



DTS-100/DTS-101
Digital weekly time switch

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1. Description

DTS-100/DTS-101 digital time switches 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 programs.
- Sealable cover of the front panel, easy setting by 4 keys.
- Automatic summer/winter time changeover.
- LCD display.
- Holiday mode.
- Single 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

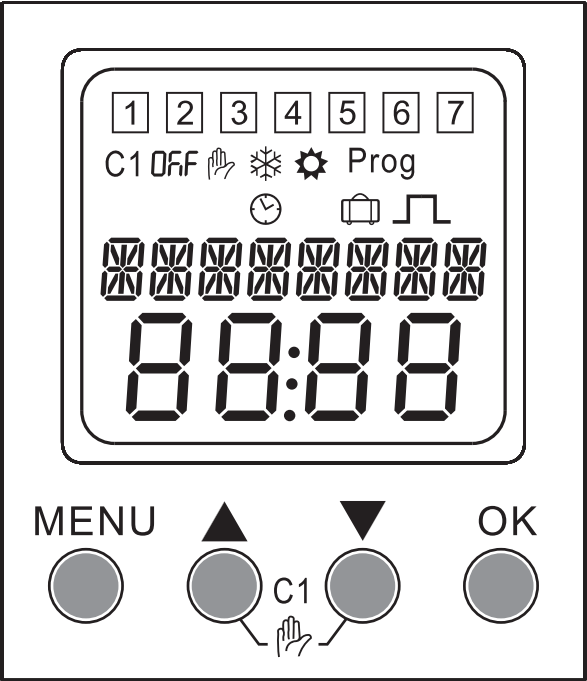
- Please disconnect the power supply before installation.**
- Connect the supply voltage as stated on the product.**

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	DTS-100	DTS-101
Supply terminals	L, N	
Rated voltage	AC220-240V	AC/DC 24-264V
Rated frequency	50/60Hz	
Power consumption	1W	
Number of programs	52	
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	3 years	10 years
Data readout	LCD display	LCD display with backlight
Number of contacts	1 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



