

1. Description

RD-TPD series digital time switch are used for realization of time functions in the control and automation systems. It operates according to the set time schedule planned by the user.

There is an internal battery which can protect real time clock and all the settings when the electric power supply is off.

2.Features

- Digital time switch with weekly program.
- 3 or 10 years power reserve(lithium battery).
- 52(RD-TPD1/RD-TPD1B) and 80 (RD-TPD2)programs.
- Sealable cover of the front panel, easy setting by 4 keys.
- Automatic summer/winter time changeover.
- LCD display.
- Holiday mode.
- Single(RD-TPD1/RD-TPD1B) and double(RD-TPD2) channel.
- Manual control by keys combination.
- Automatic transfer of weekdays.
- 220-240VAC or 24-264V AC/DC input supply.
- Double-module, mounted on TH-35 rail.

3.Safety instruction



WARNING

-Please disconnect the power supply before installation.

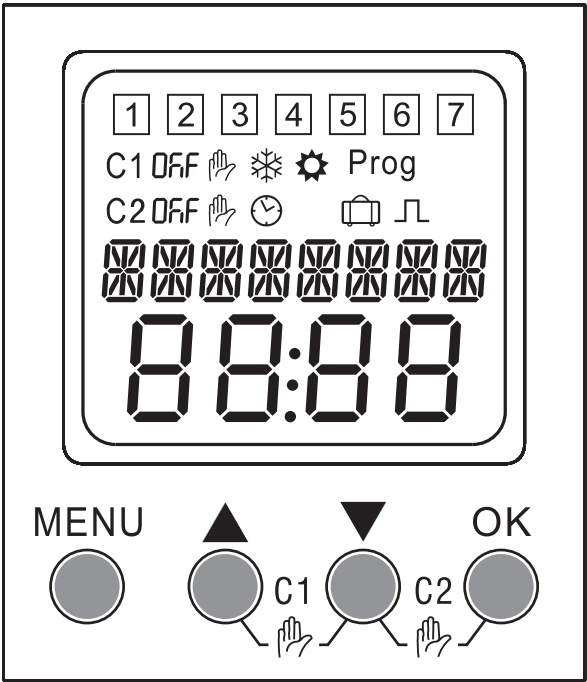
-Connect the supply voltage as stated on the product.

3. 1.The device should be installed, operated and maintained by qualified personnel.
3. 2.Don't dismantle or repair the device whether it operates normally, otherwise no responsibility is assumed by manufacturer or seller.
3. 3.Please refer to wiring diagram when connecting.
3. 4.Never use the product at the site which can be invaded by corrode gas, strong sunshine light or rain.

4. Technical data

Model	RD-TPD1	RD-TPD1B	RD-TPD2
Supply terminals	A1,A2		
Rated voltage	AC/220-240V	AC/DC 24-264V	
Rated frequency	50/60Hz	50/60Hz, 0	
Power consumption	1W		2W
Number of programs	52		80
Program	weekly, daily and pulse programs		
Mode of work	manual, automatic, holiday		
Summer/winter time	off, automatic changes		
Time tolerance	$\leq 1\text{s/day}$ at 25°C		
Power reserve	10 years		
Data readout	LCD display	LCD display with backlight	
Number of contacts	1 C/O		2 C/O
Current of contacts	16A/250V AC1		
Switching capacity	4000VA/AC1, 384W/DC		
Mechanical life	10^6		
Electrical life	10^5		
Rated insulation voltage	250V		
Protection degree	IP20		
Pollution degree	3		
Altitude	$\leq 2000\text{m}$		
Ambient temperature	$-20^{\circ}\text{C}\sim 55^{\circ}\text{C}$		
Permissible relative humidity	$\leq 50\%$ (40°C, without condensation)		
Storage temperature	$-30^{\circ}\text{C}\sim 70^{\circ}\text{C}$		
Wire size	$1\text{mm}^2 \sim 4\text{mm}^2$		
Tightening torque	0.5Nm		
Mounting	TH-35 Rail(EN60715)		
Standard	IEC 60730-1/IEC 60730-2-7		

5.Display and keys



Symbol legend

- 1 2 3 4 5 6 7

— Days of the week Monday, Tuesday, ...Sunday
- C1

— Channel 1
- C2

— Channel 2
- On OFF

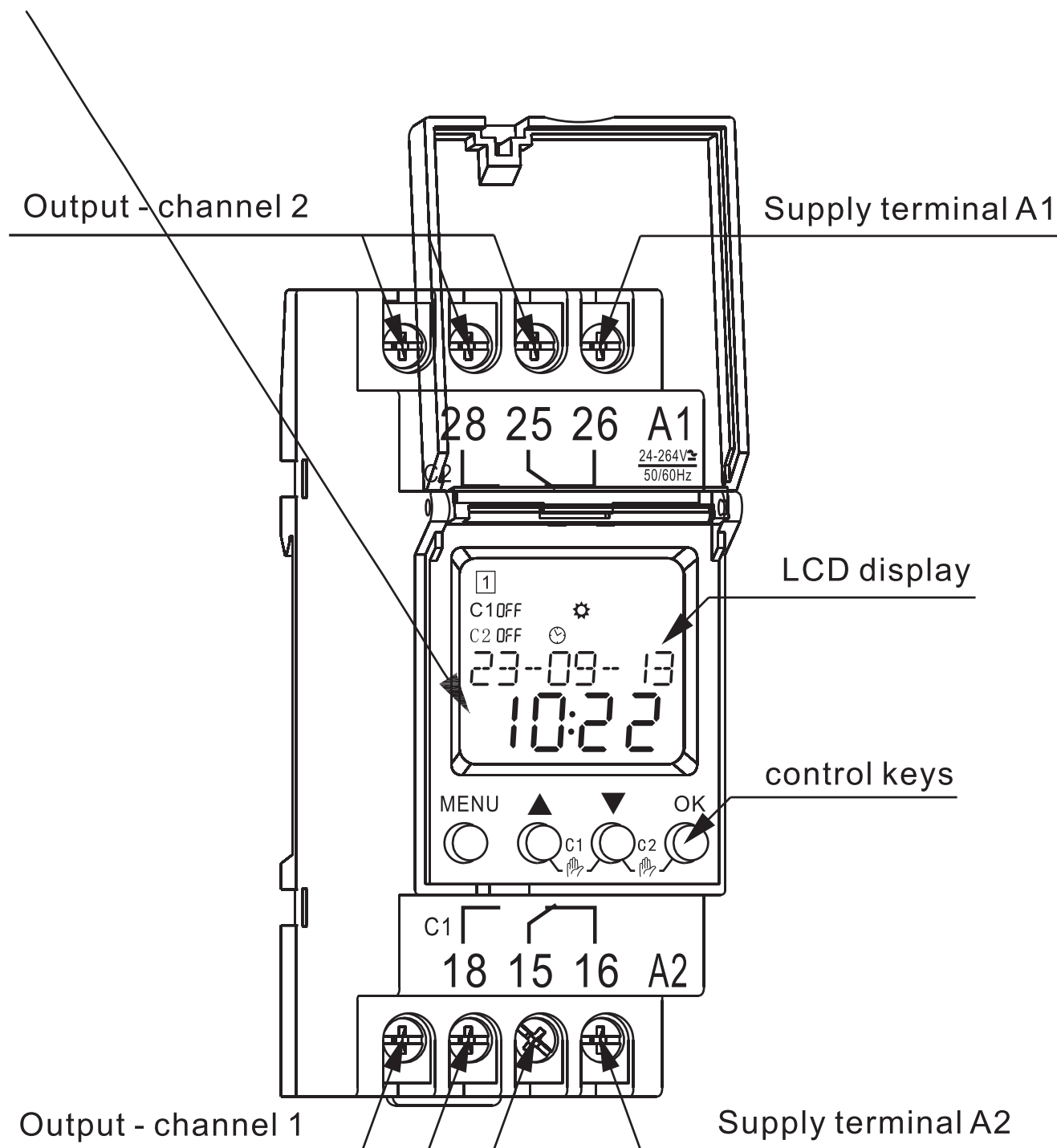
— Relay status
- Automatic mode
- Manual mode
- Holiday mode
- Winter time
- Summer time
- Prog

