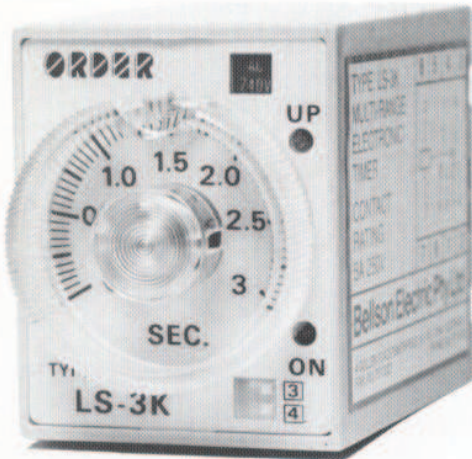




**Bellson  
Electric**

# ELECTRONIC TIME DELAY RELAYS









The ORDER LS-3K range of high repeat accuracy electronic time delay relays provide an ultra wide time delay from: 0.1 second to 30 hours



## FEATURES:

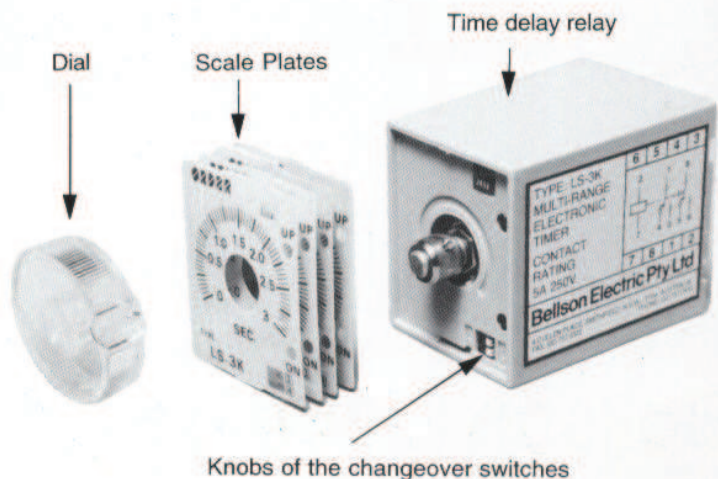
- ★ Compact Size
- ★ Large linear calibrated dial
- ★ Simple conversion of timing range
- ★ Timing status indication by 2 LED's
- ★ 5 Timers with 4 timing ranges on each unit
- ★ AC control voltages up to 415 Volts
- ★ DC control voltages 12-48 Volts
- ★ Instantaneous and timed change-over contacts

## SETTING TIME RANGE:

Delay time designation	Switch positions for altering the range			
	1  3 2  4	1  3 2  4	1  3 2  4	1  3 2  4
	adjustable range	adjustable range	adjustable range	adjustable range
<b>A</b>	0.1 – 1 sec.	1 – 10 sec.	6 – 60 sec.	1 – 10 min.
<b>B</b>	0.3 – 3 sec.	3 – 30 sec.	0.3 – 3 min.	3 – 30 min.
<b>C</b>	0.6 – 6 sec.	6 – 60 sec.	0.6 – 6 min.	6 – 60 min.
<b>D</b>	6 – 60 sec.	1 – 10 min.	6 – 60 min.	1 – 10 hrs.
<b>E</b>	0.3 – 3 min.	3 – 30 min.	0.3 – 3 hrs.	3 – 30 hrs.

## ADJUSTABLE RANGE SETTING:

- (1) Remove the dial and the four scale plates.
- (2) Adjust the knobs of the changeover switches by setting them according to the time range table.
- (3) Place the plates to be used on top of the others and then reinstall the scale plates and the dial.
- (4) Test the delay time by applying a control voltage to the time delay relay.







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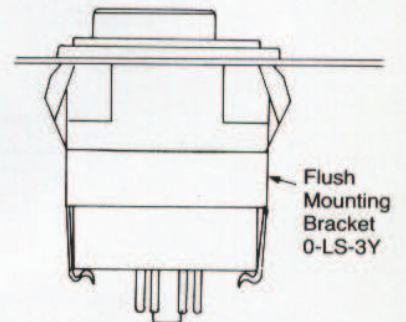
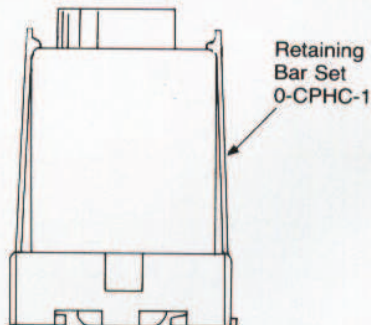
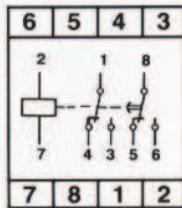
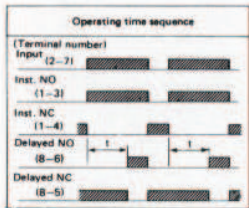
# ELECTRONIC TIME DELAY RELAYS



