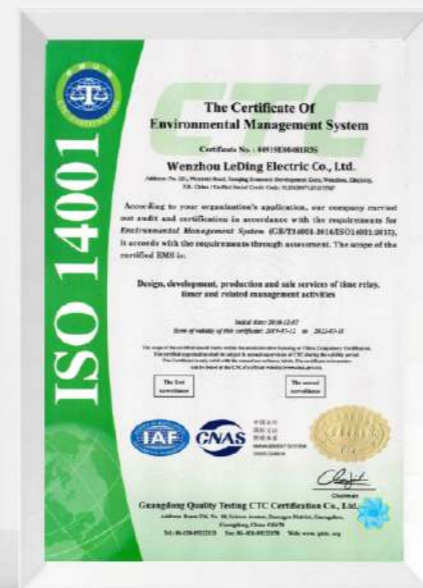




BRAND CERTIFICATE



Today, products are used by our customers in critical environments to achieve better energy management in more than 40 countries/regions around the world.



ANALOGUE TIME SWITCHES

time switches can be installed on a DIN rail (overall width of 1 to 6 modules), attached to the wall or mounted with a front panel installation set. You have a choice of analogue time switches with daily 10, 15, 30 minute programs. Switching segments are used to program your analogue time switch. Digital time switches from are available with weekly program, cycle and pulse functions, automatic summer and winter time changeover, automatic correct the time error, etc.

time switches are used to accurately and automatically program the operation of all application types (heating, lighting, ventilation, access control, bells, roller blinds, etc.) irrespective of the sector of activity (residential, tertiary, public building, agriculture, industry, etc.).



Analogue Time Switches - 1 Modules



SUL180a



AHC180b

■ MAXIMUM RECOMMENDED LOAD (10,000 OPERATIONS)

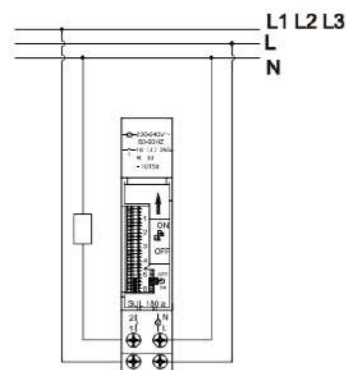
- Filament/Halogen lamp 230V 1000W
- Energy saving lamps 230V 150W
- LED lamp 230V <2W 30W
- LED lamp 230V 2-8W 90W
- LED lamp 230V >8W 100W

Din rail mounting, 1 Module

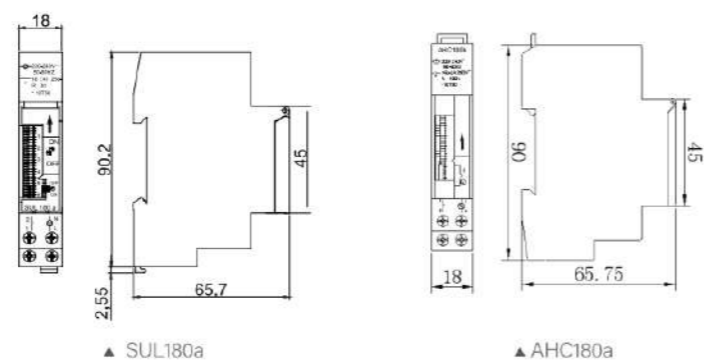
PRODUCT PARAMETERS ▼

Items	Mini Switching Time	Operating Voltage	Rated Current	Type of Contact	Type of Connection	Power Reserve	Power Consumption
SUL180a	15 mins	230VAC	16A	No contact	Screw terminal	72 hours	1 VA
SUL160a	15 mins	230VAC	16A	No contact	Screw terminal	-	1 VA
AHC180b	15 mins	230VAC	16A	No contact	Screw terminal	100 hours	1 VA

CONNECTION EXAMPLE ▼



SCALE DRAWINGS ▼



Analogue Time Switches - 2 Modules



AHC10

■ MAXIMUM RECOMMENDED LOAD (10,000 OPERATIONS)