— Program setting
- Pulse setting

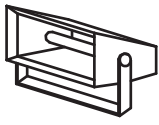
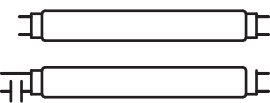
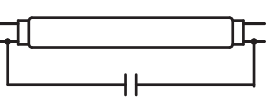
Keys

MENU ☐ Enter main menu ☐ Back to main menu	OK ☐ Confirm selection
☐ Select menu ☐ Digit +	☐ Select menu ☐ Digit -
C1 ☐ C1 manual operation	C2 ☐ C2 manual operation

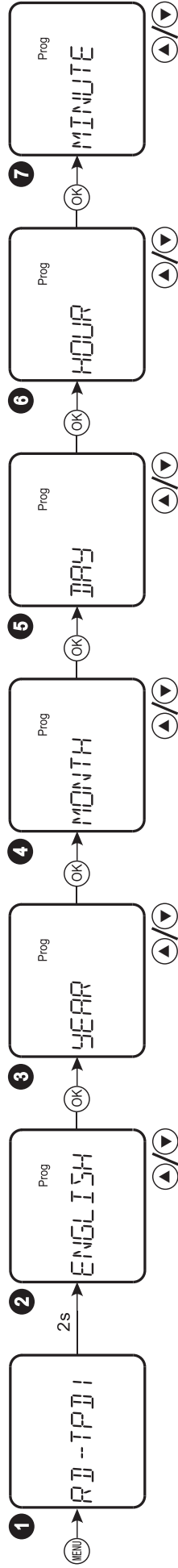
23-09-13: DD-MM-YY, 23th.September.2013



6.Maximum pilotable power

				
2000W	2000W	1000W	500W	500W

7. Initial operation

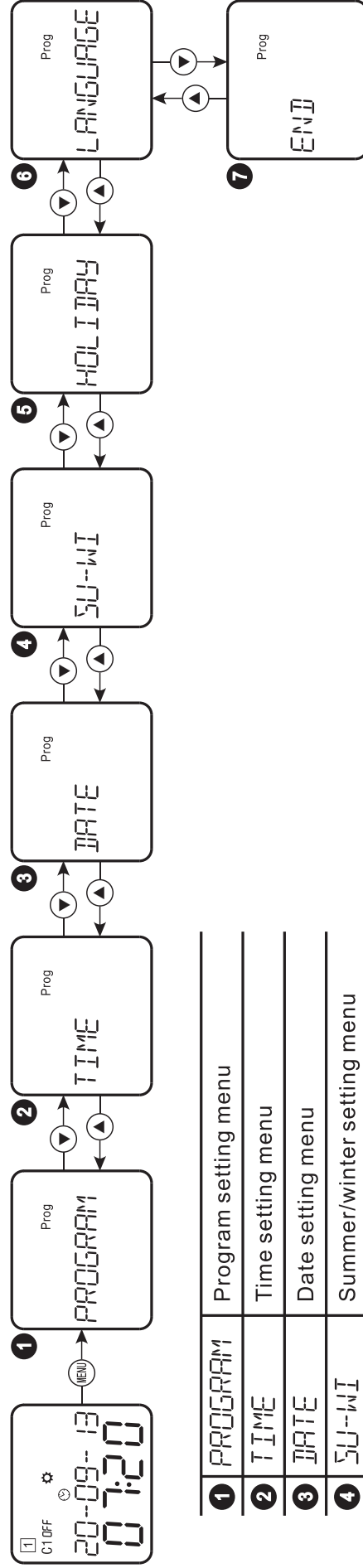


- 1 Press "MENU" key, the screen will display the model for 2 seconds.
- 2 Select the desired language with "▲▼" keys and press "OK" key.
- 3 Select adequate year with "▲▼" keys and press "OK" key.
- 4 Select adequate month with "▲▼" keys and press "OK" key.
- 5 Select adequate day with "▲▼" keys and press "OK" key.
- 6 Select adequate hour with "▲▼" keys and press "OK" key.
- 7 Select the minute with "▲▼" keys and press "OK" key.

Note: If the settings were not ended and not operated by keys for 2 minutes, device will return to **ENGLISH** menu.(for **DTS-100**)

If the settings were not ended and not operated by keys for 2 minutes, device will return to **ENGLISH** menu, and backlight is switched off. Pressing any keys can switch on display and backlight(for **DTS-101**).

8. Main menu

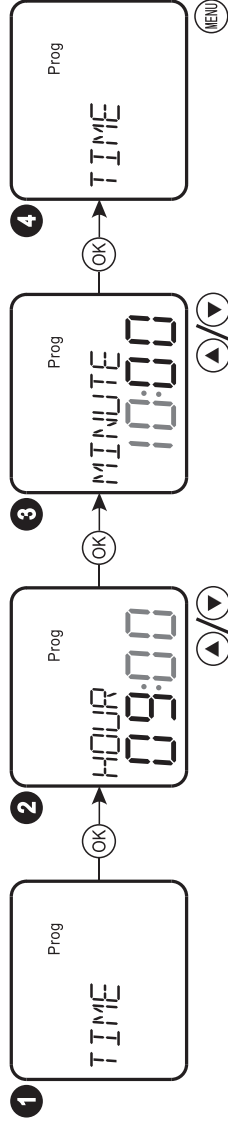


1	PROGRAM	Program setting menu
2	TIME	Time setting menu
3	DATE	Date setting menu
4	SU-WI	Summer/winter setting menu
5	HOLIDAY	Holiday mode setting menu
6	LANGUAGE	Language setting menu
7	END	End settings and exit from menu

- Press "MENU" key to enter menus setting, and symbol **Prog** appears.
- If not operated for 1 minute, the device will automatically exit from setting.
- Select the desired menu by pressing "▲▼" keys

