
PCB Surface Cleaner
"Clean Roller"
model R Y-705AE

Instruction Manual



RAYON INDUSTRIAL Co., Ltd.

禁複製
2014/06/30

1 Note on the safety(You always read before use).

Symbols

 **WARNING** → Failure to follow instructions may lead to injury.

 **CAUTION** → Failure to follow instructions may lead to damage.

Warnings and cautions specific to the RY-700 Series.

WARNING

- During operation, don't open the cover of the equipment.
It causes being shocked.
- Don't operate as it opened an equipment cover.
It is involved and it causes the injury.
- Don't remove an equipment cover as well as the repair, the fixed period check.
- The professional technical expert do a repair, a check.
- Don't operate a switch kind with the wet hand.
It causes being shocked.
- In " the dangerous place " where solvent, combustible gas and so on exist, don't use.

CAUTION

- Don't bring a hand close to the roll and the tape to be operating.
- Don't bring a hand close to the Static Eliminator bar to be operating.
- Always, connect the earth.
- When not using this equipment, make a power OFF.
- Use a specified lotion.
- Pay the protection of the entry line, the signal line note.
- When the malfunction occurs, do a direct stop.
- In case of the power failure, make a power OFF.

2 Warranty

2.1 Warranty Period

Rayon Industrial Co., Ltd. proudly warrants the RY-700 to be manufactured in accordance with specifications explained in this manual (or additional specifications agreed on with the customer) and free of defects in components, workmanship, or materials for a period of one full year from the date of purchase.

2.2 Warranty Limits

The Company will exchange any defective parts during the warranty period provided such parts are returned prepaid to the manufacturer or the agency with the dated purchase receipt.

For the first 90 days the defective parts will be delivered without charge.
After the 90th day, a shipping and handling fee will be charged.

This warranty does not apply to any physical or electrical damage done to the product through misuse, abuse or negligence (such as any modifications made to the unit or service work done by anyone other than from the Company or the agency). Any unit that has had its serial number altered or removed will be ineligible for warranty.

The Company will not be liable for loss or damage due directly or indirectly to any occurrence or use for which the product is not designed or intended. In no event shall the Company be liable for incidental or consequential damages except where state laws override.

This warranty extends to the original purchaser and is not transferable. No person, agent, distributor, dealer or company is authorized to change, modify, or amend the terms of this warranty in any manner whatsoever.

Specification Amendments and Revisions of the Manual

The design of the product is under constant review and the Company reserves the right to change the specifications and the equipment within the extents of the directives at any time without prior notice. While every effort is made to keep this manual up to date, the information in the manual is subject to change without notice.

Prohibition of Copying

No part of this manual may be reproduced or transmitted in any form or by any means, electric or mechanical, including photocopying and recording, for any purpose other than the purchaser's personal use without the permission of the Company.

3 Contents

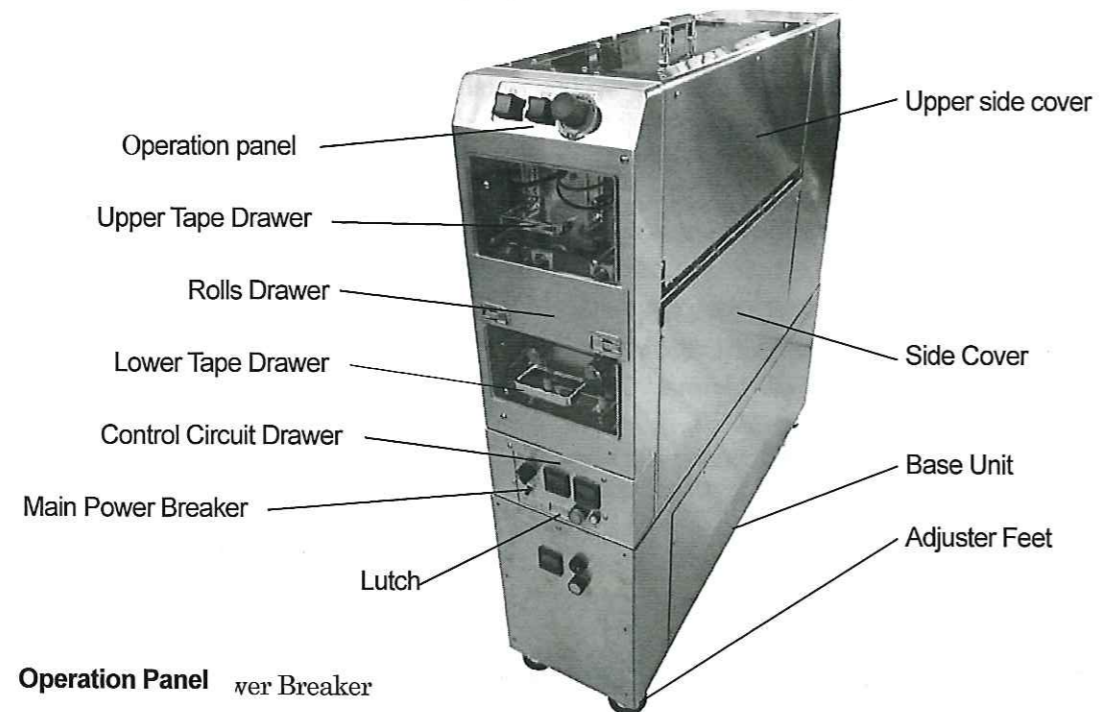
1	NOTE ON THE SAFETY(YOU ALWAYS READ BEFORE USE).....	2
2	WARRANTY.....	3
2.1	WARRANTY PERIOD.....	3
2.2	WARRANTY LIMITS.....	3
3	CONTENTS.....	4
4	GENERAL DESCRIPTION.....	6
4.1	DUST REMOVAL METHOD.....	6
4.2	VARIATION OF MODEL.....	6
5	OPTIONAL UNIT.....	7
5.1	STATIC ELIMINATING BAR.....	7
5.2	OPTION FOR CLEAN ROLLER.....	7
5.3	MECHANICS TO RISE AND FALL CLEAN ROLL.....	7
6	ELEMENTS & NAMES.....	8
6.1	NAME OF PARTS.....	8
6.2	PARTS FOR EACH SECTION.....	9
7	INSTALLATION.....	13
7.1	SET UP.....	13
7.2	CHECKS OF MACHINE'S WORKINGS.....	13
7.3	ADHESIVE TAPE ROLLS / TAPE DRAWERS.....	13
8	TEST RUN.....	14
8.1	TEST FOR ROLLS ROTATION.....	14
8.2	TEST FOR RISE/FALL OF UPPER ROLLS.....	14
8.3	SETTING MACHINES CONDITION.....	14
9	EXTERNAL CONTROL TERMINAL.....	15
9.1	CONNECTION.....	15
	Notice 15	
10	ROUTINE MAINTENANCE.....	16
11	CLEANING METHOD FOR EACH PARTS.....	18
11.1	GENERAL CLEANING MAIN BODY.....	18
11.2	CLEAN ROLLS.....	18
11.3	STATIC ELIMINATOR BARS.....	18
12	TAPE PURGE OPERATION.....	19
12.1	REPLACING ADHESIVE TAPE ROLLS.....	19
12.2	CAUTION.....	19
13	DETACH/ATTACH FOR ROLL UNIT.....	20
13.1	DETACHING.....	20
13.2	ROLL HOLDER UNIT.....	20

14	EXCHANGE OF CLEAN ROLLS.....	21
14.1	ROLL EXPLODED VIEW.....	21
15	ARRANGEMENT PLAN OF GEARS.....	22
16	STATIC ELIMINATOR BAR.....	23
17	CAUTIONS ON HANDLING.....	24
18	CONSUMPTIVE PARTS LIST.....	25
19	SPECIFICATIONS.....	26
20	CIRCUIT DIAGRAM.....	27
21	LADDER DIAGRAM.....	30

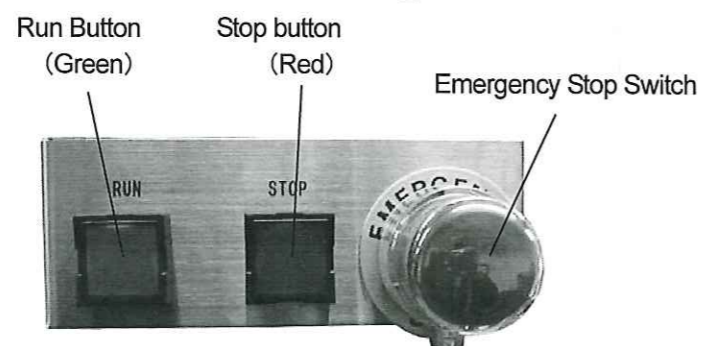
6 Elements & Names

6.1 Name of Parts

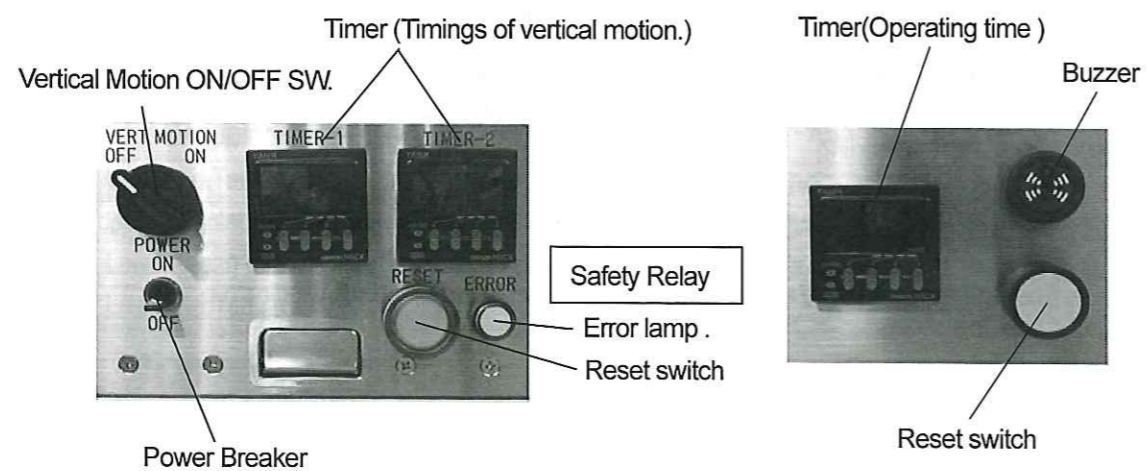
RY-700A series are mainly organized with the elements and parts shown below.



