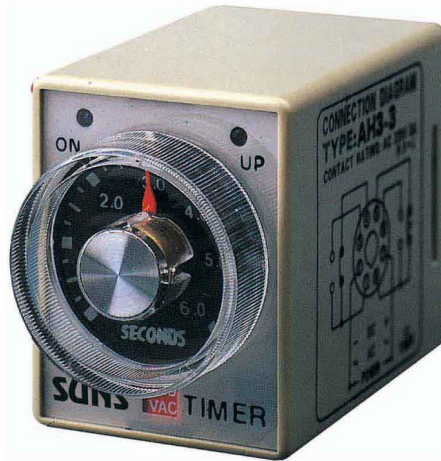




TIMER AH Series



Features :

- . Using CMOS IC, Accurate and stable operation.
- . High repeat accuracy 1%
- . Short resetting time-100 msec. ax.
- . Two LED's provides status indication. for power ON and time UP.
- . Wide variety of type-14 time ranges. (0.1 sec. to 10 hrs.)
- . Standard surface mounting could be easily converted into flush mounting by adding a special adaptor, (Type Y-40)

Available Type

MOUNTING	Surface Mounting Flush Mounting	AH3-1 with Y-40	AH3-2 with Y-40	AH3-3 with Y-40
Control Output	Time-limit contact Instantaneous contact	SPDT(5A)	DPDT(5A)	SPDT(5A) SPST-NO(5A)
Connection & Timing Chart		①	②	③

Time Range

Rated time	Time setting Range	Operating Voltage
1S	0.1S-1S	DC 12V DC 24V AC110V 50/60Hz
3S	0.3S-3S	
6S	0.6S-6S	
10S	1S-10S	
30S	3S-30S	AC120V 50/60Hz
60S	6S-60S	
3M	10S-180S	AC220V 50/60Hz
6M	20S-6M	
10M	30S-10M	AC 240V 50/60Hz
30M	2M-30M	
60M	3M-60M	
3H	10M-3H	
6H	20M-6H	
10H	30M-10H	

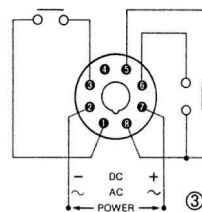
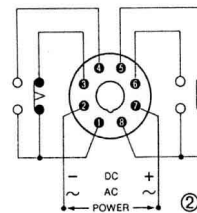
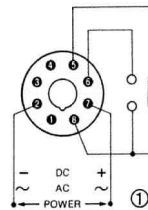
Specifications

OPERATING VOLTAGE	AC: 85-1 10% DC: 80-110% AC 85-1 10% of rated voltage. DC 85-1 10% of rated voltage.
RATED VOLTAGE	AC 1 10V , 220V , 240V , 50/60Hz DC 12V , 24V
CONSUMED POWER	AC: 2VA DC: 2W About 2VA for AC, About 2W for DC.
Control Method	Time-limit operation Self-resetting.
Contact Rating	AC 120V 5A.(p.f.=1)
Ambient Temp	-10°C~+55°C
Ambient Humidity	45~85% RH

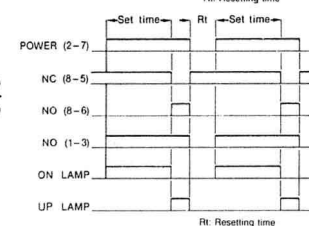
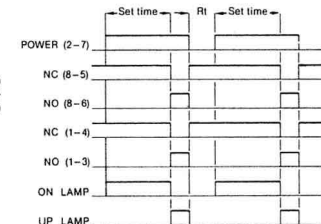
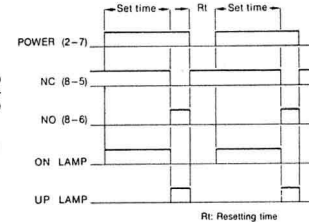
Characteristics

