

# idec GT3A-1,-2 and -3 ALL MULTI-TIMERS

## INSTRUCTION SHEET

Read this instruction sheet to make sure of correct operation before starting installation, operation, maintenance, and inspection of the GT3A series timers. The end user should keep this instruction sheet for future reference.

### ● TIME RANGE Determined by Time Range Selector and Dial Selector

Dial	0-1	0-3	0-6	0-18
1S	0.1sec - 1sec	0.1sec - 3sec	0.1sec - 6sec	0.2sec - 18sec
10S	0.1sec - 10sec	0.3sec - 30sec	0.6sec - 60sec	1.8sec - 180sec
10M	6sec - 30min	18sec - 30min	36sec - 60min	108sec - 180min
10H	6min - 10hours	18min - 30hours	36min - 60hours	108min - 180hours

### ● GENERAL SPECIFICATIONS

Operation System	Solid-state CMOS circuit		
Operation Type	Multi-Mode		
Time Range	0.1sec to 180hours		
Pollution Degree	2 (IE60664-1)		
Over voltage category	III (IE60664-1)		
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	
Disengaging value of Input 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)		
Reset Time	60msec maximum		
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 (GT3A-1, 2) 1000V AC, 1 minute (GT3A-3)		
Vibration Resistance	10 to 55Hz amplitude 0.75mm 2 hours in each of 3 axes		
Shock Resistance	Operating extremes: 98m/sec <sup>2</sup> (Approx. 10G) Damage limits: 490m/sec <sup>2</sup> (Approx. 50G) 3 times in each of 3 axes		
Degree of Protection	IP40 (enclosure), IP20 (socket) (IEC60529)		
Power TYPE	GT3A-1	GT3A-2	GT3A-3
Consumption (Approx.)	AF20 100V AC/60Hz 2.9VA	2.5VA	2.2VA
	200V AC/60Hz 4.7VA	4.3VA	4.0VA
	AD24(AC/DC) 1.3VA/0.5W	1.6VA/0.8W	1.8VA/0.7W
Mounting Position	Free		
Outline Dimensions	40H × 36W × 72.5D mm		
Weight (Approx.)	GT3A-1	GT3A-2	GT3A-3
	63g	73g	79g

\* The value of the error over a preset time applies the value of which or the larger one.

### ● APPLICABLE STANDARD

Safety standard	UL508, CSA C22.2 No.14, IEC61812-1, EN61812-1		
EMC	IEC61812-1, EN61812-1		
Electrostatic Discharge	level 3 Contact ±6k, Air ±8kV	IEC61000-4-2 EN61000-4-2	
Electromagnetic Field	level 3 10V/m, AM 80%, 80M-1000MHz	IEC61000-4-3 EN61000-4-3	
Fast Transient/Burst	level 3 Power Supply: ±2kV	IEC61000-4-4 EN61000-4-4	
Surge	AF20 level 3 Power Supply: Line to Line ±1.0kV Line to Ground ±2.0kV	IEC61000-4-5 EN61000-4-5	
	AD24 level 2 Power Supply: Line to Line ±0.5kV Line to Ground ±1.0kV		
Radiated Emission	Group 1 Class A CISPR 11 EN55011		

### ● CONTACT RATINGS

Type	GT3A-1, GT3A-2	GT3A-3
Allowable Contact Power	960VA/120W	
Allowable Voltage	250V AC/150V DC	
Allowable Current	5A	
Maximum permissible operating frequency	1800 cycles per hour	
Rated Load	1/8HP, 240V AC 3A, 240V AC (Resistive) 5A, 120V AC/30V DC (Resistive)	1/6HP, 240V AC 5A, 240V AC/24V DC (Resistive)
Conditional Short Circuit	Fuse 5A, 250V	
Life	Electrical 100,000 op. minimum (Resistive) Mechanical 20,000,000 op. minimum	