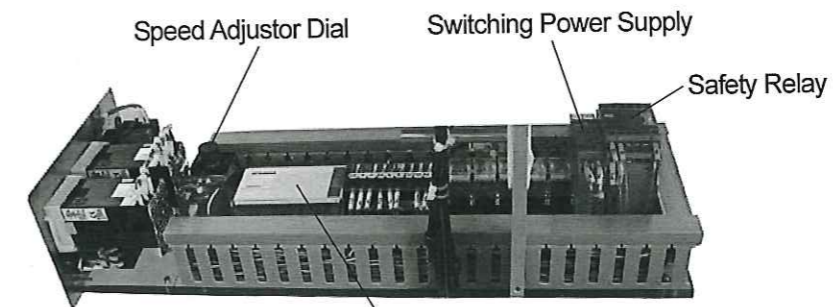
Operation Panel



Preset Panel



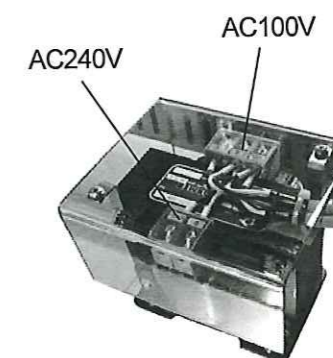
6.2 Parts for Each Section



Programmable Sequence Controller

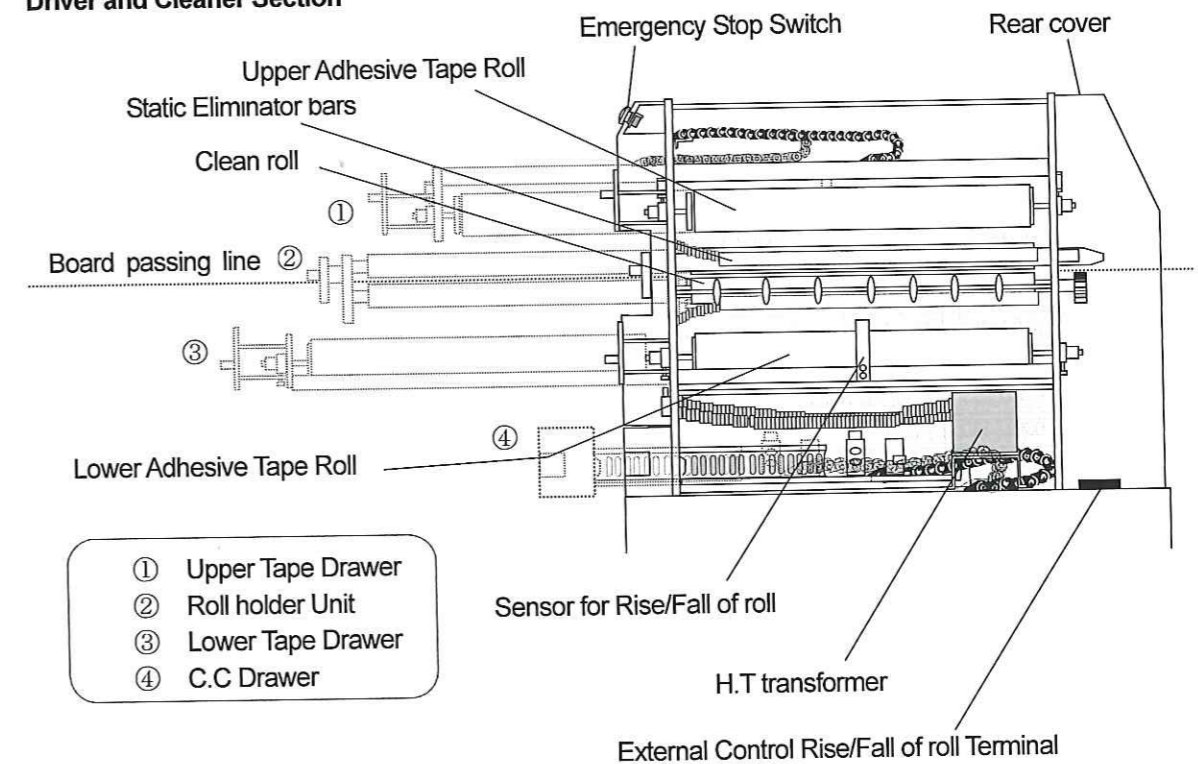


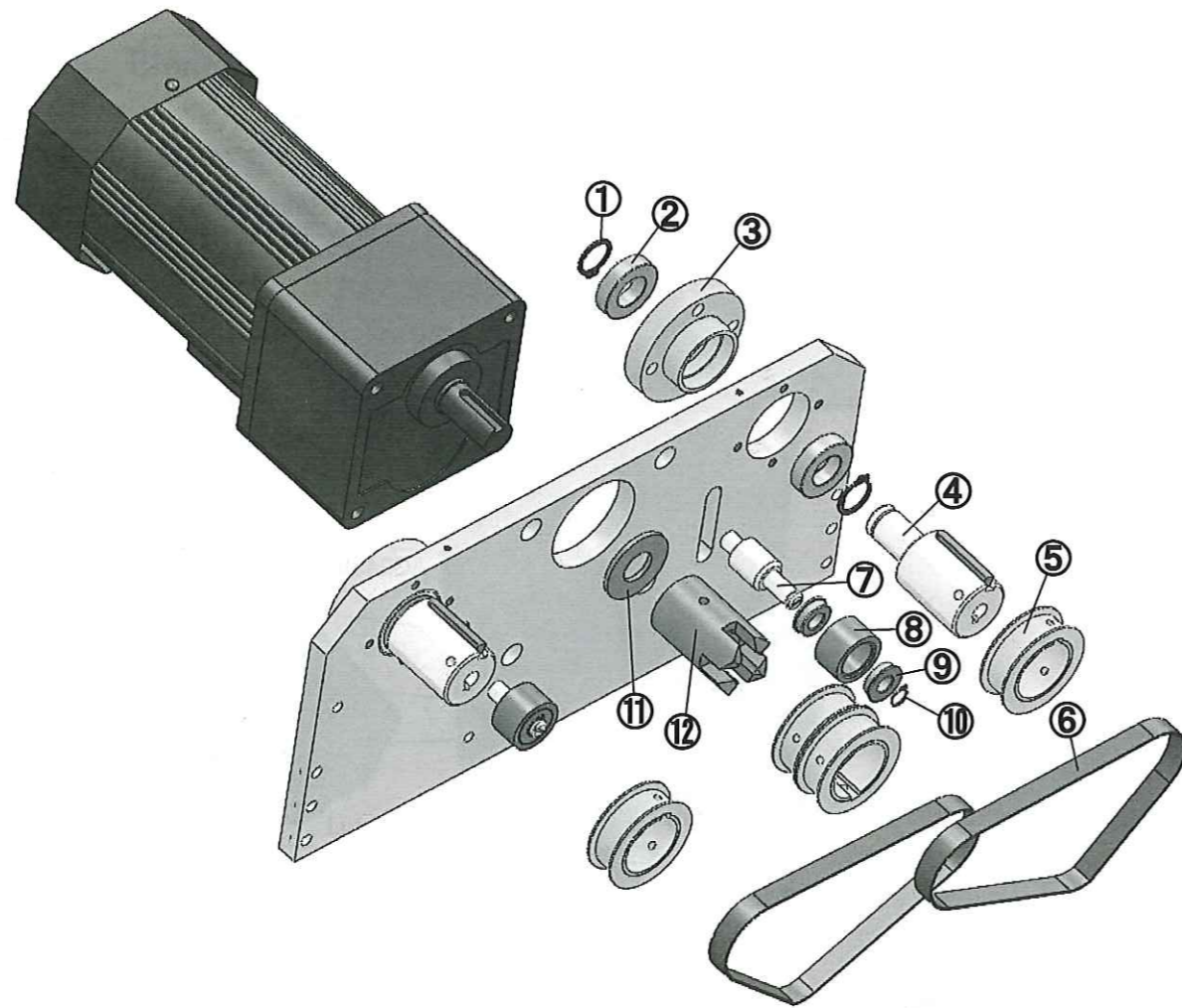
H.T transformer



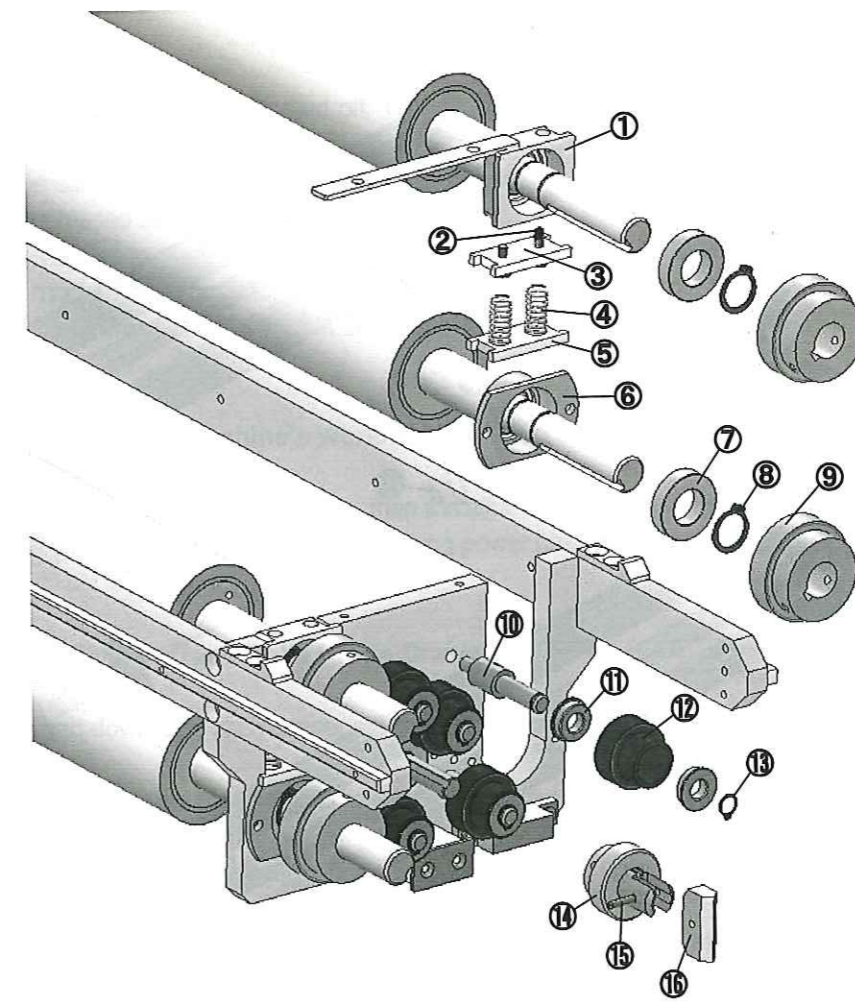
Step down transformer

Driver and Cleaner Section

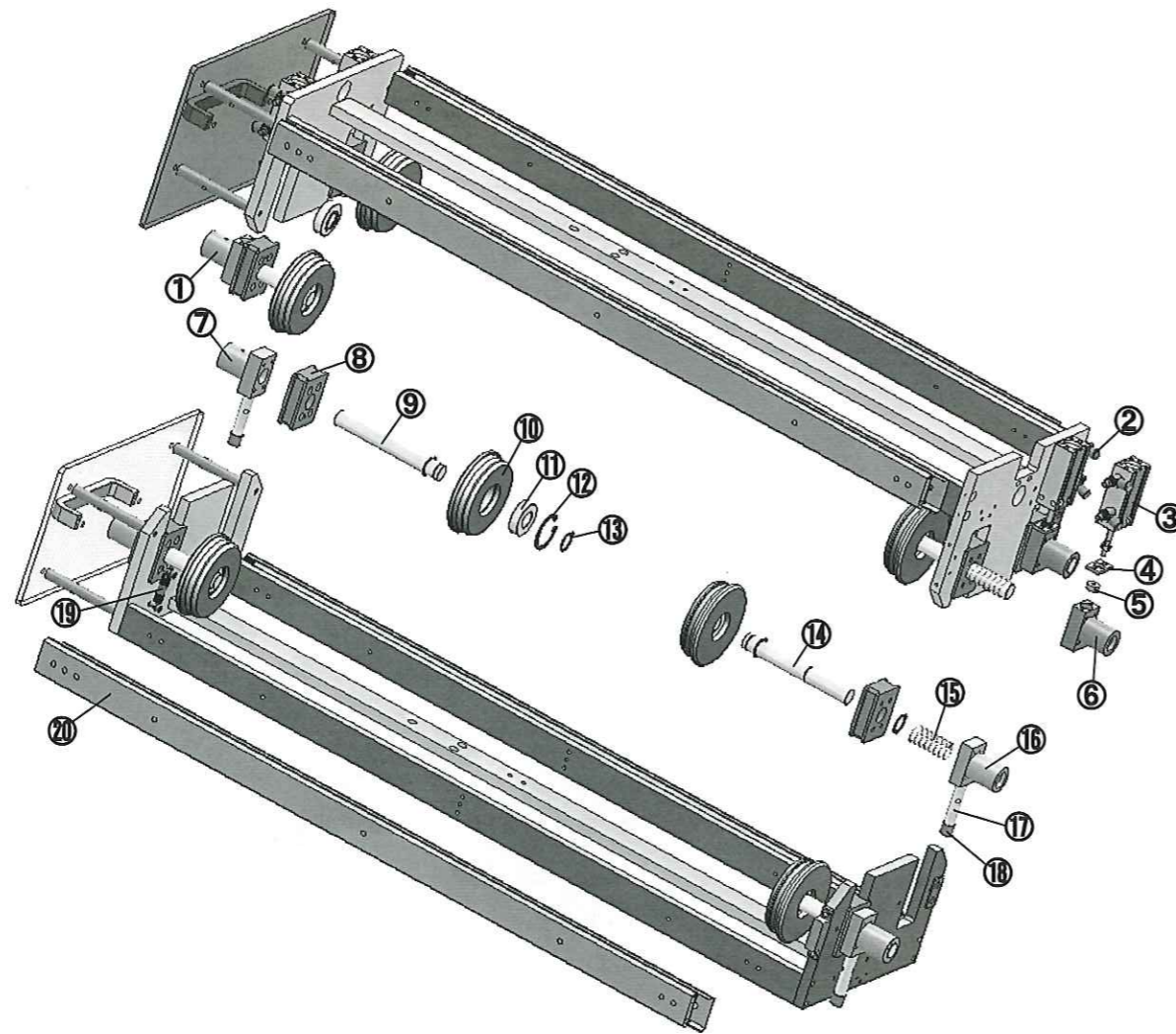




NO.	Code	Part name	Spec./Type	Supplier
1	06000792	Stop Ring	S-15	
2	02000494	Bearing	6902ZZ	KOYO
3	00015340	Coupling base	RY-0434023-00-R0	RAYON
4	00016958	Coupling Shaft	RY-0414143-01-R3	RAYON
5	00015330	Pulley	RY-0424029-00-R1	RAYON
6	00016330	Timing belt	100S3M345U	MITSUBOSHI
7	00016430	Idler Pin	RY-0364039-02-R0	RAYON
8	00016332	Tension pulley	RY-0414124-00-R1	RAYON
9	02000496	Bearing	F688ZZ	KOYO
10	06000788	Stop Ring	S-8	
11	00017975	Motor Spacer	RY-0494187-00-R0	RAYON
12	00017972	Coupling	RY-0494184-00-R1	RAYON