Repeat Accuracy	Less than $\pm 1\%$ of full scale.	
Effect of Voltage	Less than $\pm 1.0\%$	
Effect of Temp	Less than $\pm 2\%$ at 20°C	
Setting Accuracy	Less than $\pm 10\%$ of full scale.	
Reset Time	Less than 0.1Sec.	
Insulation Resis.	Over 50M. (DC500V)	
Dielectric Str.	AC 2000V one Min.	
Weight	Approx. 160G.	
Shock Resistance	Incorrect operate 10G.	
Life	Mechanical	5,000,000 operations.
	Electrical	100,000 operations at rated load.
Vibration Resistance	Incorrect operate 10-55Hz 0.3mm. Durability 10-55Hz 0.5mm	

Connection Diagram



Operation Time Chart



STAR-DELTA TIMER FOR INDUCTION MOTOR START

Output Capacity	Model	TSDT-N
	IC Delay	250V 3A
	ID Instant	250V 1A
	Time	0-12S
	Range	0-30S 0-60S

- Specially designed for induction motor starting
- Change time (0.1-0.5 sec.) from star(Y) to delta (Δ) is according to the requirement of the user.
- Short release time, suitable for fast repeat operating
- Operating voltage optional from AC 110V to AC 440V: 110V-440V
- Two timing ranges: 30 sec. or 60sec.



Characteristics

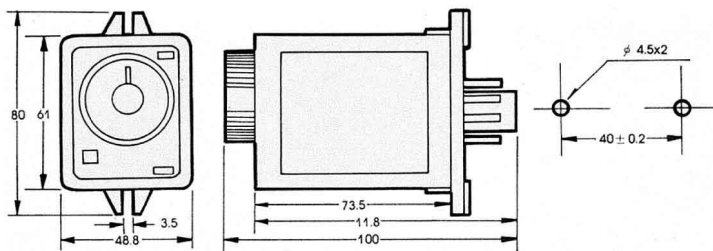
Repeat Accuracy	Less than $\pm 1\%$ of full scale.	
Effect of Voltage	Less than $\pm 1.0\%$	
Effect of Temp	Less than $\pm 2\%$ at 20°C	
Setting Accuracy	Less than $\pm 10\%$ of full scale.	
Reset Time	Less than 0.3Sec.	
Insulation Resis.	Over 50M. (DC500V)	
Dielectric Strength	AC 2000V one Min.	
Weight	Approx. 250G.	
Shock Resistance	Incorrect operate 10G.	
Life	Mechanical	5,000,000 operations.
	Electrical	100,000 operations at rated load.
Vibration Resistance	Incorrect operate	10-55Hz 0.3mm.
	Durability	10-55Hz 0.5mm

Specifications

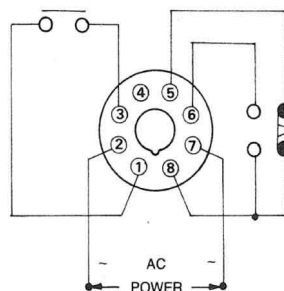
OPERATING VOLTAGE	AC 85-110% of rated voltage.
RATED VOLTAGE	AC 1 10V, 220V, 240V, 50/60Hz
CONSUMED POWER	AC: 3VA
Control Method	Time-limit operation Self-resetting.
Contact Rating	AC 120V 5A.(p.f.=1)
Ambient Temp	-10~50°C
Ambient Humidity	45~85% RH

