W48×H48mm, Weekly/Yearly Timer SENSORS Features Easy to check and change the program setting CONTROLLERS · Customizable weekly or yearly unit time setting and control by user MOTION DEVICES Includes daylight saving time function 1 independent control output. (relay) Flush and surface, DIN rail mounting are in one unit. SOFTWARE Please read "Safety Considerations" in the instruction manual before using Ordering Information LE365 S 1 4 (J) Temperature Controllers Output 1 1 Relay output Power supply (K) SSRs 4 100-240VAC 50/60Hz Size s DIN W48×H48mm (L) Item Power Controllers LE365 Weekly/Yearly timer Specifications (M) Counters Model LE365S-41 Power supply 100-240VAC~ 50/60Hz (N) Timers Allowable voltage range 90 to 110% of rated voltage Power consumption Max. 2.4VA (100-240VAC~) (O) Digital Panel Meters Timing program 48 steps for weekly, 24 steps for yearly Operation mode ON/OFF mode, cycle mode, pulse mode Panel flush, surface, DIN rail (P) Indicators Mounting ±15 sec/month (ambient temperature: 25°C) (±4 sec/week) Time deviation ±0.01% ±0.05 sec Temperature error (Q) Converters Memory protection Over 5 years (at 25°C) Contact type SPST (Single Pole Single Throw) (R) Digital Control Contact capacity 250VAC~ 15A, 30VDC= 5A resistive load Display Units Output Output number Independent 1 output (1a) (S) Min. 5,000,000 operations (switching capacity 30 times/min) Mechanical Relay Sensor Controllers life cycle Electrical 50,000 operations<switching capacity 20 times/min, 250VAC 15A (resistive load)> (T) Switching Mode Power Insulation resistance Over 100MΩ (at 500VDC megger) Dielectric strength 2,000VAC 50/60Hz for 1min Supplies Noise immunity ±2kV the square wave noise (pulse width: 1µs) by the noise simulator (U) Recorders Ambient temperature -10 to 55°C, storage: -25 to 65°C Environment Ambient humidity 35 to 85%RH Approval (V) HMIs Unit weight

※Environment resistance is rated at no freezing or condensation.

Approx. 110g

Connections



(X) Field Network Devices

(W) Panel PC

Dimensions

12:59

00 E

ß 61



How to Switch from The Flush Mounting to Surface or DIN Rail Mounting Type

DIN RAII

Remove terminals from the body after unscrewing terminals screws, and then assemble terminals to the body after rotating terminals as shown below.



Autonics

Unit Description





MOTION DEVICES

SOFTWARE

(J) Temperature Controllers

(K) SSRs

- 1. Day indicator
- 2. Day display
- Light: Day is selected.
- Light-out: Day is not selected.
- 3. Current time setting mode indicator
- 4. DST display (daylight saving time)
- 5. AM/PM display (main display)
- 6. Season display
- 7. Program display
- 8. Display ON time/day, OFF time/day, ON time width,
- OFF time width
- 9. AM/PM display (sub-display)
- 10. YEAR display
 - : It turns ON when set, check, modify, delete yearly program, set yearly holidays and operate yearly program.
- 11. Yearly START/STOP day display
- 12. Main display

Functions

○ Definitions

- Record: A part of program that controls output operation.
- Step: Basic component of Record.

Operation modes

- If the operation mode of Program 1 (program 2) is set on pulse mode initially, the pulse mode is fixed for additional programs. If the operation mode of Program 1 (program 2) is set on ON/OFF or cycle mode initially, pulse mode cannot be used for additional pulse programs.
- If the weekly operation mode is set on ON/OFF or cycle mode, the yearly operation mode is fixed on ON/OFF mode.

If the yearly operation mode is set on ON/OFF, the weekly operation mode is fixed on ON/OFF or cycle mode.

 If the weekly operation mode is set on pulse mode, the yearly operation mode is fixed on pulse mode. If the yearly operation mode is set on pulse mode, the weekly operation mode is fixed on pulse. Weekly ON/OFF mode

13. Remaining step display

14. Operation mode display

16. Year, month, date display

17. Unit of pulse width display

15. Output mode display

set and released.