NO.	Code	Part name	Spec./Type	Supplier
1	00012462	Roll Slider	RY-0334240-00-R2	RAYON
2	00008398	Spring	12-0430(5032)	SAMINI
3	00015432	The spring attachment plate for gaps	RY-0484041-00-R0	RAYON
4	00009665	Spring	12-0941(5204)	SAMINI
5	00009067	The spring base for gaps	RY-020041-00-R1	RAYON
6	01000469	Roll Fixing Flange	RY-981013-00-R3	RAYON
7	02000494	Bearing	6902ZZ	KOYO
8	06000792	Stop Ring	S-15	
9	02000500	Spur Gear	SUS1-40(Φ 15H7Key5mm_2-M4)	KHK
10	01000182	Idler Pin	RY-930054-00-R1	RAYON
11	02000496	Bearing	F688ZZ	KOYO
12	0000844	Spur Gear	PS1-26(Φ 16H7)	KHK
13	06000788	Stop Ring	S-8	
14	00017971	Spur Gear	RY-0494183-00-R1	RAYON
15	00013131	Spring pin	SSPSR3-14	MISUMI
16	00014937	Coupling Cotter	RY-0334359-01-R0	RAYON



NO.	Code	Part name	Spec./Type	Supplier
1	00012509	Tape Fixing Flange	RY-0354100-00-R2	RAYON
2	00043314	Speed Controller	AS1201F-M5-04A	SMC
3	02000545	Free mount Cylinder	CU16-30D	SMC
4	00013129	Free mount cover	RY-0354102-01-R1	RAYON
5	00012229	Free mount	RY-0354101-00-R1	RAYON
6	00012508	Spring Case	RY-0354099-00-R2	RAYON
7	00004694	Tape Fixing Flange	RY-981016-01-R1	RAYON
8	00011800	Tape Slider	RY-0304093-00-R4	RAYON
9	00002432	The shaft of a tape-B	RY-990320-00-R5	RAYON
10	00001530	Tape holder	RY-9710006-00-R2	RAYON
11	02000493	Bearing	6002ZZ	KOYO
12	06000787	Stop Ring	R-32	
13	06000792	Stop Ring	S-15	
14	00001309	The shaft of a tape-A	RY-990158-00-R5	RAYON
15	02000524	Spring	11-1823(5476)	SAMINI
16	01000173	Spring Case	RY-981015-00-R2	RAYON
17	01000179	Tape push-up Shaft	RY-950069-00-R1	RAYON
18	00015435	Tape Push-up Block A	RY-0484044-00-R1	RAYON
19	02000522	Spring	22-0832(6113)	SAMINI
20	00024632	Slide rail	S340-28	TAKACHIHO

7 Installation

7.1 Set up

- ① Be sure that Power Breaker is turned off, Then Connect the AC power cable to the power source terminal.
- ② Connect the earth Ground Line to the Electrically Credible Ground near the machine.
- ③ Supply compressed air to the machine with 6mm dia-tube.
- ④ Adjust Air Pressure to get 0.3~0.4 Mpa (3.0~4.0 kgf/cm²) in Regulator gauge.
- ⑤ When the machine is to be automatically operated, connect the remote control line through control line inlet to the terminal units located at the front of the Base Unit.

7.2 Checks of machine's workings

- Supplying air makes upper tape roll rise, then it is allowed to draw the upper tape drawer.
- Supplying AC power to the machine, and turning power breaker on make Stop lamp(red) is lit.

7.3 Adhesive Tape Rolls / Tape Drawers

- ① It lets an up-and-down tape cash drawer slide, and it is checked whether it is normal.
- ② Rotate the Adhesive Tape Rolls by hand and see it turns around smoothly.
- ③ Remove the protective cover papers of Adhesive tape rolls and Clean Rolls.
- ④ Press the Run Button with the drawers open to see the machine will not start. This is for checking Interlock switch of Tape Drawers.
- ⑤ In case you remove the adhesive tape roll completely from the drawers, fix Adhesive Tape Rolls in the machine in the direction indicated in the warning label.

8 Test run

8.1 Test for rolls rotation

Procedure	Correct response of machine	Treatment for wrong response
1. Make power breaker on	Stop lamp lit red	Check in put power
2. Press run button	Run lamp lit green	Check interlock SW. or EMG SW.
	Up/Low tape rolls are pressed	Check air in put
	Rolls start rotating	Check the motor drivers dial on the drivers PCB
3. Adjust the speed control dial in the C.C drawer	Speed of clean roll rotation is varied according to the Speed control dial.	
4. Press stop bottom	Stop state	

8.2 Test for RISE/FALL of upper rolls

Procedure	Correct response of machine	Treatment for wrong response
1. Make power breaker on	Stop lamp lit red	Check in put power
2. Turn the RISE/FALL switch on	—	—
3. Press run button	Run lamp lit green	Check interlock SW. or EMG SW.
4. Make sensor on entrance active by bringing finger close	Synchronously upper clean roll start falling	
5. Take finger away from sensor		
6. Turn off the RISE/FALL switch		

8.3 Setting machines condition

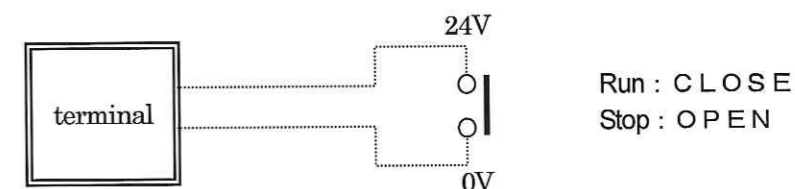
Speed control

- ① Turn power breaker on and press run button.
- ② Pull out the control circuit drawer and adjust the motor driver speed to the factories required line speed.
- ③ Return the control circuit drawer at home position

9 External control terminal

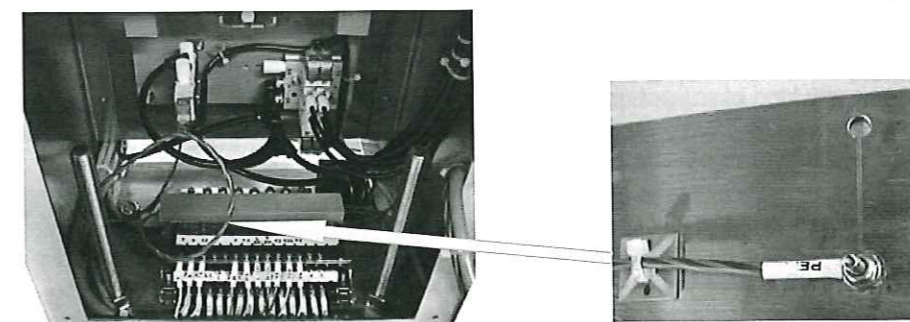
9.1 Connection

To control RY-700A externally, use the external control terminal on rear side, referring to the circuit diagram.



Notice

- When external Signal is ON, (Closed), the machine will not stop with the Stop Switch pressed. (Emergency Stop Switch and interlock switch is active.)



The electric wire is long in order to open covering.

Please contain to suitable space.

10 Routine Maintenance

A) Periodical routine.

- ⊙ The machine is almost of maintenance free, still, do check the following points periodically.

B) Daily

- ⊙ Check the cleanness of the Adhesive tape rolls.

C) Weekly

- ⊙ Clean the Clean Rolls
- ⊙ Press the Emergency Stop Switch and see if it works.
- ⊙ Check and see if the interlock switches for the Tape Drawers work.

For the procedures for checking safety components, see

D) Monthly

- ⊙ Clean the ionizing points of static eliminator bars with soft brush.
- ⊙ Check and see if the machine has any problem listed in.

For the intervals of purges of Adhesive tape rolls, find the most appropriate period in each line.

Method of cleaning the machine.

A) Main body

- ⊙ Use an ethyl alcohol soaked soft cloth to wipe the body of the machine.
- ⊙ Never use any kind of solvent, paint thinner, and so on. That may cause damages to the machine body to the fed PCB. Also, chances are the leftover solvent may transfers to the fed PCB.

B) Clean Rolls

- ⊙ Wipe the surface of the Clean Rolls with soft cloth soaked in ethyl alcohol(ethanol)
- ⊙ Never use other materials, e.g. strong cleaner containing acid, alkali-cleaner, organic-solvent, etc., such as Benzine, Gasoline, etc.
- ⊙ Method of Cleaning

- ① Open the Top Cover
- ② Draw the upper Tape Drawer
- ③ Take out the upper Clean Roll and clean it.
- ④ Clean the lower Clean Roll.
- ⑤ Replace the upper Clean Roll.
- ⑥ Replace the upper Tape Drawer.
- ⑦ Replace the Top Cover. Be sure it is fixed with bolts.

C) Static Eliminator bars

- ⊙ Clean the Static Eliminator bars periodically in order to prevent the ionizing points on the bar from collecting hardened balls of lint, grease, and other foreign matter that reduce their sharpness and decrease efficiency.
- ⊙ Method of Cleaning
 - ① Turn the ON/OFF switch off.
 - ② Clean the ionizing points with soft brush. Compressed air is also effective in order to keep the inside of the bar clean.

D) Fault Finding Table

Here below is the faultfinding table which operator can take into account in order to use the machine in maximum effect.

Checking Problem	Probable Cause	Solution
✓ Adhesive tape rolls are dirty.	Adhesive tape roll sheet gets too much dust and particles.	Purge the dirty sheet of Adhesive tape rolls by one turn. When dusts and particles are no longer transferred from Adhesive tape rolls from Clean Rolls, Adhesive tape rolls are Saturated
✓ No rotation of Clean Rolls and Adhesive tape rolls.	The M/C is not powered	Exchange of parts
	The M/C is in the OFF/ Stop state.	
✓ No rotation of Adhesive tape rolls	Air pressure to the Adhesive tape rolls is not adequate.	Check the air pressure gauge and supply proper air pressure.
	The M/C is in the TAPE FREE state	Press the TAPE FREE button and bring the machine into the Normal state.
	The solenoid valve is broken.	Replace it.
✓ Abnormal rotations of Clean Rolls or of feed roller. Strange sound Motor's over heat Difference of driving speed for each roll.	Trouble of mechanical transmission parts <input type="checkbox"/> Gears are loosen <input type="checkbox"/> Shafts are bent. <input type="checkbox"/> Damages	<input type="checkbox"/> Fix the parts by fastening bolts and screws.
		<input type="checkbox"/> If you find parts strongly damaged, exchange them.
		<input type="checkbox"/> For motors over heat, check also the input voltage and that the speed controller is properly installed.
✓ PCB gets hurt after cleaning.	Clean Rolls has strongly attached material.	Remove it with pincettes, and wipe Clean Roll with alcohol.
✓ Static Electricity is not eliminated well.	Ionizing points of the static eliminator bars collect built-up deposits.	Turn off the machine, and clean the Static Eliminator bars with soft brush to get rid of them
	The lifetime of the unit is over.	Replace it.
✓ Cleaning effect gets worse after a long period of use.	Clean Roll has been worn away and the rubber does not touch the surface of PCB well.	Replace it for a new one.
✓ The machine sways back and forth when PCB pass through it	Speeds difference between Clean Roller and prior/posterior machine.	Adjust the speed of the machine precisely by the speed adjustment dial.
No vertical motion of Clean Rolls	Failure of Electrical parts Either timer, solenoid valve, or sensor. Failure of Air cylinders	Check those parts

11 Cleaning method for each parts

11.1 General cleaning Main body

- ① Use an ethyl alcohol soaked soft cloth to wipe the body of the machine.
- ② Never use any kind of solvent, paint thinner, and so on. That may cause damages to the machine body to the fed PCB. Also, chances are the leftover solvent may transfers to the fed PCB.

11.2 Clean Rolls

- ① Wipe the surface of the Clean Rolls with soft cloth soaked in ethyl alcohol (ethanol)
- ② Never use other materials, e.g. strong cleaner containing acid, alkali-cleaner, organic-solvent, etc., such as Benzine, Gasoline, etc.
- ③ Method of Cleaning
 - ① Open the Top Cover
 - ② Draw the upper Tape Drawer
 - ③ Take out the upper Clean Roll and clean it.
 - ④ Clean the lower Clean Roll.
 - ⑤ Replace the upper Clean Roll.
 - ⑥ Replace the upper Tape Drawer.
 - ⑦ Replace the Top Cover. Be sure it is fixed with bolts .

11.3 Static Eliminator bars

- ① Clean the Static Eliminator bars periodically in order to prevent the ionizing points on the bar from collecting hardened balls of lint, grease, and other foreign matter that reduce their sharpness and decrease efficiency.
- ② Method of Cleaning
 - ① Turn the ON/OFF switch off.
 - ② Clean the ionizing points with soft brush. Compressed air is also effective in order to keep the inside of the bar clean.

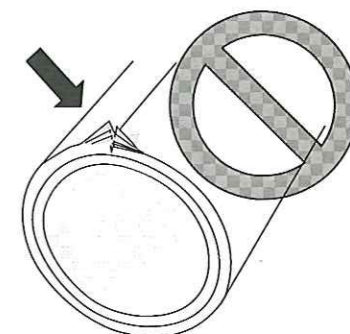
! CAUTION

- ① Never use water to clean the bars.

12 Tape Purge Operation

When Adhesive Tape Rolls absorbs too much dust and particles, and the adhesiveness of the tape sheet is no longer strong enough to catch particles from the surfaces of the clean Rolls, it is time to purge Adhesive Tape Roll sheet by peeling and cutting off the contaminated part of the sheet. The procedure is as follows.

