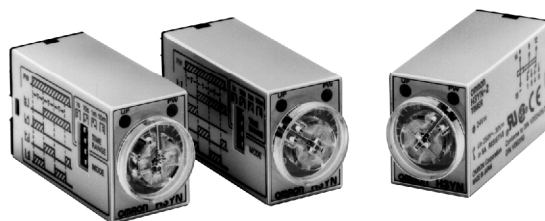


Solid-State Timer

H3YN

Miniature Timer with Multiple Time Ranges and Multiple Operating Modes

- Minimize Inventory
- Standard multiple operating modes and multiple time ranges
- 4PDT or DPDT control output
- LED power-ON and time-UP indicators
- Sockets, hold-down clips and mounting accessories may be ordered separately



Ordering Information

Supply voltage	Time-limit contact	Short-time range model (0.1 s to 10 min)	Long-time range model (0.1 min to 10 h)
24, 100 to 120, 200 to 230 VAC; 12, 24, 48, 100 to 110, 125 VDC	DPDT	H3YN-2	H3YN-21
	4PDT	H3YN-4	H3YN-41
24 VDC	4PDT (Twin contact)	H3YN-4-Z	H3YN-41-Z

Note: Specify both the model number and supply voltage when ordering.

Example: H3YN-2 24 VAC

Supply voltage

MODEL NUMBER LEGEND:

H3YN - - -
1 2 3

1. Output
2: DPDT
4: 4PDT

2. Time Range
None: Short-time range (0.1 s to 10 min)
1: Long-time range (0.1 min to 10 hrs)

3. Contact Type
None: Single contact
Z: Twin contact

ACCESSORIES (ORDER SEPARATELY)

Connecting Socket

Applicable Timer	Track-mounting/front-connecting socket	Back-connecting socket		
		Solder terminal	Wire-wrap terminal	PCB terminal
H3YN-2/-21	PYF08A-E, PYF08A-N	PY08	PY08QN(2)	PY08-02
H3YN-4/-41 H3YN-4-Z/-41-Z	PYF14A-E, PYF14A-N	PY14	PY14QN(2)	PY14-02

Hold-Down Clips

Applicable socket	Part number
PYF08A-E, PYF08A-N, PYF14A-E, PYF14A-N	Y92H-3
PY08, PY08QN(2), PY08-02, PY14, PY14QN(2), PY14-02	Y92H-4

Panel Adapter

Applicable timer	Part number
H3YN-2/21, H3YN-4/41, H3YN-4-Z/41-Z	Y92F-78

Specifications

RATINGS

Item	H3YN-2/-4/-4-Z	H3YN-21/-41/-41-Z
Time ranges	0.1 s to 10 min (1 s, 10 s, 1 min, or 10 min max. selectable)	0.1 min to 10 h (1 min, 10 min, 1 h, or 10 h max. selectable)
Supply voltage	24, 100 to 120, 200 to 230 VAC; 12, 24, 48, 100 to 110, 125 VDC (see note 1)	
Operating mode	ON-delay, interval, repeat cycle with ON-start or OFF-start (selectable with DIP switch)	
Operating voltage	85% to 110% of rated supply voltage (12 VDC: 90% to 110% of rated supply voltage) (see note 2)	
Power consumption	24 VAC: Relay ON: 1.1 VA (at 24 VAC, 60 Hz) Relay OFF: 0.2 VA (at 24 VAC, 60 Hz) 100 to 120 VAC: Relay ON: 14 VA (at 120 VAC, 60 Hz) Relay OFF: 0.6 VA (at 120 VAC, 60 Hz) 200 to 230 VAC: Relay ON: 1.5 VA (at 230 VAC, 60 Hz) Relay OFF: 0.9 VA (at 230 VAC, 60 Hz) 12 VDC: Relay ON: 0.9 W (at 12 VDC) Relay OFF: 0.07 W (at 12 VDC) 24 VDC: Relay ON: 0.9 W (at 24 VDC) Relay OFF: 0.7 W (at 24 VDC) 48 VDC: Relay ON: 1.0 W (at 48 VDC) Relay OFF: 0.2 W (at 48 VDC) 100 to 110 VDC: Relay ON: 1.3 W (at 110 VDC) Relay OFF: 0.3 W (at 110 VDC) 125 VDC: Relay ON: 1.3 W (at 125 VDC) Relay OFF: 0.3 W (at 125 VDC)	
Control outputs	DPDT: 5 A at 250 VAC, resistive load ($\cos\phi = 1$) 4PDT: 3 A at 250 VAC, resistive load ($\cos\phi = 1$)	

- Note:**
1. Single-phase, full-wave-rectified power supplies can be used.
 2. When using the H3YN in any place where the ambient temperature is more than 50°C, supply 90% to 110% of the rated supply voltages (supply 95% to 110% with 12 VDC type).