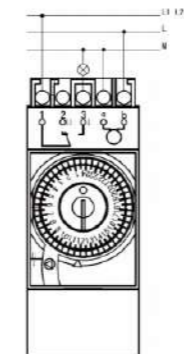
- Filament/Halogen lamp 230V 1000W
- Energy saving lamps 230V 150W
- LED lamp 230V <2W 30W
- LED lamp 230V 2-8W 90W
- LED lamp 230V >8W 100W

Din rail mounting, 2 Module

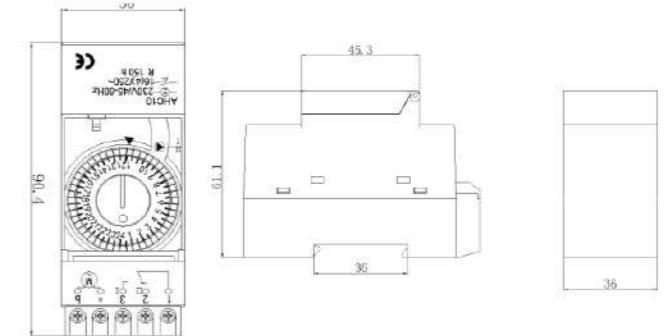
PRODUCT PARAMETERS ▼

Items	Mini Switching Time	Operating Voltage	Rated Current	Type of Contact	Type of Connection	Power Reserve	Power Consumption
AHC10	30 mins	230VAC	16A	Changeover contact	Screw terminal	150 hours	1.5 VA

CONNECTION EXAMPLE ▼



SCALE DRAWINGS ▼



Analogue Time Switches - 3 Modules



SUL181h

SYN161h

SUL181d

SYN161d

Din rail mounting, 3 Module

PRODUCT PARAMETERS

Items	Mini Switching Time	Operating Voltage	Rated Current	Type of Contact	Type of Connection	Power Reserve	Power Consumption
SUL181h	30 mins	230VAC	16A	Changeover contact	Screw terminal	150 hours	1.5 VA
SYN161h	30 mins	230VAC	16A	Changeover contact	Screw terminal	-	1.5 VA
SUL181d	15 mins	230VAC	16A	Changeover contact	Screw terminal/ DuoFix spring terminal	150 hours	1.5 VA
SYN161d	15 mins	230VAC	16A	Changeover contact	Screw terminal/ DuoFix spring terminal	-	1.5 VA
AHC181h	30 mins	230VAC	16A	Changeover contact	Screw terminal	100 hours	1.5 VA
AHC181d	15 mins	230VAC	16A	Changeover contact	Screw terminal	100 hours	1.5 VA

Analogue Time Switches - 3 Modules



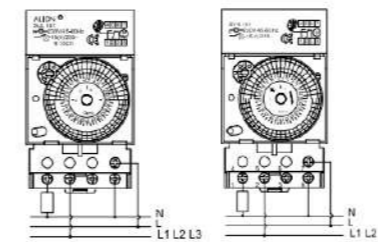
AHC181h

AHC181d

MAXIMUM RECOMMENDED LOAD (10,000 OPERATIONS)

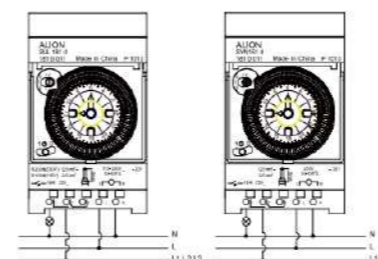
- Filament/Halogen lamp 230V 1000W
- Energy saving lamps 230V 150W
- LED lamp 230V <2W 30W
- LED lamp 230V 2-8W 90W
- LED lamp 230V >8W 100W

