

Autonics

ANALOG TIMER



ATS11 SERIES

INSTRUCTION MANUAL

Thank you for choosing our Autonics product.

Please read the following safety considerations before use.

■ Safety Considerations

※Please observe all safety considerations for safe and proper product operation to avoid hazards.

※ ⚠ symbol represents caution due to special circumstances in which hazards may occur.

⚠ Warning Failure to follow these instructions may result in serious injury or death.

⚠ Caution Failure to follow these instructions may result in personal injury or product damage.

⚠ Warning

- 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 personal injury, fire, or economic loss.
- Do not use the unit where flammable or explosive gas, humidity, direct sunlight, radiant heat, vibration, or impact may be present.** Failure to follow this instruction may result in explosion or fire.
- Install on a device panel to use.** Failure to follow this instruction may result in fire or electric shock.
- Do not connect, repair, or inspect the unit while connected to a power source.** Failure to follow this instruction may result in fire or electric shock.
- Check 'Connections' before wiring.** Failure to follow this instruction may result in fire.
- Do not disassemble or modify the unit.** Failure to follow this instruction may result in fire or electric shock.

⚠ Caution

- Use the unit within the rated specifications.** Failure to follow this instruction may result in fire or product damage.
- Use a dry cloth to clean the unit, and do not use water or organic solvent.** Failure to follow this instruction may result in fire or electric shock.
- 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

ATS	11	-	4	1	D	Output	※Sockets (PG-11, PS-11(N)) are sold separately.
							D Time limit 2c
							E Instantaneous 1c + Time limit 1c
						Time range	1 Time range 1 (0.1 to 1)
							3 Time range 3 (0.3 to 3)
						Power supply	1 12VDC
							2 24VAC 50/60Hz, 24VDC
							4 100-240VAC 50/60Hz, 24-240VDC
						Number of plug pins	11 11-pin plug type
						Item	ATS Small Analog Timer

■ Unit Description

Operation/Power indicator (Flashes for timer operation, Turns ON for timer stop)

Time setting dial

Output operation mode indicator (ATS11 (A, F, F1, C, D, I mode))

Output operation mode setting SW

Time limit output indicator

Time range indication (1S, 10S, 1M, 10M, 1H, 10H)

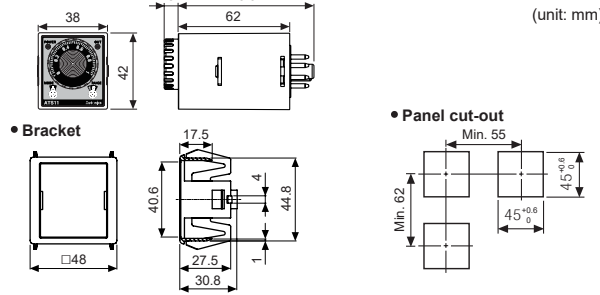
Time range setting switch

■ Time Specifications

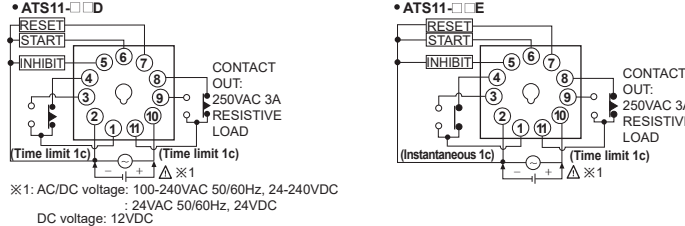
Model	Time range	Time unit	Time setting range	Model	Time range	Time unit	Time setting range
ATS11-□□□	1S	SEC	0.1 to 1 sec.	ATS11-□□□	1S	SEC	0.3 to 3 sec.
	10S		1 to 10 sec.		10S		3 to 30 sec.
	1M		0.1 to 1 min.		1M		0.3 to 3 min.
	10M	1 to 10 min.	10M		3 to 30 min.		
	1H	0.1 to 1 hour	1H		0.3 to 3 hour		
	10H	1 to 10 hour	10H		3 to 30 hour		

