GEFRAN

550

QUARTZ TIMER / COUNTER

Main applications

- *Timer*
- *Double timer*
- *Cyclic timer*
- *Counter*
- *Double counter*
- *Cyclic counter*
- *Revolution monitor*
- *Delay timer*

Main features

- *Input from mechanical contact or Open Collector*
- *Start/Stop and Reset inputs from mechanical contact or AC voltage*
- *Configurable as Timer or Counter*
- *Five time bases, 1msec resolution*
- *Five ranges of counter prescaler*
- *Quartz timer*

GENERAL

The catalogues of timers and counters are often packed with different models and versions: the 550 offers one model for every application.
By limiting the number of faceplate keys to those strictly necessary, there is a larger space for the display.
The miniaturisation achieved with SMT reduces the dimensions and increases the reliability.
The microprocessor enables the required performance to be selected, by means of setting only three parameters (Typ, out, in.2) by following the configuration described later.
There are two settings SP1 and SP2, five time bases: from hundredths of a second to hours and minutes, five prescaler ranges for the counter.

TECHNICAL DATA

INPUTS

2 inputs (IN1, IN2) with start/stop or reset function of the timer or counter, and counter input for frequencies up to 100Hz.

IN1

From voltage free contacts, open collector (24Vdc/1mA) or in Vac (at the same voltage as the instrument supply).

IN2

Available only if IN1 is not in Vac, for voltage free contact or open collector (24Vdc/1mA), active either when closed or when open.

OUTPUTS

Relay

5A/250Vac at cosφ = 1 (3,5A at cosφ = 0,4)
Spark suppression on the NO contact.

POWER SUPPLY

110/220Vac ±10%
120/240Vac ±10%
24/48Vac ±10%
24Vdc ±10%
50/60Hz; 5VA max.

AMBIENT CONDITIONS

Working temperature: 0...50°C
Storage temperature: -20...70°C
Humidity: 20...85%Ur non condensing

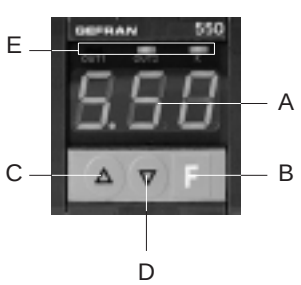
FUNCTIONALITY

Timer / Counter functions enclosed.
Timing and counting are displayed as a count/down.

WEIGHT

240g

FACEPLATE DESCRIPTION



A - Main display,
digits h. 14mm, green LED
B - Function key
C - Lower key
D - Raise key
E - Output/input indication, green LED

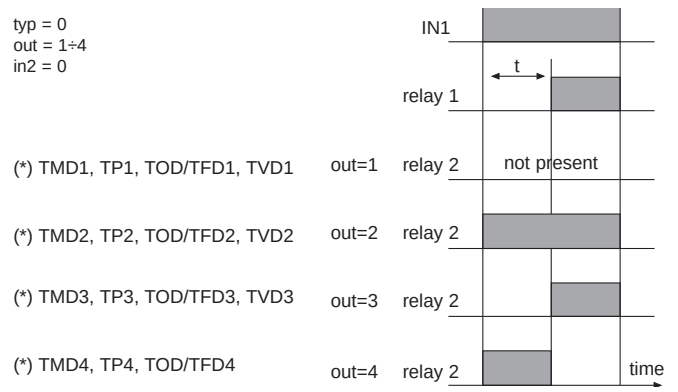
IP54 faceplate protection

FUNCTIONALITY

Non cyclic single timer, without reset

The timing begins with a command on IN1.
Relay 1 energises at the end of the preset time t (=SP1) and disenergises when the command on IN1 is removed.
The action of relay 2 depends on the configuration of OUT.

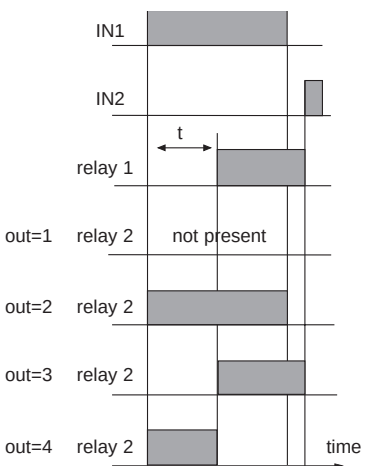
typ = 0
out = 1÷4
in2 = 0



Non cyclic single timer, with reset

The timer is activated by a command on IN1.
Relay 1 energises at the end of the preset time t (=SP1) and disenergises with a command on IN2 (reset). The action of relay 2 depends on the configuration of OUT.

