

INSTRUCTION SHEET

MULTI-FUNCTION TIMERS GT3F-1 / -2

(POWER OFF DELAY TYPE)

Confirm that the delivered product is what you have ordered. Read this instruction sheet to make sure of correct operation. Make sure that the instruction sheet is kept by the end user.

● TIME RANGE

Dial Range	0 - 1	0 - 3	0 - 18	0 - 60
1S	0.1sec - 1sec	0.1sec - 3sec	0.2sec - 18sec	0.6sec - 60sec
10S	0.1sec - 10sec	0.3sec - 30sec	1.8sec - 180sec	6sec - 600sec

Time Up Operation Repeat Cycle	3sec minimum
Reset Input Repeat Cycle	3sec minimum

● GENERAL SPECIFICATIONS

Operation System	Solid-state CMOS circuit	
Operation Type	Power OFF delay	
Time Range	0.1sec to 600sec	
Pollution Degree	2 (IEC60664-1)	
Over Voltage Category	III (IEC60664-1)	
Rated Operational Voltage	AF20	100-240V AC (50/60Hz)
	AD24	24V AC (50/60Hz) / 24V DC
Voltage Tolerance	AF20	85-264V AC (50/60Hz)
	AD24	20.4-26.4V AC (50/60Hz) / 21.6-26.4V DC
Minimum Power Application Time	180sec maximum: 0.4sec 600sec: 1sec	
Time-delay Operation Start Voltage	Rated Voltage × 10% minimum	
Range of Ambient Operating Temperature	-10 to +50°C (without freezing)	
Range of Ambient Storage and Transport Temperature	-30 to +70°C (without freezing)	
Range of Relative Humidity	35 to 85%RH (without condensation)	
Air Pressure	80kPa to 110kPa (Operating)	
	70kPa to 110kPa (Transport)	
Repeat Error	±0.2%, ±10msec*	
Voltage Error	±0.2%, ±10msec*	
Temperature Error	±0.2%, ±10msec*	
Setting Error	±10% maximum	
Insulation Resistance	100MΩ minimum (500V DC)	
Dielectric Strength	Between power and output terminals : 2000V AC, 1 minute	
	Between contacts of different poles : 2000V AC, 1 minute Between contacts of the same pole : 750V AC, 1 minute	
Vibration Resistance	10 to 55Hz amplitude 0.75mm 2 hours in each of 3 axes	
Shock Resistance	Operating extremes: 98m/sec ² (Approx. 10G) Damage limits: 490m/sec ² (Approx. 50G) 3 times in each of 3 axes	
Degree of Protection	IP40 (enclosure), IP20 (socket) (IEC60529)	
Power Consumption (Approx.)	AF20	1.1VA (100V AC/60Hz) / 2.3VA(200V AC/60Hz)
	AD24	0.7VA (24V AC/60Hz) / 0.2W(24V DC)
Mounting Position	Free	
Outline Dimensions	40.0H×36.0W×72.5D mm	
Weight (Approx.)	GT3F-1	77g
	GT3F-2	79g

* For the value of the error against a preset time, whichever the larger applies.

