



## Bulletin 700-HNC

- **Miniature Timer**
- **Four Different Operating Modes**
- **4PDT**
- **DIN Rail Mount with Socket**
- **Pin Configuration Same as 700-HC 4PDT Relay**
- **Time Range to 10 Hours**

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#### Description

The Bulletin 700-HNC miniature timer is a miniature, newly designed analog timer ideal for space-saving, compact control panels. Because this device operates in multiple operating modes and time ranges, its versatility leads to a drastic reduction in stocked timers.

#### Conformity to Standards:

VDE0435/P2021  
 VDE0110  
 EN50081-2  
 EN50082-2


#### Approvals:

CE Certified  
 UL508  
 CSA22.2 No. 14  
 ACA

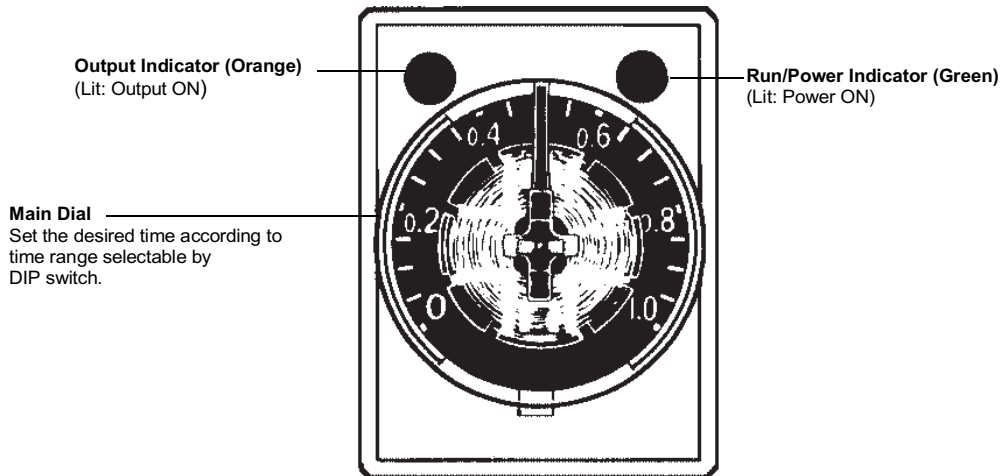
**Your order must include:**

- Cat. No. of the timing relay plus suffixes of selection options.
- Cat. No. of socket required.
- If required, Cat. No. of any accessories.



**Bulletin 700-HNC Miniature Timer with Multiple Time Ranges**

Model	Operating Modes	Output	Input Voltages	Timing Ranges	Sockets	Cat. No.	Factory-stocked Item
 Cat. No. 700-HNC	ON-Delay One Shot Repeat cycle, OFF-start Repeat cycle, ON-start	4PDT	12V DC	.1 s...10 min.	700-HN103 700-HN128	700-HNC44AZ12	✓
				.1 min...10 h		700-HNC44BZ12	✓
			24V DC	.1 s...10 min.		700-HNC44AZ24	✓
				.1 min...10 h		700-HNC44BZ24	✓
			48V DC	.1 s...10 min.		700-HNC44AZ48	
				.1 min...10 h		700-HNC44BZ48	
			100-110V DC	.1 s...10 min.		700-HNC44AZ11	✓
				.1 min...10 h		700-HNC44BZ11	
			125V DC	.1 s...10 min.		700-HNC44AZ25	
				.1 min...10 h		700-HNC44BZ25	
			24V AC	.1 s...10 min.		700-HNC44AA24	✓
				.1 min...10 h		700-HNC44BA24	✓
			100-120V AC	.1 s...10 min.		700-HNC44AA12	✓
				.1 min...10 h		700-HNC44BA12	✓
			200-230V AC	.1 s...10 min.		700-HNC44AA23	✓
				.1 min...10 h		700-HNC44BA23	✓

**General Timer Functions**



**Accessories**

	Description	Pkg. Qty.	Cat. No.	Factory Stock Item
 Cat. No. 700-HN103	<b>Screw Terminal Socket – Panel or DIN Rail Mounting. Guarded Terminal Construction</b> 14-blade miniature socket for use with Bulletin 700-HNC timers.	1	700-HN103	✓
 Cat. No. 700-HN128	<b>Screw Terminal Base Sockets – Panel or DIN Rail Mounting. Open Style Construction</b> 14-blade miniature socket for use with Bulletin 700-HNC timers. Order must be for 10 sockets or multiples of 10.	10	700-HN128	✓