9. Program setting

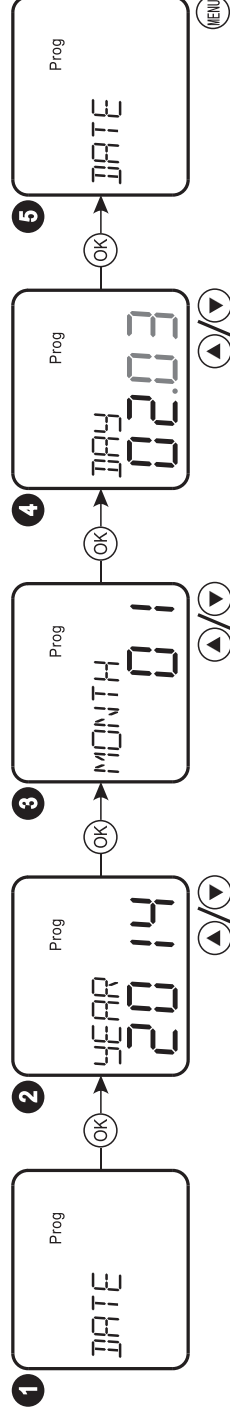
● Time setting



- 1 Select **TIME** and press "OK" key.
- 2 Select adequate hour with "▲▼" keys and press "OK" key. adjusting range is 0~23.
- 3 Select adequate minute with "▲▼" keys and press "OK" key. adjusting range is 0~59.
- 4 Exit from the setting by pressing "MENU" key.

Long press ▲ 0.5s, increase the numerical value quickly
 Long press ▼ 0.5s, decrease the numerical value quickly

● Date setting

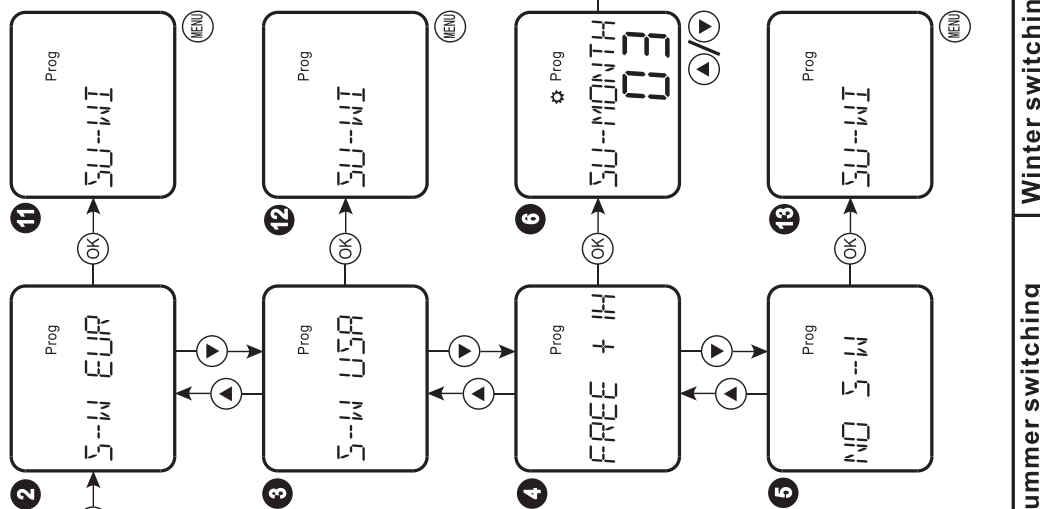


- 1 Select **DATE** and press "OK" key.
- 2 Select adequate year with "▲▼" keys and press "OK" key. adjusting range is 2000~2095.
- 3 Select adequate month with "▲▼" keys and press "OK" key.
- 4 Select adequate day with "▲▼" keys and press "OK" key.
- 5 Exit from the setting by pressing "MENU" key.

Long press ▲ 0.5s, increase the numerical value quickly
 Long press ▼ 0.5s, decrease the numerical value quickly

● Summer/winter time setting

- 1 Select **SU-WI** and press "Ok" key.
- 2 3 4 5 Select the required summer/winter mode with "▲▼" keys and press "Ok" key.
- 6 Set the start month of summer time and press "OK" key.
- 7 Set the start day of summer time and press "OK" key.
- 8 Set the start month of winter time and press "OK" key.
- 9 Set the start day of winter time and press "OK" key.
- 10 11 12 13 Exit from the setting by pressing "MENU" key.

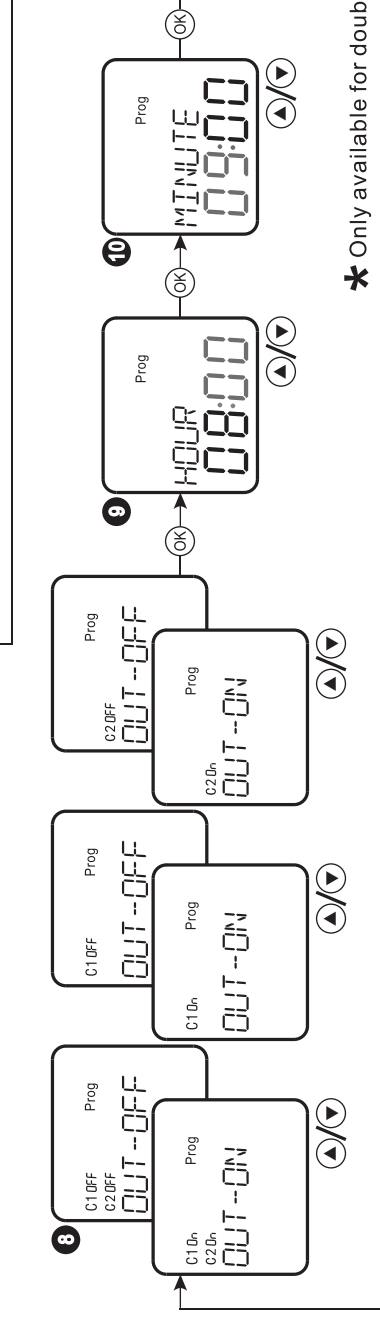
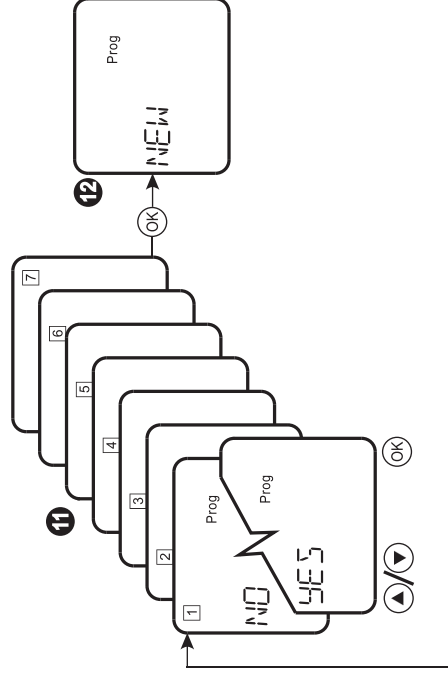