CONNECTION EXAMPLE



▲ SUL181h

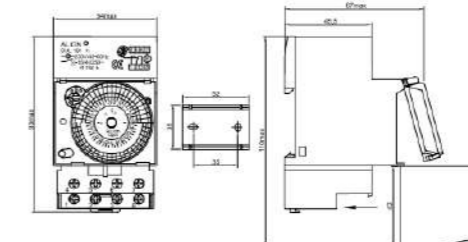
▲ SYN161h



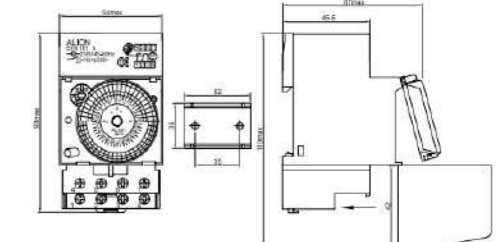
▲ SUL181d

▲ SYN161d

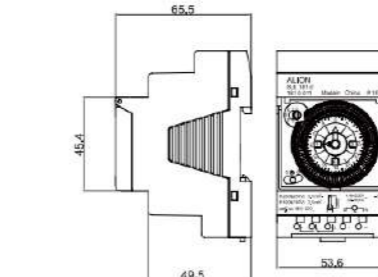
SCALE DRAWINGS



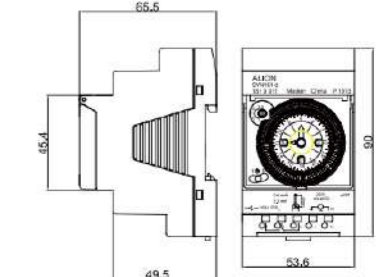
▲ SUL181h



▲ SYN161h



▲ SUL181d



▲ SYN161d

Analogue Time Switches - 4 Modules



AHC711



AHC710

■ MAXIMUM RECOMMENDED LOAD (10,000 OPERATIONS)

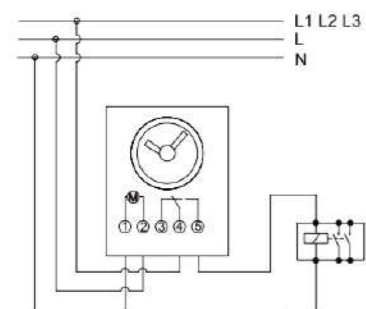
- Filament/Halogen lamp 230V 600W
- Energy saving lamps 230V 100W
- LED lamp 230V <2W 20W
- LED lamp 230V 2-8W 60W
- LED lamp 230V >8W 60W

Din Rail Mounting,4 Module

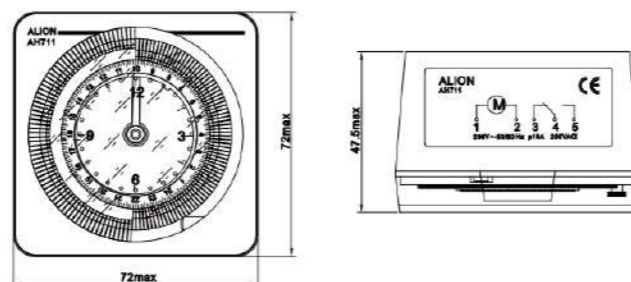
PRODUCT PARAMETERS

Items	Mini Switching Time	Operating Voltage	Rated Current	Type of Contact	Type of Connection	Power Reserve	Power Consumption
AHC711	10 mins	230VAC	16A	Changeover contact	Screw terminal	72 hours	1 VA
AHC710	10 mins	230VAC	16A	Changeover contact	Screw terminal	-	1 VA

CONNECTION EXAMPLE



SCALE DRAWINGS



Analogue Time Switches - 4 Modules



AHC712B



AHC189

■ MAXIMUM RECOMMENDED LOAD (10,000 OPERATIONS)

- Filament/Halogen lamp 230V 1000W
- Energy saving lamps 230V 150W
- Filament/Halogen lamp 2300W
- Motor load (cosφ=0.7) AC110.750W / AC220V:1500W
- Fluorescent lamp load (Conventional parallel corrected 1300VA 70μF
- LED lamp 230V <2W 30W
- LED lamp 230V 2-8W 90W
- LED lamp 230V >8W 100W

