



DIGITAL TIME SWITCH

RS Stock No's:

896-6876, 896-6891 (24Hr/7 Day)
896-6885 (Pulse function)

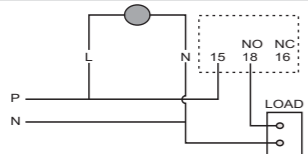
CAUTION :

- Installation should be done by skilled electrician only.
- Heavy Inductive loads should be equipped with interference suppressors like varistors, RC snubbers.
- Use of contactors is recommended if load exceeds the contact rating. Please see Inductive load category.
- Non- Rechargeable Battery Disposal: As per the applicable regulations in country and state, by authorized, professional disposal firms knowledgeable in Federal, State or Local requirements of hazardous waste treatment & transportation.

NOTE :

- IMPORTANT:** IF Daylight Saving Time (DST) applicable, First Set Date, then Set DST & then set the Real Time Clock.
- IMPORTANT:** When user presses \odot key in program edit mode, it returns to Run mode.
- Battery Mode:** Key sensing may be slower so please make sure that any key is pressed for at least 1 sec.
- Product innovation being a continuous process, we reserve the right to alter specifications without any prior notice.
- User is recommended to ensure the suitability of the product for the intended application

CONNECTION DIAGRAM:



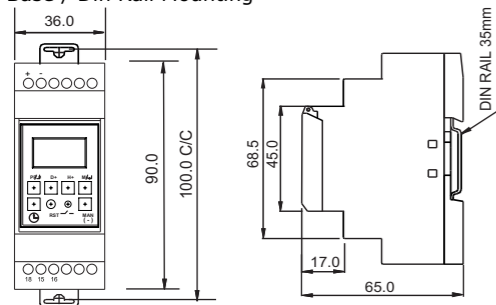
TERMINAL DETAILS :

	0.54 N.m (5 Lb.In) Terminal screw - M2.5
	1 x 0.2...3.3 mm ² Solid Wire
AWG	1 x 24 to 12

Use Copper Conductors Only, 60/75°C.

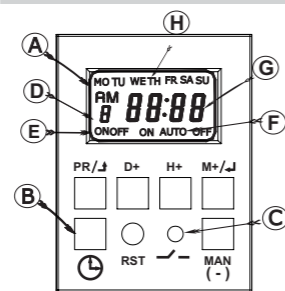
OVERALL DIMENSIONS :

Base / Din Rail Mounting



6LL003-08

FRONT VIEW:



- A - LCD
- B - Keypad
- C - Relay 'ON/OFF' LED Indication.
- D - Program Number
- E - Relay Status
- F - Mode
- G - HR : MIN
- H - Day

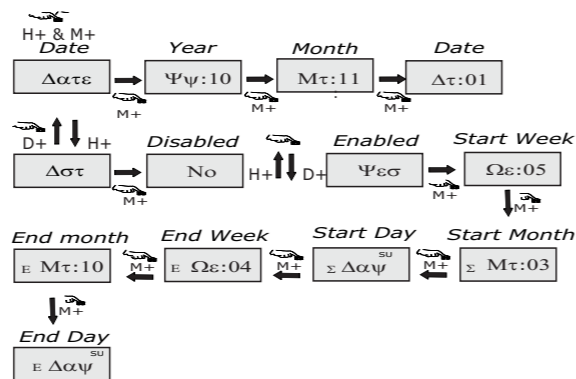
KEY FUNCTIONS :

- PR / \updownarrow** - Program key to view & edit programs & As ESC Key
- D+** - Day selection & Also as an Date/DST Increment key
- H+** - Hour Increment & Also as an Date/DST Decrement key
- M+/ \downarrow** - For Crono: To increment Minute
For Pulse : To set Pulse duration
Also as an ENTER key
- (H+) + (M+)** - To enter in DATE / DST mode
- RST** - Reset programs & settings in the device.
- MAN (-)** - Manual key for overriding.
Also to decrement D/H/M in program mode
- \odot - Clock Key, to set the clock
- CLK + MAN** - To set 12 / 24h clock mode
- CLK + PR** - To Lock / Un-lock keypad

CLOCK SETTING: Figure 1

- \odot + **MAN** Press clock key \odot & MAN key simultaneously to toggle between 12/24 hour clock mode.
AM / PM
- \odot + **D+** Keep the Clock key \odot pressed & then press the D+ key to set day.
MO/TU/WE/TH/FR/SA/SU
- \odot + **H+** Keep the Clock key \odot pressed, then press the H+ key to set hour.
00- 23 - in 24 Hour Mode
01- 12 - in 12 Hour Mode
- \odot + **M+** Keep the clock key \odot pressed, then press M+ key to set min.
00- 59