Display	Function	Summer switching	Winter switching
SU-W EUR	Europe sum/win	Last Sunday in March	Last Sunday in October
SU-W USA	U.S.A sum/win	Second Sunday in March	First Sunday in November
FREE + IH	Free sum/win	Freely programmed	Freely programmed
NO S-W	No sum/win	None	None

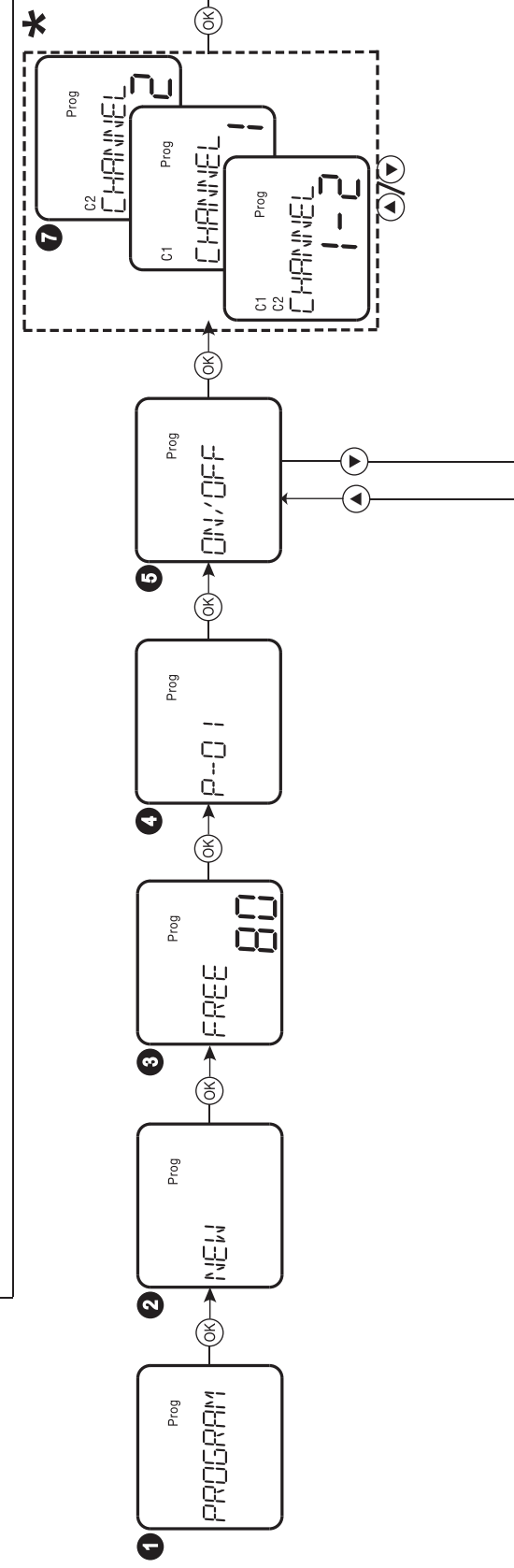
Long press ▲ 0.5s, increase the numerical value quickly
 Long press ▼ 0.5s, decrease the numerical value quickly

● Program creating

- 1 Select **PROGRAM** and press "OK" key.
- 2 Select **NEW** and press "OK" key.
- 3 Display the free memory spaces briefly.
- 4 Display the number of new program and press "OK" key.
When the programs memory is full, new program will not be created, symbol "FULL" appears on the screen.
- 5 Select **ON/OFF** mode.
- 6 Select **PULSE** mode.



* Only available for double channel model



7 13 Select **C1, C2** or **C1+C2** with “▲▼” keys and then press “OK” key.

8 Display the output state of channels.

Select **OUT-ON** or **OUT-OFF** with “▲▼” keys and then press “OK” key.

9 14 Set the hour with “▲▼” keys and press “OK” key.

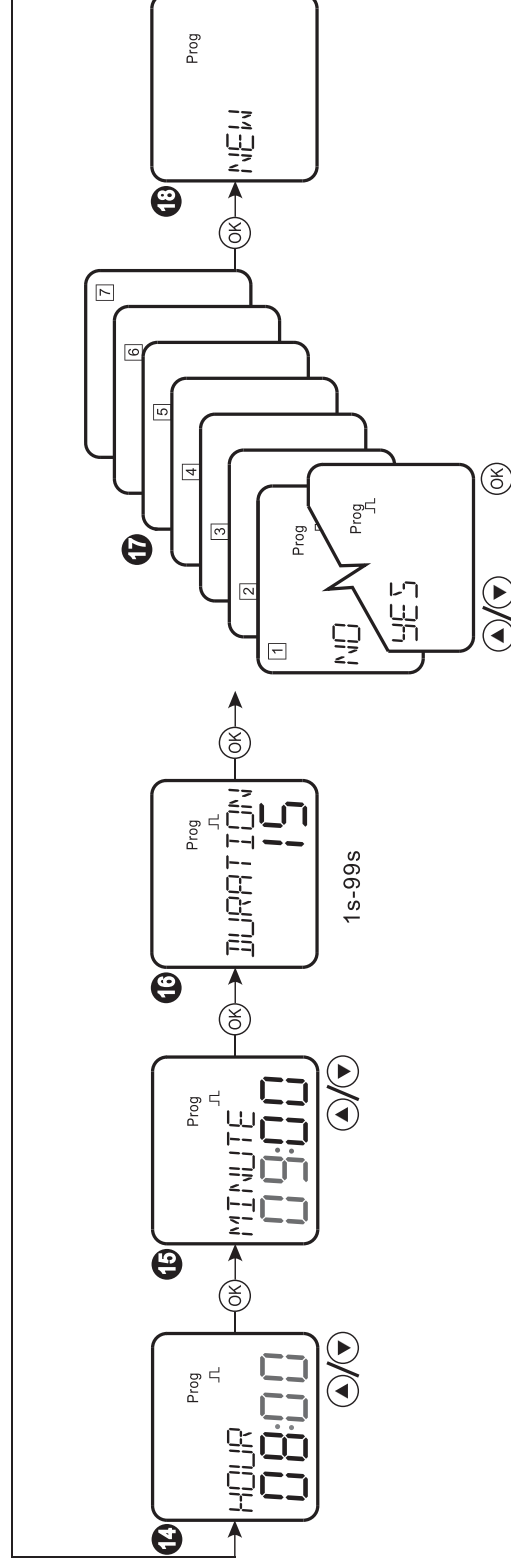
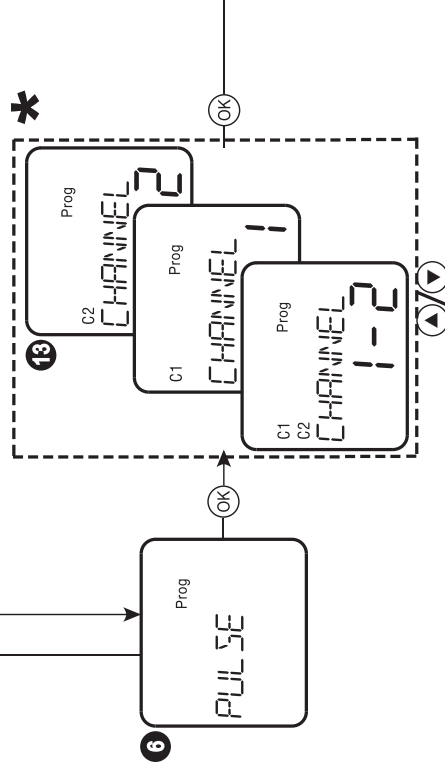
10 15 Set the minute with “▲▼” keys and press “OK” key.