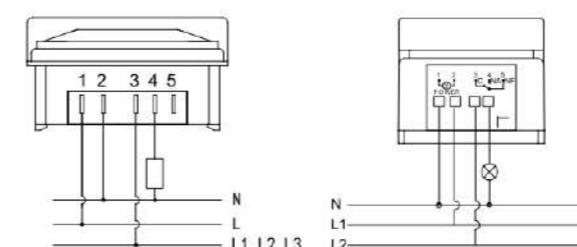
Din Rail Mounting,4 Module(AHC189)

Fornt Panel Mounting,4 Module(AHC712B)

PRODUCT PARAMETERS

Items	Mini Switching Time	Operating Voltage	Rated Current	Type of Contact	Type of Connection	Power Reserve	Power Consumption
AHC712B	15 mins	230VAC	16A	Changeover contact	Screw terminal	24 hours	1 VA
AHC712	15 mins	230VAC	16A	Changeover contact	Screw terminal	-	1 VA
AHC189	15 mins	230VAC	16A	Changeover contact	Screw terminal	-	1.5 VA

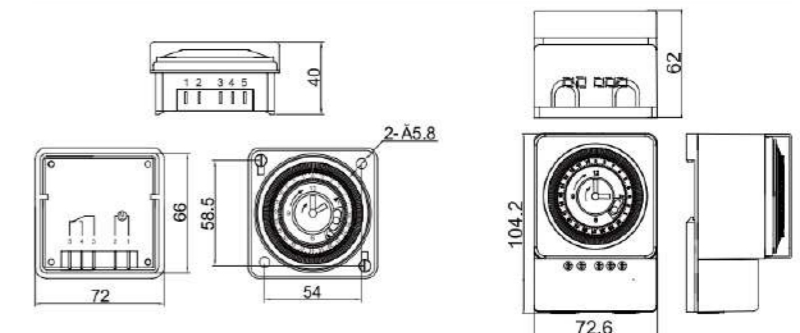
CONNECTION EXAMPLE



▲ AHC712

▲ AHC189

SCALE DRAWINGS



▲ AHC712

▲ AHC189

Analogue Time Switches - 4 Modules



TB388



TB388B



TB388S

Din Rail Mounting, 4 Module

PRODUCT PARAMETERS

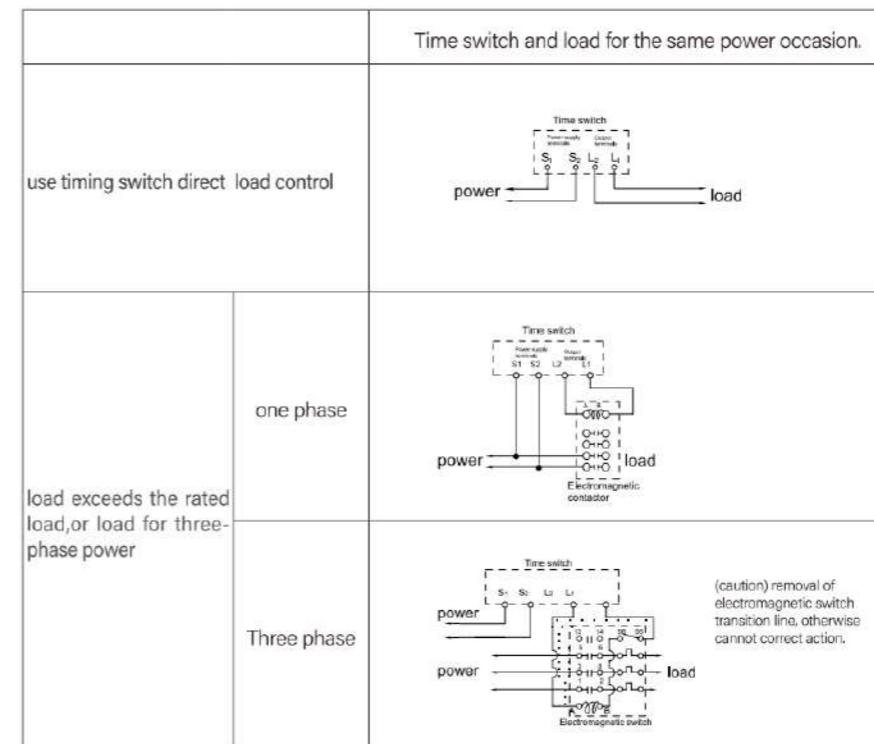
Items	Mini Switching Time	Operating Voltage	Rated Current	Type of Contact	Type of Connection	Power Reserve	Power Consumption
TB388	15 mins	110V-230VAC	20A	SPST	Screw terminal	300 hours	3 VA