- ① Be sure that Adhesive Be sure that Adhesive in the home position.
- ② Pull Tape Drawer to the front end.
- ③ Detach the edge of the surface sheet of Adhesive Tape Roll from the roll body.
- ④ Peel and pull the tape edge slowly, rotating the Tape Roll on turn.
- ⑤ Cut the contaminated part of the sheet from Adhesive Tape Roll with a cutter knife to get the new sheet roll surface.
- ⑥ Replace Tape Drawer into the machine gently until the drawer is fixed by magnet chuck.
- ⑦ Press the reset button on the panel Timer to display 0.

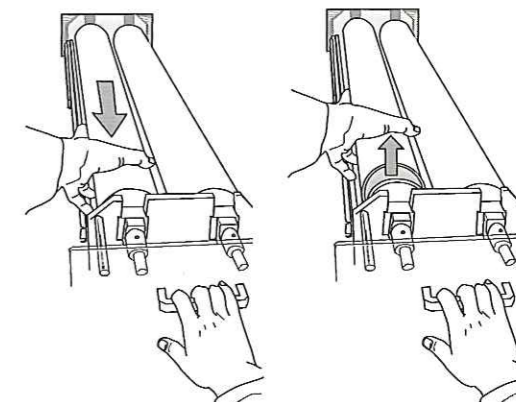


Never cut tape sheets preparatory. It may lose ability for the accumulating particles.

12.1 Replacing adhesive tape rolls

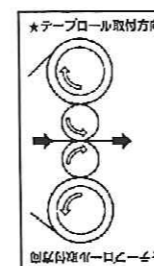
In case that tape rolls are used over, replace the used one to the new in the following procedure

- ① Turn off the stop button and power breaker.
- ② Pull the tape drawer to the end of operator side gently.
- ③ Push the tape roll to the rear side, and detach the roll from the tape roll holder.

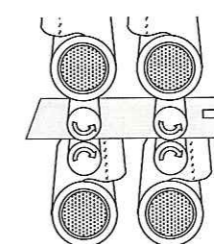


12.2 Caution

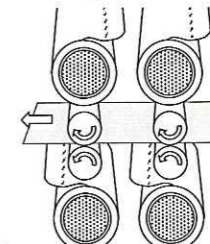
- a) Pay great attention to the tape direction. If Adhesive Tape Roll is installed in the wrong direction, the Clean Roll might wind up Adhesive Tape Roll sheet. See also the instruction below.



Flow direction
Left to Right



Right to Left



Tape Roll Direction Lable

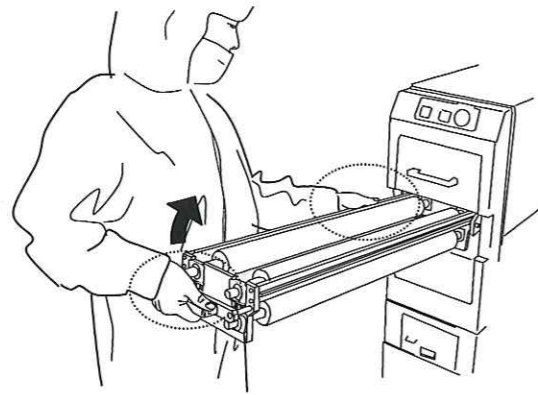
- b) Antiskid Ring is attached to each Tape Holder. In order to fully fix the Adhesive Tape Roll, press firmly the holder inside the core of the Adhesive Tape Roll.

- ① Remove the protective paper/film sheet from the Adhesive Tape Rolls.
- ② Press Tape Drawer back into the machine

13 Detach/Attach for Roll Unit

13.1 Detaching

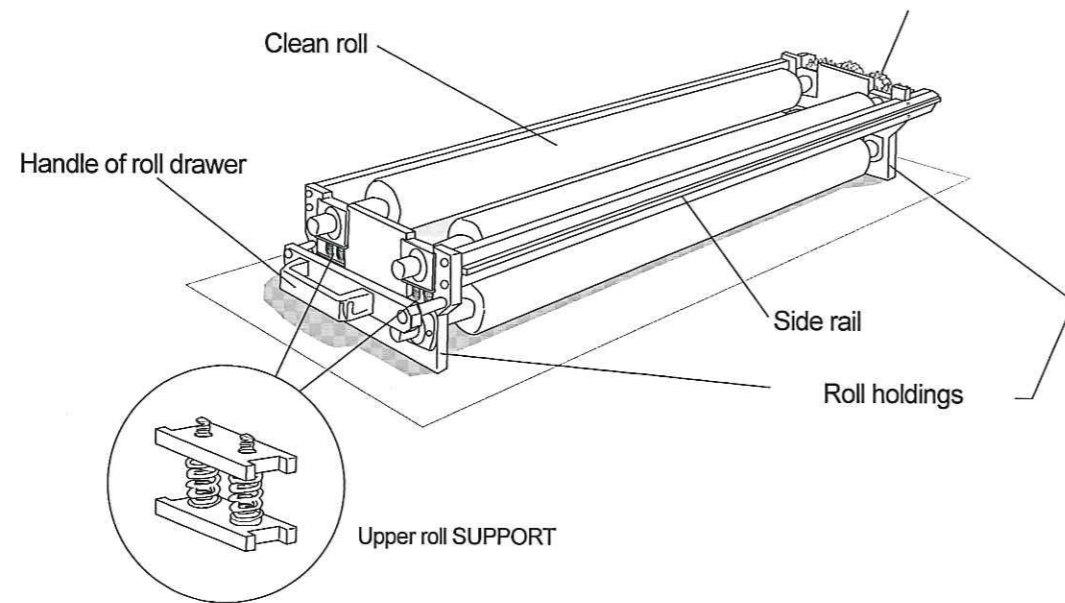
Hold the roll unit rigidly not to drop, and pull put it out slowly, rising it a little.



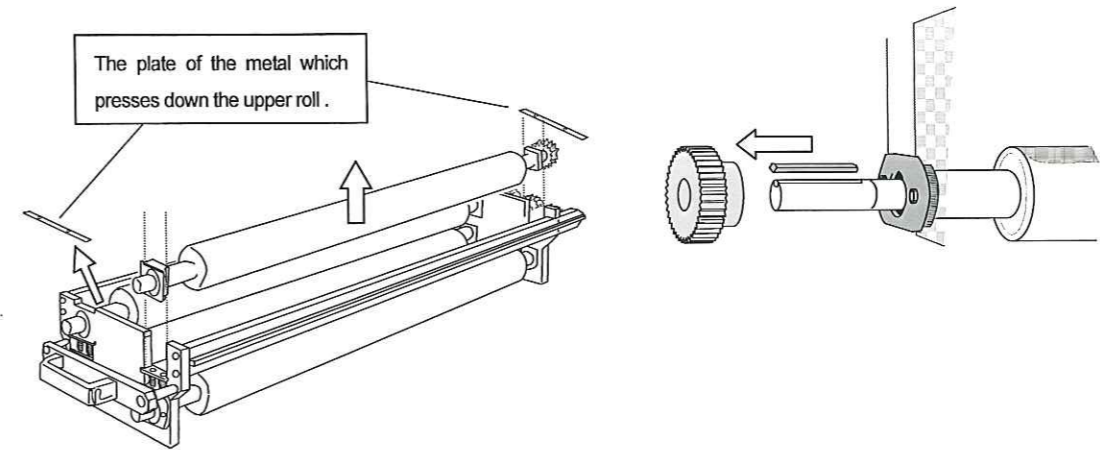
CAUTION

Please surely work by two or more persons in the case of roll unit removal and insertion. In one person, a unit is dropped and there is fear of an injury or unit breakage.

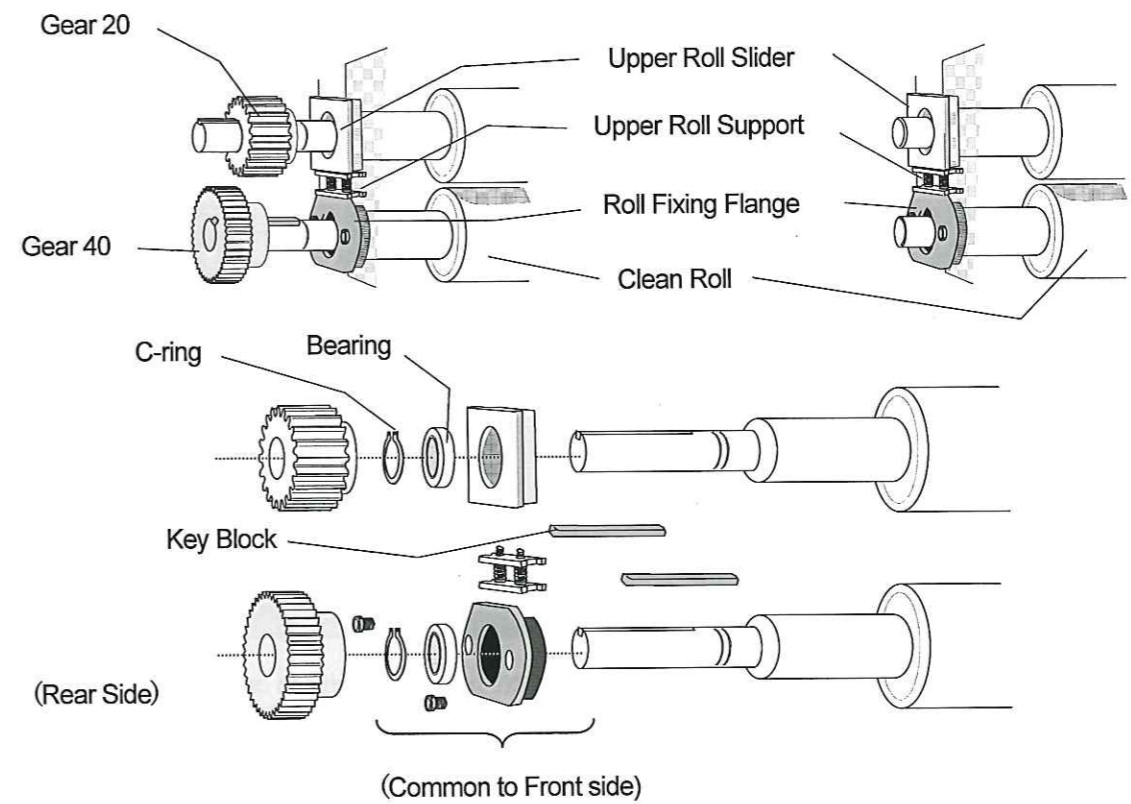
13.2 Roll Holder unit



14 Exchange of Clean Rolls



14.1 Roll exploded view

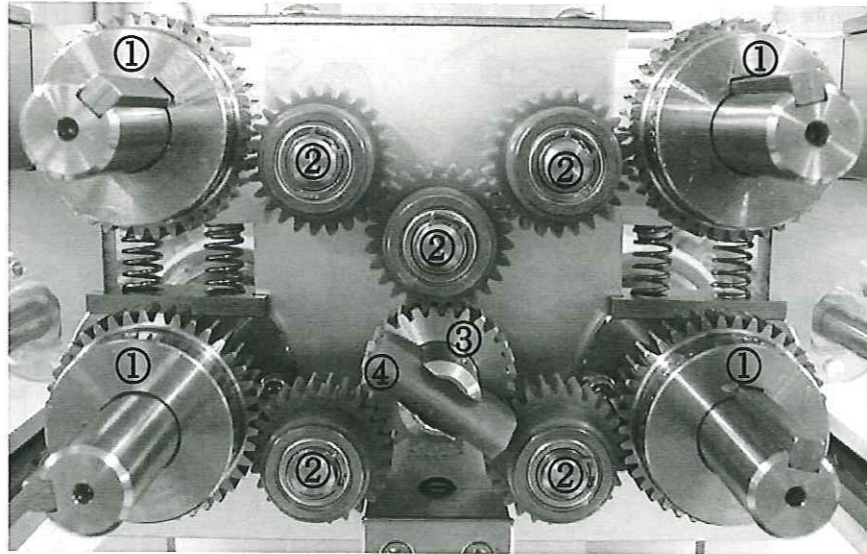


Notice

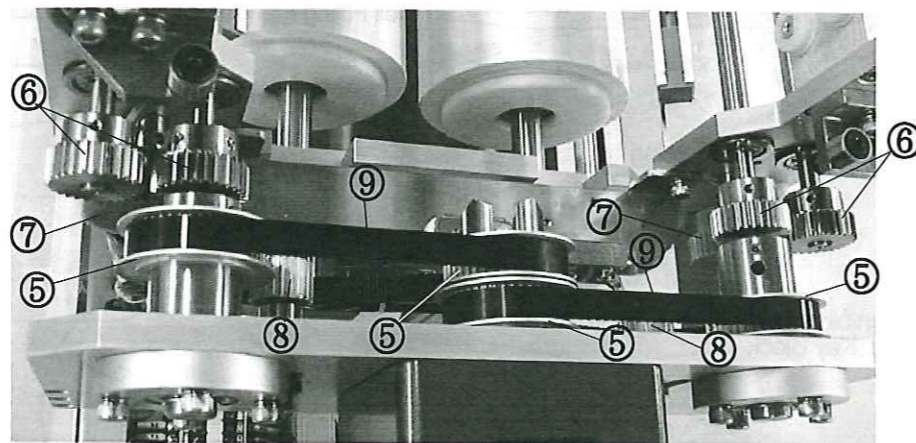
There is no difference between Upper & Lower Clean Rolls themselves.