11 17 Set the program activity on a week day(from Monday to Sunday) with “▲▼” key
If YES is selected, program operation is enabled for flashing day. If NO is selected,
program is not used for flashing day.

12 18 Return to last menu by pressing “MENU” key.

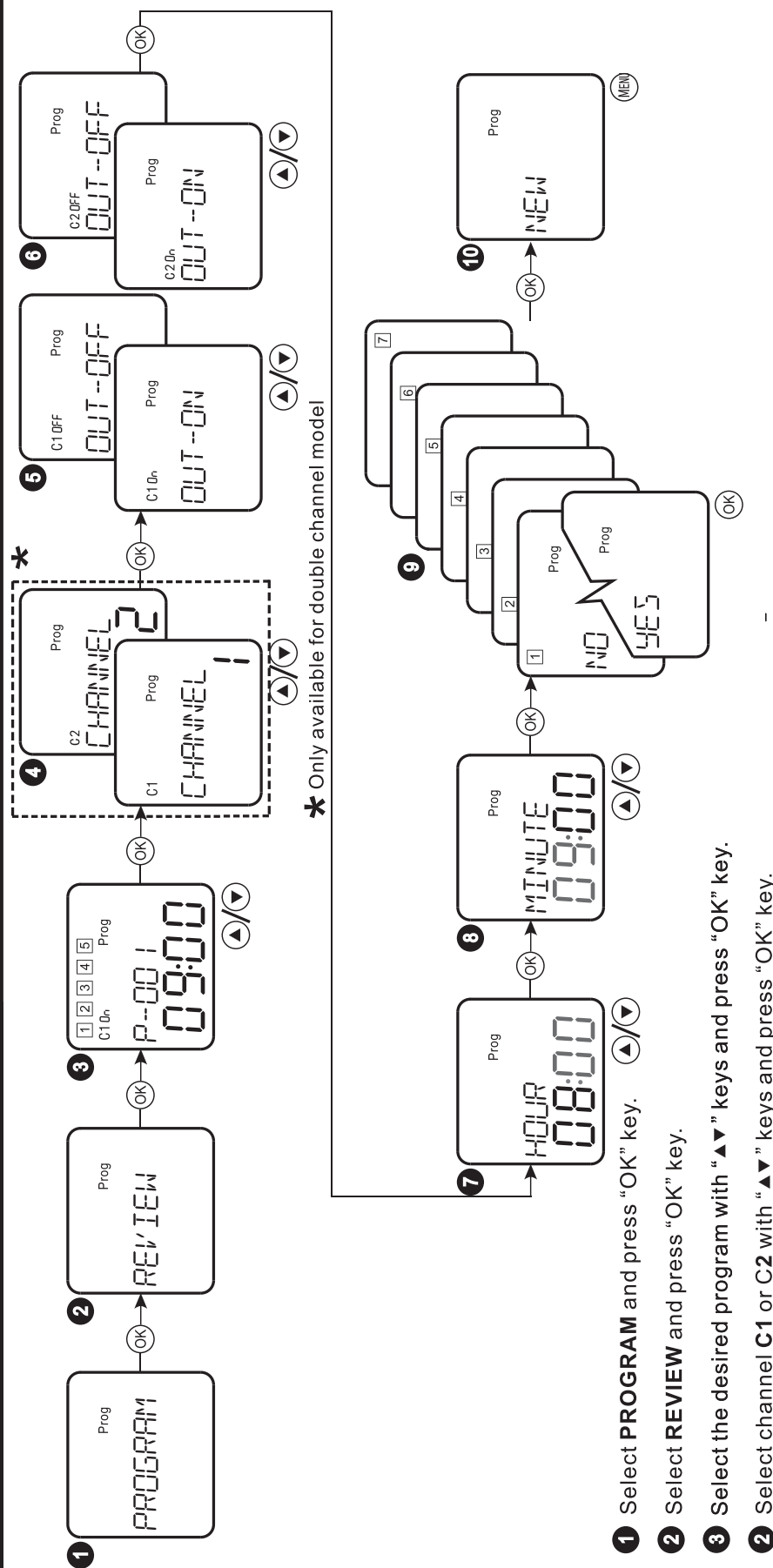
16 Set the duration of pulse, setting range is 1-99s.

* Only available for double channel model



Long press ▲ 0.5s, increase the numerical value rapidly
Long press ▼ 0.5s, decrease the numerical value rapidly

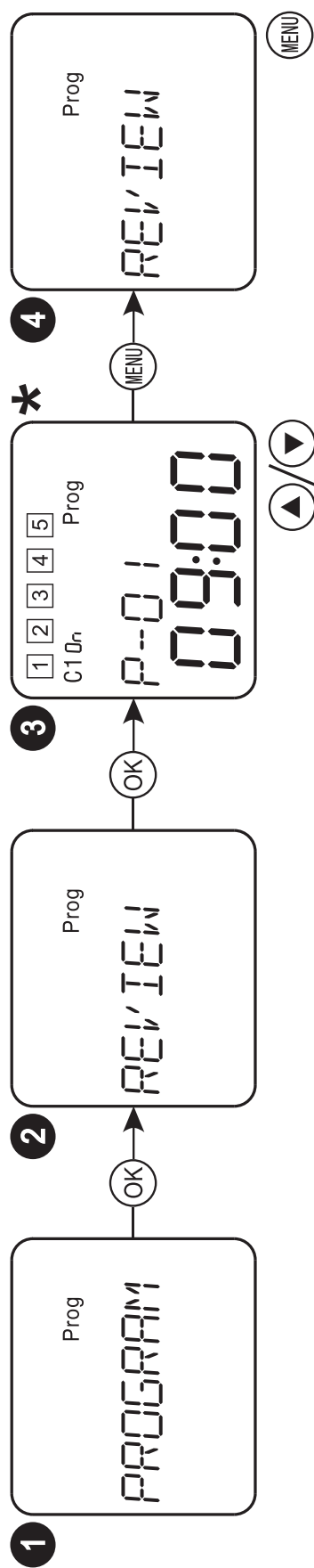
● Program modifying



- 1 Select **PROGRAM** and press "OK" key.
- 2 Select **REVIEW** and press "OK" key.
- 3 Select the desired program with "▲▼" keys and press "OK" key.
- 2 Select channel **C1** or **C2** with "▲▼" keys and press "OK" key.
- 3 Display the output state of channel 1. Select **OUT-ON** or **OUT-ON** with "▲▼" keys and then press "OK" key.
- 4 Display the output state of channel 2. Select **OUT-ON** or **OUT-ON** with "▲▼" keys and then press "OK" key.
- 7 Set the hour with "▲▼" keys and press "OK" key.
- 8 Set the minute with "▲▼" keys and press "OK" key.
- 9 Set the program activity on a week day(from Monday to Sunday) with "▲▼" keys.
If **YES** is selected, program operation is enabled for flashing day.
- 10 Return to last menu by pressing "MENU" key.

