RE-C700 (Size: 100 x 100 x 34 mm)



USB Connection Terminal (USB A-microB: Included as accessory) Pump Connection Terminals-1 Pump Connection Terminals-2 DC-IN Connection Terminal (AC Adaptor: Included as accessory) Start Switch Start-LED (BLUE) Pause-Switch Pause-LED (GREEN) Power-LED (RED)

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- Accessories Included: RE-C700 : Type A-micro B USB Cable
  - USB Memory Stick (PC Softwre)
  - AC-DC Adapter
- (1)

## Motor Speed (PPS) and Motor Rotation for Each Series

PPS	1	5	10	50	100	200	300	400	500	-	-	-	-
rpm	0.25	1.25	2.50	12.50	25.0	50.0	75.0	100.0	125.0	-	-	-	-

### RP-H (240Step/ 1 rotation motor specification)

#### RP-M (480Step/ 1 rotation motor specification)

PPS	1	5	10	50	100	200	300	400	-	-	-	-	-
rpm	0.13	0.63	1.25	6.25	12.50	25.00	37.50	50.00	-	-	-	-	-

#### **Special Notes:**

- a) Discharge Rate: Please input "Discharge Rate per Rotation (mL/rev)". (Refer to data incuded with the pumps)
- b) Control the motors within the range to prevent motor stepping-out (or motor stopping or vibrating ).
   \* RP-H: Limit/500PPS
  - \* RP-M: Limit/400PPS
  - Kr-WL LIIIII/400FF5

### (2)

# SINGLE

RE-C700-SIG-MODE-V3AA-231023A		- 🗆 X
HELP		
	< SINGLE-M	ODE>
MODEL	PPS (Hz)	ROTATION
RP-H 🗸	300	20 ~
VOLTAGE VM 5.2 V	EDEE	OTADT
CW	FREE	START
Resolution (m	L/rev) Rotation	Flow Rate (mL)
	× 20 =	
ENTER		CONNECTION -OK-
[RE-C700 SYSTEM]		

### <Single Settings>

	1	Pump Selection	Click the "v" (drop down) and select the pump: RP-H/M Operating Voltage: VM value is selected automatically.					
			RP-H/M	VM = 5.2V (fixed)				
	0	DIRECTION	rotating direction.	(Clockwise CW or Counter-Clo	ckwise CCW)			
		Pump Speed	1~1000PPS	RP-H:Limit/500PPS	RP-M:Limit/400PPS			
		FREE	Click FREE to supp Click STOP.	bly media (solution) for pump				
GRAM	Settin	gs>						

### <PRO

Input Res	olution "mL/rev"	Input the value from "Discharge Volume per Rotation (mL/rev)" that comes attached with the pump.
ENTER		Click ENTER to fix the "Resolution" settings.
ROTATIO	)N	1 ~ 3 0
Flow Rate	(mL)	<sup>r</sup> mL/rev <sub>1</sub> * <sup>r</sup> ROTATION <sub>1</sub> = Floe Rate(mL)
START		START button while connected to the PC (computer) with USB.
		* Auto Stop
EXIT		Disconnect from PC (computer).