1 2 3 4 5 6 7 Days of the week, Monday, Tuesday,.....Sunday

C1 Channel 1  Pulse setting

On OFF Relay status: On Activate
OFF Deactivate

 Automatic mode

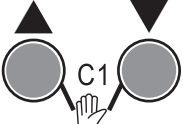
 Manual mode

 Holiday mode

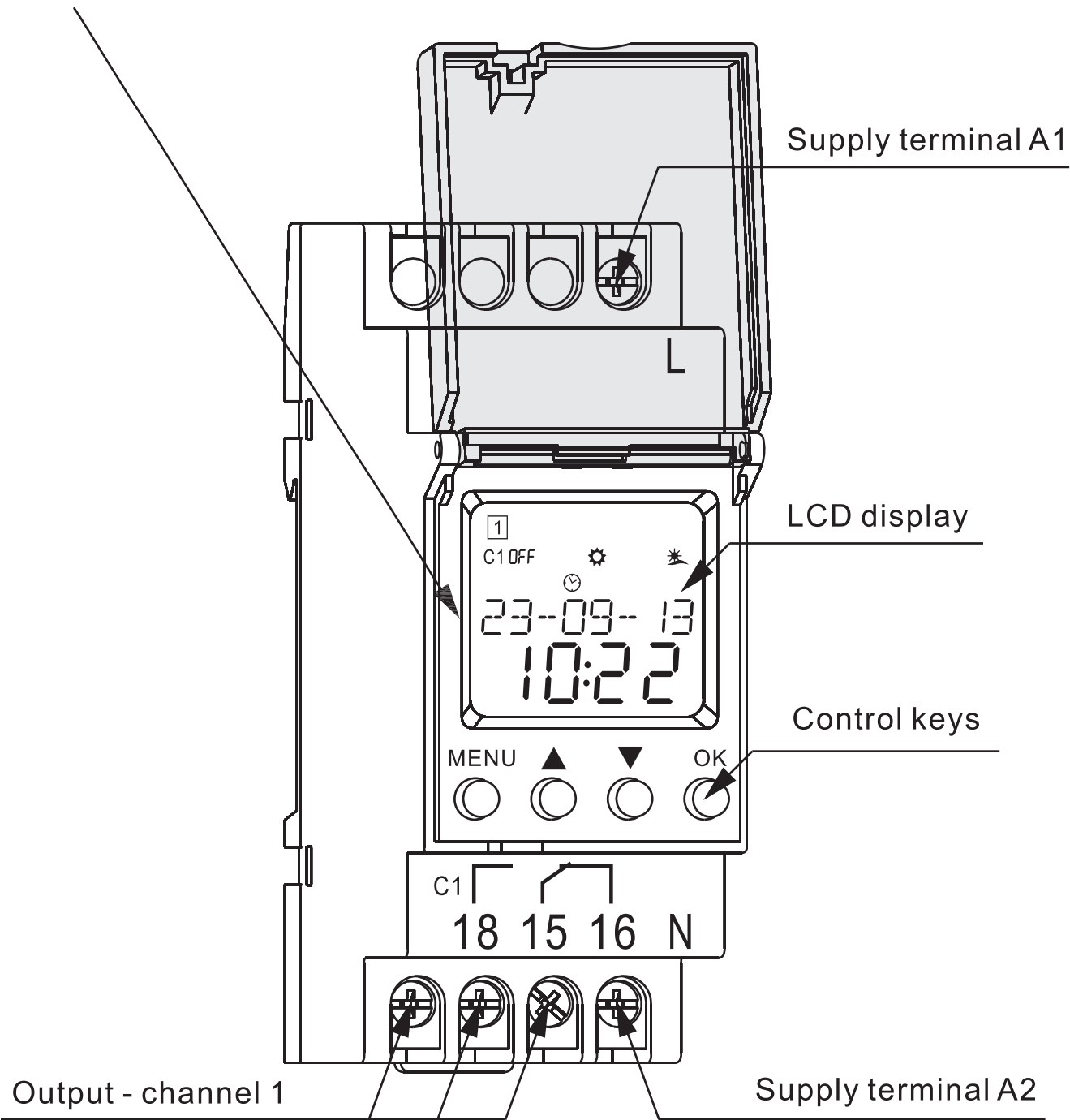
 Winter time

 Summer time

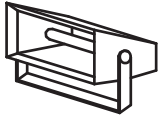
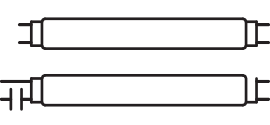
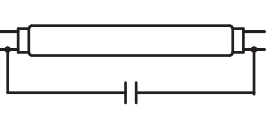
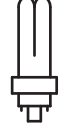
Prog Program setting

MENU 	☐ Enter main menu ☐ Back to main menu	OK 	☐ Confirm selection
	☐ Select menu ☐ Increase a numerical value		☐ Select menu ☐ Decrease a numerical value
	☐ C1 manual operation		