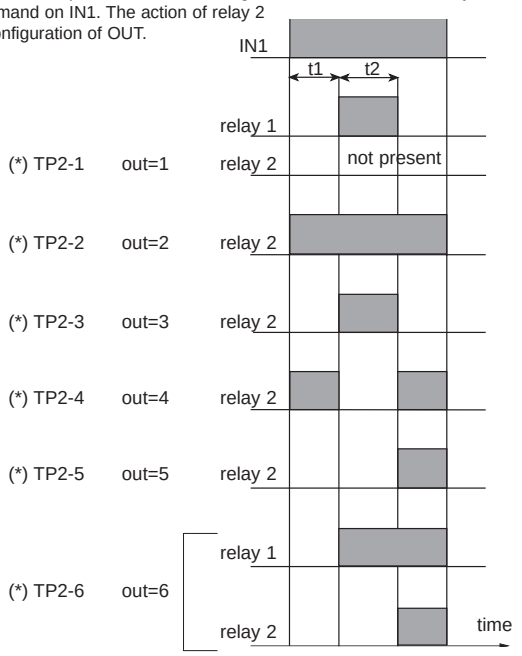
typ = 0
out = 1÷4
in2 = 1



Non cyclic double timer without reset

The timing begins with a command signal on IN1.
Relay 1 disenergises for the preset time t1 (=SP1) and energises for the preset time t2 (=SP2) if then rests except in the case of setting Out=6. The timer is reset by removing the command on IN1. The action of relay 2 depends on the configuration of OUT.

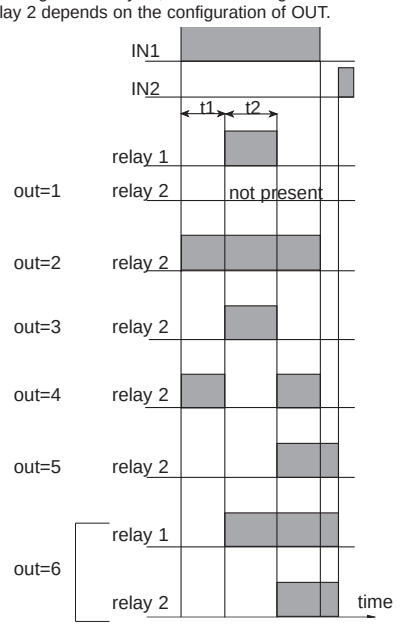
typ = 1
out = 1÷6
in2 = 0



Non cyclic double timer with reset

The timing begins if there is a command signal on IN1. Relay 1 disenergises for the preset time t1 (=SP1) and energises for the preset time t2 (=SP2). It then rests except when the setting Out=6. To begin a new cycle, a command signal on IN2 is required (reset). The action of relay 2 depends on the configuration of OUT.

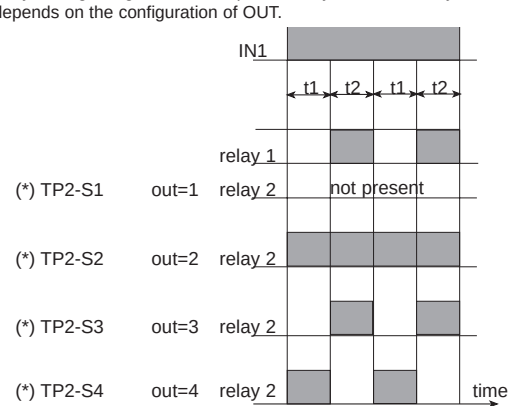
typ = 1
out = 1÷6
in2 = 1



Double cyclic timer

The timer is activated when there is a command signal on IN1. Relay 1 remains disenergised for a preset time t1 (=SP1) and energises for a time t2 (=SP2). When time t2 has expired, the cycle begins again at t1. It repeats the cycle continuously. The action of relay 2 depends on the configuration of OUT.