● APPLICABLE STANDARD

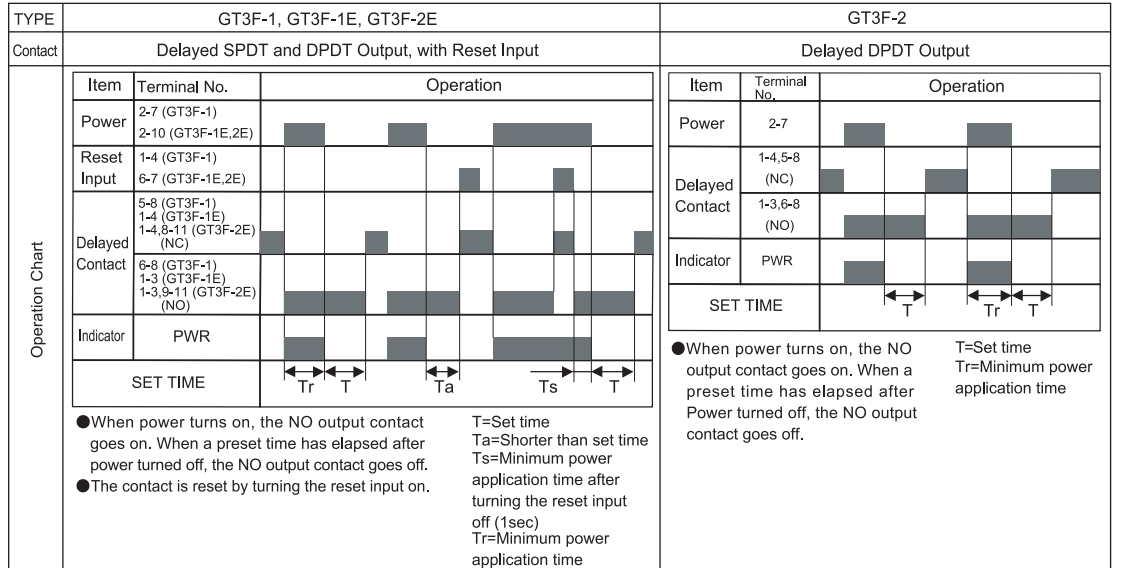
Safety standard UL508, CSA C22.2 No.14, IEC61812-1, EN61812-1
EMC IEC61812-1, EN61812-1

Electrostatic Discharge	IEC61000-4-2, EN61000-4-2
Radiated Radio-Frequency Electromagnetic Field	IEC61000-4-3, EN61000-4-3
Electrical Fast Transient/Burst	IEC61000-4-4, EN61000-4-4
Surges	IEC61000-4-5, EN61000-4-5
Conducted Radio-Frequency	IEC61000-4-6, EN61000-4-6
Voltage Dips	IEC61000-4-11, EN61000-4-11
Voltage interruptions	IEC61000-4-11, EN61000-4-11
Radiated Emission	CISPR 11, EN55011 (Group 1, Class A)

● TYPES

Rated Voltage Code	Time Range	Output	Contact	Input	Type No.	
AF20: 100 to 240V AC(50/60Hz) AD24: 24V AC(50/60Hz)/24V DC	0.1sec to 600sec (See TIME RANGE for details.)	5A, 250V AC 5A, 24V DC (Resistive Load)	Delayed SPDT	Reset	GT3F-1AF20	GT3F-1EAF20
		3A, 250V AC 3A, 24V DC (Resistive Load)	Delayed DPDT	GT3F-2: None GT3F-2E: Reset	GT3F-2AF20	GT3F-2EAF20
					GT3F-1AD24	GT3F-1EAD24
					GT3F-2AD24	GT3F-2EAD24

● OPERATION CHART



Note: The GT3F timer uses a latching relay for the output relay. Therefore, if an impact such as a drop during transportation or handling is subjected, the output may be out of the initial state. Please check the output state before using the GT3F timer. If it is not the initial state, turn the GT3F timer on and off once, time up the set time, and reset output.

● OUTPUT SPECIFICATIONS

Type	GT3F-1	GT3F-2
Allowable Contact Power (Resistive Load)	1250VA / 150W	750VA / 90W
Allowable Voltage	250V AC / 125V DC	
Allowable Current	5A	3A
Maximum Permissible Operating Frequency	1800 cycles per hour	
Contact Ratings (Resistive Load)	5A, 250V AC / 24V DC	3A, 250V AC / 24V DC
Conditional Short Circuit	Fuse 5A, 250V	Fuse 3A, 250V
Life	Electrical (Resistive Load)	100,000 op. minimum (Contact rating Load)
	Mechanical	3,000,000 op. minimum

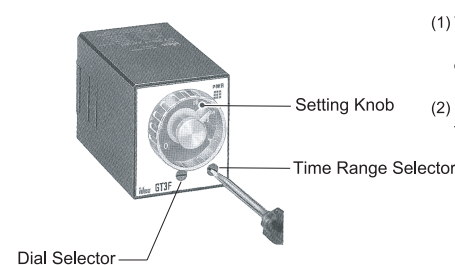
● INPUT SPECIFICATIONS

Reset Input	<ul style="list-style-type: none"> The contact is reset by turning the reset input on (L level). NO-voltage contact input and NPN open collector transistor input are applicable. Input open voltage 6V DC maximum, 0.6mA maximum. Input response time : ON 50 msec maximum, OFF 1 sec maximum.
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● MINIMUM POWER APPLICATION TIME

