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### Important Note

The information shown in these documents is for guidance only. No liability is accepted for any errors or omissions. The designer or user is solely responsible for the safe and proper application of the parts, assemblies or equipment described.

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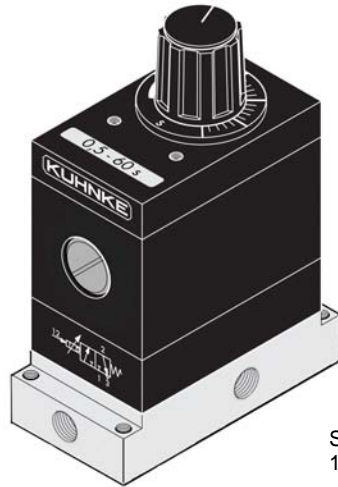
# Counters and Timers

## Series 51 Timers

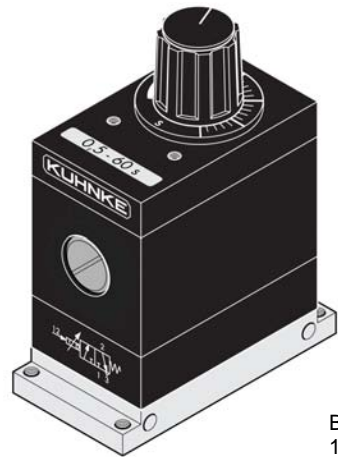
Kuhnke System Logic Devices

### Rear Mounted - Set-it, Forget-it Timer

(Up to 3 minutes)



Side Ported  
1/8 NPT



Bottom Ported  
10-32 (M5)

The Series 51 timer is an adjustable precise time delay control device. The timer is available with either an on delay- (NC) or off delay- (NO) 3 way built-in valve. It is designed for mounting along with valves or other logic devices and is available with 10-32 (M5) bottom ports, or 1/8" NPT side ports. Bottom ported timers can also be panel mounted using (2) threaded M3 inserts on the top cover.

Timing operation can be set up in 2 ways; either via direct connection of the pressure line to be timed (1/8" NPT ported only) or via a separate pilot signal. When pressure is applied to the input (or pilot port) the timing sequence begins by setting a vacuum within the timer. Using atmospheric pressure (independent of line pressure), the timer begins the preset timing cycle. At the end of the cycle an internal 3 way valve is switched providing an output. The timer resets automatically after removal of the control signal.

## Technical Specifications

### Op. Pressure:

25-145 PSI

### Connections:

10-32 (M5) or  
1/8" NPT ports

### Media:

Filtered air, non lubricated.

### Operating Valve:

3 way - internal exhaust  
Orifice size - 2mm, Cv -.13.  
Flow @ 100 PSI - 7 CFM

### Timing Start:

Application of pilot (or Line)  
pressure to control port.

### Reset:

By removal of pilot (or Line)  
signal –independent of whether  
the time interval has elapsed or not.

### Reset Time:

200 ms

### Repeatability:

± 2% of selected time.

### Time Setting:

Via adjustment knob.

### Operation:

Timing cycle uses atmospheric  
pressure drawn into vacuum.

### Air Consumption:

During timing cycle only -.01 CFM

### Materials:

Polyamide housing, aluminum  
base, Buna N seals.

### Operating Ambient:

-10°C to 60°C (14°F to 140°F)

### Dimensions (inches):

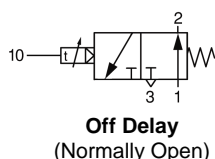
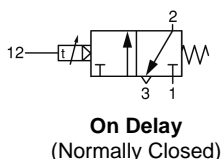
	10-32 port	1/8 port
Height	3 5/8	4 1/8
Width	1 1/2	1 1/2
Length	2 3/4	2 3/4
Weight	12 oz.	15 oz.

### Mounting:

Via 4 holes in base.

### Selection Chart

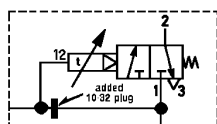
### Diagrams



### Connections

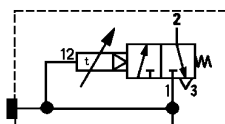
#### 1/8 Side Ported Timers

Side ported timers are supplied with a 10/32 and 1/8 port plug to set up preferred connections.



Separate Pilot Signal

For a *separate (isolated) pilot signal*, insert a 10-32 plug into the internal port (inside port 12 or 10). Use loctite or equal to seal the port. Then connect a separate pilot input signal at port 12 (10). Discard the 1/8 plug.



Supply and Pilot Same Source

For using the *same source* as the supply for the output valve and pilot signal, plug port 12 (10) using the 1/8 plug and connect the switched air supply to port 1. Discard the 10-32 plug.

#### 10-32 (M5) Bottom Ported Timers

Timer is supplied only with separate (isolated) control input signal port. Connections are located on the underside of the timer base.

The bottom ported timer can be panel mounted using (2) M3 threaded inserts on the top cover.

Timing Range		Catalog Number	
		1/8 Side ported	10-32 Bottom Ported
On Delay (NC)	.5 to 60 Seconds	51006-00US	51006-00
	1 to 120 Seconds	51012-00US	51012-00
	1 to 180 Seconds	51018-00US	51018-00
Off Delay (NO)	.5 to 60 Seconds	51006-01US	51006-01
	1 to 120 Seconds	51012-01US	51012-01
	1 to 180 Seconds	51018-01US	51018-01

### Port Identification

- 12 - Control input signal (NC version).
- 10 - Control input signal (NO version).
- 1 - Air supply.
- 2 - Valve output.

### Power Connections

For installations requiring larger output valves, use the standard timer and connect a pneumatically operated single air piloted 3 or 4 way valve of the size required to the timer output. Contact factory with size requirements.

### Typical Circuits

See typical timing circuit diagrams at the end of the timer catalog section for help in constructing pneumatic timer circuits.