Autonics

Weekly/Yearly Timer LE365S-41

INSTRUCTION MANUAL





Thank you very much for selecting Autonics products. For your safety, please read the following before using.

Safety Considerations

XPlease keep these instructions and review them before using this unit.

×Please observe the cautions that follow:

▲ Warning Serious injury may result if instructions are not followed.

⚠ Caution Product may be damaged, or injury may result if instructions are not followed

XThe following is an explanation of the symbols used in the operation manual. Caution:Injury or danger may occur under special conditions.

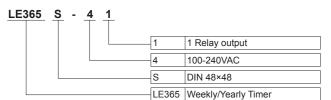
- 1. Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)
- Failure to follow this instruction may result in fire, personal injury, or economic loss. 2. Install on a device panel to use.
- Failure to follow this instruction may result in electric shock or fire.
- 3. Do not connect, repair, or inspect the unit while connected to a power source. Failure to follow this instruction may result in electric shock or fire.
- 4. Check 'Connections' before wiring.
- Failure to follow this instruction may result in fire.
- 5. Do not disassemble or modify the unit.
 Failure to follow this instruction may result in electric shock or fire.
- 6. Since Lithium battery is embedded in the product, do not disassemble or burn the unit. Failure to follow this instruction may result in fire.
- 7. Please contact to us for battery replacement.

⚠ Caution

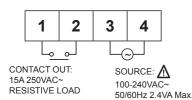
- 1. When connecting the power input and relay output, use AWG 20(0.50mm²) cable or over for the power input and use AWG 14(2.50mm²) cable or over for the relay output, and tighten the terminal screw with a tightening torque of 0.74 to 0.90N·m. Failure to follow this instruction may result in fire or malfunction due to contact failure.
- 2. Use the unit within the rated specifications.
- Failure to follow this instruction may result in fire or product damage.
- 3. Use dry cloth to clean the unit, and do not use water or organic solvent.
- Failure to follow this instruction may result in electric shock or fire.

 4. Do not use the unit in the place where flammable/explosive/corrosive gas, humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present Failure to follow this instruction may result in fire or explosion
- 5. Keep metal chip, dust, and wire residue from flowing into the unit. Failure to follow this instruction may result in fire or product damage

Ordering Information

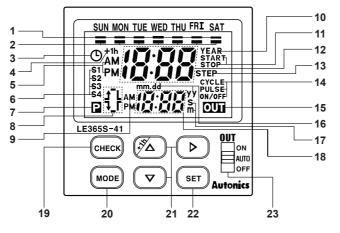


Connections



- *The above specifications are subject to change and some models may be discontinued without notice.
- **X**Be sure to follow cautions written in the instruction manual and the technical descriptions (catalog, homepage).

■ Front Panel Identification



- 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 is lighted when set, check, modify, delete yearly program, set yearly holidays and operate yearly program.
- 11 Yearly START/STOP day display
- 12 Main display
- 13 Remaining step display
- 14 Operation mode display
- 15 Output mode display
- 16 Year, month, date display
- 17 Unit of pulse duration display
- 18 Sub-display
- 19 CHECK Key
- 20 MODE Key
- 21 Operation key: Press +1h key over 3sec in RUN mode, DST mode is set
- 22 SET Key
- 23 Output selection switch
- AUTO : Control output according to the set program.
- ON : Output is ON.(Operation)
- OFF : Output is OFF.

Specifications

_					
Model		LE365S-41			
Power supply		100-240VAC~ 50/60Hz			
Allowable voltage range		90 to 110% of rated voltage			
Power consumption		Max. 2.4V			
Control	Contact type	SPST(Single Pole Single Contact)			
Output	Contact capacity	250VAC∼ 15A resistive load			
	Number of circuits	Independent 1 circuits(1a)			
Number of steps		48 steps for weekly, 24 steps for yearly			
Operation mode		ON/OFF mode, Cycle mode, Pulse mode			
Mounting		Front panel mounting, Surface mounting, DIN rail mounting			
Time deviation		±15sec/month(Ta:25°C)			
Temperature error		0.01% ±0.05sec			
Memory protection		Over 5 years(25°C)			
nsulation resistance		Min. 100MΩ(at 500VDC)			
Dielectric strength		2000VAC 50/60Hz for 1minute			
Noise strength		±2kV the square wave noise(pulse width:1μs) by the noise simulator			
Relay ife cycle	Mechanical	Min. 5,000,000 operations(Switching capacity 30 times/1 minute)			
	Electrical	50,000 operations <switching 1="" 15a(resistive="" 20="" 250vac="" at="" capacity="" load)="" minute,="" times=""></switching>			
Inviron	Ambient temperature	-10 to 55°C, Storage: -25 to 65°C (at non-freezing status)			
-ment	Ambient humidity	35 ~ 85%RH			
Approval		(£ 2PL us			
Jnit weight		Approx. 110g			