15 Arrangement plan of gears

Roll holder Unit



Reduction gear etc



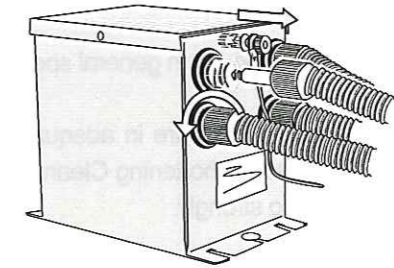
NO.	Code	Part name	Spec./Type	Supplier	qty.
1	02000500	Spur Gear	SUS1-40(Φ15H7Key5mm_2-M4)	KHK	4
2	00000844	Spur Gear	PS1-26(Φ16H7)	KHK	5
3	00017971	Spur Gear(SUS1-28)	RY-0494183-00-R1	RAYON	1
4	00014937	Coupling Cotter	RY-0334359-01-R0	RAYON	1
5	00015330	Pulley	RY-0424029-00-R1	RAYON	4
6	02000501	Spur Gear	SUS1-28(Φ8H7Key3mm_2-M4)	KHK	4
7	02000506	Spur Gear	PS1-40(Φ16H7)	KHK	2
8	00016332	Tension pulley	RY-0414124-00-R1	RAYON	2
9	00016330	Timing belt	100S3M345U	MITSUBOSHI	2

16 Static Eliminator Bar

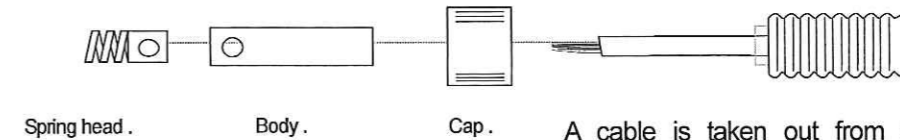
About the specifications .

Device life . More than 10000 hours . (About 5-year /8h/ for 1-day and 250-day/age) .
 Guarantee period . After shipping, one year .

Exchange time .
 When effect declined remarkably.

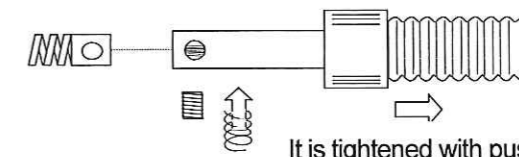


A power supply is turned off.
 A cap is turned to the counterclockwise direction and removed.



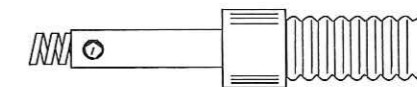
A cable is taken out from Protection tube and Poly Tube about 70mm and cut.

The wick line of the high voltage cable is tightened firmly with a screw with the spring head.



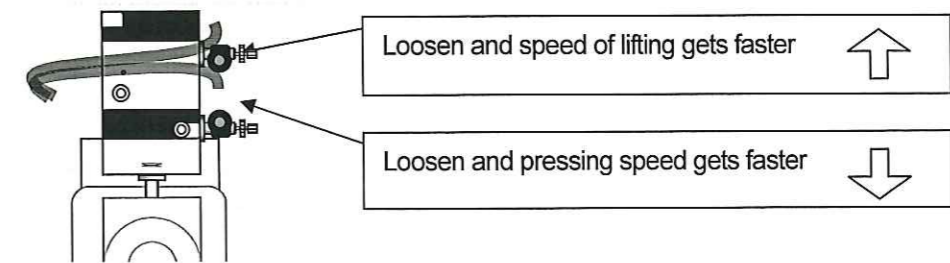
It is tightened with pushing it a little.

Attention .
 Fix a spring head firmly with a screw.



Adjustment of Pressing Speed of Adhesive Tape Roll(Air Cylinders)

By adjusting the speed controller knobs on the air cylinders, pressing speed can be balanced.
 Lower Air Cylinder needs the inverse pattern adjustment.
 Get the good balance for both cylinders and fasten the Lock Nuts.



17 Cautions on Handling

In order to keep RY-700A series in good condition for a long time, it is important to handle and operate the machine in the following manners.

Cautions with general specification

Please supply AC input power in general spec. $\pm 10\%$. Over power voltage may cause overheating the driving motor.

Set the compressed air pressure in adequate range 2.5~3.5kg.f/c m² with air pressure regulator. Over-pressure may cause shortening Clean Roll's life (sticky rubber roll) by pressing Adhesive Tape Rolls to Clean Rolls too strongly.

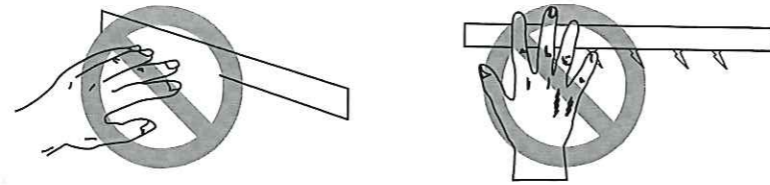
Cautions on Operating

Never draw Tape Drawers while Clean Rolls are rotating. This manner may hurt the sliding mechanism of drawers and the power transmission mechanism of the machine

Do not put your hands and may other tools close the entrance of the machine during the Run state. You may get your hands hurt and may be facing a danger of the electric shock. In case that you have any trouble during operation, immediately press the Emergency Stop Button to stop the machine.

Do not touch the static eliminator bars.

 CAUTION



Be sensitive to cleanness on the surface of both Clean Rolls and Adhesive tape rolls. Do not run the machine with extremely dirty rolls.

Others

Never fail to connect earth grounding. Poor grounding may make static eliminator not work well and also cause hazard of electrical shock.

Handle Top Cover carefully and so as not to get it hurt, crushed, or dropped to the floor.

Drawing and resetting Tape Drawer must be proceeded gently without any unnecessary big force, especially in case of the latter. Slide the drawer slowly and fix it at the end firmly so as not to hurt the limit switch installed in the rear end.

Do not weight Tape Drawers while they are drawn out. It may hurt the sliders for Tape Drawer.

Do not clean Clean Rolls with liquid solvents.

18 Consumptive Parts List

Clean Rolls

Adhesive Tape Rolls

※Please check form with the seal stuck on the machine.

19 Specifications

Model	RY-705AE	
Rating	Power supply	AC240V±10%
	Current consumption	160VA
Air supply pressure	0.35Mpa max	

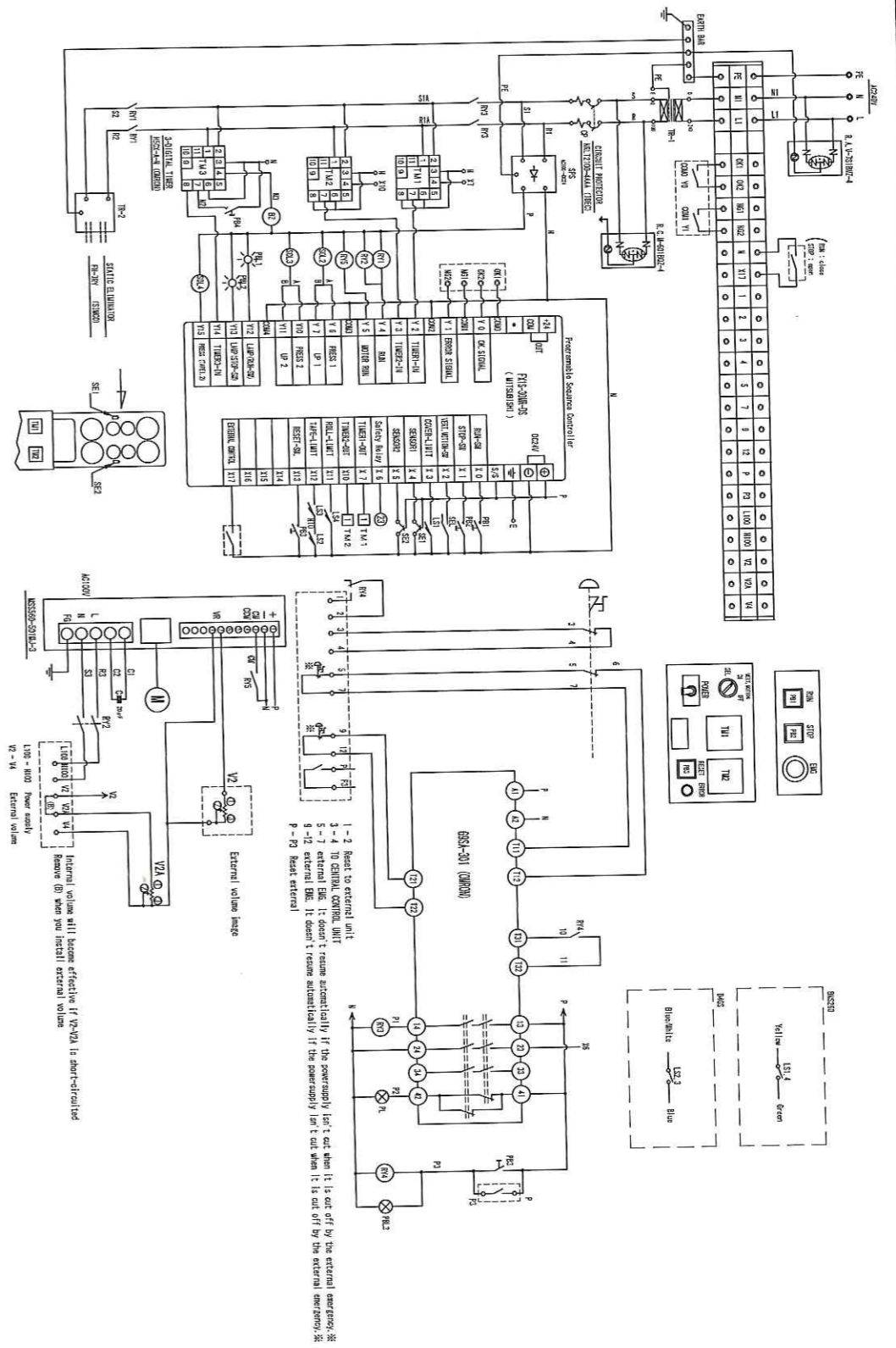
Remark: If there is something unclear or questions about this manual, please feel free to contact with Rayon Industrial Co., Ltd.

This is the end of the Operation Manual for Clean Roller: Model RY-700 Series.

Rayon Industrial Co., Ltd.
 8-2 Miyukigaoka, Tukuba-City, IBARAKI, JAPAN, 183-0015
 TEL: +81-29-852-2160 FAX: +81-29-852-2165

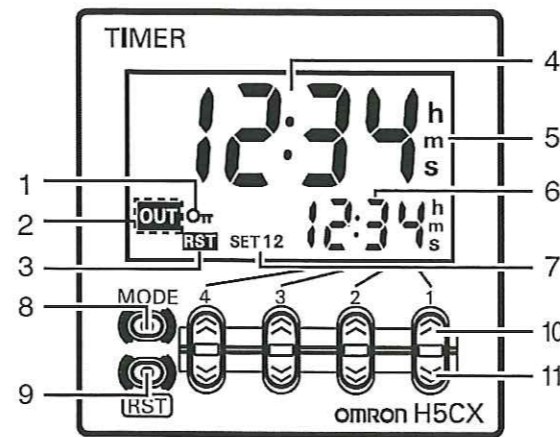
RAYON RAYON INDUSTRIAL CO., LTD. 株式会社レイオン	承認 換	作 成	WIMURA 14.05.21	1/2 P 1/1 P	1206 not	A3 not
型 式 RY-705AE	名 稱 Clean Roller	圖 名 RY-1403031E-00	圖 番 R0			

Caution
 1. Line color
 : Ground = Green/Yellow
 : AC230V = Black
 : AC100V-R = Red
 : AC100V-S = Orange
 : P = Brown
 : N = Blue



● Display Section

1. Key Protect Indicator (orange)
2. Control Output Indicator (orange)
3. Reset Indicator (orange)
4. Present Value Display (Main Display)
(Character height: 12 mm, red*)
- *Characters on models with terminal blocks can be switched between red, green, and orange.
5. Time Unit Indicators (If the time range is 0 min, 0.0 min, 0 h, 0.0 h, or 0 h 0 min, these indicators flash to indicate timing operation.)
6. Set Value Display (Sub-display)
(Character height: 6 mm, green)
7. Set Value 1, 2 Indicator



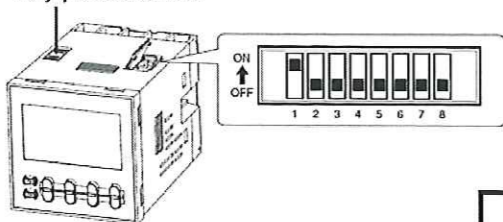
● Operation Key

8. Mode Key (Changes modes and setting items)
9. Reset Key (Resets present value and output)
10. Up Keys 1 to 4
11. Down Keys 1 to 4

Step1

Basic settings can be done only with the DIP switch.
Note: H5CX-L8□-N has no DIP switch, so go to Step2.