23. Output selection switch

ON: Output is ON. (operation)

• OFF: Output is OFF. (block)

18. Sub display

19. CHECK key

21. Operation key

20. MODE key

22. SET kev

Output operation by ON/OFF set time.

Min. time setting unit: 1 min

- It is able to set ON/OFF day separately.
- One record in two steps (ON day/ON time, OFF day/OFF time)



: Press [+1h] key over 3 sec in RUN mode, DST mode is

• AUTO: Control output according to the set program.

•Weekly Cycle operation

It outputs ON the set ON time width which is from Cycle operation ON time to Cycle operation OFF time, and it outputs OFF the set OFF time width.



(Q) Converters

(R) Digital Display Units

(S) Sensor Controllers

(T) Switching Mode Power Supplies

(U) Recorders

(V) HMIs

(W) Panel PC

(X) Field Network Devices

- Set range for ON/OFF time width
- : 1 min to 12 hour 59 min
- One record in 3 steps (ON day/ON time, OFF day/OFF time, ON time width/OFF time width)



• Weekly pulse mode

Output turns ON at ON time for a specified pulse width. (Pulse width: 1 to 59 sec, 1 to 60 min)

• One record in two steps (ON day/ON time, pulse width)



• Yearly ON/OFF mode

Output turns ON at ON time on START date and turns OFF at OFF time on STOP date.

One Record in three Steps (START/STOP date, ON/OFF time)

· Yearly pulse mode

Output turns ON at ON time on START date and turns OFF at OFF time on STOP time for a specified pulse width repeatedly.

• One record in three steps (START/STOP date, ON time, Pulse width)

O Program operation



- ① to ②: Operated by weekly setting 1 of Program 1.
- ② to ③: Operated by weekly setting 2 of Program 1.
- ④ to ⑤: Operated by weekly setting 1 of Program 1.
- (5) to (6): Operated by yearly setting 1 of Program 1. (during weekly program operation at 12:00 AM on START date, the weekly program operation stops, and it changes to yearly program operation mode. The yearly program operation stops at 12:00 AM on the next day of STOP date.)

O Display and change of next mode

- The day of next mode in Program is displayed on the day indicator, and the time of next mode is displayed on the lower row of screen.
- In ON/OFF operation mode, set ON time and OFF time to next mode. In Pulse operation mode, set Pulse ON time to next mode.

\bigcirc Power restore mode

In setting group 2 - LEVEL2 (r E ± turns ON, R ± or nor flashes), select Auto[R ±] or Normal [nor] by ▲ or ▼ key and press SET key to set.

- Auto [7] b] power restore mode Output operates according to program when power turns ON again after power failure.
- •Normal[nor] power restore mode

When power turns ON again after power failure, output is kept OFF and $r, l \in n$ flashes on the lower row of screen and power restore input (press SET key over 3 sec in RUN mode) is applied, $r, l \in n$ turns OFF and output operates according to program.

○ Season switching mode

This feature uses for setting seasonal weekly operation mode. To operate this mode, save starting month and date, ending month and date of each season which displays S1, S2, S3, S4 then set day and time of each season in weekly program setting. It is also able to operate only in summer and winter season. (S1: set summer season, S2: set winter season, S3/S4: do not set)

In setting group 2-Level 2 ($5E_{\square}$ turns ON, $_{\square}FF$ flashes.), select ON[$_{\square}\square$] by \blacksquare or \blacksquare key and press <u>SET</u> key to save. When the season switching mode changed from $_{\square}FF$ to $_{\square}\square$ or vice versa, previous set programs are deleted.

• ON[___] mode

Weekly program is switched automatically by season switching.

- Period setting per season
- Press SET key in period setting per season mode of setting group 2. (5En flashes, season with preset period turns ON and START and STOP turn ON.)
- ② Advance to the flashing position of season selection among S1, S2, S3, S4 by ▲ or ▼ key and press SET key.
- ③ After set START month, date per season and press SET key.
- ④ SET key is pressed after set STOP month, date per season, it is advanced to LEVEL1 of period setting per season. Add or adjust the period setting by SET key.
- It is disable to use when it is OFF [$_{\Box}FF$].
- If season terms are overlapped, these are prioritized in S4>S3>S2>S1 order.

