## RTE Series - Analog Timers



## Part Numbering Guide

RTE series part numbers are composed of 4 part number codes. When ordering a RTE series part, select one code from each category.
Example: RTE-P1AF20

|  |
| :--- |



(4) Input Voltage

## Part Numbers: RTE Series

|  | Description | Part Number Code | Remarks |
| :---: | :---: | :---: | :---: |
| (1) Series | RTE series | RTE | For internal circuits, see next page. |
| (2) Terminal Style | Pin | P | Select one only. |
|  | Blade | B |  |
| (3) Function Group | ON-delay, interval, cycle OFF, cycle ON | 1 | Each function group has different timing functions. |
|  | ON-delay, cycle OFF, cycle ON, signal ON/OFF delay, OFF-delay, one-shot | 2 | See page 794. |
| (4) Input Voltage | 100 to 240V AC(50/60Hz) | AF20 |  |
|  | 24 V AC( $50 / 60 \mathrm{~Hz}$ )/24V DC | AD24 |  |
|  | 12 V DC | D12 |  |

## Part Numbers

| Voltage | Power Triggered |  | Start Input Triggered |  |
| :--- | :---: | :---: | :---: | :---: |
|  | 8-Pin | Blade | 11-Pin | Blade |
| 12V DC | RTE-P1D12 | RTE-B1D12 | RTE-P2D12 | RTE-B2D12 |
| 24V AC/DC | RTE-P1AD24 | RTE-B1AD24 | RTE-P2AD24 | RTE-B2AD24 |
| 100-240V AC | RTE-P1AF20 | RTE-B1AF20 | RTE-P2AF20 | RTE-B2AF20 |

Time Range Determined by Time Range Selector and Dial Selector

|  | Dial | 0-1 | 0-3 | 0-10 | 0-30 | 0-60 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Second | $0.1 \mathrm{sec}-1 \mathrm{sec}$ | 0.1 sec -3 sec | $0.2 \mathrm{sec}-10 \mathrm{sec}$ | $0.6 \mathrm{sec}-30 \mathrm{sec}$ | $1.2 \mathrm{sec}-60 \mathrm{sec}$ |
|  | Minute | $1.2 \mathrm{sec}-1 \mathrm{~min}$ | $3.6 \mathrm{sec}-3 \mathrm{~min}$ | $12 \mathrm{sec}-10 \mathrm{~min}$ | $36 \mathrm{sec}-30 \mathrm{~min}$ | $1.2 \mathrm{~min}-60 \mathrm{~min}$ |
|  | Hour | $1.2 \mathrm{~min}-1 \mathrm{hr}$ | 3.6 min - 3 hr | $12 \mathrm{~min}-10 \mathrm{hr}$ | $36 \mathrm{~min}-30 \mathrm{hr}$ | $1.2 \mathrm{hr}-60 \mathrm{hr}$ |
|  | 10 Hours | $12 \mathrm{~min}-10 \mathrm{hr}$ | $36 \mathrm{~min}-30 \mathrm{hr}$ | $2 \mathrm{hr}-100 \mathrm{hr}$ | 6 hr - 300 hr | $12 \mathrm{hr}-600 \mathrm{hr}$ |

## Timing Diagrams

## RTE-P1, -B1



1. RTE-B1: Do not apply voltage to terminals \#2, \#5 \& \#8.
2. IDEC sockets are as follows: RTE-P1: SR2P-06* pin type socket, RTE-B1: SR3B-05* blade type socket, (*-may be followed by suffix letter A,B,C or U).

A: ON-Delay 1 (power start)
Set timer for desired delay, apply power to coil. Contacts transfer after preset time has elapsed, and remain in transferred position until timer is reset. Reset occurs with removal of power.


C: Cycle 1 (power start, OFF first)
Set timer for desired delay, apply power to coil. First transfer of contacts occurs after preset delay has elapsed, after the next elapse of preset delay contacts return to original position. The timer now cycles between on and off as long as power is applied (duty ratio 1:1).