DST & DATE SETTINGS : Figure 2



- During Run mode, press H+ with M+ to enter 'δATE' menu. Press M+/ \downarrow to enter this menu. Edit ΨΨ, MT & ΔT using D+ or H+.
- 'δATE' menu is being displayed, press H+ or D+ to select ΔT & press M+/ \downarrow to enter its menu.
- User can enter ΔT & ΔATE as shown in the figure 2 above.
For this, D+ key is used to increment the parameter value
H+ key is used to decrement the parameter value
M+ key is used to save the current parameter value
PR key is used to escape to previous parameter screen
- During ΔT period 'd' will appear at bottom left corner of the screen & day will be updated according to current date. No need to set day manually by pressing CLK & D+ key.

Note:

- ΔATE & ΔT must be set in regions where ΔT is observed. When ΔT is enabled LCD shows 'd' at the left corner.
- ΔT Start / End: Clock is rolled over from '02:00' to '03:00' at start and is rolled over from '03:00' to '02:00' at end.
- When ΔT period starts, clock gets incremented by 1 hour. If the user has set the Clock prior to setting the ΔT and accounted for this additional hour that would get incremented, then the user might have to readjust the clock.

MANUAL OVERRIDE & MODE DESCRIPTION:

Press MAN key to toggle between-

- AUTO:** As per set program.
- ON AUTO:** Manual ON up to next ON event. (Not Applicable for Pulse)
- AUTO OFF:** Manual OFF up to next OFF event. (Not Applicable for Pulse)
- ON:** Manual ON (Continuous).
- OFF:** Manual OFF (Continuous).

PROGRAMMING DETAILS :

Program Description(896-6876 & 896-6891)

25 ON/OFF Programs

1 2 3 4 5 6 7 8 9 A B C D e f g H J L n P q T u Y

Pulse 16 ON Programs

PL 0 1 2 3 4 5 6 7 8 9 A b C d E F

Program Description(896-6855)With Common Pulse 'P'

16 ON Programs (As 'Prg/Pulse') with very 1st common pulse P

PL 0 PL 1 PL 2 PL 3 PL 4 PL 5 PL 6 PL 7 PL 8 PL 9

Program Description(896-6855)With Individual Pulse

16 ON Programs (As 'Prg/Pulse') with very 1st common pulse

PL A PL b PL C PL d PL E PL F PL

How to Delete the Program?

- To delete single program, go to respective program, press H+ until '--' hr comes & press M+ until '--' min comes on LCD. '--:--' displayed on LCD indicates empty program.
- To delete/reset all the programs & settings, press RST key.

KEYPAD LOCK (\mathcal{L}):

To lock the keypad, press the \mathcal{L} and 'PR' key simultaneously for 3 seconds or more. 'bLoC' will appear on the screen indicating that the keypad has been locked.

When the keypad is locked none of the parameters can be edited, only the mode can be changed from 'Auto' to 'ON Auto' and 'Auto OFF' by pressing the 'MAN' key.

To unlock the keypad press \mathcal{L} and PR key simultaneously for 3 or more sec. 'ULoC' will appear on screen. The keypad can be locked only in Run mode and not in program Edit mode.

FREQUENTLY ASKED QUESTIONS :

Q.1:In event of power failure, do I lose all my programs?

A.1:No, because battery has a reserve of approx 6 yr at operating temperature. In absence of power, we can program the device as per requirement. However, during power fail, relay or LED will not operate but the relay status can be observed on LCD screen.

Q.2:How to use Manual override? When is it applicable?

A.2:Press MAN key to toggle to ON Auto, Auto OFF, ON or OFF mode. (Refer Mode Description). It is used if user requires an immediate ON or OFF of the relay.

Q.3:Can I select any day in the week as my weekly OFF?

A.3:Yes, when in PR mode, toggle by pressing D+ & MAN (-) or D+ key respectively to select individual holiday selection.

Q.4:What should I do to remove all programs & reset RTC?

A.4:Press RST key. All programs will get deleted, RTC will be reset to 00:00 & Default day as Monday.

Q.5:How do I change clock format from 12 h to 24 h?

A.5:Press \odot & MAN key simultaneously to switch clock format from 12h to 24 h & vice-versa.

Q.6:How does ON AUTO & AUTO OFF feature help?

