Analog twin timer

#### INSTRUCTION MANUAL

Thank you for purchasing Hanyoung Nux products. Please read the instruction manual carefully before using this product, and use the product correctly. Also, please keep this instruction manual where you can see it any time.

# HANYOUNG NUX

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# Safety information

Please read the safety information carefully then use the product correctly.

The alerts declared in the manual are classified into Danger, Warning and Caution according to their importance

<u> </u>	DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury
$\triangle$	WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury
$\triangle$	CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor injury or property damage

#### ⚠ DENGER

• The input/output terminals are subject to electric shock risk. Never let the input/output terminals come in contact with your body or conductive substances.

## ⚠ WARNING

- Please install an appropriate protective circuit on the outside if malfunction, an incorrect operation or failure of the product may be a cause of leading to a serious accident and plan for preventing accidents.
- After mounting the product onto a panel, please use a socket dedicated to the product when connecting with other units and do not turn on the power until completing wiring to prevent electric shock.
- Please turn off the power when mounting/dismounting of the product. This is a cause of electric shock, malfunction, or failure.
- If the product is used with methods other than specified by the manufacturer, then it may lead to injury or property damage.

  • In order to use this product properly and safely,
- we recommend periodic maintenance.
- The warranty of this product (including accessories) is 1 year only when it is used for the purpose it was intended under normal condition.

# CAUTION

- Please do not set "Time" to "0". This can be a cause of malfunction. Also, there could be a time difference in timer operation Please use it after confirming the time difference.
- Please set or change "Time Range" in the dip switch while the timer is OFF. If the "Time Range" has been changed to other value during the operation, please turn off the timer and turn it back on.
- · Since this is not explosion-proof structure, please use in a place where corrosive gas (such as harmful gas, ammonia, etc.), combustible or explosive gas does not occur.

  • Please use in a place where there is no direct vibration and a large
- physical impact to the product.

   Please use in a place where there is no water, oil, chemicals, steam, dust, salt, iron or others
- Please avoid using in a place where excessive amounts of inductive interference or electrostatic and magnetic noise occur.
   Please avoid using in a place where heat accumulation occurs due
- to direct sunlight or radiant heat.
- Please use in a place where the elevation is below 2,000 m.
   Please make sure to inspect the product if exposed to water since
- there is a possibility of electric leakage or a risk of fire.

  If there is a lot of noise from the power line, installing an insulate transformer or a noise filter is recommended.
- When the power is being supplied there should be a preparation time for the contact output. Please use a delay relay together when it is used as a signal on the outside of interlock circuit or others.

## Suffix code

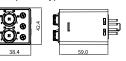
Model	Model Code			Description	Product configuration	
TF62A	0- 0 0-			Analog twin timer 38.4(W) X 42.4(H) X 59.0(D) mm		
1				Maximum time: 1sec / 1min / 1hour / 10sec / 10min / 10hour		
Time range 3				Maximum time: 3sec / 3min / 3hour / 30sec / 30min / 30hour	• TF62A-1N-A • TF62A-3N-A	
6				Maximum time: 6sec / 6min / 6hour / 60sec / 60min / 60hour		
Control output N			No option	• TF62A-6N-A		
power voltage		Α	24 – 240 V a.c. 50/60 Hz or 24 – 240 V d.c. dual usage	]		

# Specification

	Model	I	TE62A			
		11.12.1				
Timer type		Analog twin timer				
Po	wer voltage	24 – 240 V a.c. 50/60	Hz or 24 – 240 V d.c. dual usage			
Allo	wable voltage	±10 % of	Power supply voltage			
Powe	r consumption	• Max. 4.1 VA (24 – 240 V a.c. 50/60 Hz)	<ul> <li>Max. 2 W (24 – 240 V d.c.)</li> </ul>			
Opera	ting time range	0.1	L sec ~ 60 hour			
Opera	ating time error	Setting error: Max. ±5 % ±0.05     Voltage error: Max. ±0.5 %	Repetition error: Max. ±0.3 % Temperature error: Max. ±2 %			
R	leturn time		Max. 100 ms			
External o	connection method		8-pin socket			
	Operation mode	A/B/C/D/E/F (selected by	front operating mode selector switch)			
Control output	Contact composition	instantaneous SPDT (1c) + Time limit SPDT (1c)     Time limit DPDT (2c) *Automatic change of contact composition according to operation mode				
	Contact capacity	N.O. (250 V a.c. 3A Resistive load)	N.C. (250 V a.c. 2A Resistive load)			
	Relay life	Mechanical life: MIn. 10 million cycles	Electrical life: Min. 20,000 cycles     (250 V a.c. 2A resistive load)			
Insula	ntion resistance	Min. 100 MΩ (500 V d.c. mega, at conductive terminal and non-charged metal which is exposed)				
Diele	ectric strength	2000 V a.c. 60 Hz for 1 minute (at conductive terminal and non-charged metal which is exposed)				
Noi	ise immunity	$\pm 2kV$ (between the power terminals, pulse width = 1 us, square wave noise by noise simulator)				
Vibration r	esistance (durability)	10 - 55 Hz (1 minute) 0.75mm double amplitude 0.75 in each X, Y, Z direction for 2 hours				
Shock resistance (durability)		300 m/s² (30G) in each X, Y, Z direction for 3 times				
Operating ambient temperature		-10 ~ 55 °C	(without condensation)			
Accessories		Fixing Bracket	BRACKET-M (48.0 X 59.0 mm) flush type bracket			
Accessories		BRACKET-S (48.0 X 48.0 mm)	BRACKET-L (53.5 X 84.4 mm)			
(separately sold)		bracket for adjusting size (flush type)	bracket for adjusting size (flush type)			
1	Weight (g)	Approx.	79 g (Exposure type)			
	Approval		CE			