CHARACTERISTICS

Item	H3YN-2/-21	H3YN-4/-41
Repeat accuracy	$\pm 1\%$ FS max. (1 s range: $\pm 1\% \pm 10$ ms max.)	
Setting error	$\pm 10\% \pm 50$ ms FS max.	
Resetting time	Min. power-opening time: 0.1 s max. (including halfway reset)	
Insulation resistance	100 M Ω min. (at 500 VDC)	
Dielectric strength	2,000 VAC, 50/60 Hz for 1 min (between current-carrying terminals and exposed non-current-carrying metal parts) 2,000 VAC, 50/60 Hz for 1 min (between operating circuit and control output) 1,000 VAC, 50/60 Hz for 1 min (between non-continuous contacts)	
	2,000 VAC, 50/60 Hz for 1 min (between contacts of different poles)	2,000 VAC, 50/60 Hz for 1 min (between contacts of different poles)
Vibration	Mechanical durability	10 to 55 Hz, 0.75-mm single amplitude
	Malfunction durability	10 to 55 Hz, 0.5-mm single amplitude
Shock	Mechanical durability	1,000 m/s ² (approx. 100G)
	Malfunction durability	100 m/s ² (approx. 10G)
Ambient temperature	Operating	-10°C to 50°C (14°F to 122°F) with no icing
	Storage	-25°C to 65°C (-13°F to 149°F) with no icing
Ambient humidity	Operating	35% to 85% RH
Service life	Mechanical	10,000,000 operations min. (under no load at 1,800 operations/h)
	Electrical	DPDT: 500,000 operations min. (5 A at 250 VAC, resistive load at 1,800 operations/h) 4PDT: 200,000 operations min. (H3YN-4-Z/-41-Z: 100,000 operations min.) (3 A at 250 VAC, resistive load at 1,800 operations/h)
Weight	Approx. 50 g	
Approvals	UL/CSA/CE (EMC) (LV)	

Operation

■ DIP SWITCH SETTINGS

The 1-s range and ON-delay mode for H3YN-2/-4/-4-Z, the 1-min range and ON-delay mode for H3YN-21/-41/-41-Z are factory-set before shipping.

Time Ranges

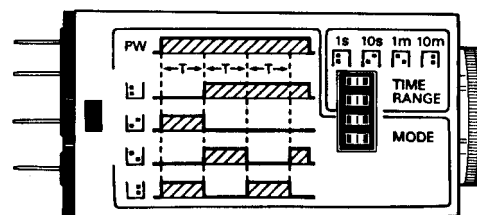
Model	Time range	Time setting range	Setting	Factory-set
H3YN-2, H3YN-4 H3YN-4-Z	1 s	0.1 to 1 s		Yes
	10 s	1 to 10 s		No
	1 min	0.1 to 1 min		No
	10 min	1 to 10 min		No
H3YN-21, H3YN-41 H3YN-41-Z	1 min	0.1 to 1 min		Yes
	10 min	1 to 10 min		No
	1 h	0.1 to 1 h		No
	10 h	1 to 10 h		No

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

Operating Modes

Operating mode	Setting	Factory-set
ON-delay		Yes
Interval		No
Repeat cycle OFF-start		No
Repeat cycle ON-start		No

Note: The bottom two DIP switch pins are used to select the operating mode.



Connections

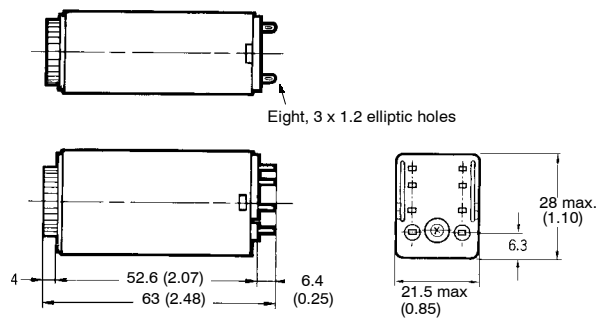
Part number	Power supply terminal numbers		Output terminal numbers			
	AC (common), DC-	AC (hot), DC+	Type	COM	NC	NO
H3YN-21-21	13	14	Timed contacts (DPDT)	9	1	5
H3YN-4/-41 H3YN 4-Z/41-Z	13	14	Timed contacts (4PDT)	9 10 11 12	1 2 3 4	5 6 7 8

Dimensions

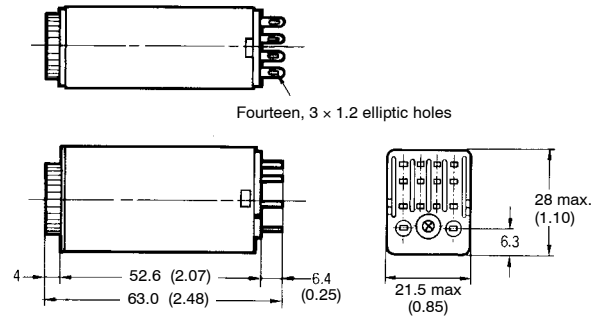
Unit: mm (inch)

■ TIMERS

H3YN-2/-21

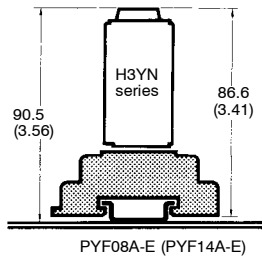


H3YN-4/-41 H3YN-4-Z/-41-Z

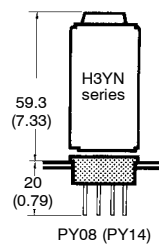


Overall Mounting Depth

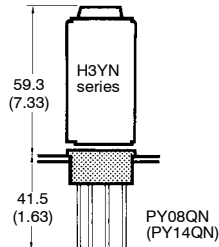
PYF08E/PYF08A-N (PYF14A/PYF14-N see note)



PY08 (PY14 see note)



PY08QN (PY14QN see note)



Note: Models in parentheses are sockets connecting to the H3YN-4/-4-Z.