Wall mounting/ 3-pointing mounting

PRODUCT PARAMETERS

Items	Mini Switching Time	Operating Voltage	Rated Current	Type of Contact	Type of Connection	Power Reserve	Power Consumption
TB388B	15 mins	110V-230VAC	20A	SPST	Screw terminal	300 hours	3 VA
TB388S	15 mins	110V-230VAC	20A	SPST	Screw terminal	300 hours	3 VA

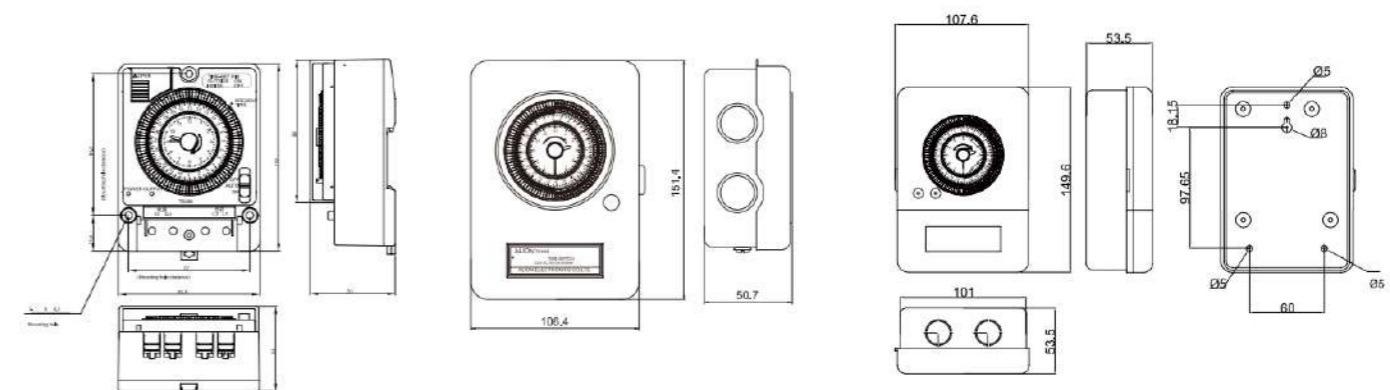
CONNECTION EXAMPLE



MAXIMUM RECOMMENDED LOAD (10,000 OPERATIONS)

- Filament/Halogen lamp 1000W
- Motor load (cosφ=0.7) 1000W
- Fluorescent lamp load (Conventional) parallel corrected 1000W

SCALE DRAWINGS



▲ TB388

▲ TB388B

▲ TB388S

Analogue Time Switches - 4 Modules



TBS

ANALOGUE DAILY TIME SWITCH

TBS analog time switch is a smaller wall mounting type of time switch, the unit can be mounted in the indoor or outdoor enclosure.

APPLICATION

TBS fits for the particular use of the following tasks: Billboard or Showcase lighting, Air-condition or Commercial Refrigeration, Pumps/ Motor/ Geyser/Fan Control, Hydroponic Systems, Wastewater Treatment Systems, Generator Exercising, Boilers / Heater Control, Pool & Spa, etc.