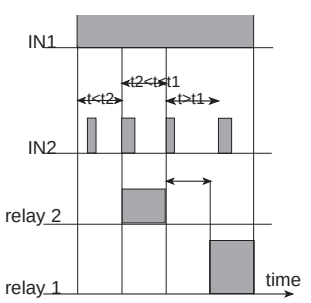
typ = 2
out = 1÷4
in2 = 0



Revolution monitor

The unit becomes active when there is a command signal on IN1.
The two relays remain disenergised when the time between two pulses is between time t1 (=SP1) and t2 (=SP2). If the time exceeds t1, relay 1 energises. If the time is shorter than t2, relay 2 energises..

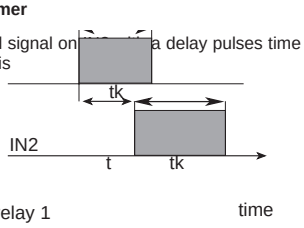
typ = 3
out = 8
in2 = 1



Delay timer

Relay 1 repeats the variation in the command signal on IN2 a delay pulses time t (=SP1). To function correctly, tk>t, where tk is the pulse duration of the command pulse.

typ = 4
out = 9
in2 = 1

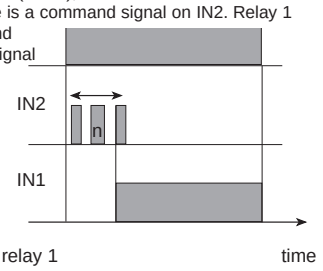


FUNCTIONALITY

Standard counter

The countdown begins at the preset value n (=SP1), and continues down to zero. The pulses on IN1 are counted while there is a command signal on IN2. Relay 1 energises when the count reaches zero and disenergieses again when the command signal on IN2 is removed. The function of relay 2 depends on the configuration of OUT.

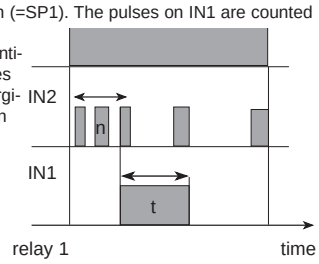
typ = 8
out = see note (**)
(*) CP-U1
in2 = 2



Non cyclic monostable counter

The countdown begins at the preset value n (=SP1). The pulses on IN1 are counted while there is a command signal on IN2.
When the count reaches zero, the count continues into negative values. Relay 1 energises when the zero is reached and remains energised for a time t (=SP2). Relay 2 depends on the configuration of OUT.

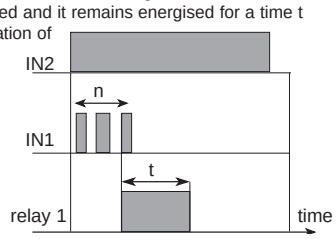
typ = 9
out = see note (**)
in2 = 2



Non cyclic monostable counter with block count

The countdown begins at the preset value n (=SP1) and continues down to zero. The pulses at IN1 are countend while there is a command signal on IN2.
Relay 1 energises when the zero is reached and it remains energised for a time t (=SP2). Relay 2 depends on the configuration of OUT.

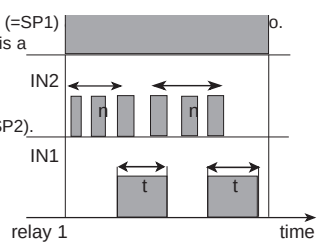
typ = 10
out = see note (**)
in2 = 2



Cyclic monostable counter

The countdown begins at the preset value n (=SP1) o.
The pulses at IN1 are countend while there is a command signal on IN2.
When zero is reached, the counter restarts from the beginning and relay 1 is energised.
The relay remains energised for a time t (=SP2).

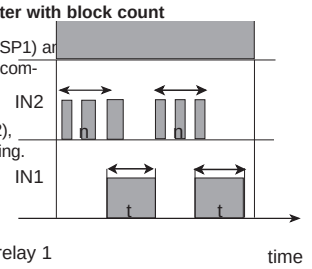
typ = 11
out = see note (**)
(*) CP-U2
in2 = 2



Cyclic monostable counter with block count

The countdown begins at the preset value n (=SP1) ar
The pulses at IN1 are counted while there is a command signal on IN2. When zero is reached, relay 1 is energised.
The relay remains energised for a time t (=SP2), after which the cycle starts again at the beginning.