**Bulletin 700-HNC**  
**Plug-in Timing Relays**  
**Specifications ①**

Ratings	
Item	700-HNC
Pilot Duty Rating	NEMA B300
Pin type	Plug-in
Operating voltage range	85%...110% of rated supply voltage (12 VDC: 90%...110% of rated supply voltage) ②
Reset voltage	10% min. of rated supply voltage ③
Power consumption	24 VAC: Relay ON: 1.5 VA (1.1 W) (at 24V AC, 60 Hz) Relay OFF: 0.2 VA (0.1 W) (at 24V AC, 60 Hz) 100...120 VAC: Relay ON: 1.5 VA (1.3 W) (at 120V AC, 60 Hz) Relay OFF: 0.8 VA (0.5 W) (at 120V AC, 60 Hz) 200...230 VAC: Relay ON: 1.8 VA (1.5 W) (at 230V AC, 60 Hz) Relay OFF: 1.2 VA (0.9 W) (at 230V AC, 60 Hz) 12 VDC: Relay ON: 0.9 W (at 12V DC) Relay OFF: 0.07 W (at 12V DC) 24 VDC: Relay ON: 0.9 W (at 24V DC) Relay OFF: 0.07 W (at 24V DC) 48 VDC: Relay ON: 1.0 W (at 48V DC) Relay OFF: 0.2 W (at 48V DC) 100...110 VDC: Relay ON: 1.3 W (at 110V DC) Relay OFF: 0.3 W (at 110V DC) 125 VDC: Relay ON: 1.3 W (at 125V DC) Relay OFF: 0.3 W (at 125V DC)
Control outputs	4PDT: 5 A at 250V AC, resistive load (cosφ = 1)
Characteristics	
▶ ◀ 120V AC Make 240V AC	30 A 15 A
◀ ▶ 120V AC Break 240V AC	3 A 1.5 A
Hp at 120V AC	1/6 Hp
Hp at 240V AC	1/6 Hp
Accuracy of operating time	±1% FS max. (1 s range: ±1%±10 ms max.)
Setting error	±10%±50 ms FS max.
Reset time	Min. power-opening time: 0.1 s max. (including halfway reset)
Influence of voltage	±2% FS max.
Influence of temperature	±2% FS max.
Insulation resistance	100 MΩ min. (at 500V DC)
Dielectric strength	2,000 VAC, 50/60 Hz for 1 min. (between current-carrying terminals and exposed non-current-carrying metal parts) ④ 2,000V AC, 50/60 Hz for 1 min. (between operating power circuit and control output) 2,000V AC, 50/60 Hz for 1 min. (between different pole contacts; 2-pole model) 1,500V AC, 50/60 Hz for 1 min. (between different pole contacts; 4-pole model) 1,000V AC, 50/60 Hz for 1 min. (between non-continuous contacts)
Vibration resistance	Malfunction: 10...55 Hz, 0.5 mm single amplitude
Shock resistance	Malfunction: 100 m/s <sup>2</sup> (approx. 10G)
Ambient temperature	Operating: -10°C...50°C (with no icing) Storage: -25°C...65°C (with no icing)
Ambient humidity	Operating: 35%...85%
Life expectancy	Mechanical: 10,000,000 operations min. (under no load at 1,800 operations/h) Electrical: 4PDT: 200,000 operations min. (H3YN-4-Z/-41-Z: 100,000 operations min.) (3 A at 250V AC, resistive load at 1,800 operations/h)

① Single-phase, full-wave-rectified power supplies can be used.

② When using the 700-HNC continuously in any place where the ambient temperature is in a range of 45°C...50°C, supply 90%...110% of the rated supply voltages (supply 95%...110% with 12 VDC type).