$\ensuremath{\bigcirc}$ Daylight saving time

To utilize daylight during the summer season, daylight saving time is adjusted forward one hour from standard time.

In setting group 2-LEVEL 2 (d5 \pm turns ON, $R\pm$ or nor flashes), select Auto [$R\pm$] or Normal [nor] by \blacktriangle or $\overline{\mathbf{v}}$ key and press <u>SET</u> key to set.

• Auto [RE] daylight saving time mode

Current time will be faster as an hour when it is started and slower as an hour when it is finished.

- · Automatic daylight saving time period setting
- Automatic daylight saving time period setting LEVEL 1
 of setting group 2.
 (recentline and START and
 - (press SET key when d5t flashes and START and STOP turn ON.)
- ② Set START date (month, date) of automatic daylight saving time mode and press <u>SET</u> key.
- ③ Set START time (AM/PM, hour) of automatic daylight saving time mode and press SET key. But, the minute will be fixed as 00.
- ④ Set STOP date (month, date) of automatic daylight saving time mode and press SET key.
- ⑤ Set STOP time (AM/PM, hour) of automatic daylight saving time mode and press SET key. But, the minute will be fixed as 00.
- Normal [npr] daylight saving time mode

Press <u>+1h</u> key over 3sec in RUN mode, "+1h" turns ON and current time is faster as an hour and "+1h" turns ON out or vice versa, when press <u>+1h</u> key over 3sec again.

○ Current time setting

(E.g.) Set the current time as 10, Mar, 2008, 5:10 PM.

① Advance to the current time setting mode



MODE + **SET** keys are pressed over 3 sec in RUN mode, it is advanced to current time setting of setting group 2 and clock will be flashed and LRJ will be lighted in second display part, press **SET** key.



SUN MON TUE WED THU FRI SAT



Press ▲ or ▼ key to set 08 (year 2008) and move the flashing digit to position month by ▶ key. Press SET key after pressing ▲ or ▼ key to set date 10.

PM and move the flashing

digit to position hour by

③ Current time (AM, PM) setting SUN MON TUE WED THU FRI SAT Press ▲ or ▼ key to select



key.

Current time (hour, min) setting
 SUN MON TUE WED THU FRI SAT



Press A or key to set 5 PM and move the flashing digit to position min by key. Press or key to set 10 min and press SET key and it is returned to RUN mode when pressing MODE key over 3 sec

- It advances to "①Current time setting mode" in ON status and set current time as shown above ② to ④ by SET key.
- Current time is set up to 31, Dec., 2099.
- Check current year/month/date in RUN mode When key is pressed over 3sec in RUN mode, it advances to current year/month/date display. After display current year/month/date for 3sec, it returns to RUN mode displaying current display.



Power Controllers

(L)

(O) Digital Panel Meters

(P) Indicators

(Q) Converters

(R) Digital Display Units

(S) Sensor Controllers

(T) Switching Mode Power Supplies

(V) HMIs

(U) Recorders

(W) Panel PC

(X) Field Network Devices

SENSORS

CONTROLLERS

MOTION DEVICES

Program Setting

○ Setting group 1



- When it is advanced to setting group 1 in RUN mode, output will be OFF.
- It is returned to previous setting group 1 when power of time switch is ON again in setting group 1.
- When MODE key is pressed in LEVEL2 of setting group 1, current setting will be canceled and it is returned to previous LEVEL1.
- When press SET key to program over max. number of steps for weekly program in Weekly program setting mode of setting group 1-LEVEL 1, number of remaining steps and STEP flash and it returns to LEVEL 1 status.
- When press SET key to program over max. number of steps for yearly program in Yearly program setting mode of setting group 1-LEVEL 1, number of remaining steps and STEP flash it returns to LEVEL 1 status.

