

## Motor Timer

## H2A

### Miniature, High-performance Motor Timer

- Employs high-reliability bifurcated contacts for output.
- Moving pointer provided in all types for confirmation of elapsed time.
- Employs time-out and power ON indicators for all types.
- Wide variety of timing ranges from 5 s to 24 hrs.



### Ordering Information

Operation/resetting system	Internal connection	Time-limit contact	Instantaneous contact	Mounting
				Surface mounting (see note 2)
Time-limit operation/ self-resetting	Parallel motor and clutch connection	SPDT	---	H2A
			SPST-NO	H2A-H

- Note:** 1. Specify both the model number and supply voltage when ordering.  
2. Surface mounting models can be used as a flush mounting type by attaching an exclusive adapter (Y92F-40) to the timer.

### Specifications

#### ■ Time Ranges

Rated time	Time setting range		Time division
	50 Hz	60 Hz	
5 s	0.2 to 6 s	0.2 to 5 s	0.2 s
10 s	0.5 to 12 s	0.5 to 10 s	0.5 s
30 s	1 to 36 s	1 to 30 s	1.0 s
60 s	2 to 72 s	2 to 60 s	2.0 s
3 min	1/6 to 3 1/2 min	1/6 to 3 min	10.0 s
6 min	1/4 to 7 1/6 min	1/4 to 6 min	15.0 s
12 min	1/2 to 14 min	1/2 to 12 min	30.0 s
30 min	1 to 36 min	1 to 30 min	1.0 min
60 min	2 to 72 min	2 to 60 min	2.0 min
3 hrs	1/6 to 3 1/2 hrs	1/6 to 3 hrs	10.0 min
6 hrs	1/4 to 7 hrs	1/4 to 6 hrs	15.0 min
12 hrs	1/2 to 14 hrs	1/2 to 12 hrs	30.0 min
24 hrs	1 to 28 hrs	1 to 24 hrs	1.0 hrs

#### ■ Ratings

<b>Rated supply voltage</b>	100, 110, 200, or 220 VAC (50 Hz), 100/110, 200/220 VAC (60 Hz)
<b>Operating voltage range</b>	85% to 110% of rated supply voltage
<b>Power consumption</b>	Approx. 3 VA
<b>Control outputs</b>	Standard type: 2 A at 250 VAC, resistive load (cosφ = 1)

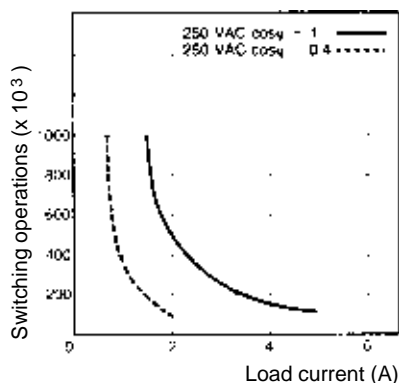
**Note:** The front panel of the timer is color-coded to identify the following supply voltage classifications:

- 100, 110 V: Blue
- 200, 220 V: Red
- Other classes: Black

■ Characteristics

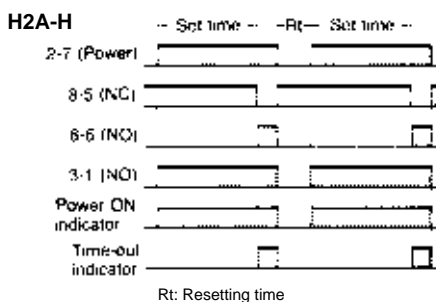
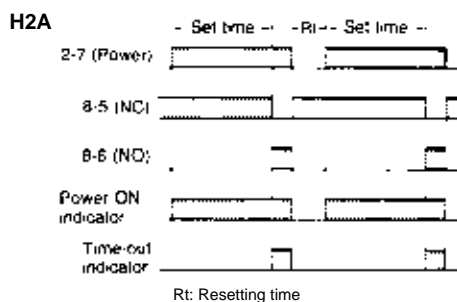
Accuracy of operating time	±2% max. (±3% max. for the 5-s model)
Setting error	±5% max.
Reset time	0.3 s max.
Influence of voltage	±1% max.
Influence of temperature	±2% max.
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength	2,000 VAC, 50/60 Hz for 1 min (between current-carrying and non-current-carrying parts, between contact and control circuit and between contacts of different polarities) 1,000 VAC, 50/60 Hz for 1 min (between non-continuous contacts)
Vibration resistance	Destruction: 16.7 Hz with 4-mm double amplitude Malfunction: 10 to 55 Hz with 0.5-mm double amplitude
Shock resistance	Destruction: 1,000 m/s <sup>2</sup> (approx. 100G) Malfunction: 100 m/s <sup>2</sup> (approx. 10G) (5G for lateral shocks)
Ambient temperature	Operating: -10°C to 50°C
Ambient humidity	Operating: 45% to 85%
Life expectancy	Mechanical: 1,000,000 operations min. (under no load at operating of 1,800 operations/hr) Electrical: See "Engineering Data"
Motor life expectancy	20,000 hrs
Approved standards	UL (File No. E52800-US), CSA (File No. LR22310-US)
Weight	Approx. 170 g

Engineering Data



Operation

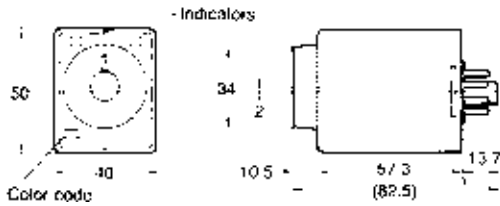
■ Timing Chart



# Dimensions

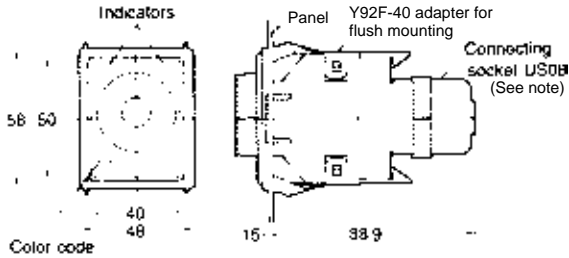
**Note:** All units are in millimeters unless otherwise indicated.

## H2A/H2A-H

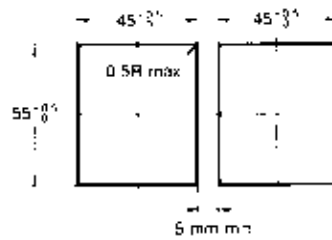


**Note:** F-shaped hook (PHC-1) for PF085A and L-shaped hook (PHC-4) for PL08 are supplied with the timer.

## H2A(-H) with Adapter



### Panel Cutouts

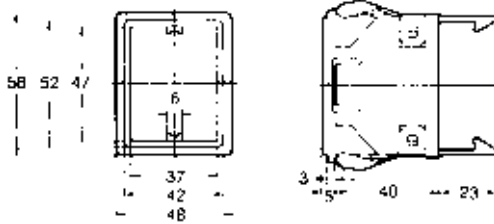


**Note:** Back connecting socket US08 and Y-shaped hook PHC-3 are supplied with the timers.

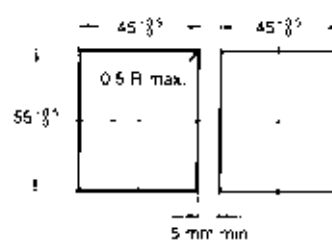
## ■ Accessories (Order Separately)