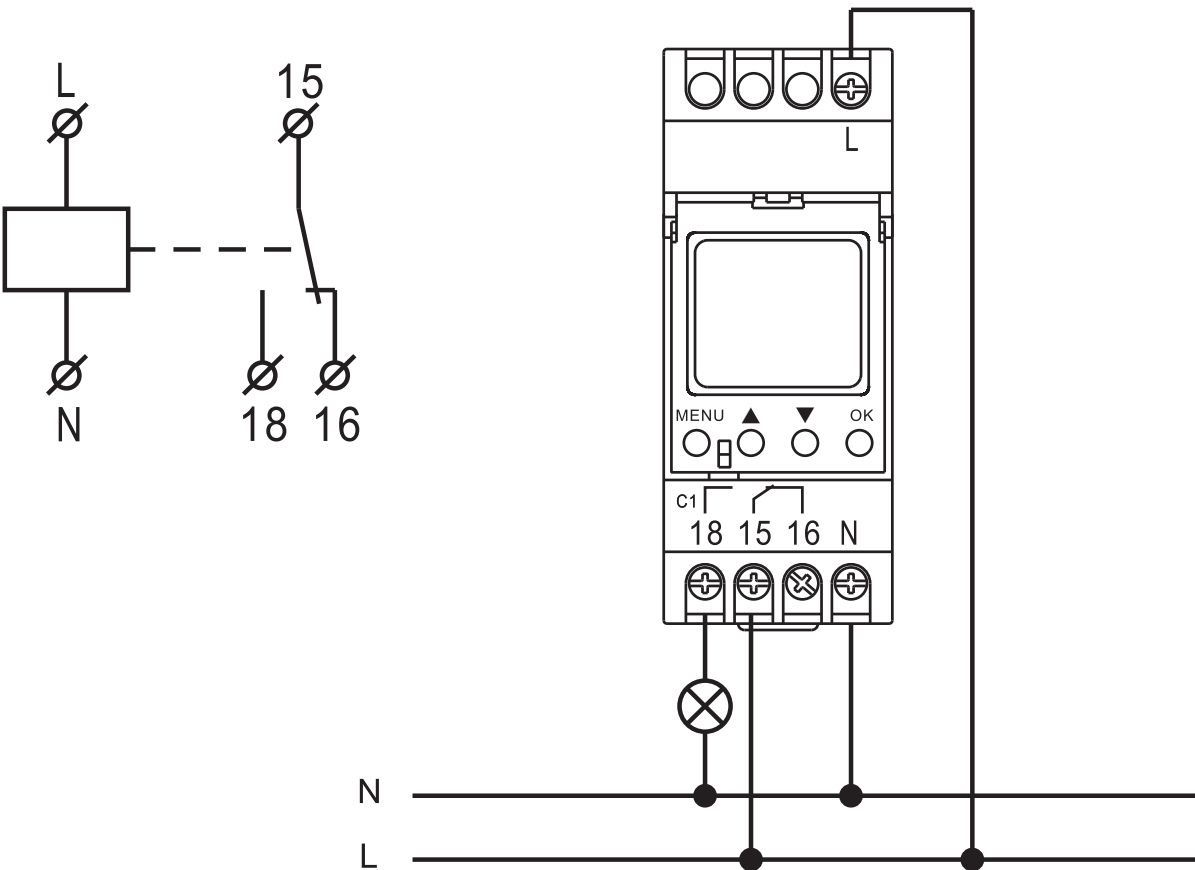
23-09-13: DD-MM-YY, 23th.September.2013



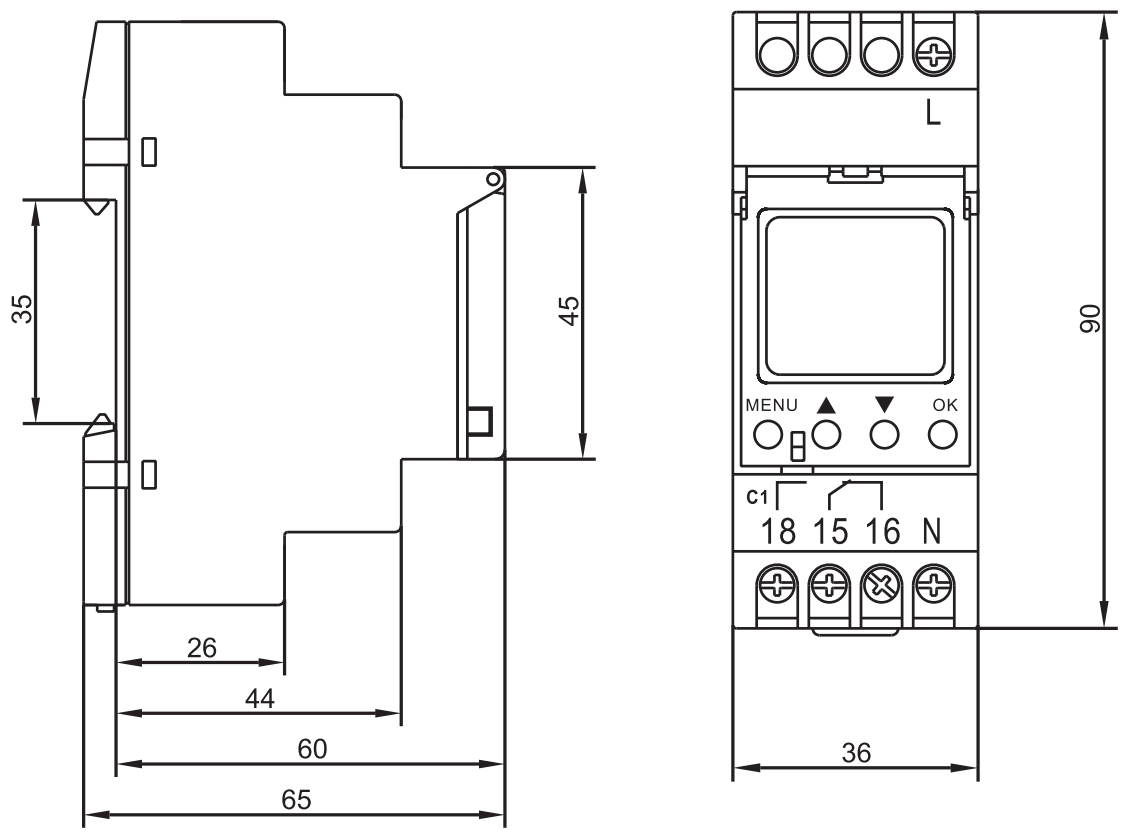
6.Maximum pilotable power

				
2000W	2000W	1000W	500W	500W

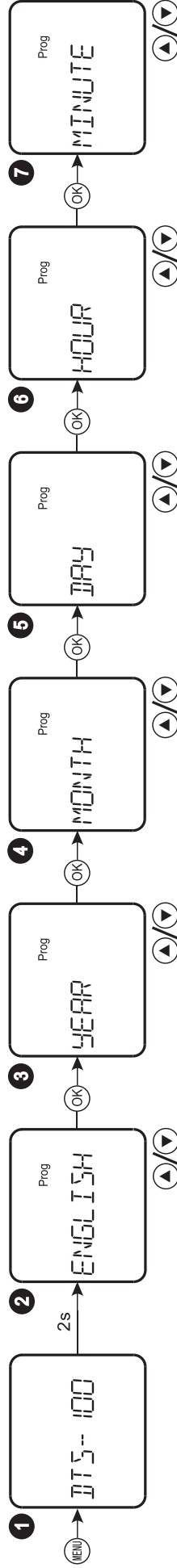
7. Wiring diagram



8. Dimensions



9. Initial operation

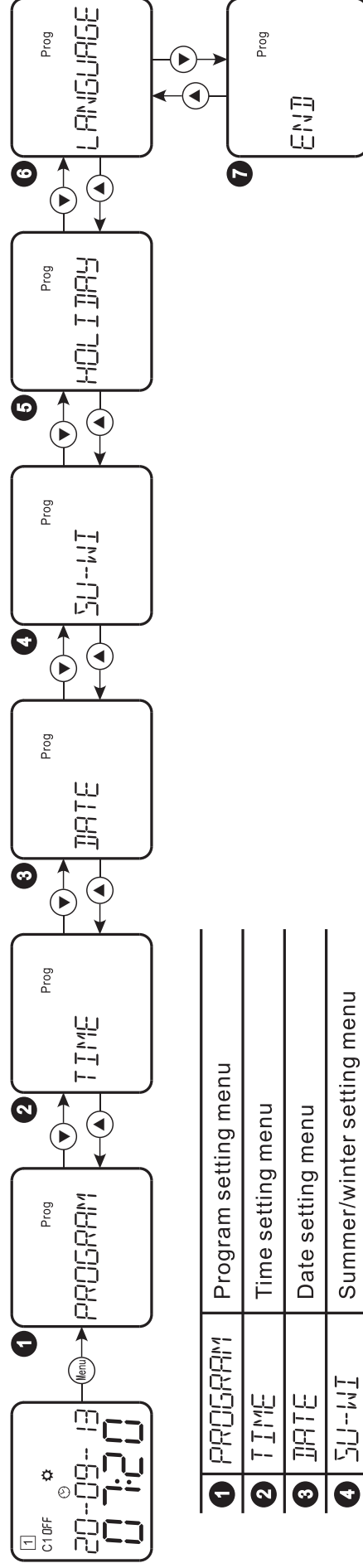


- 1 Press "MENU" key, the screen will display the model for 2 seconds.
- 2 Select the desired language with "▲▼" keys and press "OK" key.
- 3 Select adequate year with "▲▼" keys and press "OK" key.
- 4 Select adequate month with "▲▼" keys and press "OK" key.
- 5 Select adequate day with "▲▼" keys and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