#### **Dimension & Panel cutout**

## Exposure type





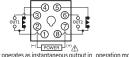


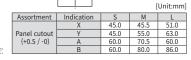


\* Application of BRACKET-M (BRACKET-S/L refer to the chart below)

■ Bra	cket				■ Panel c	utout
Type		Flush		Fixing		1
Product name	BRACKET-S	BRACKET-M	BRACKET-L	BRACKET-SCO		
Size	48.0 x 48.0 mm	48.0 X 59.0 mm	53.5 x 84.4 mm			
Model					В	
order	T38A/TF62A	T38A/TF62A	T38A/TF62A	FIXING		
code	BRACKET-S	BRACKET-M	BRACKET-L	BRACKET SCO		1 1
						!

## Connection diagram





# I Function and name of each part

#### Output ON indicator

Turns on when output is 'ON' in ation mode 'A/B/D/F Turns on when OUT2 output is 'ON' in operation mode 'C/F'

#### Output OFF indicator • -

Turns on when output is 'OFF' in operation mode 'A/B/D/E'
Turns on when OUT1 output is 'ON' in operation mode 'C/F

Volume for setting OFF operation time OFF operation time setting in operation mode 'A/B/D/E/F' Setting ON operation time of OUT1 in operation mode 'C'

6 M

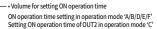
6 H

60 S 60 M

60 H

OUT2

OFF indicator



ON operation time range selection switch

Select ON operation time range in operation mode 'A/B/D/E/F' Select ON operation time range of OUT2 in operation mode 'C'

Refer to the below table about The operation mode selection switch

· OFF operation time range selection switch

Select OFF operation time range in operation mode 'A/B/D/E/F' Select the ON operation time range of OUT1 in operation mode 'C'

ON/OFF operation time range selection switch (**change after power is off)					Operation mode selection switch (*change after power is off)		
time	range	setting tim	Indication		Output operation mode		
	1 S	0.1 ~ 1	sec		Α	FLICKER ON START (time-limit 2c)	
	1 M	0.1 ~ 1	min		В	FLICKER OFF START + instantaneous 1c	
TF62A-1	1 H	0.1 ~ 1	hour		С	TWIN (time-limit 1c + time-limit 1c)	
TF6ZA-1	10 S	1 ~ 10	sec	TF62A	D	FLICKER OFF START (time-limit 2c)	
	10 M	1 ~ 10	min		Е	FLICKER ON START + instantaneous 1c	
	10 H	1 ~ 10	hour			DUAL (time-limit 1c + time-limit 1c)	
	3 S	0.3 ~ 3	sec		F	* Same as TF62D output operation of	
TF62A-3	3 M	0.3 ~ 3	min			existing product	
	3 H	0.3 ~ 3	hour			g time range is selected as '10 S / 10 M / 10 H, 30 S	
	30 S	3 ~ 30	sec			60 M / 60 H', the operating time is converted to	
	30 M	3 ~ 30	min	x10' from the display time on the front panel and is operated			

3 ~ 30 hour

min

0.6 ~ 6 sec

6 ~ 60 sec

6 ~ 60 min

6 ~ 60 hou

0.6 ~ 6

0.6 ~ 6 hour 30 S / 30 M / 30 H, 60 S / 60 M / 60 H, OFF operation time is converted to 'x10' from the display time on the front panel and operates.

When the switch power is 'ON", both the operation time range and the operation mode are not changed. (Ex. A > B / 1 S > 1 M) Please turn off the switch power and then change it.

the OUT2 output repeats ON/OFF operation according to the Ton time and Toff time.