Setting group 2 RUN mode Press MODE + SET Press MODE key (setting group 2) for 3 sec key for 3 sec LEVEL1 LEVEL2 Current time setting mode SET Current time (Clock icon flashes) setting MODE LEVEL1 LEVEL2 SET Power failure return selection mode Power restore (rEL flashes, RL or nor turns ON) selection MODE LEVEL1 LEVEL2 SET eason switching Season switching selection mode (5En flashes, on or oFF turns ON) selection MODE Ж1 LEVEL1 LEVEL2 Period setting for season mode Period setting SET per season flashes, period-set season turns ON an (5 F o START or STOP turns ON) MODE LEVEL1 LEVEL2 SET Daylight saving time selection mode (d5L flashes, RL or ner turns ON) Daylight saving time selection MODE ×2 LEVEL1 LEVEL2 Automatic Automatic[RE] daylight saving SET davlight time period setting mode saving time period setting (d5L flashes, START or STOP turns ON) MODE

- X1: Season switching selection is DFF.
- **2:** Automatic switching selection of Daylight Saving Time is Normal[npr].
- When it advances to setting group 2 in RUN mode,
- output (OUT1, OUT2) will be OFF.
- When power of time switch is ON again in setting group 2,
- it is returned to previous setting group 1.
- Front MODE key is pressed in LEVEL2 of setting group 2, it is returned to previous LEVEL1.
- When season switching selection is changed from $_{\Box}FF$ to $_{\Box}n$ to $_{\Box}FF$, previous set weekly program will be deleted

Weekly/Yearly Timer

C Example of Weekly program setting

• Weekly ON/OFF mode

(E.g.) Output 1 (OUT1) is ON from Monday to Friday at 8:00 AM and OFF at 6:10 PM.

s	SUN	MON	TUE	WED	THU	FRI	SAT				
	8:00 6:10 8:00 6:10 8:00 6:10 8:00 6:10 8:00 6:10										

AM PM AM PM AM PM AM PM AM PM

① Advance to weekly program setting mode

SUN MON TUE WED THU FRI SAT

STEP

MODE key is pressed over 3sec in RUN mode P flashes and press SET key.

② Mode type setting

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Press SET key in ON/OFF mode.

Press **b** key to move the indicator to Monday, it will

be lighted when ▲ or ▼ key

Press SET key after Tuesday, Wednesday, Thursday, Friday turn ON.

are pressed and move it to

Tuesday by **b** key.

③ ON day setting

SUN MON TUE WED THU FRI SAT



④ ON time setting (AM, PM)



kev is pressed, move the flashing to hour position and select PM by ▲ or ▼ key when ON time is afternoon.

⑤ ON time setting (hour, min)



Set 8:00 by ▲ or ▼ key and



press SET key.

6 OFF day setting SUN MON TUE WED THU FRI SAT



Press SET key to check ON/ OFF day.

⑦ OFF time setting (AM, PM)



Select PM by A or key and move the flashing to hour position by **b** key.



SENSORS

MOTION DEVICES

SOFTWARE

(J) Temperature Controllers

(K) SSRs

(L)

Power Controllers

(M) Counters

(N) Timers

(O) Digital Panel Meters

(P) Indicators

(Q) Converters

(R) Digital Display Units

(T) Switching Mode Power Supplies

(U) Recorders

(S) Sensor Controllers



Move the flashing to minute position by **b** key after set 6:00 by
or
key and set the minute as 10 by 🔺 or 💌 key and press SET key.

③ Complete to set

SUN MON TUE WED THU FRI SAT



Press SET key to set additional program.

Weekly Pulse mode

- Pi

(E.g.) Output 2 (OUT2) is ON for 10 sec at 8:00 AM from Monday to Friday during S2 season in case, period of S1, S2, S3, S4 is set.

SUN	MON	TUE	WED	THU ↑	FRI	SAT ▲
	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM
					ON fo	or 10 sec

8.00 AM

Advance to weekly program setting mode SUN MON TUE WED THU FRI SAT



MODE key is pressed for 3 sec in RUN mode, P flashes and press SET key.