Definitions

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

Operation mode

If the operation mode of Program1 (Program2) is set on Pulse mode initially, the Pulse mode is fixed for additional program

OFF width

ON width OFF Time

Pulse width

(1~59sec, 1~60min)

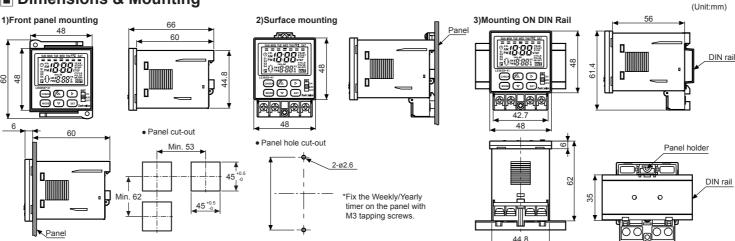
- Weekly ON/OFF mode
- Output operation by ON/OFF set time
- Min. time setting unit : 1 min.
 Able to set ON/OFF day separately.
- •One Record in two Steps
- Weekly Cycle mode
- Output turns ON for ON time and turns OFF for OFF time

- (Pulse width: 1~59sec, 1~60min)
- One Record in two Steps(ON day/ON time, Pulse width)
- 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
- time for a specified pulse width repeatedly.
- •One Record in three Steps(START/STOP date, ON time, Pulse width)

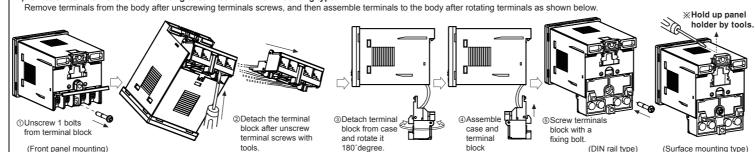
Functions

- (ON day/ON time, OFF day/OFF time)
- And the ON/OFF cycle is repeated. • Range of ON/OFF time : 1 min.~12:59
- One Record in three Steps(ON day/ON time, OFF day/OFF time, ON width/OFF width)
- Weekly Pulse mode
- Output turns ON at ON time for a specified pulse width.
- Yearly ON/OFF mode
- Output turns ON at ON time on START date and turns OFF at OFF time on STOP

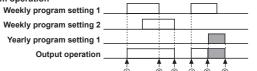
Dimensions & Mounting



4)How to switch from the flush mounting to surface or DIN rail mounting type



O Program operation



- ① ~ ② : Operated by weekly program setting1
- ② ~ ③ : Operated by weekly program setting2
- ④ ~ ⑤ : Operated by weekly program setting?
- ⑤ ~ ⑥ > Operated by yearly program setting1
 ⑤ ~ ⑥ > Operated by yearly program setting1
 (During weekly program operation at "START date AM 12:00(⑥)", the weekly program operation stops, and it changes to yearly program operation mode.
 The yearly program operation stops at "12:00AM on the next day of STOP date(⑥)".)

• 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 or Cycle mode, set ON time and OFF time to next mode. In Pulse operation mode, set Pulse ON time to next mode

Power restore mode

In setting group 2-LEVEL 2("rEE" is lighted, " RE" or " nor" are flashed), select Auto(" RE") or Normal(" nor ") by ▲ or ▼ keys and press SET key to set.

Auto(" Rt ") power restore mode

Output(OUT1, OUT2) operates according to program when power turns on again after power

Normal(" nor ") power restore mode

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

Season switching mode

In setting group 2-Level2("5En" is lighted, "pFF" is flashed.), select ON("pn") by ▲ or ▼ keys and press SET key to set.

• (Note) : When the season switching mode changed from " OFF" to " ON" or vice versa, previous set programs are deleted.

- ON(" □ ∩ ") mode
- Weekly program is switched automatically by season switching.
- · Period setting per season
- ①Press [SET] key in period setting per season mode of setting group 2. (" 5 E o " is flashed. season with preset period is lighted and "START" and "STOP" are lighted.)
- ②Advance to the flashing position of season selection among S1, S2, S3, S4 by ▲ or ▼ keys 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(" oFF").

