

Replace with: <http://waterheatertimer.org/Intermatic-ET-series-timers-and-manuals.html>

## Choosing timer to replace Paragon EC72 timer



EC72 is discontinued 15 amp Paragon 2-channel timer with different models for different clock voltage. For example Model EC72/24 has 24volt clock, and EC72/277 has 277volt clock.

See manual for model numbers.

The clock is on separate terminals from switching terminals.

The switching terminals are dry with maximum load capability of 15 amps, 14 gauge wire.

Timer has impulse/momentary capability and can control latching relays, and perform bell-ringing functions.

EC72D comes inside Nema 1 indoor metal enclosure. EC72 has plug-in base for surface mount or din-rail mount housed in indoor plastic enclosure.

Terminals are the screw plates where wires connect to timer.

Dry terminals means the timer clock terminals are separate from the switching terminals. So the timer clock can be connected to 120Volts for example, but the dry timer relays can be connected to, and control, any voltage. For example the timer can control 1 low-voltage circuit, and 1 higher-voltage circuit. Many timers have this capability.

NO NC terminals: EC72 has NO NC terminal configuration so each circuit can turn ON a load just as another load is turned OFF. Page 17 manual.

EC72 clock voltage: Different model EC72 timer is required for different voltage. Most replacement timers have selectable voltage, so 1 timer model can fit multiple field applications. Exception is EC72D/12 timer which offers 12 Volt DC clock motor. Most typical replacement timers do not offer 12 volt DC as selectable option.

Voltages: The separate dry terminals are not dependent on chosen clock voltage and can control any voltage. This is true for all timers with dry terminals. EC72 dry terminals are rated 15 amp and 14 gauge wire.

Load means the lights, motor, pump etc that are controlled by the timer circuit.

2-channel means the timer can control 2 different circuits with different timing schedule for each circuit. Or the EC72 can control 1 or 2 circuits so they turn on-off with same schedule. If replacement timer does not need different schedule for each circuit, then 2-channel timer is not needed. Ordinary DPST timer will work.

If more than 2 channels are needed: If operator wants to control more than 2 circuits, with each circuit having different timing schedule, then a 4 channel, or 8 or 16 channel timer can be purchased. This eliminates need for more than one timer.

Maximum Load rating for EC72 is 15 amp, with 14 gauge wire. For comparison, 15 amp load rating is used for 1 household dishwasher, and is too lightweight for most commercial applications. This is why EC72 timer is probably wired to a contactor or latching relay.

Contactor/ Latching Relays are typically electromagnetic switches that are activated by other switches such as a timer. This lets a low-amp timer control a high-amp load. Contactors are generally rated for high-amp loads, for example contactors can control 50 amp 3-phase compressor, or 70 amp 240Volt parking lot lights. The timer activates the contactor or latching relay, and then the contactor opens-and-closes the high amp load.

EC72 has impulse or momentary timer function: this function is necessary if timer controls separate contactor/relay, and that contactor/relay is a latching type commonly used for lighting controls.

If timer is connected to ordinary contactor, and not a latching contactor, then impulse/momentary capability is not necessary.

Bell or Horn ringing: Impulse/momentary capability is necessary if the timer rings a bell, or sounds a horn periodically throughout the day-or-week. Examples for this application can be found in a high school, or factory. Duration of impulse is 2 seconds, which is typical duration of school bell.

Holiday programming: The Paragon EC72 has program option for 12 holidays, so the timer can skip certain days of year. For example if operator does not want school bell to ring on Christmas day, then choosing a timer with holiday function is necessary.

Daylight savings time: EC72 has automatic adjustment for daylight savings time. Unknown if this is the older dates for DST or the newer dates for DST. Timer has automatic leap year correction.

Programming: EC72 timer can be set for weekly or daily schedule. Up to 16 events: 8 ON and 8 OFF per channel. So each circuit can have separate 8 ON and 8 OFF.

Battery: EC72 has ordinary 9 volt battery that lasts 2 years.

### **Replacing the EC72:**

Timer with identical programming, identical impulse capability, and identical wiring and load characteristics is the Intermatic ET70215 timer.

<http://waterheatertimer.org/pdf/Intermatic-et70215cr.pdf>

<http://waterheatertimer.org/Intermatic-timers-and-manuals.html#ET7000>

Best way to find seller for ET70215 timer is go to google, and click 'images' and do image search for product.

The difference between Paragon EC72 and Intermatic ET70215 is that the Intermatic has load rating 20 amp and 12 gauge wire.

ET70215 also has more programming set points, and dawn-dusk capability.

If you do not need a 2-channel, impulse timer, with holiday settings, please e-mail with specifications and I can suggest correct timer. Open waterheatertimer.org link above and scroll to page bottom for e-mail.



Intermatic ET70215 2-channel timer

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