Dimension

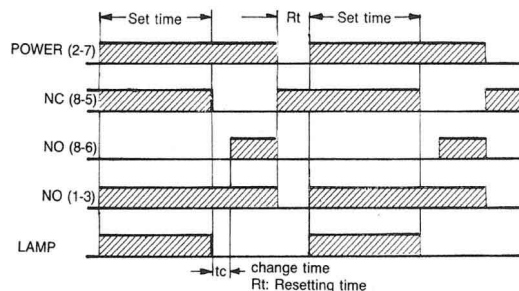
unit:mm



CONNECTION DIAGRAM

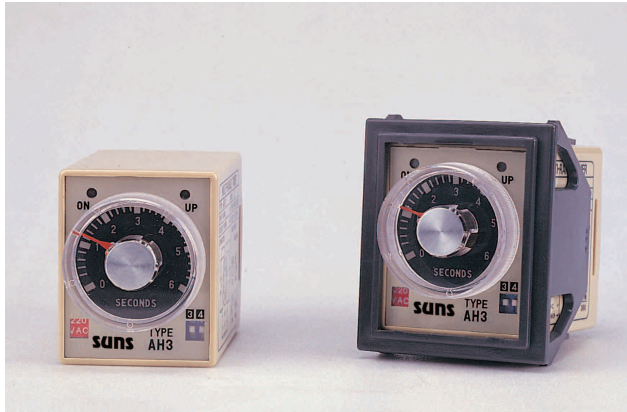


OPERATION TIME CHART





AH3-A-B-C-D-E Multi Range Timer



FEATURES

- Exclusive CMOS IC assures high performance stability, and accuracy.
- 4Time range can be changed with easy by merely exchanging DIP switch.
- Easy - to - monitor DIP switch positions, time series and operation voltage.
- Five time series with wide timing ranges from 0.1 sec. to 18 hrs.
- Standard surface mounting can be easily converted into flush mounting by using a special adapter (Type T-40)
- Output contact :Time limit contacts 2C (DPDT) 10A.

Available Type

MOUNTING	Surface Mounting	AH3
	Flush Mounting	with T-40 (adapter)
Control Output	Time-limit contact	2C DPDT(10A)

Operation Time Chart

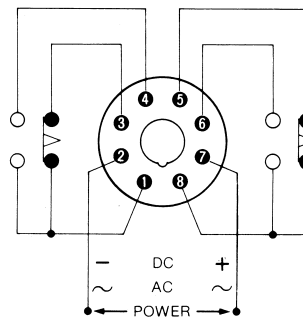
Four time are available for each timer by setting the DIP switches to required positions.

Time range series	Position of time range selector			
	3 4	3	4	1
A	1S (0.05S-1S)	10S (0.1S-10S)	60S (0.5S-60S)	10M (10S-10M)
B	3S (0.05S-3S)	30S (0.5S-30S)	3M (1S-3M)	30M (30S-30M)
C	6S (0.1S-6S)	60S (0.5S-60S)	6M (1S-6M)	60M (30S-60M)
D	1S (0.05S-1S)	10M (10S-10M)	60M (30S-60M)	10H (10M-10H)
E	3M (1A-3M)	30M (30S-30M)	3H (3M-3H)	30H (1H-30H)

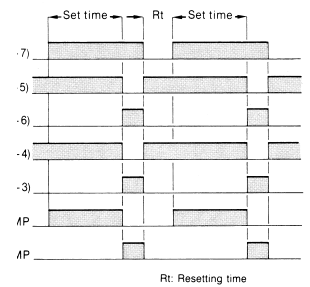
Characteristics

Repeat Accuracy	Less than $\pm 1\%$ of full scale.	
Effect of Voltage	Less than $\pm 1.0\%$	
Effect of Temp	Less than $\pm 2\%$ at 20°C	
Setting Accuracy	Less than $\pm 10\%$ of full scale.	
Reset Time	Less than 0.1Sec.	
Insulation Resis.	Over 50M. (DC500V)	
Dielectric Str.	AC 2000V one Min.	
Weight	Approx. 110G.	
Shock Resistance	Incorrect operate 10G.	
Life	Mechanical	5,000,000 operations.
	Electrical	100,000 operations at rated load.
Vibration Resistance	Incorrect operate 10-55Hz 0.3mm. Durability 10-55Hz 0.5mm	