Daylight Saving Time

- In setting group 2-LEVEL 2(" d5t" is lighted, " Rt" or " nor " is flashed.), select Auto(" Rt") or Normal(" ∩ □ r ") by ▲ or ▼ keys and press SET key to set.
- Auto(" Rt ") Daylight Saving Time mode Current time will be faster as an hour when it is started and will be slower as an hour when Auto
- mode is finished. · Automatic Daylight Saving Time period setting
- ①Automatic Daylight Saving Time period setting LEVEL 1 of setting group 2.
- (" d5t" is flashed and "START" and "STOP" are lighted.) © Set START date(Month, date) of automatic Daylight Saving Time mode and press SET 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. (s) Set STOP time(AM/PM, Hour) of automatic Daylight Saving Time mode and press SET key.
- Normal(" חפר") Daylight Saving Time mode
- Press +1h key over 3sec in RUN mode, "+1h" is lighted and current time is faster as an hour and "+1h" is lighted out, current time will be slower as an hour when press +1h key over 3sec again.

Current time setting

(Ex)Set the current time as 10, Mar, 2008, 5:10 PM

But the minute will be fixed as 00

①Advance to the current time setting mode



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

SUN MON TUE WED THU FRI SAT 3.111 ım.dd yy

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

③Current time(AM, PM) setting

ress or very keys to select PM and move the flashing digit to position hour by key.

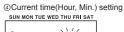
SUN MON TUE WED THU FRI SAT

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

- It advances to "①Current time setting mode" in ON status and set current time as shown above ②~④ by SET key.
- Current time is set up to 31, Dec, 2099.
- Check current vear/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.



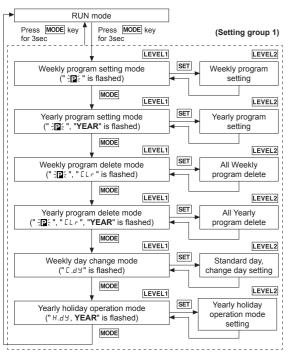
②Year, Month, Date setting





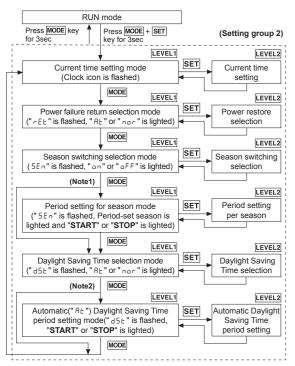
Program Setting

Setting group 1



- When it is advanced to setting group 1 in RUN mode, output (OUT1, OUT2) will be OFF.
 • It is returned to previous setting group 1 when power of time switch is ON again
- 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" are flashed 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" are flashed it returns to LEVEL 1 status.

O Setting group 2



- (Note1) Season switching selection is " oFF"
- (Note2) Automatic switching selection of Daylight Saving Time is Normal (" ספר") • When it advances to setting group 2 in RUN mode, output(OUT1, OUT2) will
- 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 " oFF" to " oo" or " oo" to " oFF", previous set weekly program will be deleted
- Press ▲ or ▼ kevs to select Press SET kev to set pulse width as 10s(10sec) and additional program press SET key to set.

PULSE

Weekly program setting

Weekly ON/OFF mode

(Ex)Output1(OUT1) is ON from Monday to Friday at 8:00 AM and

OF	F at 6:10	0 PM.					
	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					

Advance to weekly @Mode type setting 30N day setting program setting mode
SUN MON TUE WED THU FRI SAT



MODE key is pressed over 3sec Press SET key in ON/OFF n RUN mode, " P " is flashed mode and press SET kev.

Press key to move the indicator to Monday, it will be lighted when ▲ or ▼ keys are pressed and move it to Tuesday by key. Press SET key after Tuesday Weekly Cycle mode

SUN MON

6:00 AM

Start Cycle mode

program setting mode

in RUN mode. " " is flashed

STEP

and press SET key.

ON time width setting SUN MON TUE WED THU FRI

Move the flashing to min.

and press SET key to set.

it is finished.

Weekly day change

@Change standard day

汇战

ress MODE key over 3sed

o move to the setting group1 n RUN mode and press it

ashed in second display part

Yearly holiday mode

Press MODE key over 3sec

o move to the setting group1

Set every year 5, May to off the output.

epeatedly until " [.dy " is

nd press SET key.

(4) Season switching

Setting

Weekly day change cancellation

③Delete all program in program

Advance to weekly

1216

6:00AM to Saturday 5:30PM.