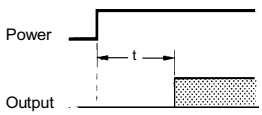
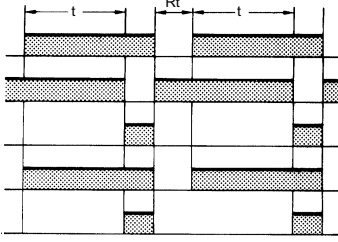
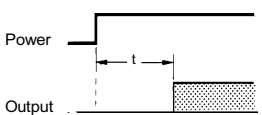
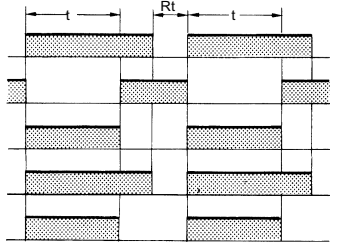
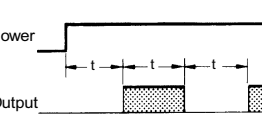
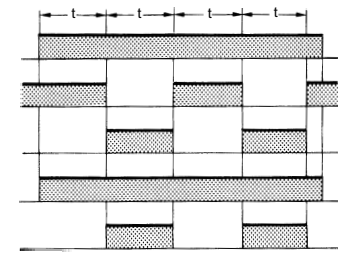
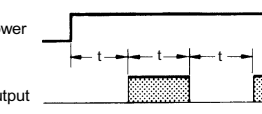
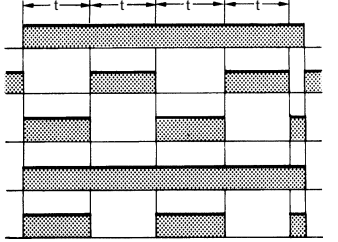
③ Set the reset voltage as follows to ensure proper resetting.

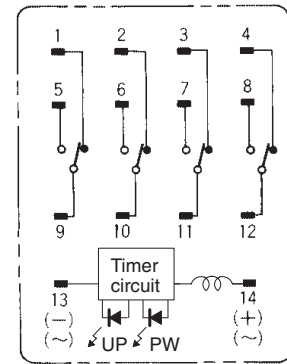
- 100...120V AC: 10V AC max.
- 200...230V AC: 20V AC max.
- 100...110V DC: 10V DC max.

<b>Characteristics, Continued</b>	
Noise immunity	±1.5 kV, square-wave noise by noise simulator (pulse width: 100 ns/1 μs, 1-ns rise)
Static immunity	Destruction: 8 kV Malfunction: 4 kV
Enclosure rating	IP40
Weight	Approx. 50 g
EMC	Emission Enclosure: EN55011 Group 1 class A Emission AC Mains: EN55011 Group 1 class A Immunity ESD: EN61000-4-2:4 kV contact discharge (level 2) 8 kV air discharge (level 3) Immunity RF-interference: ENV50140: 10 V/m (amplitude modulated, 80 MHz to 1GHz) (level 3) 10 V/m (pulse modulated, 900 MHz) Immunity Conducted Disturbance: ENV50141: 10 V (0.15...80 MHz) (level 3) Immunity Burst: EN61000-4-4:2 kV power-line (level 3) 2 kV I/O signal-line (level 4)
Approved standards	UL508, CSA22.2 No. 14 Conforms to VDE0435/P2021, VDE0110 (for in-panel use) Conforms to EN50081-2, EN50082-2

**Bulletin 700-HNC**  
**Plug-in Timing Relays**  
**Timing Charts**

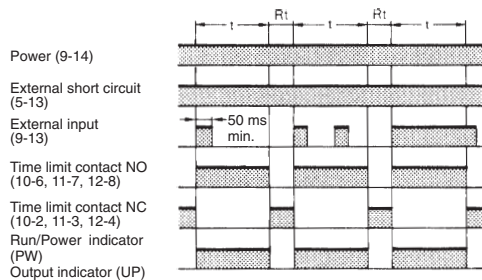
**Note:** t: Set time  
 Rt: Reset time

Operating Mode	Timing Charts / Wiring Diagram	
<p><b>ON-Delay</b></p> 	<p>Power (13-14)            Time limit contact NC (9-1, 10-2, 11-3, 12-4)            Time limit contact NO (9-5, 10-6, 11-7, 12-8)            Run/Power indicator (PW)            Output indicator (UP)</p>	
<p><b>One Shot</b></p> 	<p>Power (13-14)            Time limit contact NC (9-1, 10-2, 11-3, 12-4)            Time limit contact NO (9-5, 10-6, 11-7, 12-8)            Run/Power indicator (PW)            Output indicator (UP)</p>	
<p><b>Repeat Cycle OFF-Start</b></p> 	<p>Power (13-14)            Time limit contact NC (9-1, 10-2, 11-3, 12-4)            Time limit contact NO (9-5, 10-6, 11-7, 12-8)            Run/Power indicator (PW)            Output indicator (UP)</p>	
<p><b>Repeat Cycle ON-Start</b></p> 	<p>Power (13-14)            Time limit contact NC (9-1, 10-2, 11-3, 12-4)            Time limit contact NO (9-5, 10-6, 11-7, 12-8)            Run/Power indicator (PW)            Output indicator (UP)</p>	