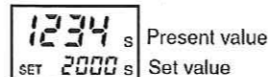
Key-protect switch



Item	OFF	ON
1 DIP switch setting	Disable	Enable
2		
3 Time range	Refer to the table on the right.	
4		
5 Output mode	Refer to the table on the right.	
6		
7 UP/DOWN mode	UP	DOWN
8 Input signal width	20 ms	1 ms

- Default settings are all OFF.
- Turn ON pin 1 on the DIP switch (enabled).
- DIP switch settings are updated when the power is turned ON. (Set the DIP switch before installation and turning ON power.)

• Display in RUN mode.
(except for Z mode)



Pin 2	Pin 3	Pin 4	Time range
ON	ON	ON	0.001 s to 9.999 s
OFF	OFF	OFF	0.01 s to 99.99 s
ON	OFF	OFF	0.1 s to 999.9 s
OFF	ON	OFF	1 s to 9999 s
ON	ON	OFF	0 min 01 s to 99 min 59 s
OFF	OFF	ON	0.1 min to 999.9 min
ON	OFF	ON	0 h 01 min to 99 h 59 min
OFF	ON	ON	0.1 h to 999.9 h

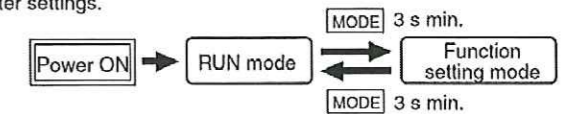
Pin 5	Pin 6	Output mode
OFF	OFF	A Mode (Signal-ON delay (I): Power recycle)
ON	OFF	A-2 Mode (Power-ON delay (I): Power recycle)
OFF	ON	E Mode (Interval: Power recycle)
ON	ON	F Mode (Cumulative: Power retain)

Step2

Parameters that cannot be set with the DIP switch are set with the operation keys on the front panel.

Note: Refer to the datasheet (Cat. No. L111) for detailed parameter settings.

- Change from RUN Mode to Function Setting Mode.



- Set the parameters using the [MODE] Keys.

The characters displayed in reverse video are the default settings.

When performing settings with operation keys only, set pin 1 of the DIP switch to OFF (factory setting).

If pin 1 of the DIP switch is set to ON, the setting items indicated in □ will not be displayed.

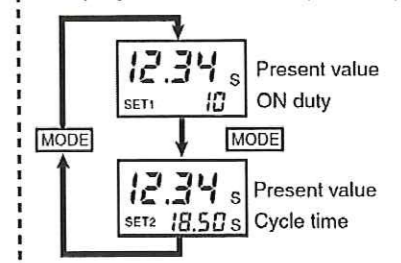
Display	Parameter name	Set value	Comments
Time range	Time range	*1	---
UP/DOWN mode	UP/DOWN mode	UP, DOWN *2	---
Output mode	Output mode	A, A-1, A-2, A-3, b, b-1, d, E, F, z, S *2	Only modes A-2, b, E, and z can be selected for H5CX-L8E□.
Output time	Output time	0.001 to 99.99	(If the output time is set to 0.00, HOLD is displayed.) Displayed for modes A, A-1, A-2, A-3, b, b-1 and S only. Unit: second
Input signal width	Input signal width	20ms, 1ms *2	Displayed only for models other than H5CX-L8E□.
NPN/PNP input	NPN/PNP input	NPN, PNP *2	Only displayed for the H5CX-A□ and H5CX-A11□.
Display color	Display color	RED, GRN, ORG, R-GR, B-GR, R-OR, GR-OR, B-OR *2	Displayed only for models with terminal blocks.
Instantaneous/time-limit	Instantaneous/time-limit	100%, 2% *2	Displayed only for the H5CX-L8E□.
Set value upper limit	Set value upper limit	1 to 9999	---
Key protect level	Key protect level	KP-1, KP-2, KP-3, KP-4, KP-5, KP-6, KP-7 *2	---
• Models Other Than H5CX-L8E□			
Output ON count alarm set value	Output ON count alarm set value	1 to 9999	× 1,000
Output ON count monitor value	Output ON count monitor value	---	The monitor value is only displayed. It cannot be set. × 1,000
• H5CX-L8E□			
Instantaneous output 1 (OUT1) ON count alarm set value	Instantaneous output 1 (OUT1) ON count alarm set value	1 to 9999	× 1,000
Time-limit output 2 (OUT2) ON count alarm set value	Time-limit output 2 (OUT2) ON count alarm set value	1 to 9999	× 1,000
Instantaneous output 1 (OUT1) ON count monitor value	Instantaneous output 1 (OUT1) ON count monitor value	---	The monitor value is only displayed. It cannot be set. × 1,000
Time-limit output 2 (OUT2) ON count monitor value	Time-limit output 2 (OUT2) ON count monitor value	---	The monitor value is only displayed. It cannot be set. × 1,000

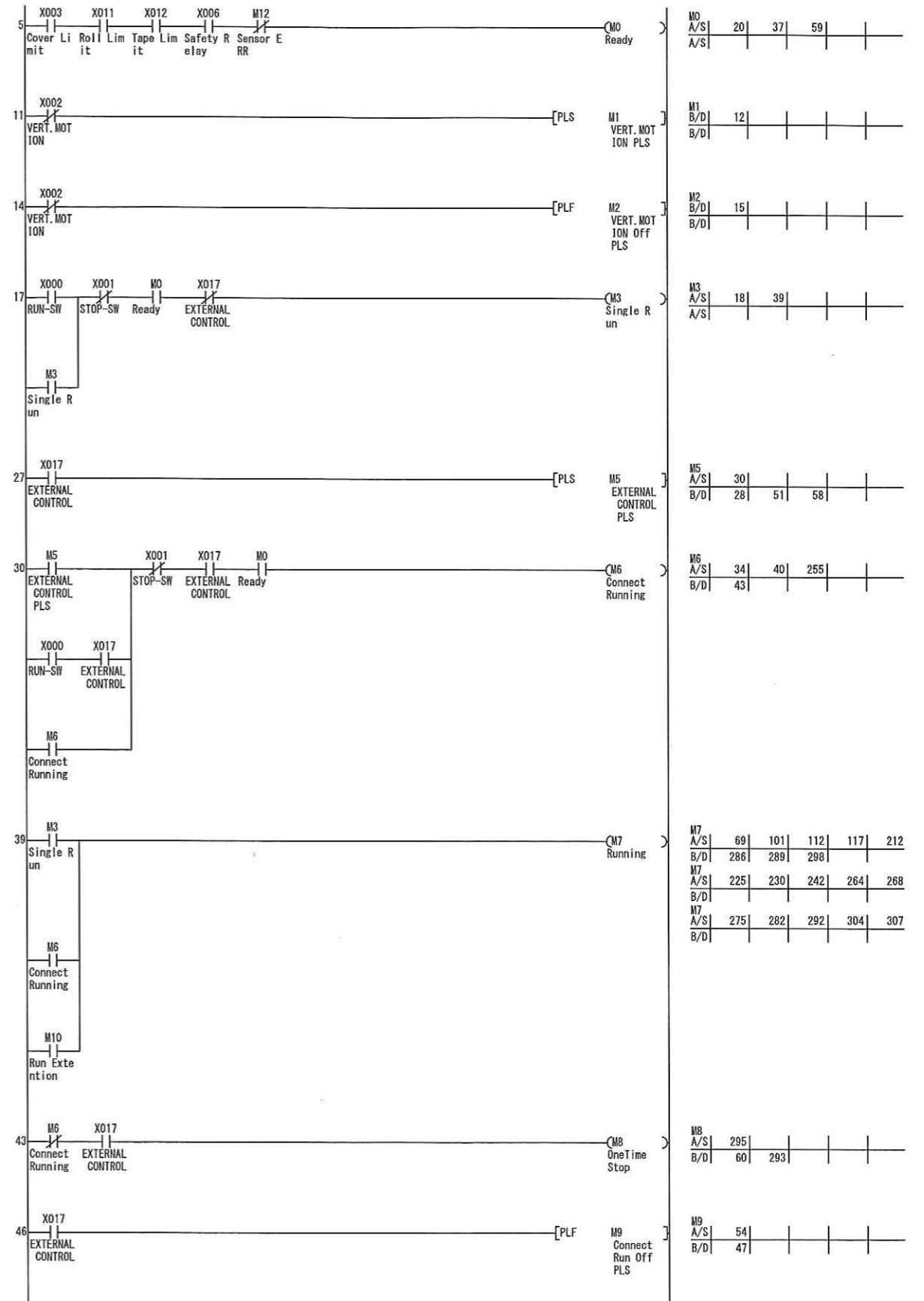
*1 The set values for the time range are as follows:

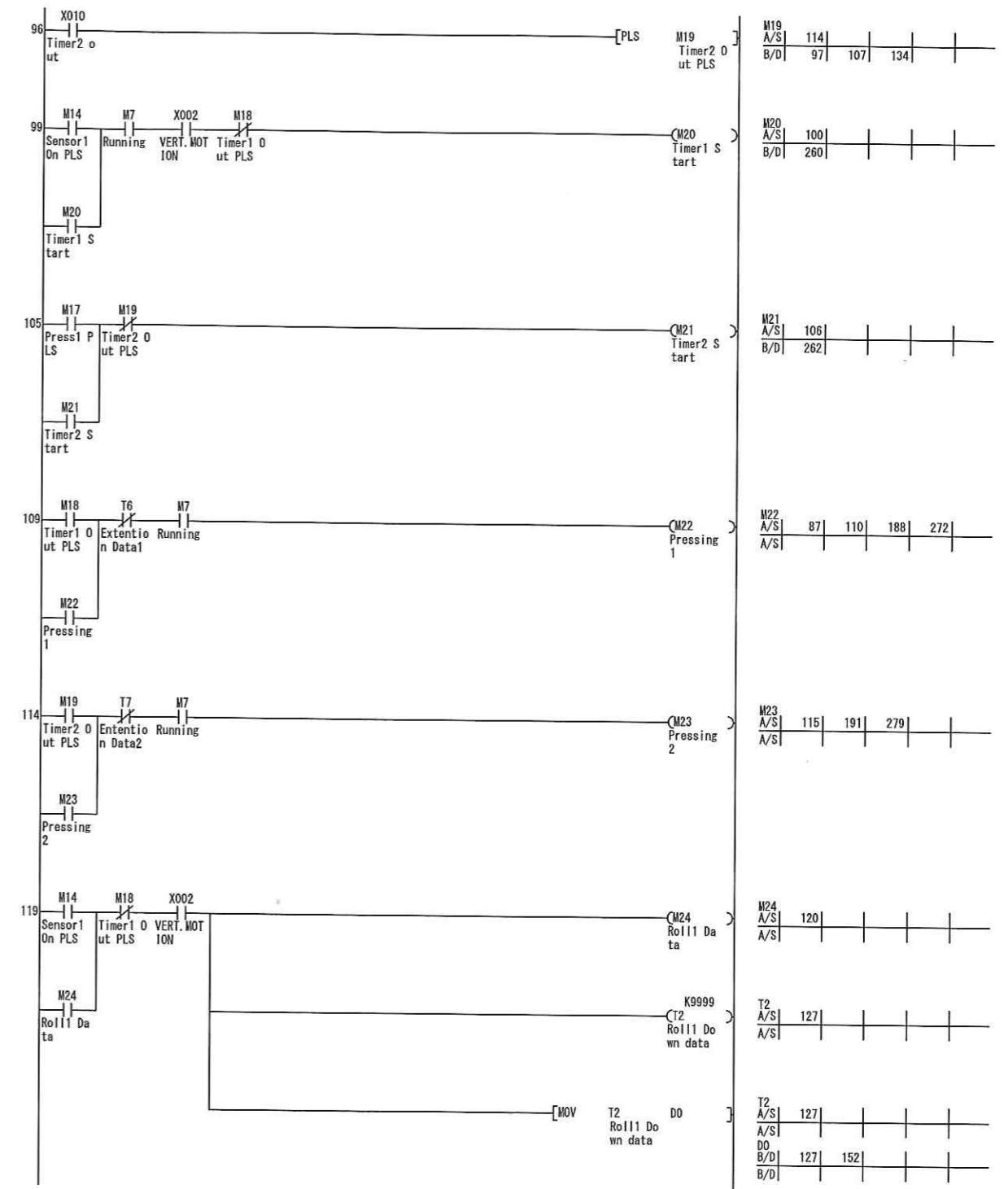
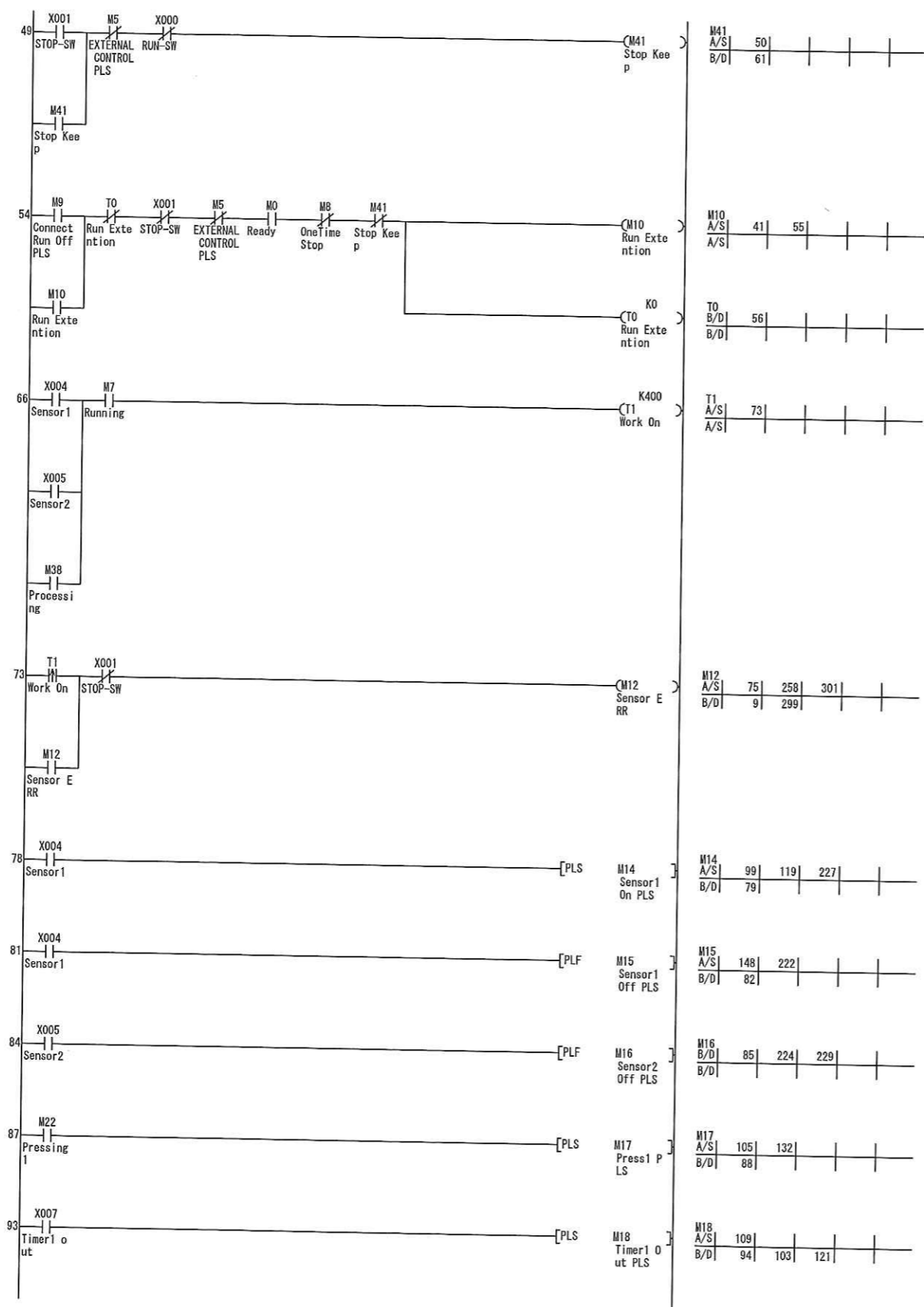
Display	Set value
--- s	0.01 s to 99.99 s (default setting)
---. s	0.1 s to 999.9 s
--- s	1 s to 9999 s
---:-- ms	0 min 01 s to 99 min 59 s
---: m	0.1 min to 999.9 min
---:-- m	1 min to 9999 min
---:-- hm	0 h 01 min to 99 h 59 min
---: h	0.1 h to 999.9 h
--- h	1 h to 9999 h
-.--- s	0.001 s to 9.999 s