TUE

MODE key is pressed over 3sec When CYCLE is flashed by

position by key and set min. position by key and set

as 10 by press ▲ or ▼ keys min. as 5 by press ▲ or ▼

(Ex)Output1(OUT1) is ON for 10min and OFF for 5min from Monday

②Mode type setting

<u>or Dü</u>ğ

Move the flashing to min

keys and press SET key to

①Change current year, month, date in current time setting mode

Tuesday is operated temporarily as Saturday(standard) program

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

Output is ON in Saturday at 9:00AM and OFF at 12:00PM and it is ON 8:30AM

560

day

SET key. After select Saturday Monday to change (Mon is

Press key to move the indicator to Saturday and press

as standard day(Sat is lighted)

It is used to off the output without program adjustment during previously set

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

yearly holiday No.

yearly holiday period available from present year to 31, Dec of the next year.

YEAR

H.63

by ▲ or ▼ keys.

and OFF at 6:00PM from Monday to Friday and the mode of Monday and

Advance to weekly day ②standard day selection ③Change day selection

THU

FRI

STEP

126

Press SET key to set

[Kn

dAy

Press key to move the indicator to Monday and select

lighted) by ▲ or ▼ keys and

Tuesday to change(Tue is lighter

and press SET to complete weekly day change setting.

③Start date of yearly

holiday setting sun mon tue wed thu FRI

additional program.

SAT

5:30 PM

Refer to 3~8 of

"

Weekly ON/OFF mode

to set ON day. ON time.

OFF day and OFF time

WED

ON time setting ON time setting @OFF day setting

(AM, PM)
SUN MON TUE WED THU FRI I STEP STEP AM Ö'ÖÖ ON/OFF ⋴₺

Set 8:00 by ▲ or ▼ keys Press SET key to check ON ashing to hour position and and press SET key to set. OFF day. select PM by ▲ or ▼ keys

OFF time setting (AM, PM) SUN MON TUE WED THU FRI SAT

STEP

when ON time is after



SUN MON TUE WED THU FRI SAT

Select PM by ▲ or ▼ keys position by key.

PT PMIC LIN

Move the flashing to min. position by key after set 6:00 addition by ▲ or ▼ keys and set min. as 10 and press SET key to

Press SET key to set

STEP

• Weekly Pulse mode

n RUN mode, " 🔁 " is flashed

Press key to move the

Tuesday by key.

hursday Friday

lighted when A or kevs

ress SET key after light

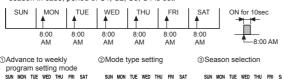
@Pulse width setting

SUN MON TUE WED THU FRI SAT

STEP

and press SET key

Output2(OUT2) is ON for 10sec at 8:00AM from Monday to Friday during S2 season in case, period of S1, S2, S3, S4 is set.



STEP STEP MODE key is pressed over 3sec

When PULSE is flashed by press ▲ or ▼ keys in ON/ OFF mode indicator flashing status, press SET key to se

Press ▲ or ▼ keys to select season S2 and press SET ke

STEP

ON day setting ⑤ON time setting (AM, PM)
SUN MON TUE WED THU FRI SAT SUN MON TUE WED THU FRI SAT STEP

Min.)
SUN MON TUE WED THU FRI SAT STEP

Press key move the select PM by ▲ or ▼ kevs

®Complete to set

STEP

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

n RUN mode and press it and press SET key.

Press SET key after check Month position will be flashed by press key and Set May by ▲ or ▼ keys and date sition will be flashed by pres key. Set 5th by a or keys and press SET key to

④End date of yearly holiday ⑤Complete to set setting sun mon tue wed thu fri sat



by press ▶ key and Set May
by ▲ or ▼ keys and date ▶ key. Set 5th by ▲ or ▼ keys and press SET key to

Nonth position will be flashed

the additional yearly holiday setting and press SET key to will be flashed by press set additional progr up to 12 times.

O Yearly program setting

Yearly ON/OFF mode

ON for 10min

ON for 5min

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

Advance to yearly program @Mode type setting setting mode SUN MON TUE WED THU FRI SAT

STEP 噩 RUN mode, "
" is flashed

and press MODE key once hen. " Tand YEAR are ashed and press SET key to

Press MODE key for 3 sec in Press SET key when ON/OFF Press key until month

position is flashed and set Ap by ▲ or ▼ keys and press flashed. Press SET key afte set 5th by ▲ or ▼ keys.

ONO THE TENT ON TO

€¥EAR

STEP

Set 9:00 by

or

keys and

Press SET key to set addition

press SET key to set.

3 Start date setting

₽

YEAR STARTS

End date setting
 SUN MON THE WED THE FRE SAT

yy on/or

The flashing is moved to month key is pressed, move the osition directly and press or ▼ keys and set Apr and select PM by 🛕 or 🔻 keys oress key until date position when ON time is after is flashed. Press SET key after set 7th by ▲ or ▼ keys.