10. Main menu

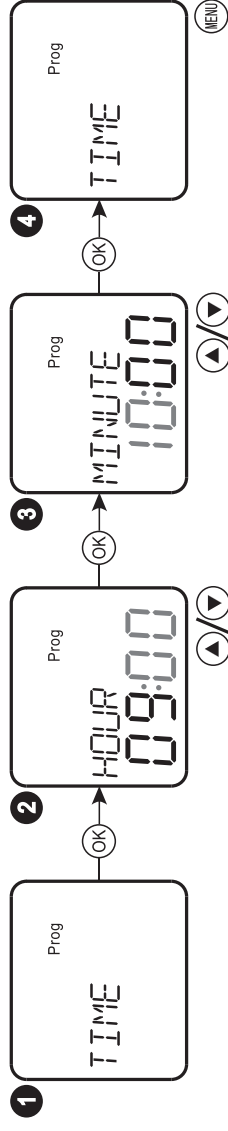


1	PROGRAM	Program setting menu
2	TIME	Time setting menu
3	DATE	Date setting menu
4	SU-WI	Summer/winter setting menu
5	HOLIDAY	Holiday mode setting menu
6	LANGUAGE	Language setting menu
7	END	End settings and exit from menu

- 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

11. Program setting

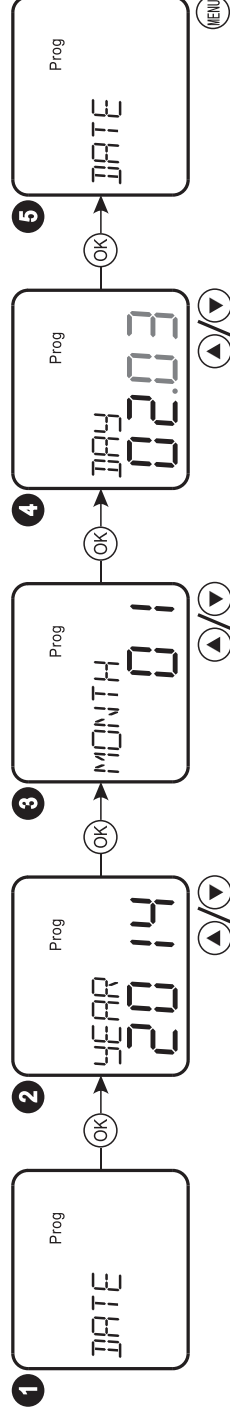
● Time setting



- 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

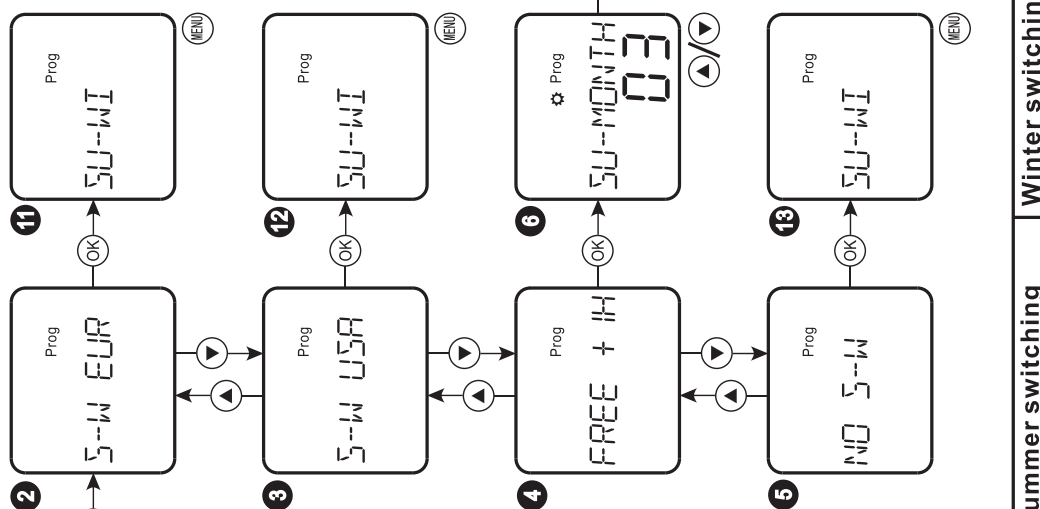


- 1 Select **DATE** and press "OK" key.
- 2 Select adequate year with "▲▼" keys and press "OK" key. adjusting range is 2000~2095.
- 3 Select adequate month with "▲▼" keys and press "OK" key.
- 4 Select adequate day with "▲▼" keys and press "OK" key.
- 5 Exit from the setting by pressing "MENU" key.