Opera	ation mo	ode		
А	FLICKER ON START	(time-limit 2c)	Rt: Return Time Ton: on op	eration time Toff: off operation time
Power	2-7	Ton Toff Ton Toff Ton	Toff Ton Rt Ton	When power is applied, OUT1
OUT1 (time-limit)	1) - (3)			output and OUT2 output turn ON at the same time,
OUT2 (time-limit)	6 - 8			and timekeeping starts. Until the power is turned off, OUT1 output and OUT2 output
ON indicator	OUT1 & OUT2			repeat ON/OFF operation according to Ton time and
OFF indicator	operation display			Toff time.
В	FLICKER OFF STAR	T (time-limit 1c + instantaneous 2	1c) Rt: Return Time Ton: on c	peration time Toff: off operation time
Power	2-7		Ton Toff	OUT1 output is an instantaneous output that turns on at the same time
OUT1 (instantaneous)	1) - 3)			as power is applied, and maintains the ON state until the power is turned
OUT2 (time-limit)	6 - 8			off regardless of Ton time and Toff time.When power is applied, OUT2 output remains OFF and timekeeping
ON indicator	OUT2			starts.Until the power is turned OFF,

OUT2 output turns C 12 time is displayed.  OUT2 (time-limit)  OUT2 (time-limit)  ON indicator operation display of the company					
Power ② - ⑦ When the power 3 OUT2 output turns 0  OUT1 (time-limit) ① - ③ T2 time is displayed.  OUT2 (ime-limit) ① - ⑧ S OUT2  ON indicator Operation display operation display  OFF and time Visit of the power operation operation of the power operation	С	TWIN (time-limit 1	Lc + time-limit 1c)	Rt: Return Time T1: out1 on ope	ration time T2: out2 on operation time
(time-limit)	Power	2-7	T2 T1	← Rt → T2 T1	When the power is applied, the OUT2 output turns ON and the
OUI (time-limit) (\$\overline{6}\$ - (\$\overline{8}\$) (when the time read out of the the time read out of the time that the time read out out out the turns C operation display operation stops. Time volume OFF and time volume OFF		1) - 3)			T2 time is displayed.When the time time reaches T2, OUT2
ON indicator         OUT2         OUT1 output turns C           operation display         operation display         operation Stops.Time           OEE indicator         OUT1         volume OFF and time		6 - 8			output turns OFF, OUT1 output is ON and time T1 is displayed.  When the time reaches T1 time.
OEE indicator 0011	ON indicator				OUT1 output turns OFF and timer operation stops. Time T1 is set to
	OFF indicator				volume OFF and time T2 is set to volume ON.

	-possession and pre-								
D	FLICKER OFF STAR	T (time-limit 2c)	F	Rt : Return Ti	me Ton: on o	peration ti	me Toff: off operation time		
Power	2-7	Toff Ton Toff	Ton Toff 1	Ton Toff	Rt Toff	When	names is smalled OUT1		
OUT1 (time-limit)	1 - 3			- :		_ outpu	When power is applied, OUT1 output and OUT2 output remain OFF, and timekeeping starts.		
OUT2 (time-limit)	6 - 8			- 1		Until t	the power is turned OFF output and OUT2 output		
ON indicator	OUT1 & OUT2			- 11			t ON/OFF operation ding to Ton time and Toff		
OFF indicator	operation display					dine.			
E	FLICKER ON START	(time-limit 1c + ins	tantaneous 1c)	Rt: Return	Time Ton: or	operation	time Toff: off operation time		
							· · · · · · · · · · · · · · · · · · ·		

E	FLICKER ON START	(time-limit 1c + instantaneous 1c) Rt: Return Time Ton: on operation time Toff: off operation ti	me
Power	2-7	Ton Toff Ton Toff Ton Toff Ton Toff Ton Toff Ton OUT1 output is an instantaneous output that turns ON at the same	
OUT1 (instantaneous)	1)-3	time as power is applied, and remains ON until power is O	FF
OUT2 (time-limit)	6 - 8	regardless of Ton time and Toff time.When power is applied, OU output turns ON and timekeepin	
ON indicator	OUT2 operation	starts.Until the power is turned OFF, OUT2 output repeats	ъ
OFF indicator	display	ON/OFF operation according to Ton time and Toff time	

F	DUAL (time-limit	Lc + time-limit 1c) Rt : Return Time T1 : out1 on operation	on time T2 : out2 on operation time Toff : out1 & out2 off operation time
Power	2-7	T1 Toff, T2 Toff, T1 Toff, T2	When power is applied, OUT1
OUT1 (time-limit)	1 - 3		output and OUT2 output repeat the "OUT1 ON -> OUT1 OFF ->
OUT2 (time-limit)	6 - 8		OUT2 ON -> OUT2 OFF" operation according to the T1, T2, and Toff times until the power is turned off.
ON indicator	OUT2 operation display		T1 and T2 times are the same, set to ON volume.
OFF indicator	OUT1 operation display		Toff time is set to OFF volume.