DESCRIPTION

- 1 channel
- Daily program
- Shortest switching time: 15 minutes
- Simple summer/winter time correction
- With power reserve (Nickel metal hydride battery replacement)
- Finger-safe terminals
- Quartz controlled
- Switching status display
- Clock hands for time display
- Din Rail Mounting, 4 Module

TECHNICAL DATE

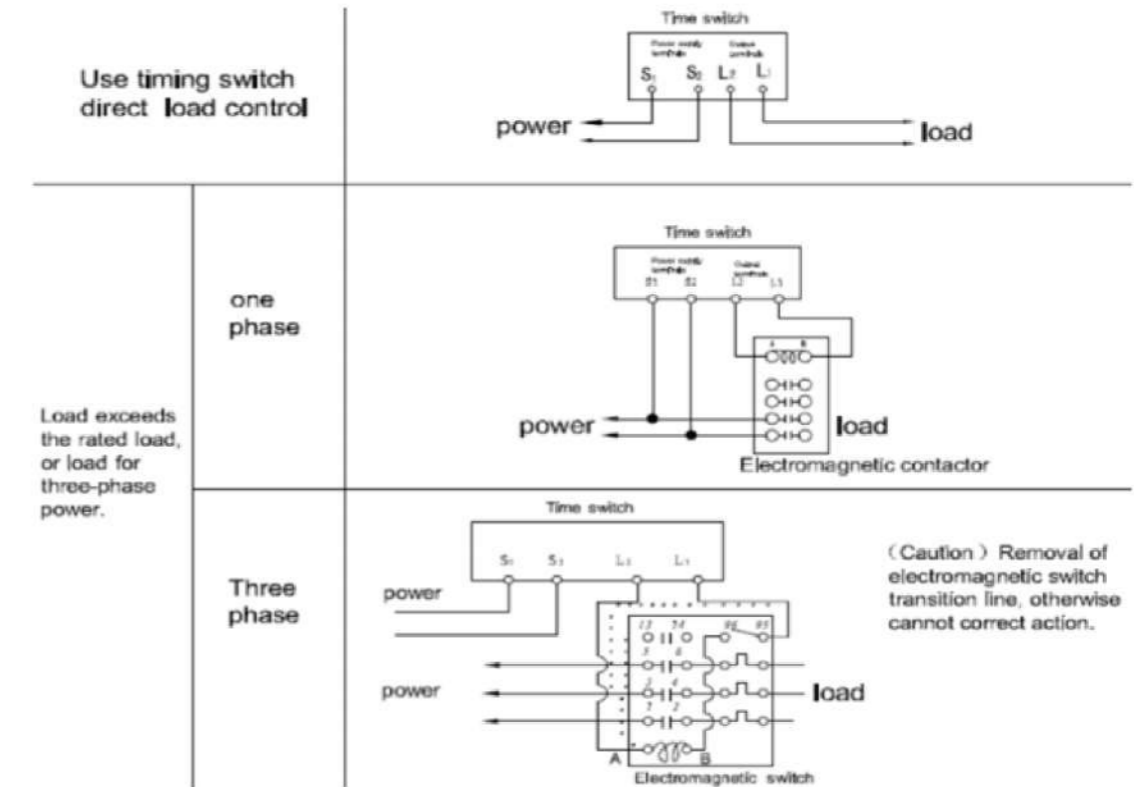
Supply Voltage	110-230VAC, 50/60Hz	Type Of Protection	Plastic enclosure with IP20
Switching Capacity	Resistive load: 20A / 250V~ at $\cos\phi = 1$ Inductive load: 12A / 250V~ at $\cos\phi = 0.6$	Class Of Protection	II according to EN 60 730-1
Number Of Switching Segments	96	Housing And Insulation Material	High-temperature resistant, self-extinguishing thermoplastic
Time Accuracy At 25 °c	$\leq \pm 2$ Sek./day (quartz)	Test Approval	CE
Power Reserve	300 hours	Power Consumption	3 VA
Type Of Contact	Not potential-free		

TBS

Maximum recommended load (10,000 operations)

Filament / Halogen lamp	Motor load ($\cos\phi = 0.7$)	Fluorescent lamp load (conventional) parallel-corrected
2300 W	AC110.750W AC220V.1500W	1300VA 70uF

WIRING DIAGRAM



DIMENSIONS