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

● Summer/winter time setting

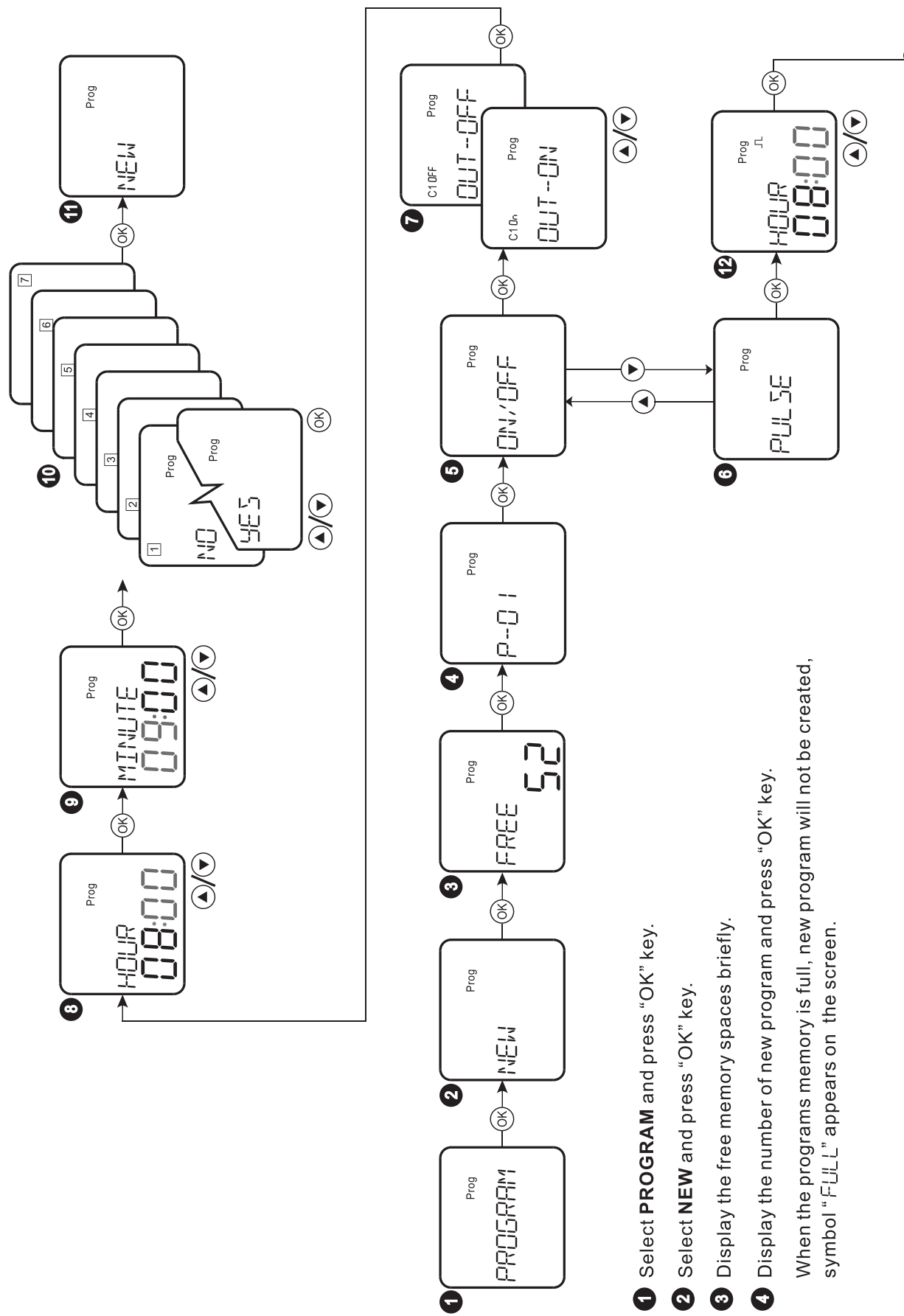
- 1 Select **SU-WI** and press "Ok" key.
- 2 3 4 5 Select the required summer/winter mode with "▲▼" keys and press "Ok" key.
- 6 Set the start month of summer time and press "Ok" key.
- 7 Set the start day of summer time and press "Ok" key.
- 8 Set the start month of winter time and press "Ok" key.
-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

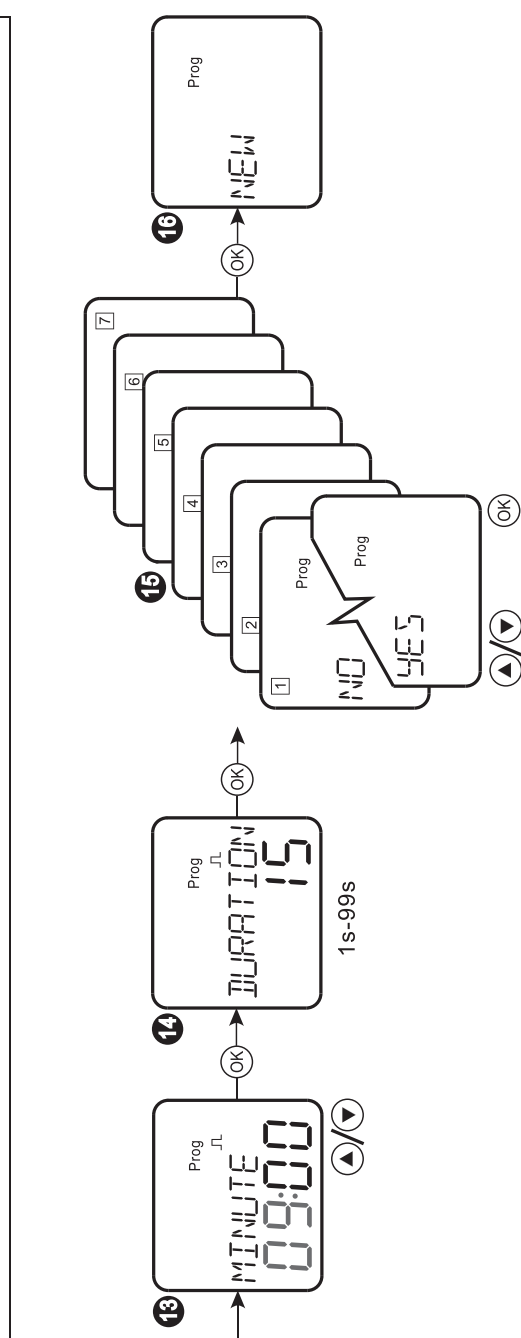


Display	Function	Summer switching	Winter switching
SU-W EUR	Europe sum/win	Last Sunday in March	Last Sunday in October
SU-W USA	U.S.A sum/win	Second Sunday in March	First Sunday in November
FREE + IH	Free sum/win	Freely programmed	Freely programmed
NO S-W	No sum/win	None	None