÷P÷

Ρ

② Mode type setting

SUN MON TUE WED THU FRI SAT



Press A or key when ON/ OFF flashes, pulse flashes and press SET key.

Press A or kev to select

season S2 and press SET

key.

3 Season selection SUN MON TUE WED THU FRI SAT

S1 S2 S3 S4 STEP PULSE Ρ

(W) Panel PC

(V) HMIs

(X) Field Network Devices

④ ON day setting SUN MON TUE WED THU FRI SAT



Press key to move the indicator to Monday, it will be lighted when a or key is pressed and move it to Tuesday by key. Press set key after light Tuesday, Wednesday, Thursday and Friday.

⑤ ON time setting (AM, PM)



Press ▶ key, move the flashing to hour position and select PM by ▲ or ▼ key when ON time is afternoon.

6 ON time setting (hour, min)



Set 8:00 by ▲ or ▼ key and press SET key.

⑦ Pulse width setting

SUN MON TUE WED THU FRI SAT



Press A or key to select pulse width as 10s and press SET key.

⑧ Complete to set SUN MON TUE WED THU FRI SAT



Press SET key to set additional program.

Weekly Cycle mode

(E.g.) Output 1 (OUT1) is ON for 10 min and OFF for 5 min from Monday 6:00 AM to Saturday 5:30 PM.



① Advance to weekly program setting mode SUN MON TUE WED THU FRI SAT



In RUN mode, press MODE key for 3 sec and P flashes. Press SET key.

② Mode type setting SUN MON TUE WED THU FRI SAT



Press A or key when ON/ OFF flashes, cycle flashes and press SET key.

3 to 8

Ρ

Refer to ③ to ⑧ of "Weekly ON/OFF mode" to set ON day, ON time, OFF day and OFF time.

③ ON time width setting

SUN MON TUE WED THU FRI SAT



Press ▶ key to move the flashing to minute position and set as 10 min by ▲ or ▼ key and press SET key.

10 OFF time width setting

SUN MON TUE WED THU FRI SAT

Press key to move the flashing to minute position and set as 5 min by a or key and press set key.

(1) Complete to set SUN MON TUE WED THU FRI SAT



Press **SET** key to set additional program.

○ Weekly day change

When the specified day mode is required to install in other day, it is started from the set day and returned to previous program setting automatically when it is finished.

Weekly day change cancellation

- ① Change current year, month, date in current time setting mode
- ② Change standard day
- ③ Delete all program in program
- ④ Season switching

• Setting example

Output is ON in Saturday at 9:00 AM and OFF at 12:00 PM and it is ON 8:30 AM and OFF at 6:00 PM from Monday to Friday and the mode of Monday and Tuesday is operated temporarily as Saturday (standard) program.

① Advance to weekly day change mode

SUN MON TUE WED THU FRI SAT



Press MODE key over 3 sec to move to the setting group1 in RUN mode and press it repeatedly until [.d] flashes in second display part and press SET key.

② Standard day selection



Press key to move the indicator to Saturday and press SET key. after select Saturday as standard day (SAT turns ON) by a or key.

③ Change day selection SUN MON TUE WED THU FRI SAT



Press key to move the indicator to Monday and select Monday to change (Monday turns ON) by or key and repeat the procedure to select Tuesday to change (TUE turns ON) and press SET key to complete.

O Yearly holiday mode

It operates to off the output without program adjustment during previously set yearly holiday period available from present year to 31, Dec. of the next year.

Designate the start date of yearly holiday and year of end date as every year [- -] to repeat the holiday mode for specified in every year.

Setting example

Set every year 5, May to off the output.

① Advance to yearly holiday mode

SUN MON TUE WED THU FRI SAT



Press MODE key over 3 sec to move to the setting group1 in RUN mode and press it repeatedly until H.J.J flashes in second display part and press SET key.

② Yearly holiday number display SUN MON TUE WED THU FRI SAT

HING I

Press **SET** key after check yearly holiday number.