Long press ▲ 0.5s, increase the numerical value rapidly
Long press ▼ 0.5s, decrease the numerical value rapidly

● Program reviewing

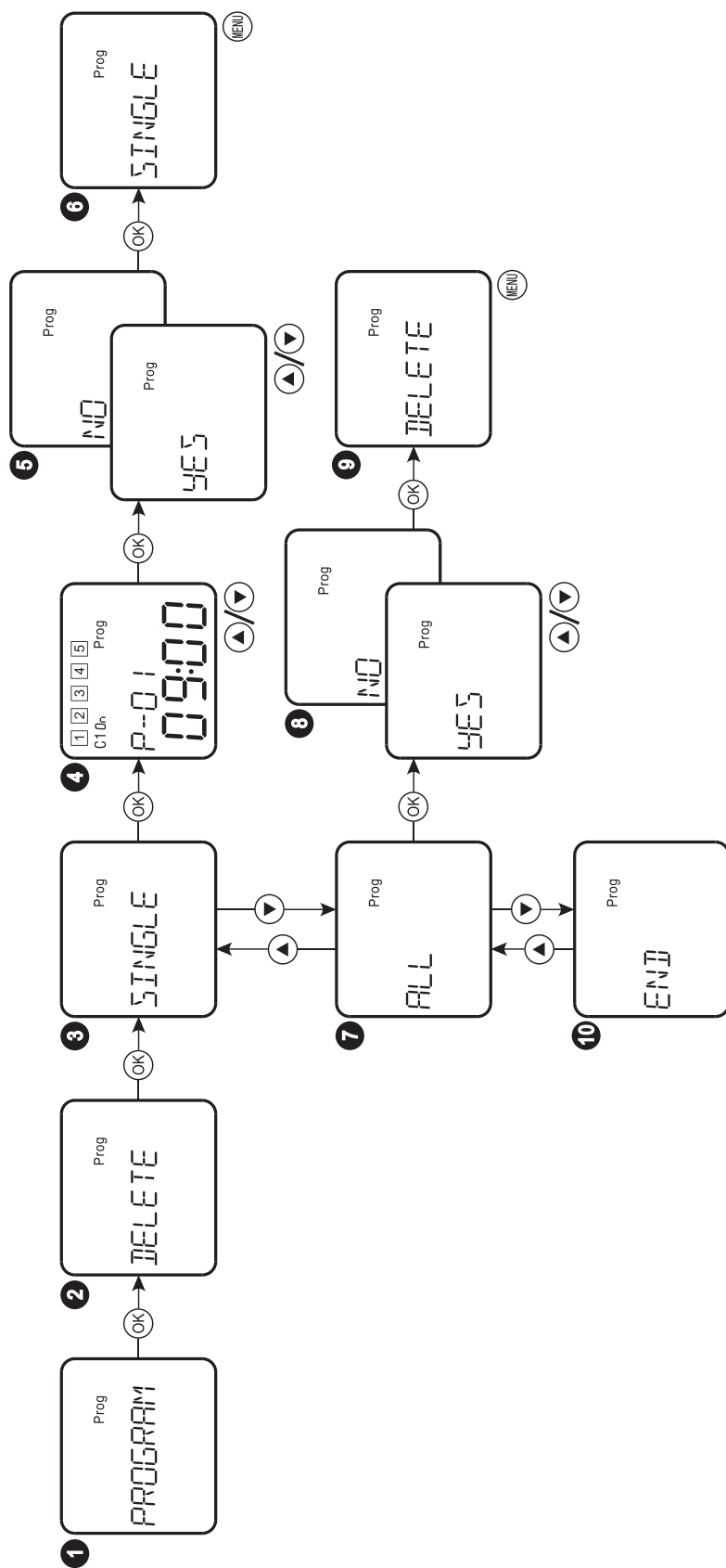


- 1 Select **PROGRAM** and press “OK” key.
- 2 Select **REVIEW** and press “OK” key.
- 3 View the operation of the set programs with “▲▼” keys and press “MENU” key.
- 4 Exit from the setting by pressing “MENU” key.

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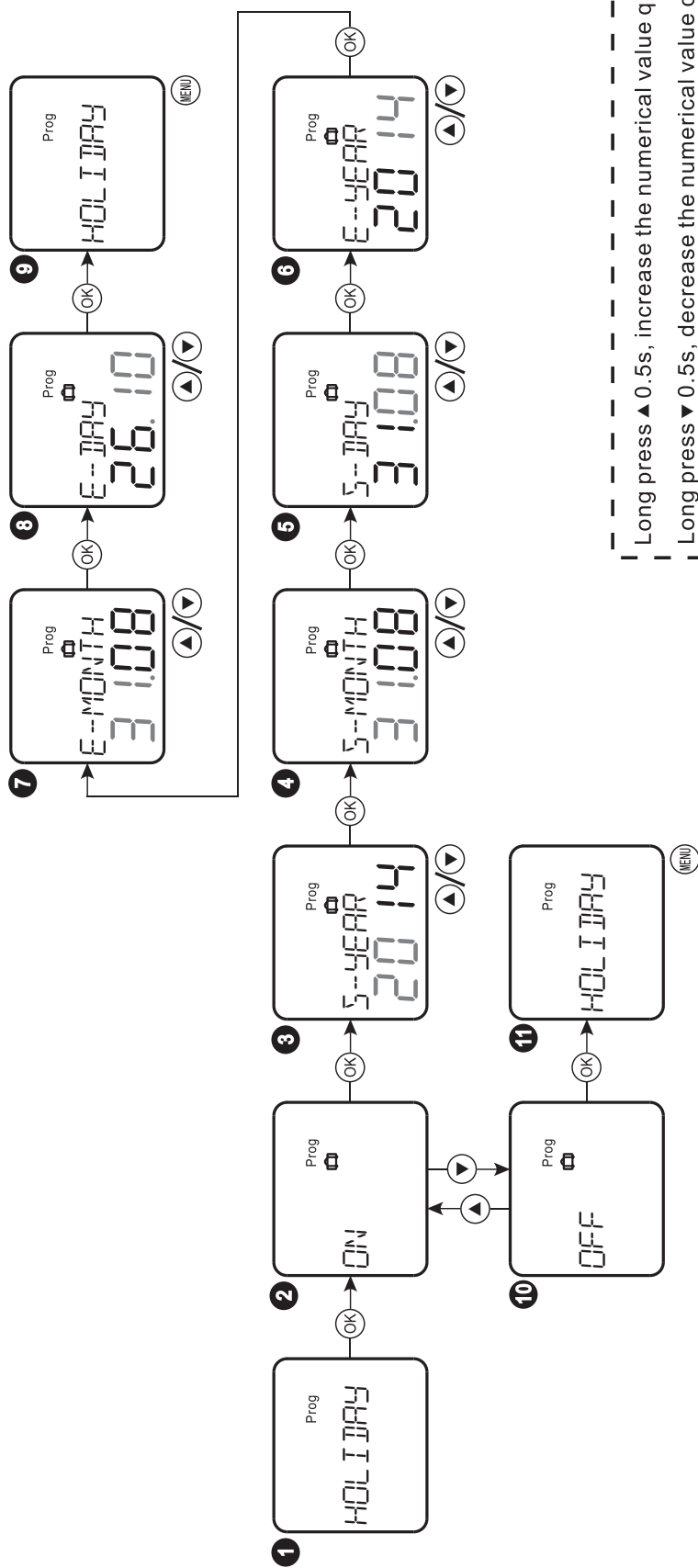
Symbols	Description
P--01 09:00	ON/OFF program
P--02 155 09:00	Pulse program