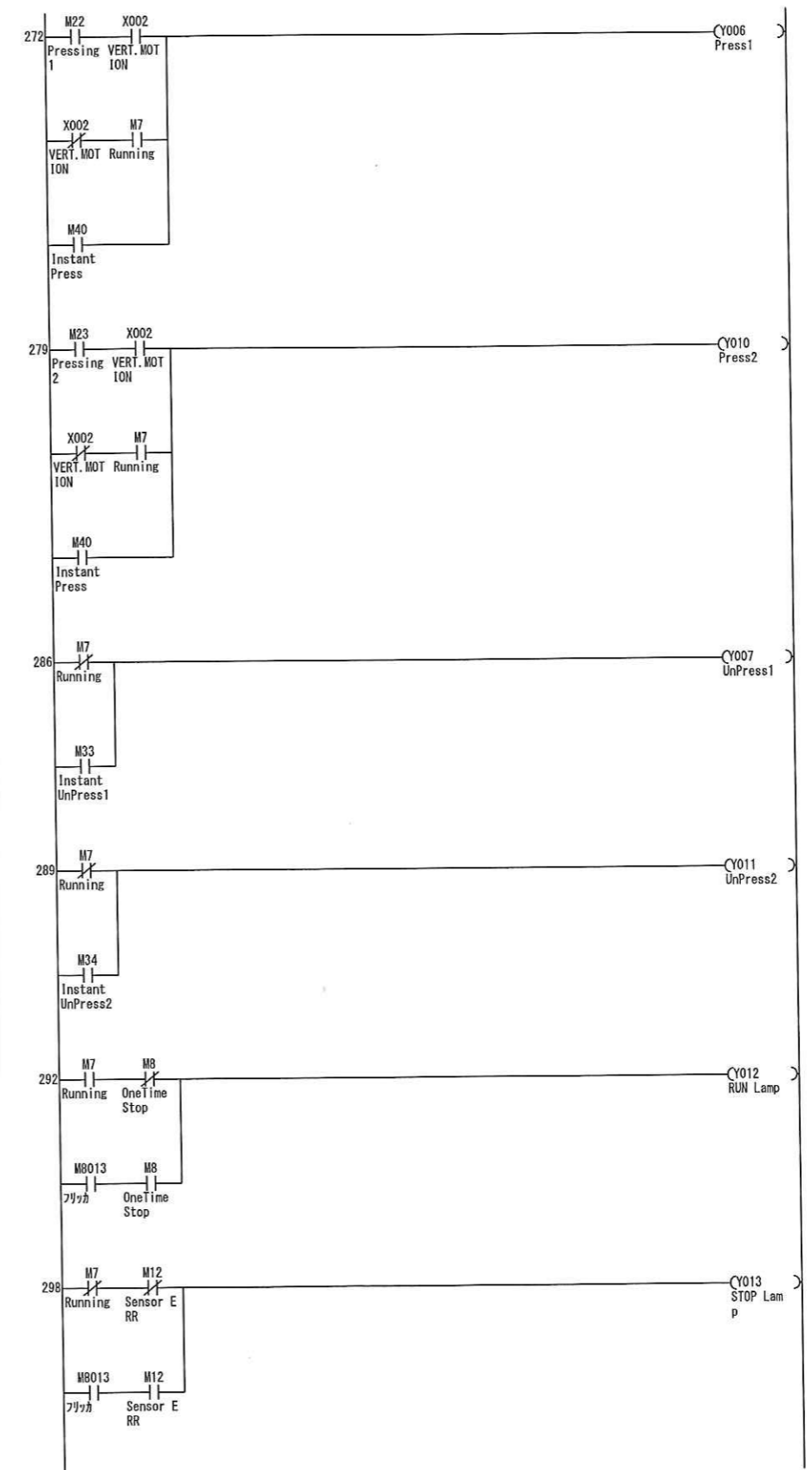
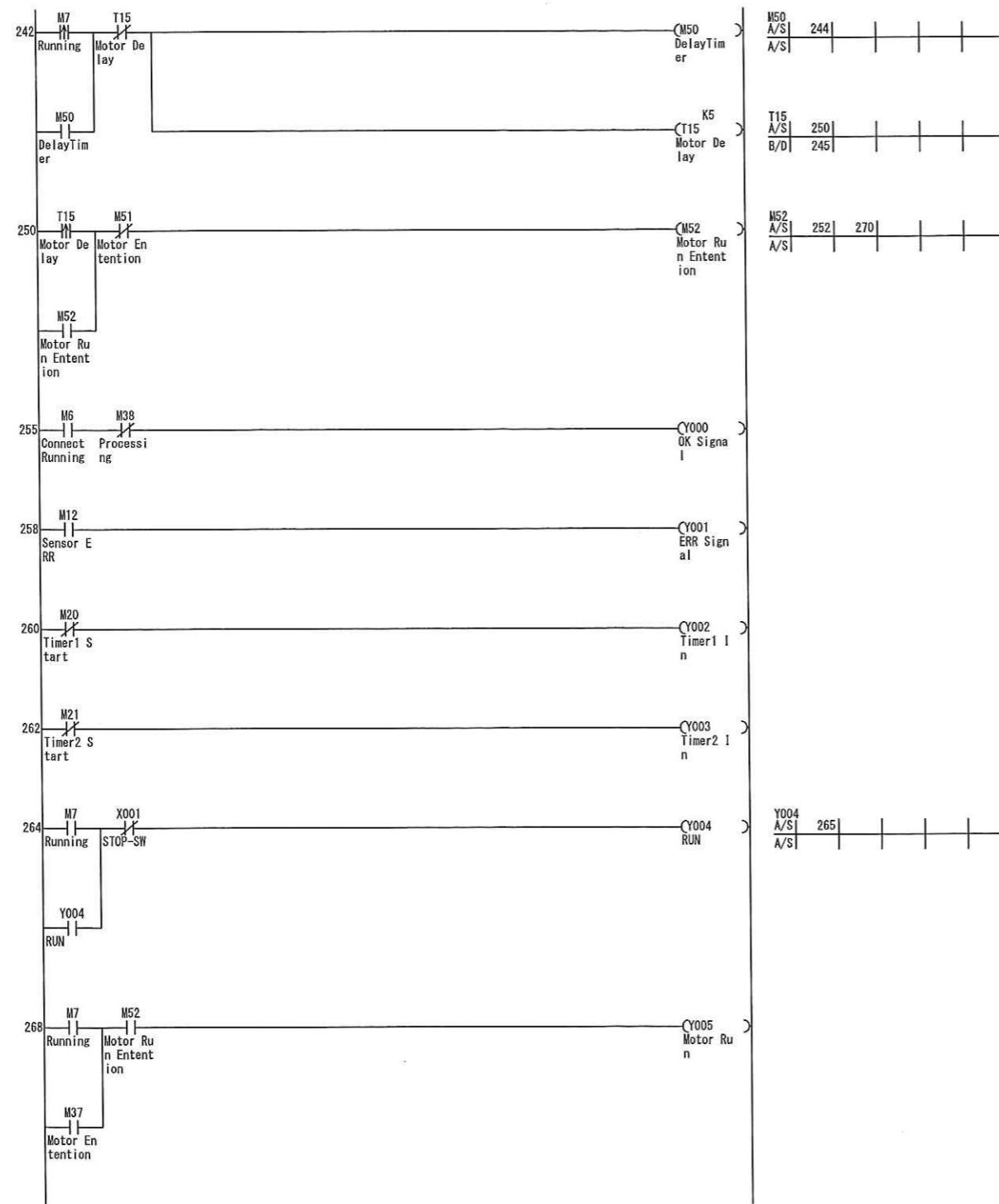
*2 After reaching the last set value, the [MODE] Keys will return to the first set value.