Connection Diagram



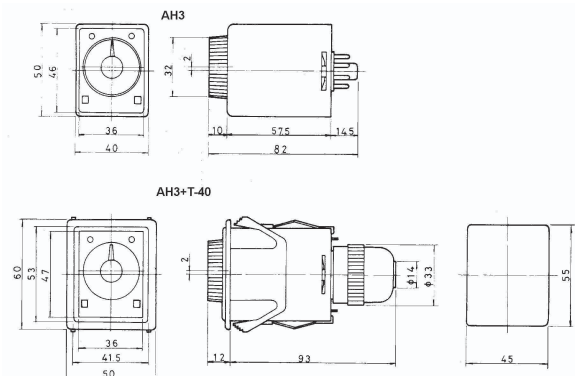
Operation Time Chart



Specifications

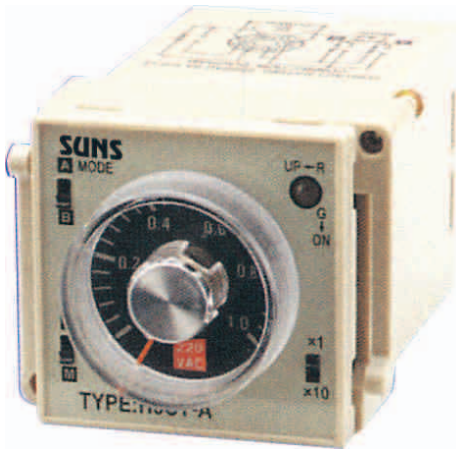
OPERATING VOLTAGE	AC 85-110% of rated voltage. DC 85-110% of rated voltage.
RATED VOLTAGE	AC 110V , 220V , 240V , 50/60Hz DC 12V , 24V, 48V
CONSUMED POWER	~2VA for AC ~2W for DC
Control Method	Time-limit operation Self-resetting.
Contact Rating	AC 120V 10A.(p.f.=1)
Ambient Temp	-10~50°C
Ambient Humidity	45~85% RH

Dimension unit:mm





Multi Range Timer AH-5B



FEATURES

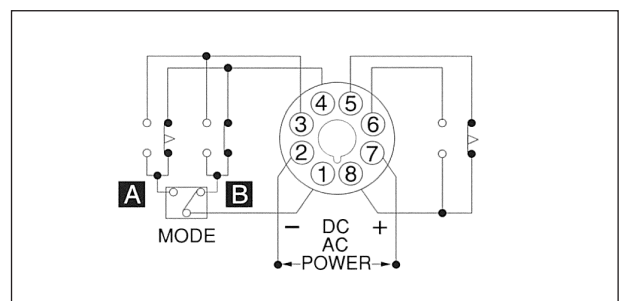
- . Exclusive CMOS IC assures high performance stability, and accuracy.
- . 4Time range can be changed with easy by merely exchanging DIP switch
- . Easy - to - monitor DIP switch positions, time series and operation voltage.
- . Five time series with wide timing ranges from 0.1 sec. to 30hrs.
- . 2C delay or 1C delay with 1C instant combination obtainable by switching Mode A or Mode B

Time Range

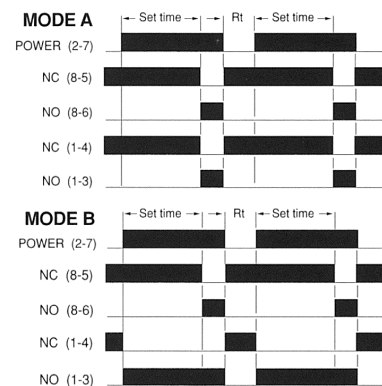
Four setting time are available for each timer by setting the DIP switches to required positions.

Item No.	Item Ranges
AH5B-A	1S - 10S - 1M - 10M
AH5B-B	3S-30S-3M-30M
AH5B-C	1M-10M-1H-10H
AH5B-D	3M-30M-3H-30H
AH5B-E	6S-60S-6M-60M

Connection Diagram



Operation Time Chart



Specifications

OPERATING VOLTAGE	AC 85-110% of rated voltage. DC 85-110% of rated voltage.
RATED VOLTAGE	AC 110V , 220V , 240V , 50/60Hz DC 12V , 24V
CONSUMED POWER	3VA
Contact Rating	250VAC 5A.(p.f.=1)
Ambient Temp	-10~50°C
Ambient Humidity	45~85% RH
Setting Error	10% max
Repeat Error	1% max
Reset Time	< 0.1 sec

Dimension unit:mm