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

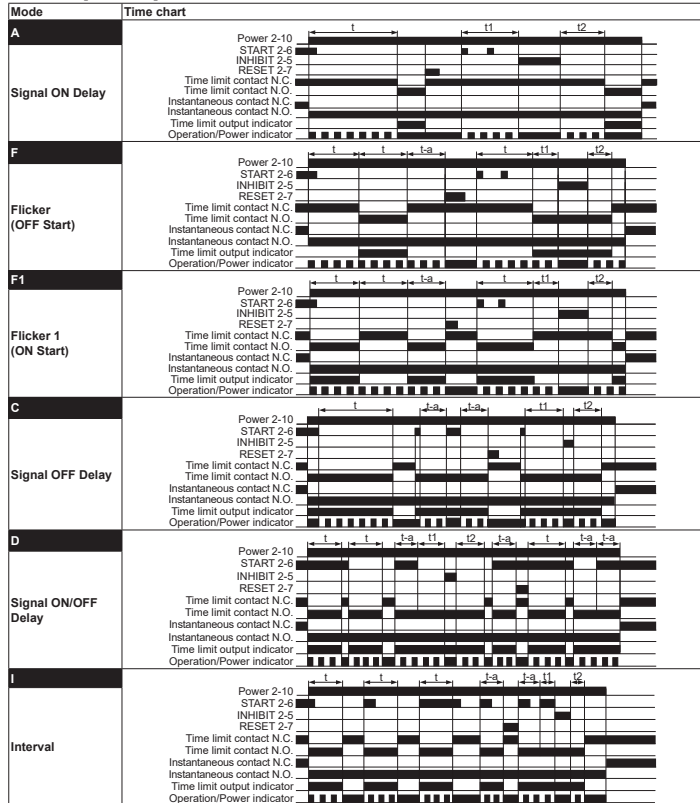
■ Dimensions



■ Connections



■ Output Operation Mode



※ATS11-□□□E model only supports instantaneous contact.
 ※If power is cut or the RESET terminal is short-circuited, the timer will be RESET.
 ※If the INHIBIT terminal is short-circuited during a time limit operation, the time will stop.
 ※In case of F, F1 output operation mode, setting time should be over 100ms.
 If not, it may cause abnormal output operation due to under 100ms of setting time.

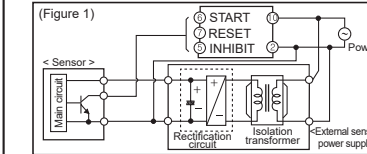
■ Specifications

Model	ATS11-□□□D	ATS11-□□□3D	ATS11-□□□1E	ATS11-□□□3E
Function	Multi Function Timer			
Control time setting range*1	0.1 sec. to 10 hour	0.3 sec. to 30 hour	0.1 sec. to 10 hour	0.3 sec. to 30 hour
Power supply	•100-240VAC 50/60Hz, 24-240VDC universal •24VAC 50/60Hz, 24VDC universal •12VDC			
Allowable voltage range	90 to 110% of rated voltage			
Power consumption	•Max. 3.5VA (100-240VAC), Max. 1.5W (24-240VDC) •Max. 4VA (24VAC), Max. 1.5W (24VDC) •Max. 1W (12VDC)		•Max. 4.2VA (100-240VAC), Max. 2W (24-240VDC) •Max. 4.5VA (24VAC), Max. 2W (24VDC) •Max. 1.5W (12VDC)	
Return time	Max. 100ms			
Min. input signal width	Start, Inhibit, Reset: Min. 50ms			
Input	Start, Inhibit, Reset: [No-voltage input] - Short-circuit impedance: Max. 1kΩ, Residual voltage: Max. 0.5V, Open-circuit impedance: Max. 100kΩ			
Time operation	Signal ON Start			
Control output	Contact type	Time limit DPDT (2c)	Instantaneous SPDT (1c)+Time limit SPDT (1c)	
	Contact capacity	250VAC 3A resistive load		
Relay life cycle	Mechanical	Min. 10,000,000 operations		
	Electrical	Min. 100,000 operations (250VAC 3A resistive load)		
Repeat error	Max. ±0.2% ±10ms			
Setting error	Max. ±5% ±50ms			
Voltage error	Max. ±0.5%			
Temperature error	Max. ±2%			
Insulation resistance	100MΩ (at 500VDC megger)			
Dielectric strength	2,000VAC 50/60Hz for 1 minute			
Noise resistance	±2kV the square wave noise (pulse width 1μs) by noise simulator			
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz (for 1 min.) in each X, Y, Z direction for 1 hour		
	Malfuction	0.5mm amplitude at frequency of 10 to 55Hz (for 1 min.) in each X, Y, Z direction for 10 min.		
Shock	Mechanical	300m/s ² (approx. 30G) in each X, Y, Z direction 3 times		
	Malfuction	100m/s ² (approx. 10G) in each X, Y, Z direction 3 times		
Environment	Ambient temp.	-10 to 55°C, Storage: -25 to 65°C		
	Ambient humid.	35 to 85%RH, Storage: 35 to 85%RH		
Approval	CE, UL, VDE			
Accessory	Bracket			
Weight*2	Approx. 95g (approx. 70g)			

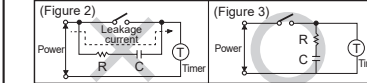
※1: Refer to time specifications for control time setting range by model.
 ※2: The weight includes packaging. The weight in parentheses is for unit only.
 ※Environment resistance is rated at no freezing or condensation.

■ Cautions During Use

- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
- 12VDC, 24VAC, 24VDC power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
- When supplying or turning off the power, use a switch or etc. to avoid chattering.
- Install a power switch or circuit breaker in the easily accessible place for supplying or disconnecting the power.
- In order to block peripheral current, use isolation transformer which of secondary part is not grounded as (Figure 1) to supply power to the external input device.



6. In order to avoid leakage current flowing, connect resistance and condenser as (Figure 3). If connect as (Figure 2), it may cause malfunction due to leakage current.



- Do not connect two or more timers with only one input contact or transistor simultaneously.
- 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.
- Change setting time, time range, operation mode or etc. after turning off the power of the timer.
- 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