### 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.

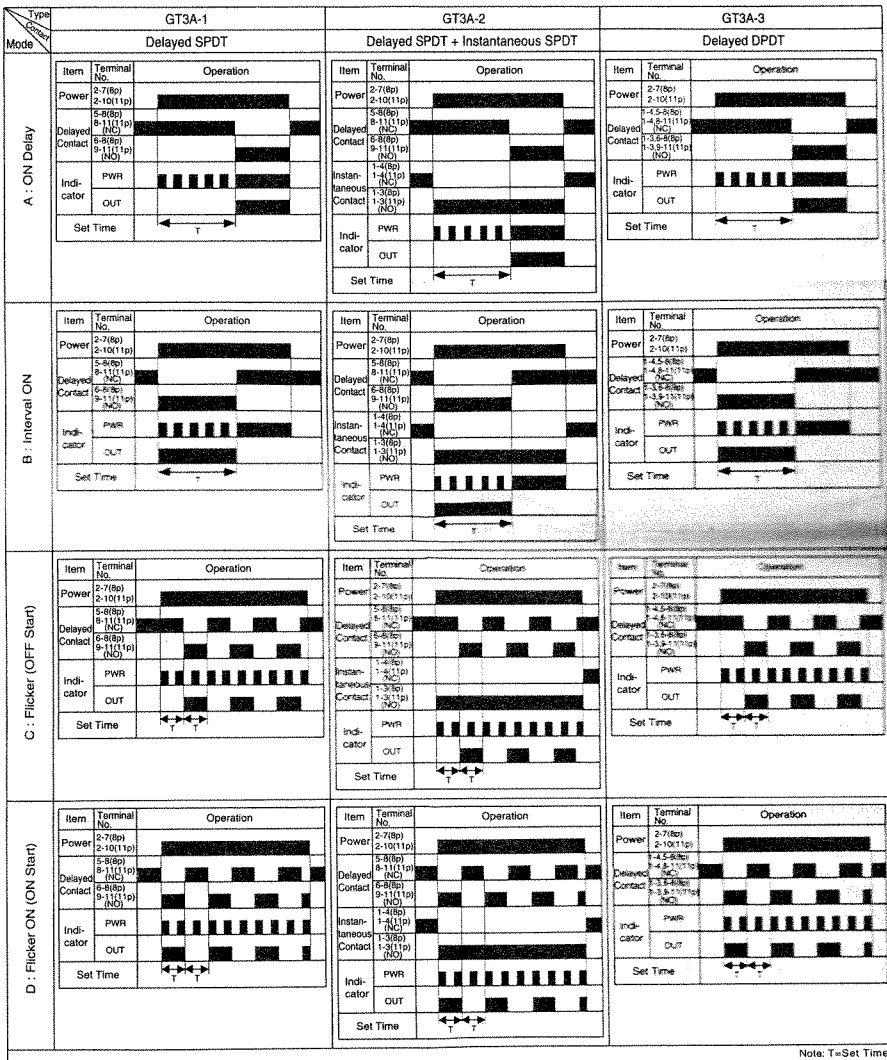
**Caution** Caution notices are used where inattention might cause personal injury or damage to equipment.

- 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.

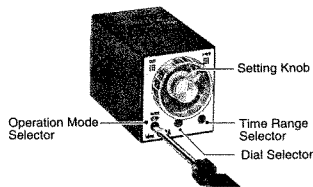
### ● TYPES

Operation Mode	Rated Voltage Code	Time Range	Output	Contact	Type No.	
					8-pin Type	11-pin Type
A: ON Delay B: Interval ON C: Flicker D: Flicker ON	AF20: 100 to 240V AC(50/60Hz)	0.1sec to 180hours	3A, 240V AC 5A, 120V AC/30V DC (Resistive Load)	Delayed SPDT	GT3A-1AF20	GT3A-1EAF20
					Delayed SPDT + Instantaneous SPDT	GT3A-2AF20
	AF20: 100 to 240V AC(50/60Hz) AD24: 24V AC(50/60Hz)/24V DC	(See the table below for details.)	5A, 240V AC 5A, 24V DC (Resistive Load)	Delayed DPDT	GT3A-2AD24	GT3A-2EAD24
					GT3A-3AF20	GT3A-3EAF20
					GT3A-3AD24	GT3A-3EAD24

### ● OPERATION CHARTS

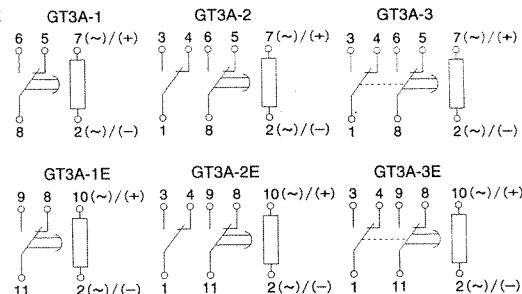


### ● SWITCH SETTING

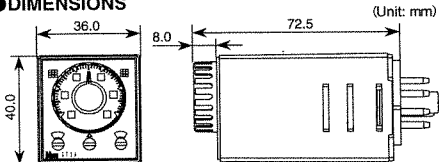


- The switches should be securely turned using a flat screwdriver 4mm wide maximum. Note that incomplete setting may cause malfunction. The switches, which do not turn infinitely, should not be turned beyond the limits.
- Since changing the setting during timer operation may cause malfunction, power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

### ● INTERNAL CONNECTIONS



### ● DIMENSIONS



NOTE: GT3A series are UL Listed when used in combination with following IDEC's sockets:  
GT3A-1,2,3: SR2P-06\* pin type socket.  
GT3A-1E,2E,3E: 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°Cmin.,  
-Use 14AWG max.(2mm<sup>2</sup>max.). Copper conductors only,  
-Terminal Torque 1.0 to 1.3 N·m

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