A.6:ON AUTO / AUTO OFF feature bypass the current program & continues with the next program. ON AUTO mode returns back to AUTO mode at next programmed ON Time. AUTO OFF mode returns back to AUTO mode at next programmed OFF Time. In this way, one can override the relay to switch ON/OFF without affecting the further programs.

PROGRAMMING EXAMPLES: 896-6876 and 896-6891

Ex 1 : Relay ON at 18.00 & OFF at 6.30 from Monday to Sunday (Program For Whole Week).

Steps:

Screen 1

MO 00:00 OFF AUTO After power ON, screen 1 will be displayed

Screen 2

FR 10:00 OFF AUTO Set the current time (e.g.10:00), Day (e.g.Friday) & Relay mode (e.g. AUTO) as per CLOCK setting & mode function

\odot -> Press PR to enter in ON time program.

Screen 3

MO TU WE TH FR SA SU 19:00 Press D+ stepwise for day selection as given below. Mon to Sun is default setting so no need to press any key

- MO TU WE TH FR SA SU (All week days)
- MO TU WE TH FR SA (Exclude Sunday)
- MO TU WE TH FR (Exclude Week-ends)
- MO TU WE TH SU (Exclude Friday & Saturday)
- SA SU (Only Weekends)
- FR SA (Only Weekends)
- TU WE TH FR SA SU (Exclude any single day)
- MO TU WE TH FR SA SU (Include Single day)
- MO WE FR (Exclude Alternate day)
- TU TH SA (Exclude Alternate day)

Screen 4

MO TU WE TH FR SA SU 18:00 Press H+ to edit & increment the hour as & if needed, use MAN (-) key to decrement hours. Set the time to 18:00.

PR -> Press PR to switch in OFF time program.

Screen 5

MO TU WE TH FR SA SU 06:30 Press H+ continuous to set the hour as 18:00. Use MAN (-) key to decrement hours

Example 2: 3 Different programs for whole week

RELAY ON	RELAY OFF	
Program 1 : 20:45 (MO-FR)	06:30 (SA)	Steps: Set the clock as explained in screen 1 & 2 above
Program 2 : 19:00 (SA)	06:30 (SU)	
Program 3 : 18:15 (SU)	06:30 (MO)	

Screen 6

MO TU WE TH FR 20:45 Press D+ 3 times to select MO-FR. Set ON time as 20:45 by using H+ & M+ key. \odot -> Press PR to switch in OFF time.

Screen 7

MO TU WE TH FR SA 06:30 Press D+ once to select MO-SA. Set OFF time as 06:30 by using H+ & M+ key. \odot -> Press PR to enter in 2nd program.

Screen 8

SA 19:00 Press D+ continuous to select SA. Set ON time as 19:00 by using H+ & M+ key. \odot -> Press PR to switch in OFF time.

Screen 9

SU 06:30 Press D+ continuous to select SU. Set OFF time as 06:30 by using H+ & M+ key. \odot -> Press PR to enter in 3rd program.

Screen 10

SU 18:15 Press D+ continuous to select SU. Set ON time as 18:15 by using H+ & M+ key. \odot -> Press PR to switch in OFF time.

Screen 11

MO 06:30 Press D+ continuous to select MO. Set OFF time as 06:30 by using H+ & M+ key. \odot -> Press PRG once. To save & exit the program, press \odot key

PROGRAMMING EXAMPLES 896-6855

Ex. 1: Programming For Fixed Pulse Time

Screen 12

P PL : 10 \odot -> Press PR once to enter pulse duration. Press M+ continuous to set any pulse duration from 1 to 59 s. E.g. 10s. This fixed pulse duration will be applicable to all 16 programs

Ex. 2: Programming For Individual Pulse Times

Screen 13

MO TU WE TH FR SA SU 20:00 In this case, user has to first set the ON time & then pulse duration for the same Press PRG two times to enter in ON time for program '0'. Set the ON time (20:00) & day with the help of H+/M+/D+ keys

Screen 14

MO TU WE TH FR SA SU 0 PL : 05 \odot -> Press PR once to enter pulse duration. Set the pulse 0 (for program 0) for duration of 05 by pressing M+ key.

Screen 15

MO TU WE TH FR SA SU 1 21:00 \odot -> Press PR once to enter in program 1 Set the ON time (21:00) & day with the help of H+/M+/D+ keys

Screen 16

MO TU WE TH FR SA SU 1 PL : 07 \odot -> Press PR once to enter pulse duration Set pulse 1 (for program 1) for duration of 07 by pressing M+ key.

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