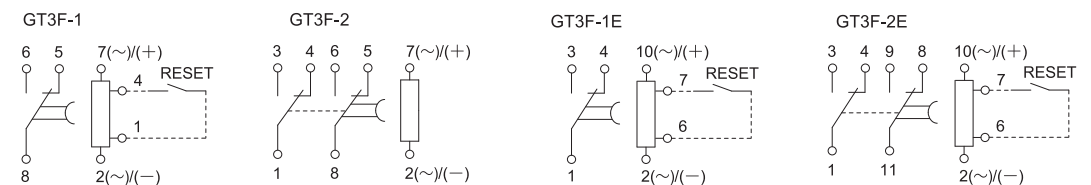
If the power application time to the GT3F is shorter than the minimum power application time, output relay may not operate or the timer may operate faster than the preset time. Please carry out timer operation after impressing a power supply for 0.4 second, when set time is below a 180-second range and it is 1 second and a 600-second range. When time is insufficient, it may not operate normally. Inrush current flows during the minimum power supply impression time.
(AF20: 0.4A, AD24: 1.2A (approx.))

● SWITCH SETTING

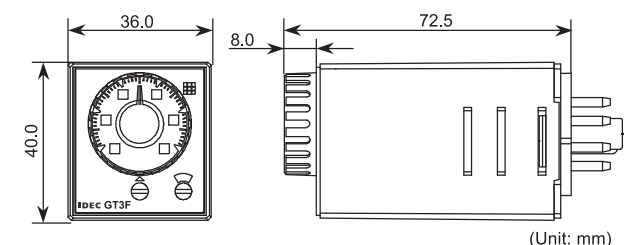


- The switches should be securely turned using a flat screwdriver 4mm wide maximum. Note that incomplete setting may cause malfunction. The letter should be centered in the display window. The switches, which do not turn infinitely, should not be turned beyond the limits.
- Since changing the setting during timer operation may cause malfunction, power should be turned off before changing the setting.

● INTERNAL CONNECTIONS



● DIMENSIONS



NOTE: GT3F series are UL Listed when used in combination with following IDEC's sockets:
GT3F-1,2 : SR2P-06* pin type socket. (*-May be followed by A,B,C or U)
GT3F-1E,2E : SR3P-05* pin type socket. (*-May be followed by A,B,C or U)
The socket to be used with these timers are rated:
-Conductor Temperature Rating 60°C,
-Use No.14AWG to No.18AWG. Copper conductors only,
-Terminal Torque 1.0 to 1.3 N-m

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Safety Precautions

Special expertise is required to use the Electronic Timer.

- All Electronic Timer modules are manufactured under IDEC's rigorous quality control system, but users must add a backup or fail safe provision to the control system using the Electronic Timer in applications where heavy damage or personal injury may be caused in case the Electronic Timer should fail.
- Install the Electronic Timer according to instructions described in this instruction sheet and the catalog.
- Make sure that the operating conditions are as described in the catalog. If you are uncertain about the specifications, contact IDEC in advance.
- In this instruction sheet, safety precautions are categorized in order of importance to Warning and Caution.

Warning Warning notices are used to emphasize that improper operation may cause severe personal injury or death.

- Turn power off to the Electronic timer before starting installation, removal, Wiring, maintenance, and inspection on the Electronic Timer. Failure to turn power off may cause electrical shocks or fire hazard.
- Emergency stop and interlocking circuits must be configured outside the Electronic timer. If such a circuit is configured inside the Electronic Timer, failure of the Electronic timer may cause disorder of control system, or accidents.

Caution Caution notices are used where inattention might cause personal injury or damage to equipment.

- The Electronic Timer is designed for installation in equipment. Do not install the Electronic Timer outside equipment.
- Install the Electronic Timer in environments described in this instruction sheet and the catalog. If the Electronic Timer is used in places where the Electronic Timer is subjected to high-temperature, high-humidity, condensation, corrosive gases, excessive vibrations, and excessive shocks, then electrical shocks, fire hazard, or malfunction will result.
- Use an IEC60127-approved fuse and circuit breaker on the power and output line outside the Electronic Timer.
- Do not disassemble, repair, or modify the Electronic Timer.
- When disposing of the Electronic Timer, do so as an industrial waste.