● Program deleting



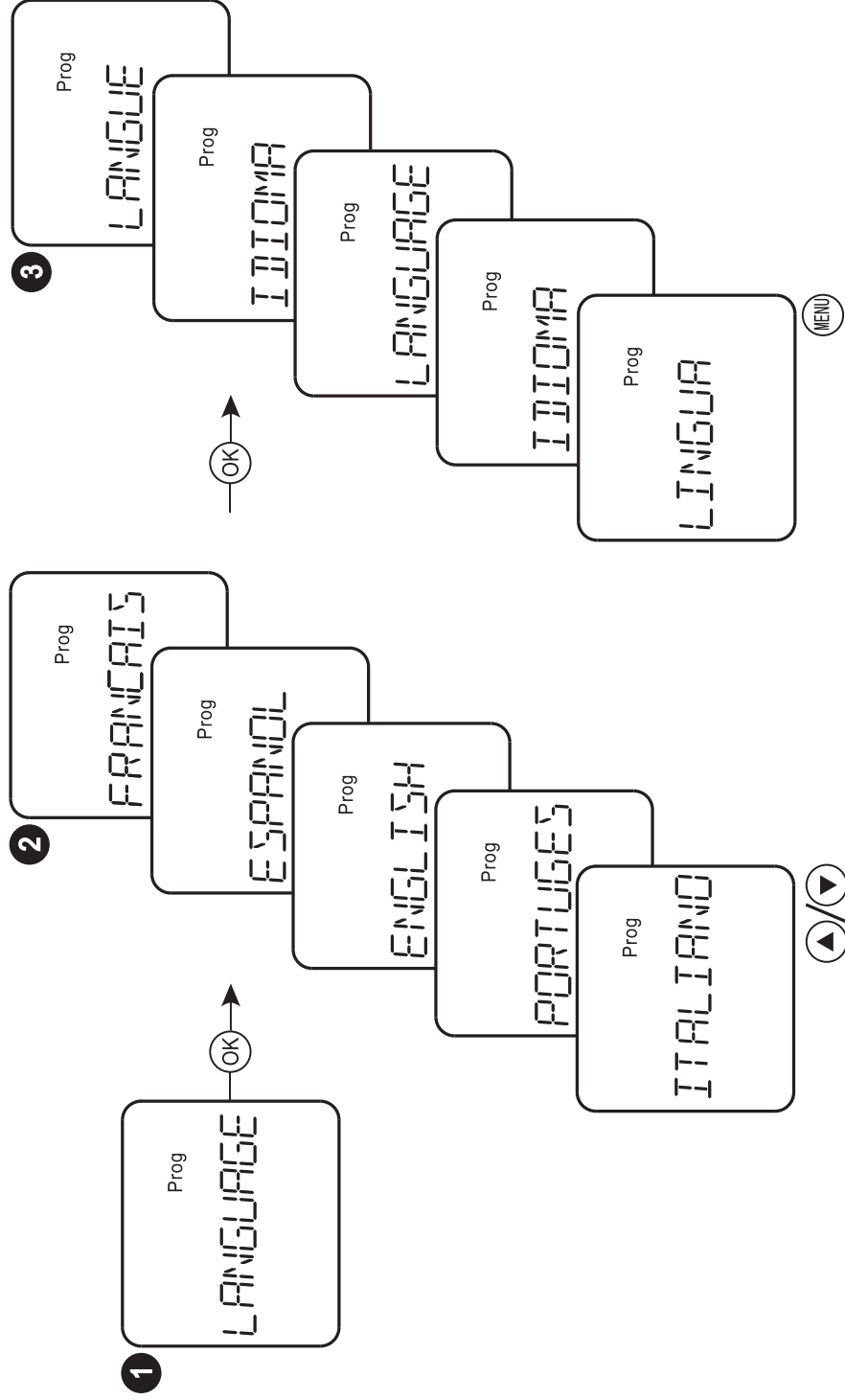
- 1 Select **PROGRAM** and press “OK” key.
- 2 Select **DELETE** and press “OK” key.
- 3 Select **SINGLE** to delete single program and press “OK” key.
- 4 Select the desired program with “▲▼” keys and press “OK” key.
- 5 Select **YES** or **NO** with “▲▼” keys and press “OK” key.
- 6 Return to **SINGLE** sub-menu, Exit from the setting by pressing “MENU”key..
- 7 Select **ALL** to delete all programs and press “OK” key.
- 8 Select “**YES**” or “**NO**” with “▲▼” keys and press “OK” key.
- 9 Return to **DELETE** sub-menu. Exit from the setting by pressing “MENU” key.
- 10 End program setting.

● Holiday mode



- 1 Select **HOLIDAY** and press "OK" key.
- 2 Select **ON** to activate holiday mode and press "OK" key.
- 3 Set the start year of holiday with "▲▼" keys and press "OK" key.
- 4 Set the start month of holiday with "▲▼" keys and press "OK" key.
- 5 Set the start day of holiday with "▲▼" keys and press "OK" key.
- 6 Set the end year of holiday with "▲▼" keys and press "OK" key.
- 7 Set the end month of holiday with "▲▼" keys and press "OK" key.
- 8 Set the end day of holiday with "▲▼" keys and press "OK" key.
- 9 Return to **HOLIDAY** menu. Exit from the setting by pressing "MENU" key.
- 10 Select **OFF** to deactivate holiday mode and press "OK" key.
- 11 Return to **HOLIDAY** menu. Exit from the setting by pressing "MENU" key.