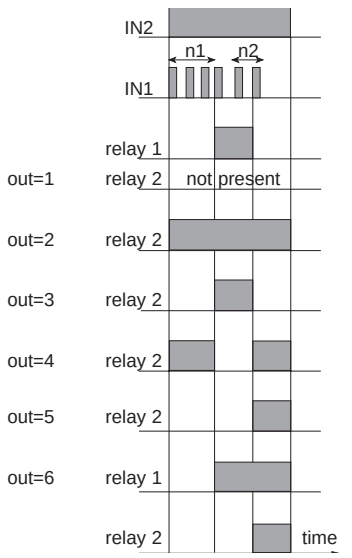
typ = 12
out = see note (**)
(*) CP-U3
in2 = 2



Non cyclic double counter

The countdown starts at the value n1 (=SP1). When the zero is reached, the value n2 (=SP2), begins to countdown to zero, where it stops. Relay 1 is disenergised during the countdown of n1 and is energised during the countdown of n2.

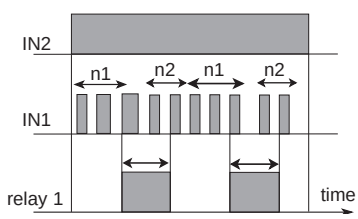
typ = 13
out = 1÷6
in2 = 2



Cyclic double counter

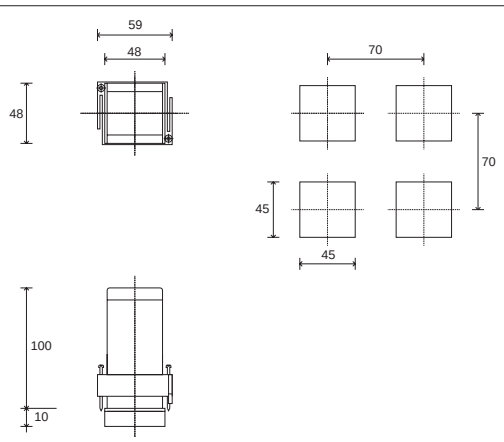
The countdown starts at the value n1 (=SP1). When the zero is reached, the value n2 (=SP2) begins to countdown to zero. When this count has reached zero, n1 begins to countdown once more.
Relay 1 is disenergised during the countdown of n1 and is energised during the countdown of n2.

typ = 14
out = see note (**)
in2 = 2



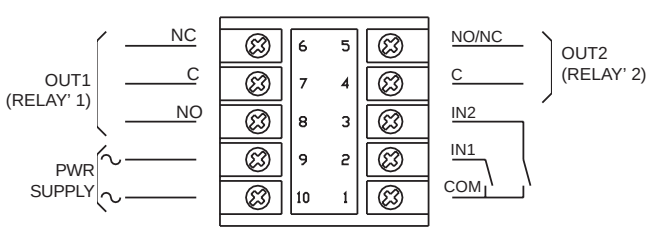
NOTE:
(*) Gefran instruments substituted by the model
(**) out = 1 relay 2 not present, out = 2 relay 2 repeats the input command, out = 3 relay 2 repeats relay 1, out = 4 relay 2 is in opposition to relay 1

DIMENSIONS AND CUT-OUT



Dimensions: 48x48mm (1/16 DIN), depth 100mm

CONNECTION DIAGRAM



Apply user's manual warnings for a correct installation

ORDER CODE

550 □ □

POWER SUPPLY	
24Vdc	**0**
110Vac	**1**
220Vac	**2**
240Vac	**3**
24Vac	**4**
48Vac	**5**
120Vac	**6**

INPUT	
From voltage free contact	**C**
Vac input	**AC**

Please, contact GEFRAN sales people for the codes availability.

The instrument conforms to the European Directives 2004/108/CE and 2006/95/CE with reference to the generic standards:
EN 61000-6-2 (immunity in industrial environment) **EN 61000-6-3** (emission in residential environment) **EN 61010-1** (safety)

GEFRAN

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