Select PM by ▲ or ▼ keys and move the flashing to hour position by ▶ key.

Move the flashing to minute position by ▶ key after set 5 for hour by ▲ or ▼ keys

□ ½ PM 5. ∭ ON/OF

position by key after set 5 for hour by ▲ or ▼ keys the minute as 10 by ▲ or ▼

ON for 5sec.

10:00AM

SUN MON TUE WED THU FRI SAT

B MUYUU E

Set 10:00 by ▲ or ▼ keys

and press SET key to set.

YEAR

 Yearly Pulse mode
 (Ex)Output(OUT) is ON from 2, Oct, 2008 to 4, Oct, 2008 at 10:00AM and OFF after 5sec. (Present is 2007.)



Advance to yearly program @Mode type setting

③Start date setting SUN MON TUE WED THU FRI SAT YEAR STARTS YEAR



Press MODE key for 3 sec in When PULSE is flashed by RUN mode: "⊇" is flashed and press MDDE key once, then, "

"and YEAR are flashed and status, press SET key to set. ress SET kev to set.

Press ▲ or ▼ kevs to set ver 2008(08) and position by key. Set Oct by ▲ or ▼ keys and move

to date position by | key and press SET key after set 2nd by

YEAR

STEP

(a) ON time setting (AM, PM) (b) ON time setting (Hour, Min a)End date setting SUN MON TUE WED THU



key is pressed, move the flashing to hour position and Move to end month position by ▼ keys after move to end date select PM by ▲ or ▼ keys

key and set 4th by position by key and press when ON time is afternoon

nPulse width setting ®Complete to set

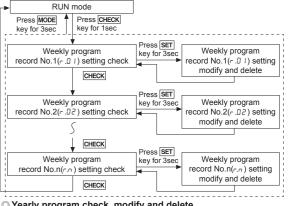
STEP ı|<u>B</u>³t PULSE 1200 Press SET key to set additional

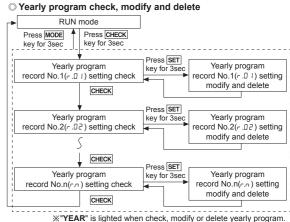
Press ▲ or ▼ kevs 4 times oress SET key.

XIt is able to set year of start date and end date in yearly program setting up to

Program Check. Modify and Delete

O Weekly program check, modify and delete





If any key is untouched for 60sec, it is returned to RUN mode in weekly

or yearly program check. • In weekly or yearly program check, it controls output depending on program setting and output is OFF in modify or delete mode.

• When MODE key is pressed in weekly or yearly program record modify, delete stand by or delete mode, current work is cancelled and it is

returned to check mode. Weekly or yearly program record modify and delete

(1)Program record modify

①When press SET key over 3sec in program check, "Edt" is flashed in second display part, press SET key.

2 It is returned to check mode when finish the modify same as the above procedure.

(2)Program record delete

①When press SET key over 3sec in program check. "Edt" is flashed in second display part, press ▲ or ▼ keys until "[Lr" is flashed in second display part and press SET key.

②Press [SET] key over 3sec when "CLr" is lighted in second display part, it is returned to program check.

■ Lithium Battery

Since lithium battery is embedded in the product, follow instructions below for

Do not charge, short, disassemble, subject it to shock, heat.

②Do not solder on a battery directly.
③Do not store this unit in the place with the direct sunlight, high temperature and

Cautions during Use

Follow instructions in 'Cautions during Use'. Otherwise It may cause unexpected accidents

When supplying or turning off the power, use a switch or etc. to avoid

Install a power switch or circuit breaker in the easily accessible place for

supplying or disconnecting the power.

Keep away from high voltage lines or power lines to prevent inductive noise. In case installing power line and input signal line closely, use line filter or varistor at power line and shielded wire at input signal line.

Do not use near the equipment which generates strong magnetic force or high

frequency noise. In case of controlling a heater, must use a thermostatic switch at load circuit.

This unit may be used in the following environments.

①Indoors (in the environment condition rated in 'Specifications')

②Altitude max. 2.000m

③Pollution degree 2 ④Installation category II

Major Products

tepper Motors/Dri

Autonics Corporation HEADQUARTERS

Switching Mode Pow I/O Terminal Blocks & Cables

DRW171153AA

■ Laser Marking System (Fiber, Co₂, Nd: YAG)
■ Laser Welding/Cutting System