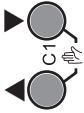
● Language setting

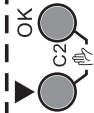


- 1 Select **LANGUAGE** and press "OK" key.
- 2 Select the desired language with "▲▼" key and press "OK" key
- 3 Exit from the setting by pressing "MENU" key.

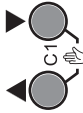
11.Keys combination for MANUAL control

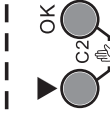
○ AUTO/MANUAL

 Press “▲▼” keys simultaneously, the output state of channel 1 switches to MANUAL. When the output states of other operation modes was changed, Manual mode exits automatically.

 Press “▼” and “OK” keys simultaneously, the output state of channel 2 switches to MANUAL. When the output states of other operation modes was changed, Manual mode exits automatically.

○ PERM ON/PERM OFF

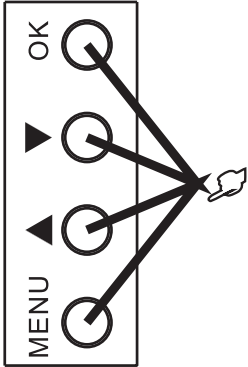
 Press “▲▼” keys simultaneously for 2s, the output state of channel 1 switches to PERM ON/PERM OFF.  flashes.

 Press “▼” and “OK” keys simultaneously for 2s, the output state of channel 2 switches to PERM ON/PERM OFF.  flashes.

***** Only available for double channel model

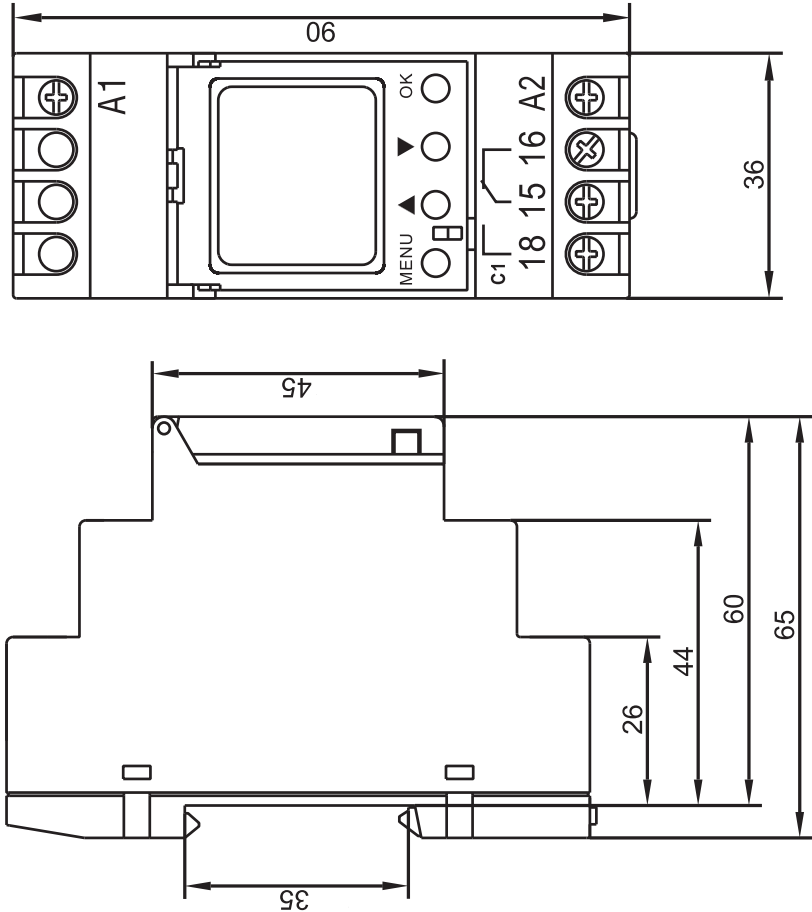
AUTO	AUTO mode
MANUAL	MANUAL mode
PERM ON	PERMANENT ON mode
PERM OFF	PERMANENT ON mode

12.Reset



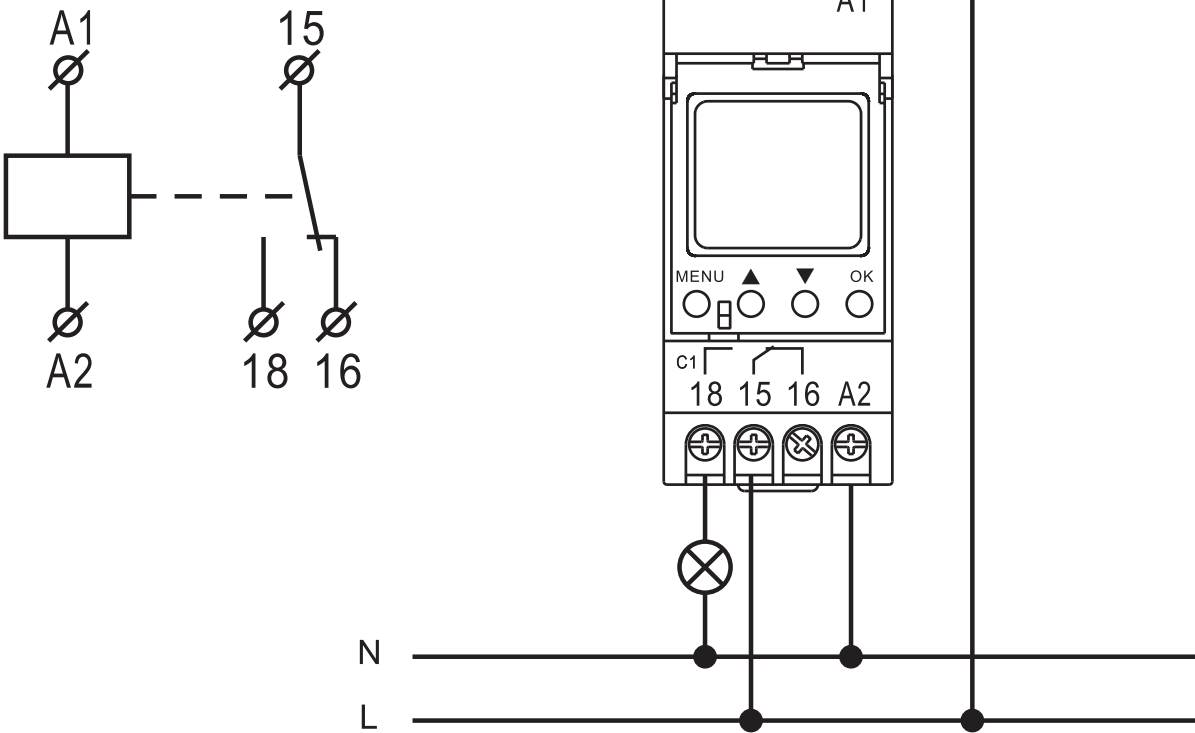
Press the four keys simultaneously for 0.5 second to reset automatically. The device was restored to factory settings.

13. Dimensions



14. Wiring diagrams

RD-TPD1/RD-TPD1B



RD-TPD2