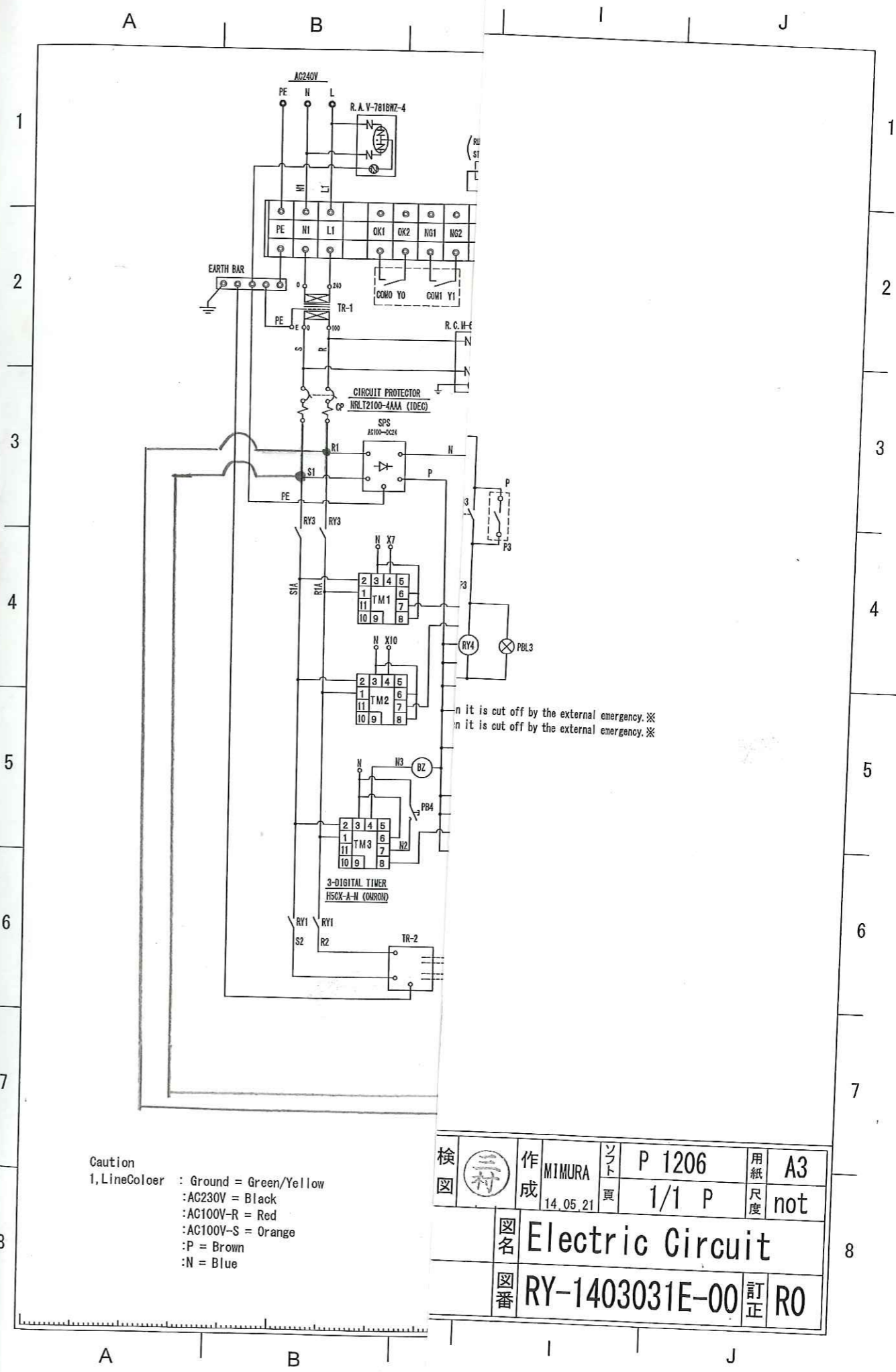
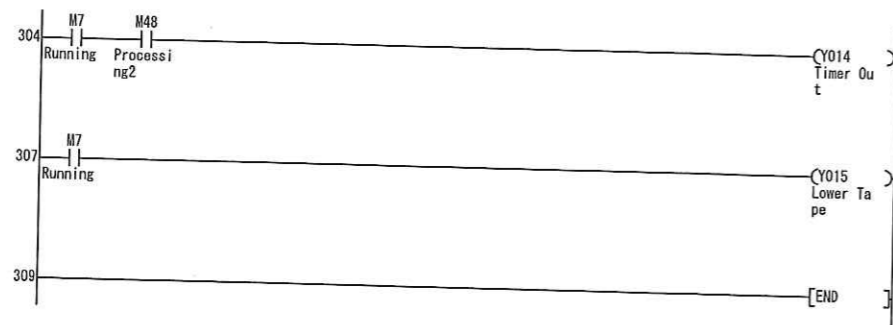
• Display in RUN mode. (Z mode)







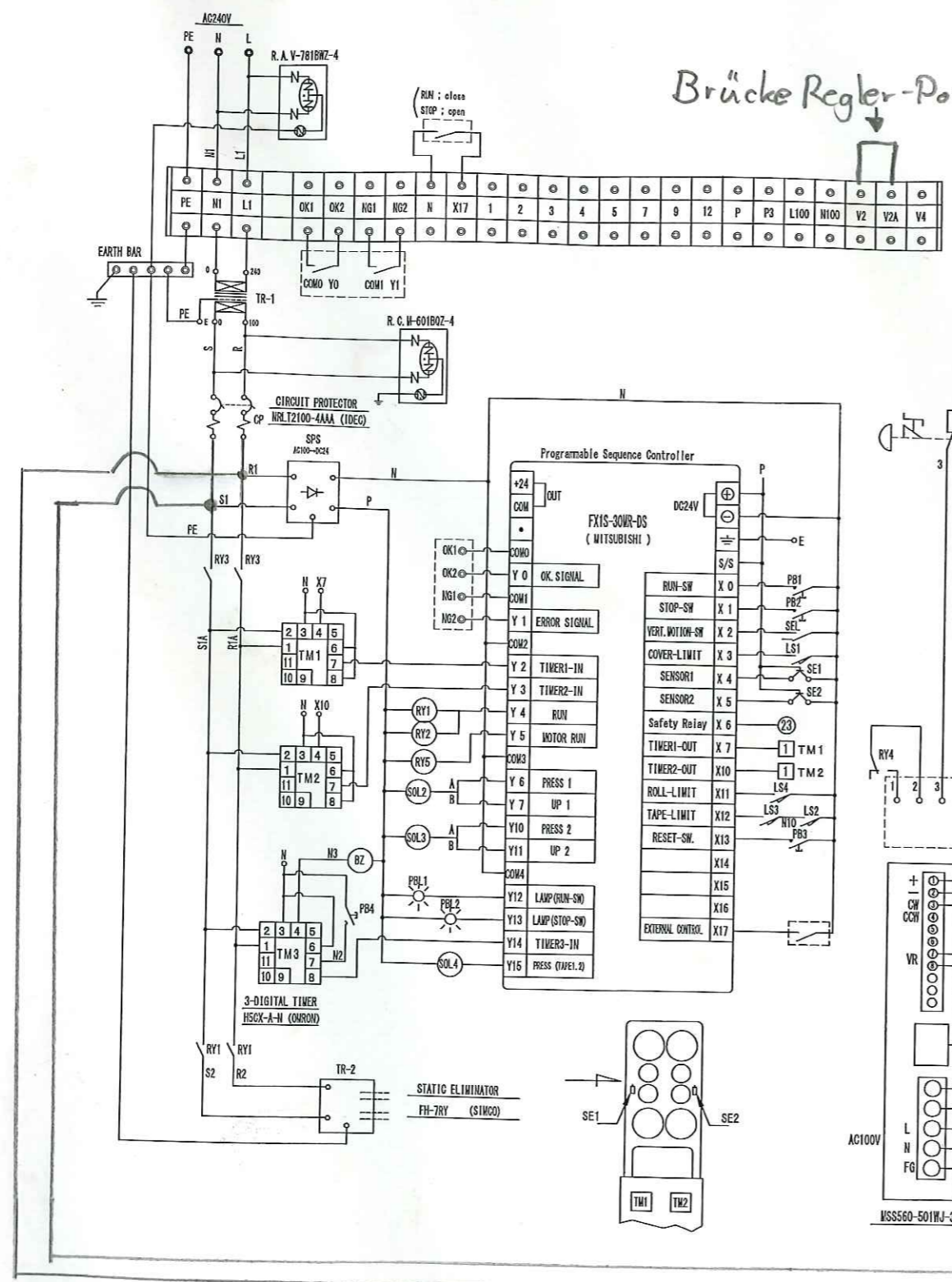




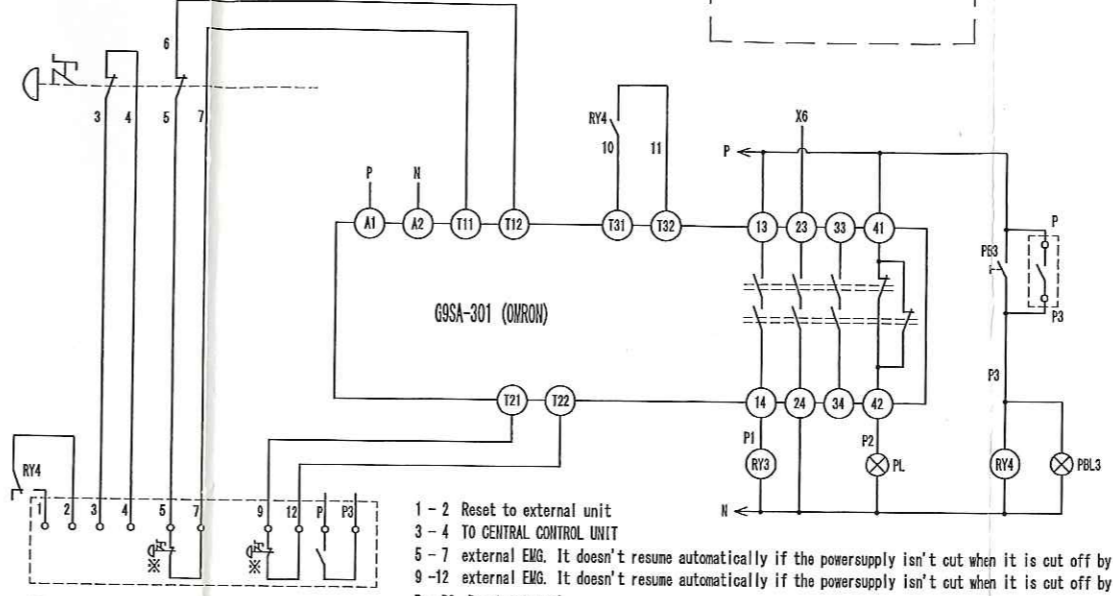
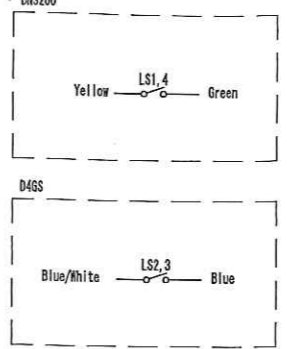
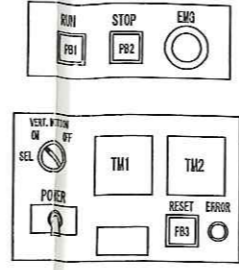
Caution
 1. Line Colour : Ground = Green/Yellow
 : AC230V = Black
 : AC100V-R = Red
 : AC100V-S = Orange
 : P = Brown
 : N = Blue

検 図	作 成	MIMURA	ソフト P 1206	用紙 A3
		14.05.21	1/1 P	尺 度 not
図 名	Electric Circuit			
図 番	RY-1403031E-00 訂正 RO			

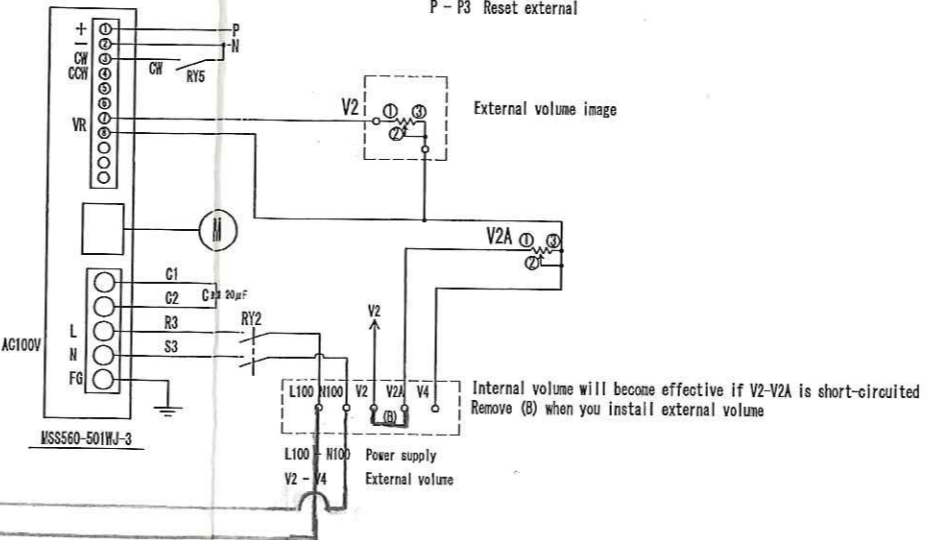
A B C D E F G H I J



Brücke Regler-Poti (Geschwindigkeit im Rayon)



1 - 2 Reset to external unit
 3 - 4 TO CENTRAL CONTROL UNIT
 5 - 7 external EMG. It doesn't resume automatically if the powersupply isn't cut when it is cut off by the external emergency. ※
 9 - 12 external EMG. It doesn't resume automatically if the powersupply isn't cut when it is cut off by the external emergency. ※
 P - P3 Reset external



Internal volume will become effective if V2-V2A is short-circuited
 Remove (B) when you install external volume

Caution
 1, LineColor : Ground = Green/Yellow
 : AC230V = Black
 : AC100V-R = Red
 : AC100V-S = Orange
 : P = Brown
 : N = Blue

図面承認欄	様	備考	RAYON		承認	検図	作成	ソフト	P 1206	用紙	A3
			RAYON INDUSTRIAL CO., LTD (株)レヨーン工業				MIMURA	真	1/1 P	尺度	not
装置	Clean Roller		図名	Electric Circuit		図番	RY-1403031E-00		訂正	RO	
型式	RY-705AE										

A B C D E F G H I J