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

● Program creating

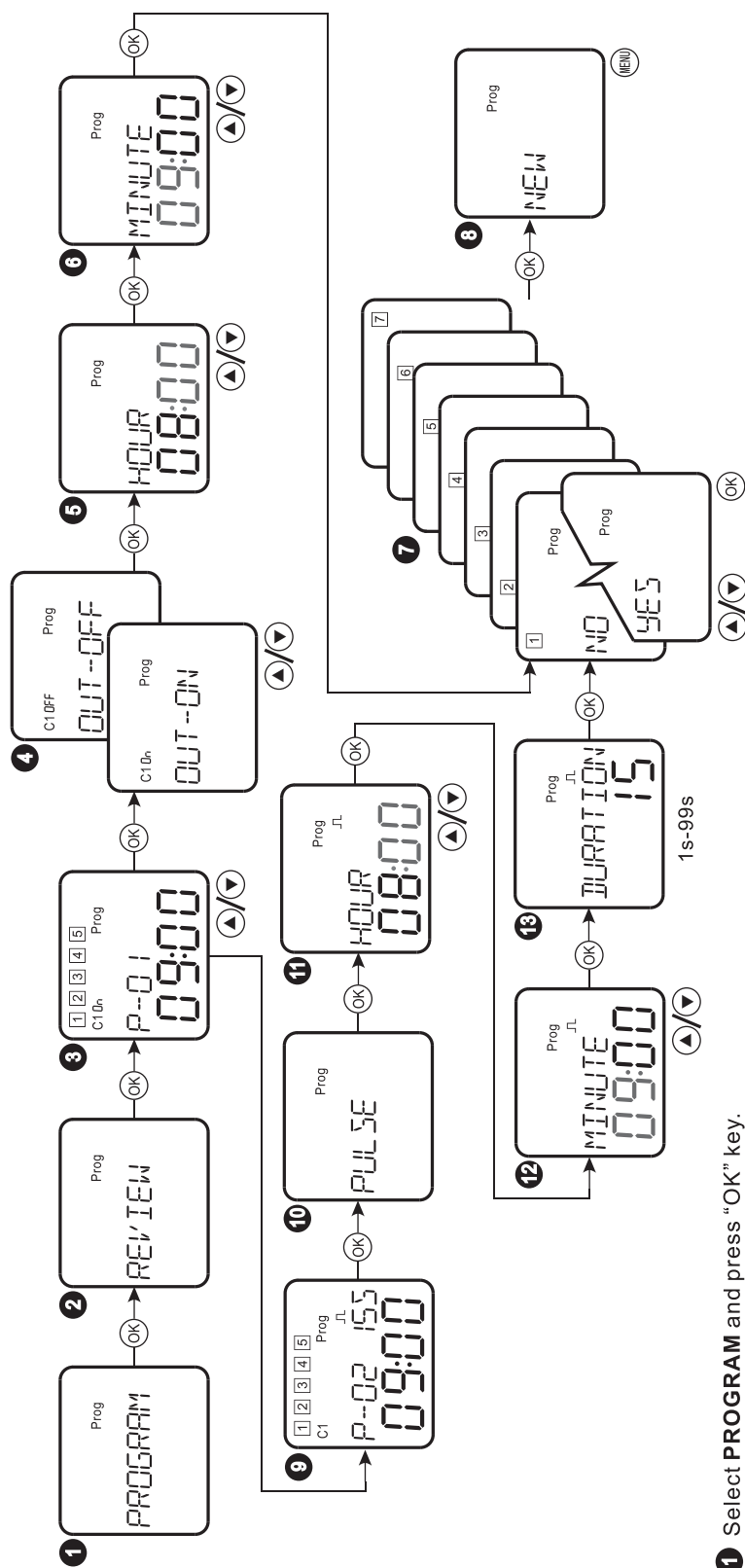




- 5 Select **ON/OFF** mode.
- 6 Select **PULSE** mode.
- 7 Display the output state of channel 1. Select **OUT-ON** or **OUT-OFF** with “▲▼” keys and then press “OK” key.
- 8 12 Set the hour with “▲▼” keys and press “OK” key.
- 9 13 Set the minute with “▲▼” keys and press “OK” key.
- 10 15 Set the program 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.
- 11 16 Return to last menu by pressing “MENU” key.
- 14 Set the duration of pulse, setting range is 1-99s.