③ Start date of yearly holiday setting

SUN MON TUE WED THU FRI SAT



Press key until month[--] position flashes and set May by or key and press key until dazte position flashes. Press SET key after set 5th by or key.

The flashing is moved to

month[- -] position directly

May and press **b** key until

Press SET key after set 5th

date position flashes.

and press A or key to set

④ End date of yearly holiday setting SUN MON TUE WED THU FRI SAT

mm.dd

⑤ Complete to yearly holiday SUN MON TUE WED THU FRI SAT



by ▲ or ▼ key. liday Press MODE key to finish the additional yearly holiday

the additional yearly holiday setting and press <u>SET</u> key to set .

XIt is able to set yearly holiday up to 12 times.



CONTROLLERS

SENSORS

(J) Temperature Controllers (K) SSRs (L) Power Controllers (M) Counters



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(W) Panel PC

(X) Field Network Devices

○ Yearly program setting

Yearly ON/OFF mode

(E.g.) Output (OUT) is ON from every 5, Apr to 7, Apr at 9:00 AM and OFF 5:10 PM.

① Advance to Program 1 (P1) yearly program setting mode

SUN MON TUE WED THU FRI SAT



Press MODE key for 3 sec in RUN mode, P flashes and press MODE key once, then, P and YEAR flash and press SET key to set.

② Mode type setting



Press SET key when ON/OFF flashes

③ Start date setting SUN MON TUE WED THU FRI SAT



Press 🕨 key until month position flashes and set Apr by A or key and press key until date position flashes. Press SET key after set 5th by ▲ or ▼ key.

④ End date setting SUN MON TUE WED THU FRI SAT



The flashing is moved to month position directly and press A or key to set April and press **>** key until date position flashes. Press SET key after set 7th by ▲ or ▼ key.

⑤ ON time setting (AM, PM)



key is pressed, move the flashing to hour position and select PM by ▲ or ▼ key when ON time is afternoon.

6 ON time setting (hour, min) SUN MON TUE WED THU FRI SAT



Press A or key to set

9 and press SET key after check 00 min

⑦ OFF time setting (AM, PM)





Select PM by A or key and move the flashing to hour position by key.

(8) OFF time setting (hour, min) SUN MON TUE WED THU FRI SAT



Move the flashing to minute position after set 5:00 by or ve key and set the minute as 10 and press SET key.

③ Complete to set SUN MON TUE WED THU FRI SAT



Press SET key to set additional program.

· Yearly pulse mode

(E.g.) Output (OUT) is ON from 2, Oct., 2008 to 4, Oct, 2008 at 10:00 AM and OFF after 5 sec (present is 2007.)



① Advance to yearly program setting mode SUN MON TUE WED THU FRI SAT



MODE key is pressed for 3 sec in RUN mode, P flashes and press MODE key again, P flashes and press SET kev.

② Mode type setting SUN MON TUE WED THU FRI SAT



▲ or ▼ key is pressed when ON/OFF flashes to set pulse mode and press SET key.

③ Start date setting



Press A or key twice to set 08 (year 2008) and move to month position by **b** key. Set Oct. by A or key and move to date position by key and press SET key after set 2nd by A or key.

(4) End date setting SUN MON TUE WED THU FRI SAT



The flashing is moved to month position directly by key and set 4th by a or key after move it to date position by **b** key, then press SET kev.





▶ key is pressed, move the flashing to hour position and select PM by ▲ or ▼ key when ON time is afternoon.

$\textcircled{\sc blue}{\sc blue}$ ON time setting (hour, min)



Press A or V key twice to set 10 and press SET key after check 00 min

⑦ Pulse width setting SUN MON TUE WED THU FRI SAT



Press ▲ or ▼ key 4 times to select pulse width as 5s and press SET key.

⑧ Complete to set

SUN MON TUE WED THU FRI SAT



Press **SET** key to set additional program.

XIt is able to set year of start/end date in yearly program setting up to 2 years later from the present year.

Program Check, Modify and Delete

$\ensuremath{\mathbb{O}}$ Weekly program check, modify and delete



○ Yearly program check, modify and delete