B: Interval (power start)
Set timer for desired delay, apply power to coil. Contacts transfer immediately, and return to original position after preset time has elapsed. Reset occurs with removal of power.


C: Cycle 3 (power start, ON first)
Functions in same manner as Mode C, with the exception that first transfer of contacts occurs as soon as power is applies. The ratio is $1: 1$. Time $\mathrm{On}=$ Time 0 ff


## Timing Diagrams con't

## RTE-P2, -B2



RTE-B2


1. RTE-P2: Do not apply voltage to terminals \#5, \#6 \& \#7
2. RTE-B2: Do not apply voltage to terminals \#2, \#5 \& \#8.
3. IDEC sockets are as follows: RTE-P2: SR3P-05* pin type socket, RTE-B2: SR3B-05* blade type socket, ( ${ }^{*}$-may be followed by suffix letter A,B,C or U).

A: ON-Delay 2 (signal start)
When a preset time has elapsed after the start input turned on while power is on, the NO output contact goes on.


C: Cycle 4 (signal start, ON first)
When the start input turns on while power is on, the NO contact goes on. The output oscillates at a preset cycle (duty ratio 1:1).


E: Signal OFF-Delay
When power is turned on while the start input is on, the NO output contact goes on. When a preset time has elapsed after the start input turned off, the NO output contact goes off.


B: Cycle 2 (signal start, OFF first)
When the start input turns on while power is on, the output oscillates at a preset cycle (duty ratio 1:1), starting while the NO contact off.


D: Signal ON/OFF-Delay
When the start input turns on while power is on, the NO output contact goes on. When a preset time has elapsed while the start input remains on, the output contact goes off. When the start input turns off, the NO contact goes on again. When a preset time has elapsed after the start input turned off, the NO contact goes off.


F: One-Shot (signal start)
When the start input turns on while power is on, the NO output contact goes on. When a preset time has elapsed, the NO output contact goes off.


## Temperature Derating Curves



## Instructions

## Installation of Hold-Down Springs DIN Rail Mount Socket



Switch Settings

(1) Operator Mode Selector (2)Scale Selector (3)Time Range Selector

1. Turn the selectors securely using a flat screwdriver 4 mm wide (maximum).
Note that incorrect setting may cause malfunction. Do not turn the selectors beyond their limits.
2. Since changing the setting during timer operation may cause malfunction, turn power off before changing.

Special expertise is required to use Electronic Timers.

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


## Warnings

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.
- Do not use the Electronic Timer for an emergency stop circuit or interlocking circuit. If the Electronic Timer should fail, a machine malfunction, breakdown, or accident may occur.


## 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 the specifications. If the Electronic Timer is used in places where it will be subjected to high-temperature, high-humidity, condensation, corrosive gases, excessive vibrations, or excessive shocks, then electrical shocks, fire hazard, or malfunction could 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 industrial waste.


## Accessories

## DIN Rail Mounting Accessories

## DIN Rail/Surface Mount Sockets and Hold-Down Springs



Panel Mounting Accessories
Flush Panel Mount Adapter and Sockets that use an Adapter

| Accessory | Description | Appearance | Use with | Part No. |
| :---: | :---: | :---: | :---: | :---: |
| Panel Mount Adapter | Adaptor for flush panel mounting RTE timers |  | All RTE timers | RTB-G01 |
| Sockets for use with Panel Mount Adapter | 8-pin screw terminal | (Shown: SR6P-M08G Wiring Socket Adapter) | RTE-P1 | SR6P-M08G |
|  | 11-pin screw terminal |  | RTE-P2 | SR6P-M11G |
|  | 8-pin solder terminal |  | RTE-P1 | SR6P-S08 |
|  | 11-pin solder terminal |  | RTE-P2 | SR6P-S11 |

## Dimensions



RTE-P1 (8 pin) Terminal Style


Panel Mount Adapter
RTE Timer, 8-Pin and 11-Pin with SR6P-S08 or SR6P-S11


RTE Timer, 8-Pin with SR6P-M08G


RTE Timer, 11-Pin with SR6P-M11G