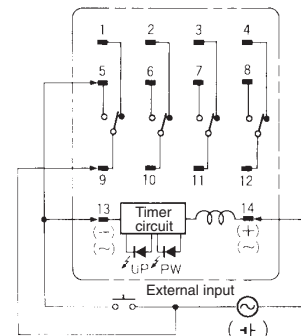


**Pulse Operation**









A pulse output for a certain period can be obtained with a random external input signal. Use the 700-HNC timing relay in interval mode as shown in the following timing charts.



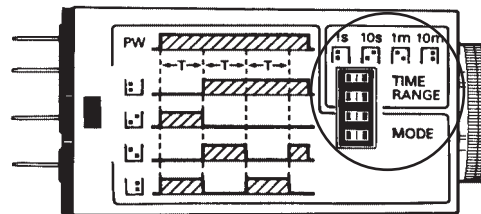
**Note:** t: Set time  
 Rt: Reset time







### Time Ranges

Cat. No.	Time Range	Time Setting Range	Setting	Factory-Set
700-HNC44AZ12 700-HNC44AZ24 700-HNC44AZ48 700-HNC44AZ11 700-HNC44AZ25 700-HNC44AA24 700-HNC44AA12 700-HNC44AA23	1 s	0.1 s...1 s		Yes
	10 s	1 s...10 s		No
	1 min.	0.1 s...1 min.		No
	10 min.	1 min....10 min.		No
700-HNC44BZ12 700-HNC44BZ24 700-HNC44BZ48 700-HNC44BZ11 700-HNC44BZ25 700-HNC44BA24 700-HNC44BA12 700-HNC44BA23	1 min.	0.1 min....1 min.		Yes
	10 min.	1 min....10 min.		No
	1 h	0.1 h...1 h		No
	10 h	1 h...10 h		No

**Note:** The top two DIP switch pins are used to select the time ranges.



### Operating Modes

Operating Mode	Setting	Factory-set
ON-delay		Yes
One Shot		No
Repeat Cycle OFF-start		No
Repeat Cycle ON-start		No

**Note:** The bottom two DIP switch pins are used to select the time ranges.

# Plug-in Timing Relays

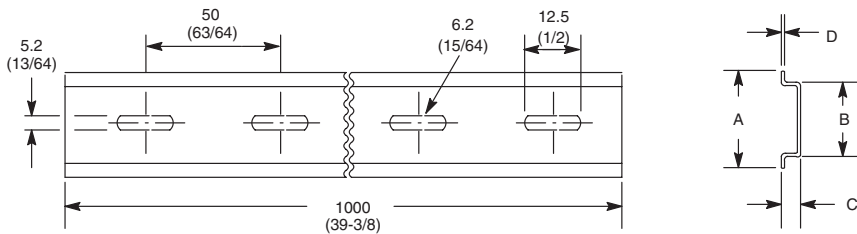
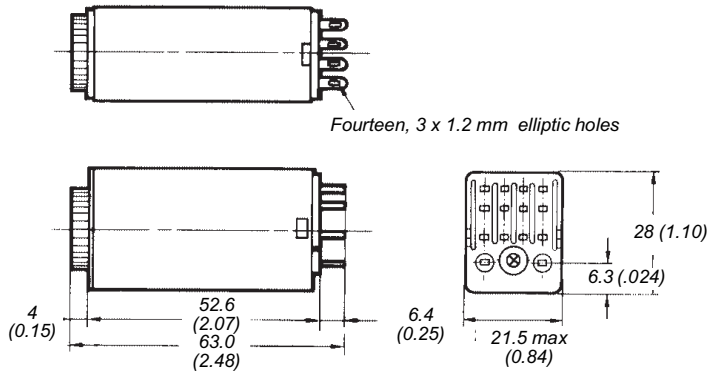
## Approximate Dimensions

Dimensions are shown in millimeters (inches) where not specified. Dimensions are not intended to be used for manufacturing purposes.

