1600/1700 Series Delay On Operate Timers

Product Facts

- **AC/DC input delay on operate timer offered in fixed (1600) and adjustable (1700) types**
- **Up to 10A loads**
- **CMOS digital design**
- **Hermetic package**
- **Built to MIL-R-83726 environmentals**
- **Many customizing options**
  - **Extended timing ranges**
  - **Tighter timing tolerances**
  - **Header and mounting**
  - **115Vac, 60 Hz. input types**

Kilovac 1600/1700 series delay on operate timers combine solid state timing circuits with electromechanical output relays in robust hermetically sealed enclosures. The 1600 types are fixed timers, while the 1700 models are adjustable via an external resistor. Numerous output options include 4A rated contacts in 1-4 form C (SPDT - 4PDT) arrangements and 10A rated contacts in 1-2 form C (SPDT-DPDT) arrangements.

Specifications by Model Number – 4 Amp Contact Versions

Fixed Timer Model Number	Adjustable Timer Model Number	Input Voltage	Temperature Range	Housing Length (Dim. "A")	Contact Arrangement
1601	1701	DC	-55°C to +85°C	1.656 [42.06]	1 Form C (SPDT)
1602	1702	DC	-55°C to +85°C	1.656 [42.06]	2 Form C (DPDT)
1603	1703	DC	-55°C to +85°C	2.0 [50.8]	3 Form C (3PDT)
1604	1704	DC	-55°C to +85°C	2.0 [50.8]	4 Form C (4PDT)
1621	1721	DC	-55°C to +125°C	1.656 [42.06]	1 Form C (SPDT)
1622	1722	DC	-55°C to +125°C	1.656 [42.06]	2 Form C (DPDT)
1623	1723	DC	-55°C to +125°C	2.0 [50.8]	3 Form C (3PDT)
1624	1724	DC	-55°C to +125°C	2.0 [50.8]	4 Form C (4PDT)
1651	1751	AC	-55°C to +85°C	2.0 [50.8]	1 Form C (SPDT)
1652	1752	AC	-55°C to +85°C	2.0 [50.8]	2 Form C (DPDT)
1653	1753	AC	-55°C to +85°C	2.375 [60.33]	3 Form C (3PDT)
1654	1754	AC	-55°C to +85°C	2.375 [60.33]	4 Form C (4PDT)
1671	1771	AC	-55°C to +125°C	2.0 [50.8]	1 Form C (SPDT)
1672	1772	AC	-55°C to +125°C	2.0 [50.8]	2 Form C (DPDT)
1673	1773	AC	-55°C to +125°C	2.375 [60.33]	3 Form C (3PDT)
1674	1774	AC	-55°C to +125°C	2.375 [60.33]	4 Form C (4PDT)

Specifications by Model Number – 10 Amp Contact Versions

Fixed Timer Model Number	Adjustable Timer Model Number	Input Voltage	Temperature Range	Housing Length (Dim. "A")	Contact Arrangement
1610	1710	DC	-55°C to +85°C	2.419 [61.44]	1 Form C (SPDT)
1620	1720	DC	-55°C to +85°C	2.419 [61.44]	2 Form C (DPDT)

Electrical Specifications

Timing Range —
1600 series (fixed) — 50 ms to 600 s
1700 series (adjustable) — 50 ms to 240 s

Tolerance — ±10% or 10 ms, whichever is greater

Recycle Time — 10 ms (DC input), 50ms (AC input)

Recovery Time — 10 ms (DC input), 50ms (AC input)

Input Voltage — 18 to 31Vdc, 105 to 125Vac, 400 Hz

Current Drain (at 25°C, 28Vdc) —
DC Coil, 10A contacts —
1- and 2-pole — 135mA maximum

AC or DC Coil, 4A contacts —
1-pole — 100mA maximum
2-pole — 150mA maximum
3- and 4-pole — 200mA maximum

Contact Ratings —
DC Coil, 10A contacts —
10A resistive @ 30Vdc
5A inductive @ 30Vdc
5A resistive @ 115 Vrms, 400 Hz
3A inductive @ 115 Vrms, 400 Hz

AC or DC Coil, 4A contacts —
4A resistive @ 30Vdc
1A inductive @ 30Vdc
2A resistive @ 115 Vrms, 400 Hz
1A inductive @ 115 Vrms, 400 Hz

Environmental Specifications

Temperature Range —
-55°C to +85°C or -55°C to +125°C

Vibration — 20 G's, 10 - 2,000 Hz

Shock — 50 G's, 11 ± 1ms duration

Insulation Resistance — 1,000 megohms, min., at 500Vdc, all terminals to case

Dielectric Strength — 1,000Vrms, 60 Hz., at sea level, all terminals to case

Sealing — Hermetic, 1.3 in. (33.0mm) of mercury

Life — 100,000 operations, min.

Weight —
4A units — 4.5 oz (127.6g) max.
10A units — 8.5 oz (240g) max.

Adjustable Timing Formula (1700 types)

The resistance required to obtain timing within this range is determined by using the formula:

Rx = 400K (T/Tmax.) – 40K, where

Rx = External Resistance in Ohms,
T = Desired Time in Seconds, and
Tmax. = Maximum Time (Code).

A high quality deposited carbon ±1%, 0.1W (min.) resistor is recommended for external resistance.