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### PROGRAM

🖳 RE-C700-PRG-MOI	DE-V3AA-231023AC	- 0	×					
FILE HELP	<operatin< th=""><th>IG TIME CONTROL PANEL&gt; [RE-C700 SYSTEM]</th><th>]</th></operatin<>	IG TIME CONTROL PANEL> [RE-C700 SYSTEM]	]					
MODEL RP-H	VOLTAGE VM 5.2V	REPEAT <wait>TIME (h:m)       1     0</wait>						
POS.No	. Resolution Flow Rate	ON>TIME (h:m:s) < ▶▶ FF>						
1 ~	(ml (ray) (ml /m							
	ENTER							
成初步取从内		FF DIRECTION						
► PO	S. FLOW RATE PPS(Hz)	RPM DIRECTION <on> TIME <off> TIME CW</off></on>						
2								
3								
5		en en esterior esterior						
POS		SET						
	POS-TI	IME TOTAL						
V	VRITE							
	Until-S	STOP						
		/:: PAUSE EXIT						
<initial settings=""></initial>								
	Pump Selection VOLTAGE	Click the "♥" (drop down) and select the pump: RP-H/M Operating Voltage: VM value is selected automatically. RP-H/M VM = 5.2V (fixed)						
	Fast Forward Operation - 1	Click the "V" (drop down) and rotating direction. (Clockwise CW or						
	Fast Forward Operation - 2	Counter-Clockwise CCW) START/STOP the optimal high speed pump operation to supply the media (solution). * Click START to supply media (solution) for each pump on each channel. Once the media (solution) flows to the tip of the discharge tube, click STOP.						
<program settin<="" th=""><th>gs&gt;</th><th></th><th></th></program>	gs>							
	Input Resolution "mL/rev"	comes attached with the pump.						
	Specify Flow Rate "mL/min" ENTER	' Input desired flow rate (mL/min). Click ENTER to fix the "Resolution" and "Flow Rate" settings.						
	Select DIRECTION	Select between Clockwise (CW) or Counter-Clockwise (CCW)						
	Operation Time	Set operation (ON) time						
	Stop Time	* Setting range between 00h 00m 01s to 99h 59m 59s						
		* Setting range between 00h 00m 01s to 99h 59m 59s						
	POS-CLEAR	Select between POS 1 to POS 5 ( ) and click POS-CLEAR to clear						
	RESET	setting for that POS. (To reset settings)						
	Specify POS	Click the " $\mathbb{V}$ " (drop down) and select POS.						
		Allows up to 5 different program condition settings in POS 1 to POS 5. Program is reflected on the POS by repeating to . (Flow Rate, ENTER, DIRECTION, Operation Time, Stop Time)						
	REPEAT	Input number of repeat operation for specified program table (POS 1 to POS 5).						
WDITE Sottingo	WAIT TIME (h:m)	Initial setting is "1". Can input value between 1 to 99. If needed, specify the wait time before the START time for each each channel. (Input h:m)						
Smire Settings>	WRITE	Click WRITE to input the PROGRAM settings to controller's ROM (memory) (During WRITE, it will be in WAIT mode)						

#### <Operation Settings> "Controller Switch - START"

	Use the controller's switch to START / STOP / PAUSE without the PC.
"PC-START"	
START	START / STOP button while connected to the PC (computer) with USB.
	* Each click will change between START STOP.
PAUSE	PAUSE button while connected to the PC (computer) with USB.
	* Each click will change between PAUSE RESTART PAUSE.
EXIT	Disconnect from PC (computer).
	NB. When controlling from PC side, "START" and "Pause" of main unit SW

must be set to <OFF> position to prevent possible unstable operation.

### SAVE-FILE / OPEN FILE

	RE-C	700-PR	3-MODE-\	2A-230623A						- 🗆 X
	FILE	HEL	Р	<opi< th=""><th>RATI</th><th>NG TI</th><th>ME CO</th><th>NTROL</th><th>PANEL&gt;</th><th>[RE-C700 SYSTEM]</th></opi<>	RATI	NG TI	ME CO	NTROL	PANEL>	[RE-C700 SYSTEM]
SAVE -FILE OPEN-FILE	-	MO [] POS	DEL RP-H	Vo Resolution	VM 5.2 Flow Ra	V RE	PEAT 1	<wai 0 <on< th=""><th>T&gt;TIME (h:m)</th><th>&lt; &gt;&gt; FF&gt;</th></on<></wai 	T>TIME (h:m)	< >> FF>
		•	POS.	(mL/rev EN	/) (mL/ FER PPS(Hz)	(min)	DIRECTION		<pre>&gt;TIME (h:m:s) O </pre>	START FF DIRECTION
		*	1 2 3 4	8	320   	80.00   	CW  	00:30:00 :: :: ::	00:00:00 :: :: ::	
	-	F	os-	CLEAR	RE	SET				_
			W	RITE	POS-	TIME TO <d f<br="">/ 00:30 •STOP <d i<br="">/ 00:30</d></d>	TAL 1:m:s> 0:00 h:m:s> 0:00	STA	ART	CONNECTION -OK-

SAVE-FILE

Click on SAVE-FILE to save the PROGRAM setting (Type in file name)

OPEN-FILE

Click on OPEN-FILE to open saved PROGRAM setting. \* Once the PROGRAM setting is opened, click WRITE to save it in the computer ROM.

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