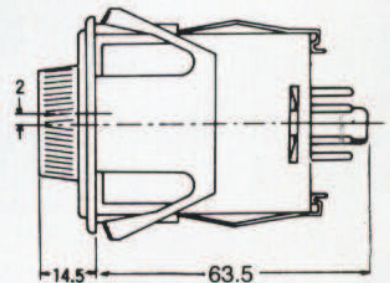
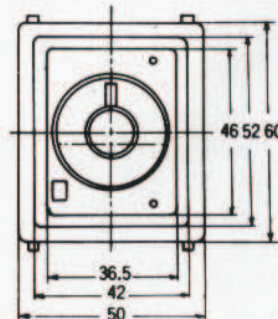
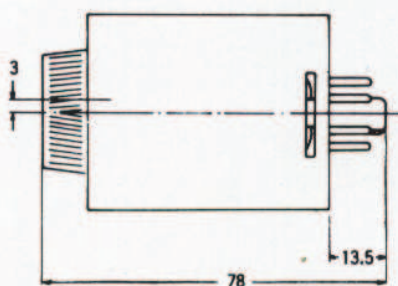
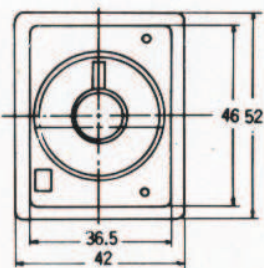
## TECHNICAL DATA:

- Rated Operating Control Voltage : 12, 24, 48, 110, 240 and 415V AC  
12, 24 and 48V D/C
- Rated Contact Capacity (Resistive) : 5A 250V AC  
1A 415V AC
- Rated Mechanical Life : 5 Million Operations
- Rated Electrical Life : 0.2 Million Operations
- Variation in Repeat Operating Time :  $\pm 0.5\%$  Max.
- Variation in Time Due to Temp. :  $\pm 2\%$  Max.
- Variation in Time Due to Voltage :  $\pm 1\%$  Max.
- Reset Time : 0.1 Sec. Max.
- Power Consumption : 2.5 VA
- Ambient Temperature Range :  $-10^{\circ}\text{C}$  to  $55^{\circ}\text{C}$

## CONNECTION DETAILS:



## DIMENSIONAL DETAILS:



PUBLICATION No. P29-1A

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DISTRIBUTED BY:

## GENERAL INFORMATION

The LS-3K range of high repeat accuracy Electronic Time Delay Relays can provide a wide range of time delays from 0.1 seconds to 30 hours in five (5) time ranges. (A, B, C, D & E).

With one (1) time delay change over contact and one (1) instantaneous contact, as standard.

**\* NOTE: All LS-3K and BSD-1 Timers are supplied with DIN Rail/Panel mounting octal socket as standard.**

### ELECTRONIC TIMERS

DESIGNATION	ADJUSTABLE RANGE	ADJUSTABLE RANGE	ADJUSTABLE RANGE	ADJUSTABLE RANGE	DESCRIPTION	CODE	
LS-3K	A	0.1 - 1 sec	1 - 10 sec	6 - 60 sec	1 - 10 min	240V TIMER Adjustable up to 10 MIN	32 - 3KA / 240
LS-3K	B	0.3 - 3 sec	3 - 30 sec	0.3 - 3 min	3 - 30 min	240V TIMER Adjustable up to 30 MIN	32 - 3KB / 240
LS-3K	C	0.6 - 6 sec	6 - 60 sec	0.6 - 6 min	6 - 60 min	240V TIMER Adjustable up to 60 MIN	32 - 3KC / 240
LS-3K	D	6 - 60 sec	1 - 10 min	6 - 60 min	1 - 10 hrs	240V TIMER Adjustable up to 10 HRS	32 - 3KD / 240
LS-3K	E	0.3 - 3 min	3 - 30 min	0.3 - 3 hrs	3 - 30 hrs	240V TIMER Adjustable up to 30 HRS	32 - 3KE / 240
<b>ADJUSTABLE RANGE SETTING:</b> (1) Remove the dial and the four scale plates. (3) Place the plates to be used on top of the others and then reinstall the scale plates and the dial. (2) Adjust the knobs of the changeover switches by setting them according to the time range table. (4) Test the delay time by applying a control voltage to the time delay relay.							
12V TIMER Adjustable up to 30 MIN 32 - 3KB / 012 24V TIMER Adjustable up to 30 MIN 32 - 3KB / 024 110V TIMER Adjustable up to 30 MIN 32 - 3KB / 110 415V TIMER Adjustable up to 30 MIN 32 - 3KB / 415 12V D/C TIMER Adjustable up to 30 MIN 32 - 3KB / D12 24V D/C TIMER Adjustable up to 30 MIN 32 - 3KB / D24							

### ELECTRONIC TIMER ACCESSORIES

DESCRIPTION	CODE
LS3K & BSD FLUSH MOUNTING BRACKET	32-LSY
LS3K & BSD BACK CONNECT SOCKET	32-P3G08
LS3K & BSD SPARE DIN/PANEL SOCKET*	32-PF085

### STAR - DELTA TIMER

The **Powerite** BSD-1 Star-Delta Starter Timer has been designed to provide a Simple, Economical and Reliable Operation for Star-Delta Motor Starters.



- Features:**
- Unique "Seal In" Contact
  - Simple Star-Delta Starter Wiring
  - Inbuilt Interlocks
  - Clear Operating Status
    - Delta Green LED
    - Star Red LED
    - Simple Adjustable Time Delay
  - Control Voltages up to 415V

DESCRIPTION	CODE
240V BSD-1 STAR-DELTA TIMER	32-BSD / 240
415V BSD-1 STAR-DELTA TIMER	32-BSD / 415

### SCHEMATIC DIAGRAM FOR BASIC CIRCUIT