Part Numbering System

Typical Part Number	1722	–C	– 1102

Model Number:
Four digit code from table above.

Mounting (see outline dimension drawings):
A = Studs on bottom B = Studs on top C = Studs on side

Timing Code:
Four-digit code for any value between 50ms.

A typical part number for an adjustable timer would be 1722–C–1102. This is a DC unit in the -55°C to +125°C temperature range with a 2 form C (DPDT) contact arrangement in a style "C" mounting, with a maximum time delay of 11s.

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Revised 3-13

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Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

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Asia Pacific: +86 0 400 820 6015
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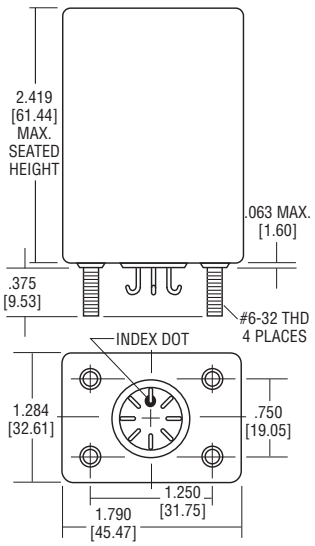
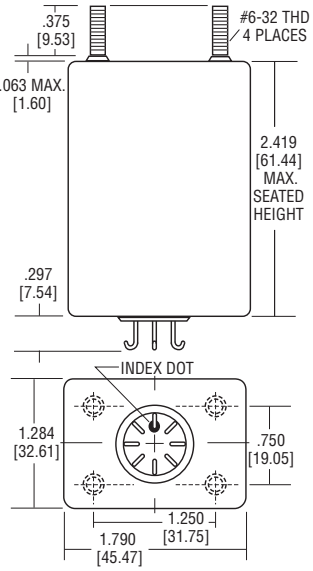
1600/1700 Series Delay On Operate Timers (Continued)

Outline Dimensions

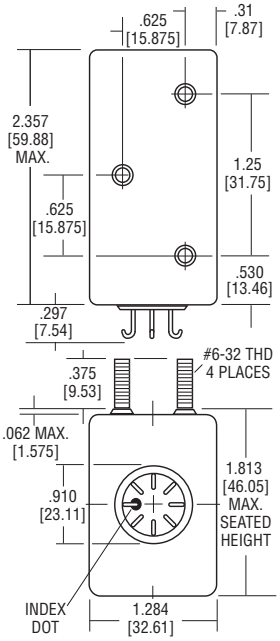
10 Amp Units



Mounting Option A

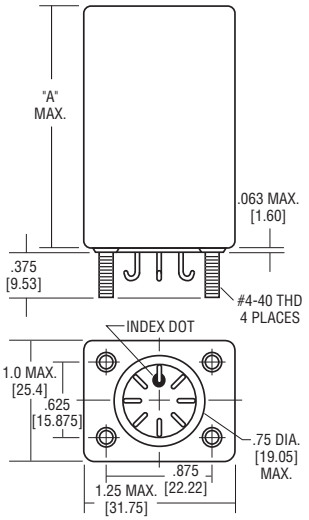


Mounting Option B

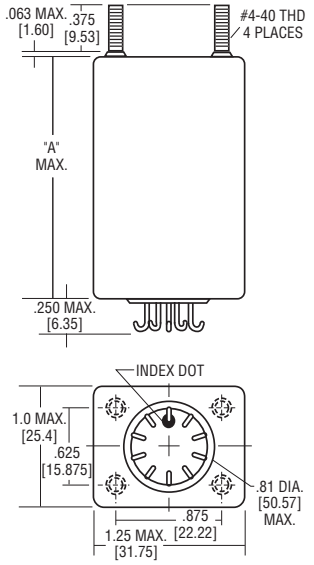


Mounting Option C

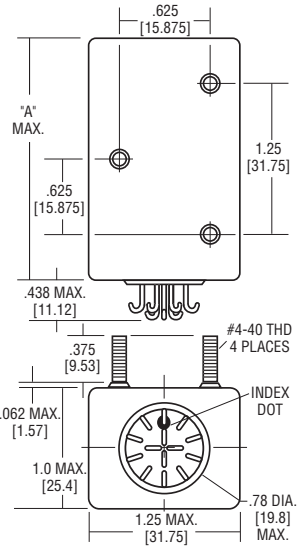
4 Amp Units



Mounting Option A



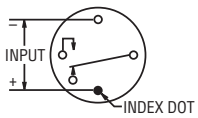
Mounting Option B



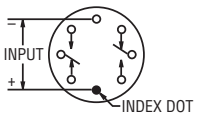
Mounting Option C

Wiring Diagrams

1600 Series (Fixed)



1 Form C



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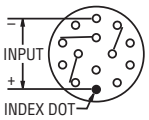

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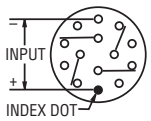
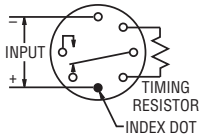


4 Form C

1700 Series (Adjustable)



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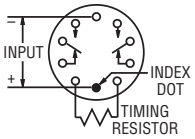

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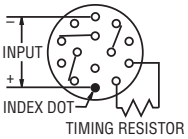

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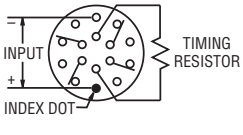

4 Form C

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