### Adapter for Flush Mounting

#### Y92F-40



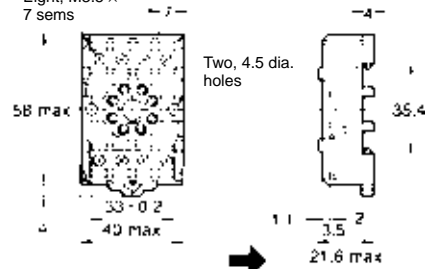
### Panel Cutouts



### Track Mounted/Front Connecting Socket

#### PF085A

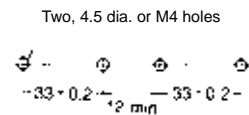
Eight, M3.5 x 7 sems



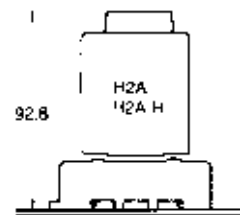
### Terminal Arrangement (Top View)



### Mounting Holes



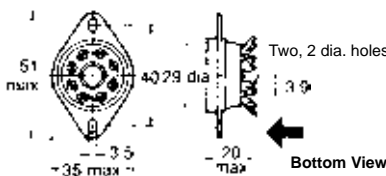
### Mounting Height of Timer with Socket



**Note:** PF085A can be used as a front connecting socket.

### Back Connecting Socket

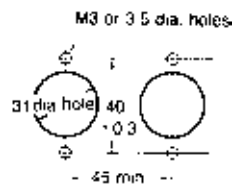
#### PL08 (Solder Terminals)



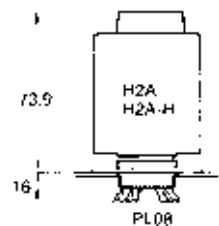
### Terminal Arrangement (Bottom View)



### Mounting Holes

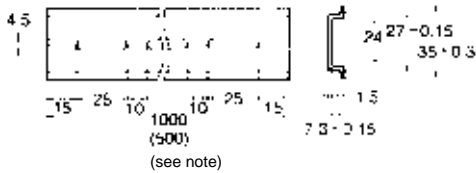


### Mounting Height of Timer with Socket



**Mounting Track (Meets DIN EN50022)**

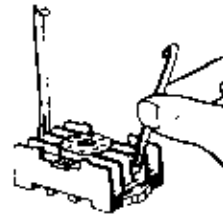
PFP-100N/PFP-50N



**Note:** This dimension applied to PFP-50N.

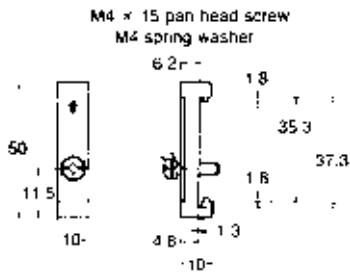
**Hold-down Clips (Attached)**

PHC-1 For PF085A

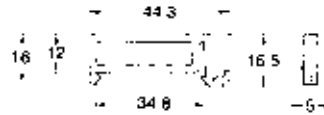


**End Plate**

PFP-M



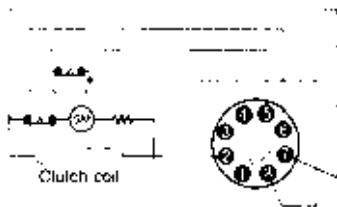
PFP-S



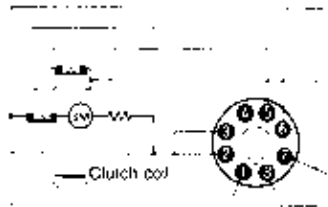
**Installation**

**Terminal Arrangement**

H2A



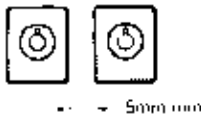
H2A-H



**Precautions**

**Mounting**

When two or more timers are to be mounted in line, provide a distance of more than 5 mm between the two adjacent timers.



When two or more timers mounted in line are to be continuously energized at the same time after the set time has elapsed, be sure to limit the carry current to less than 1 A.

When using the timers at an ambient temperature of more than 40°C, be sure to reset the timers immediately after the set time has elapsed.

**Wiring**

When wiring, employ a multi-core cable having a finished outer diameter of less than 10.5 mm, or insulated (twisted) wires with less than a 3 mm outer diameter.

**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**  
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. L04-E1-8 **In the interest of product improvement, specifications are subject to change without notice.**

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