### Timers

#### Front Mounting

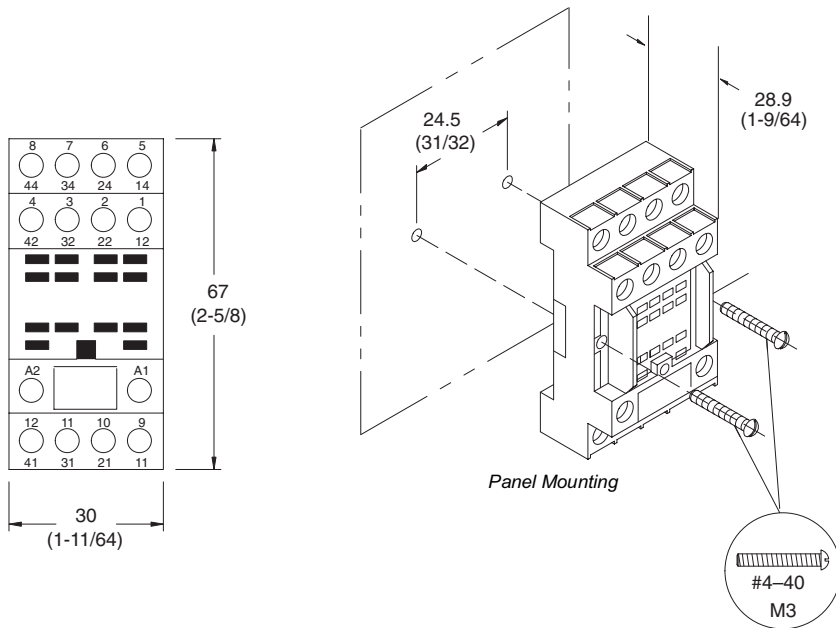
*Dimensions for cat. no. 700-HNC*



*Cat. No. 199-DR1 DIN Mounting Rail Series B  
 Cat. No. 199-DR4 DIN Mounting Rail Series B Has No Mounting Holes*

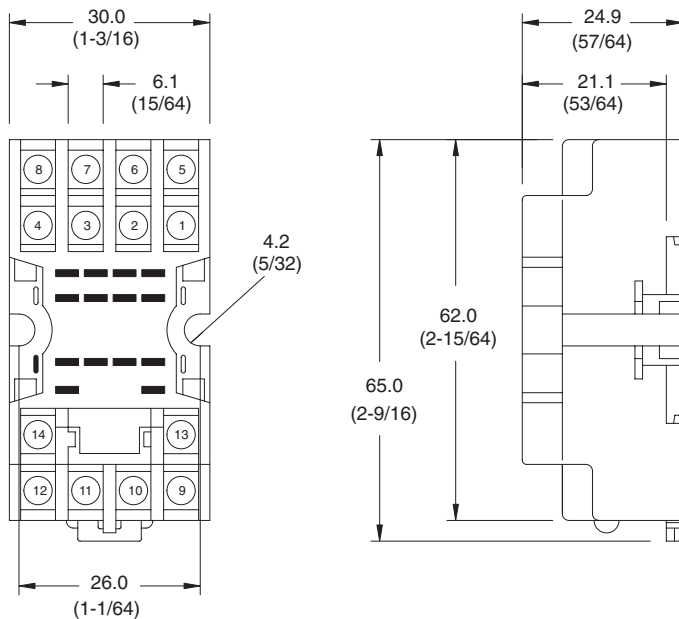
Cat. No.	A	B	C	D	Approx. Shipping Wt.
199-DR1	35 (1-3/8)	27 (1-1/16)	7.5 (19/64)	1.02 (1/64)	1.85 kg (4.07 lbs.) (10/pkg)
199-DR4	35 (1-3/8)	27 (1-1/16)	15 (19/32)	2.3 (3/32)	3.68 kg (8 lbs.) (5/pkg)

Dimensions are shown in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.



Cat. No. 700-HN103

Wire Size: 2 x 1.5 mm<sup>2</sup> (#2-16 AWG...#1-20 AWG)  
 (Either Solid or Stranded)  
 Strip Length: 9 mm (3/8 in.) – Torque: 0.8 Nm (7 lb.-in.)



Cat. No. 700-HN128

Wire Size: 2 x 1.5 mm<sup>2</sup> (#2-16 AWG...#1-20 AWG)  
 (Either Solid or Stranded)  
 Strip Length: 9 mm (3/8 in.) – Torque: 0.8 Nm (7 lb.-in.)