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

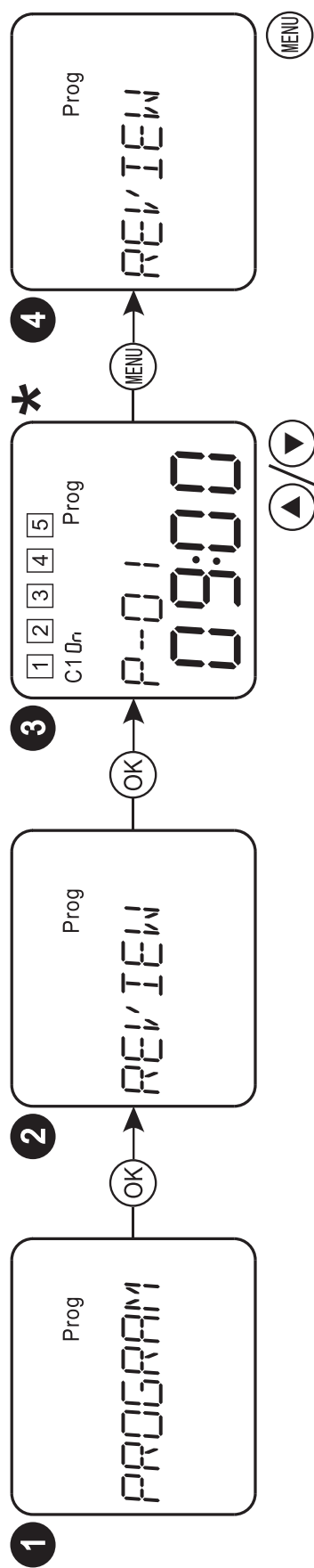
● Program modifying



- 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.
- 4 Display the output state(ON/OFF program). Select **OUT-ON** or **OUT-OFF** with "▲▼" keys and then press "OK" key.
- 10 Display the output state(Pulse program). Press "OK" key.
- 5 11 Set the hour with "▲▼" keys and press "OK" key.
- 6 12 Set the minute with "▲▼" keys and press "OK" key.
- 7 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. If NO is selected, program is not used for flashing day.
- 8 Return to last menu by pressing "MENU" key.
- 13 Set the duration of pulse, setting range is 1-99s.

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

● Program reviewing

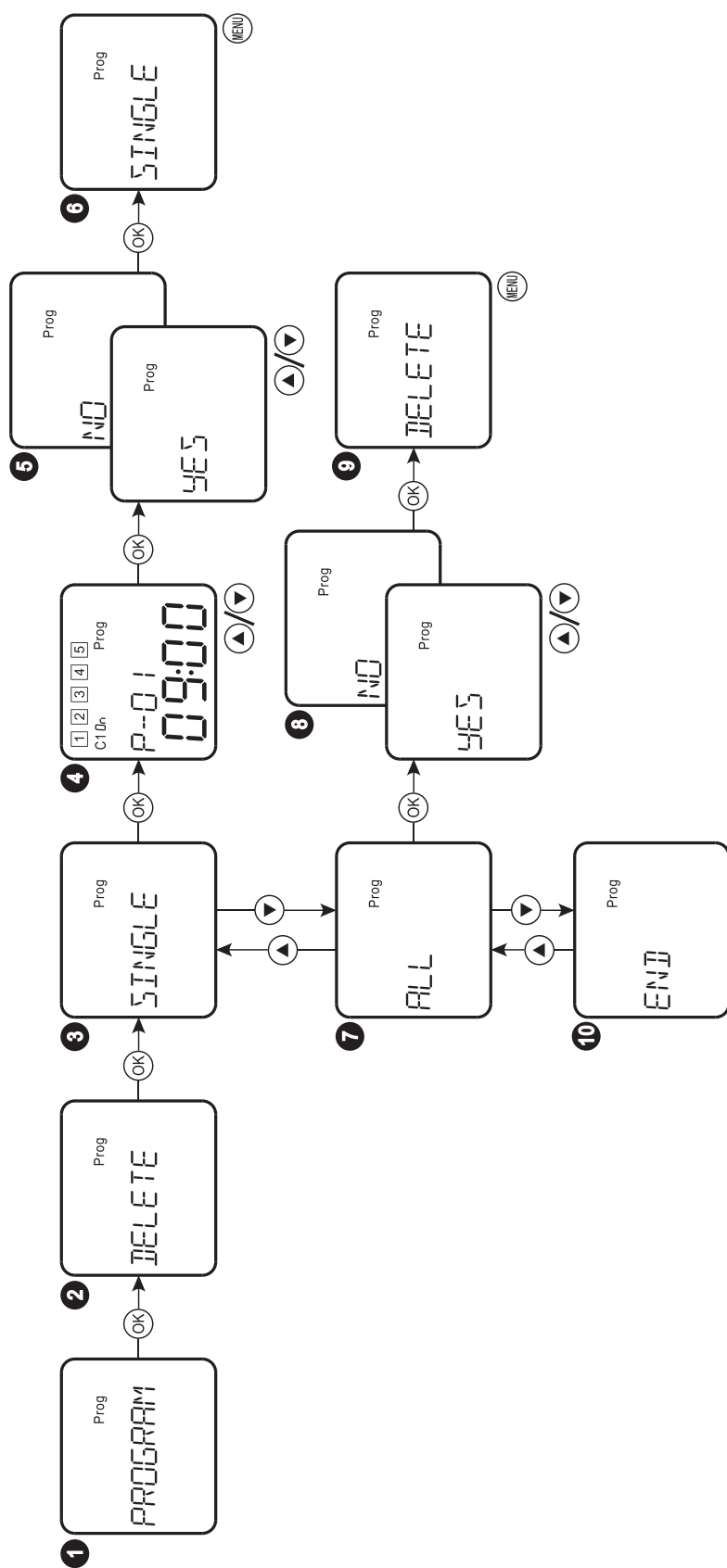


- 1 Select **PROGRAM** and press “OK” key.
- 2 Select **REVIEW** and press “OK” key.
- 3 View the operation of the set programs with “▲▼” keys and press “MENU” key.
- 4 Exit from the setting by pressing “MENU” key.

*

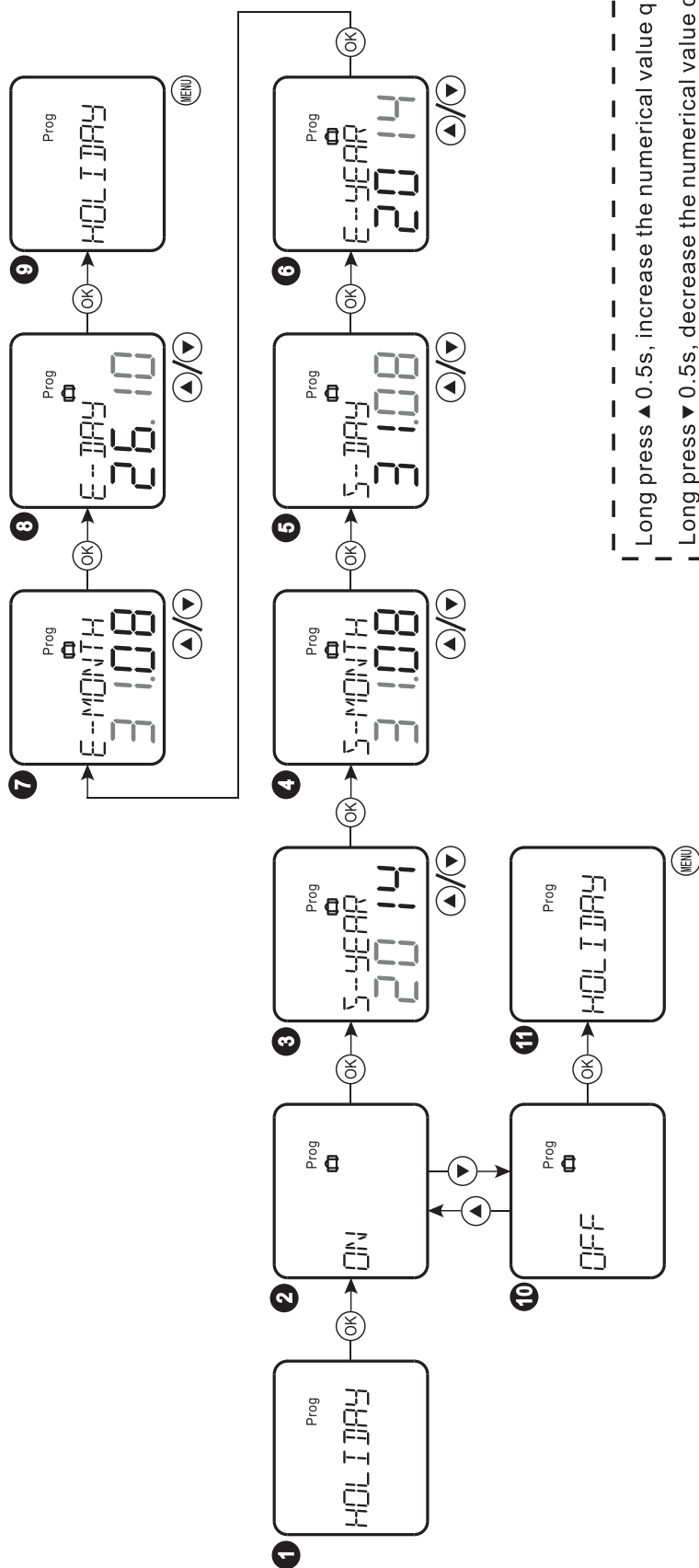
Symbols	Description
P--01 09:00	ON/OFF program
P--02 ^{PL} 155 09:00	Pulse program

● 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.

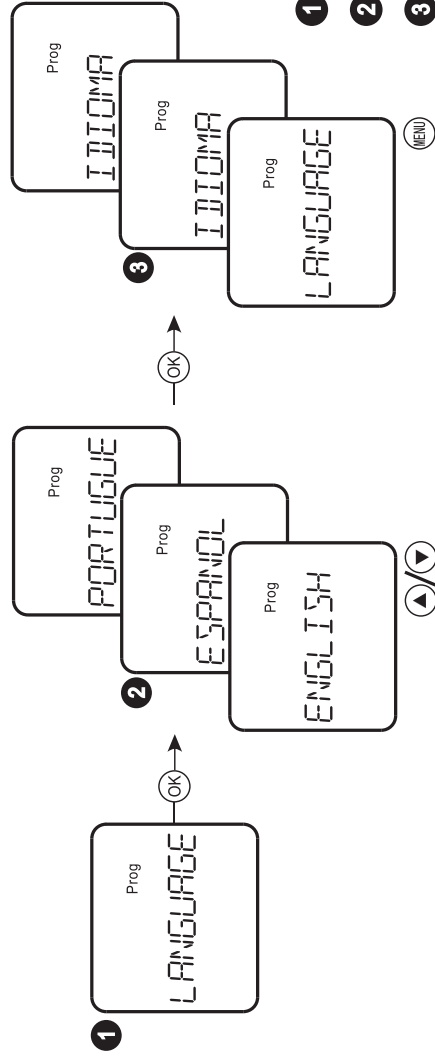
● Holiday mode



- 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.

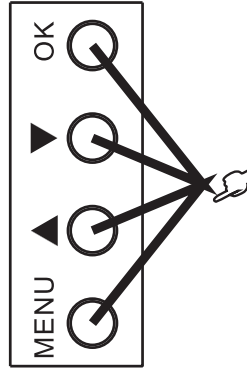
12. Language setting

- Language setting



13.Reset

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



14.Keys combination for MANUAL control

O 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.

O PERM ON/PERM OFF

▲▼ C1   Press "▲▼" keys simultaneously for 2s, the output state of channel 1 switches to PERM ON/PERM OFF.  flashes. >2s

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

DELAB SCIENTIFIC SDN BHD

Address: No.22, Jalan Tembaga SD5/2D Bandar Sri Damansara 52200 Kuala Lumpur

Tel: 603-6272 6506 / 603-6272 6527

Fax: 603-6272 6915



www.delab.com.my