

ELECTRONIC TIMERS



BCH ELECTRIC LIMITED
we care for you



Electronic Timers

- Multi Function or Mono Function
- Multi Time Range
- Multi Voltage
- Large calibrated dial for easy and accurate time setting
- Compact Design
- LED indications for Input supply and Output status
- Surface mounting & DIN rail mounting
- Confirms to IEC 1000-4-2; IEC 1000-4-3; IEC 1000-4-4; IEC 1000-4-5; IEC 1000-4-6; IEC 1000-4-11, CISPR-22
- 1 changeover relay output (SPDT)
- Suitable for Sequence Control and other applications



Encapsulated Timers

- Mono Function
- Single time Range - Fixed or variable through potentiometer
- Fixed Voltage
- Solid State Output
- Surface mounting & DIN rail mounting
- Totally sealed with polyurethane resin for better protection
- General purpose On Delay timer
- Specially designed timer for compressor/Heat Pump applications also available

Ordering Information

SST00■0+	Encapsulated ON delay Timer
SST02■00	Encapsulated ON delay Timer for Compressor/Heat Pump
SBT00■00	Delay On Make (BAR)
SBT01■00	Delay On Break (BCR)
SBT02■00	Asymmetric Cycler (BDR)
SBT03■00	Multifunction (BLR)
SDT00■0#	Star Delta

■ Voltage code, + Timing range, # Timing range

Voltage Codes

Type	Voltage	Code
BAR, BCR, BDR, BLR	24V AC/DC & 240V AC	1
	24V AC/DC & 110V AC	2
	24V AC	4
	12V DC	5
DQR	415 V AC / 240V AC	0
	240V AC	1
	110 V AC	2
SST	240V AC	1
	110V AC	2
	48V AC/DC	3
	24V AC/DC	4

Time Ranges

Type	Timing	Code
Encapsulated - SST (+)	0.1 - 10 Sec.	1
	1 - 100 Sec.	2
	3 - 300 Sec.	3
DQR (#)	20 Sec.	0
	40 Sec.	1
	100 Sec.	2

Electronic Timers

	BAR	BCR	BDR	BLR	DQR
Function	Delay on Make Function A	Delay on Break Function C	Asymmetric Cycler Function D & Di	Multifunction Function A, B, C & H	Star-Delta Function Q
Power Supply	24V AC/DC & 240V AC 24V AC/DC & 110V AC 12V DC 24V AC	24V AC/DC & 240V AC 24V AC/DC & 110V AC 12V DC 24V AC	24V AC/DC & 240V AC 24V AC/DC & 110V AC 12V DC 24V AC	24V AC/DC & 240V AC 24V AC/DC & 110V AC 12V DC 24V AC	415V AC / 240V AC 240V AC 110V AC
Supply Tolerance	85% to 110% of rated supply	85% to 110% of rated supply	85% to 110% of rated supply	85% to 110% of rated supply	85% to 110% of rated supply
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Time Range	0.1 Sec to 10 Hours	0.1 Sec to 10 Hours	0.1 Sec to 10 Hours	0.1 Sec to 10 Hours	0.2 Sec to 20 Sec 1 Sec to 100 Sec
Repeat accuracy	± 0.2 % at constant ambient ± 1.5% within temp. variation	± 0.2 % at constant ambient ± 1.5% within temp. variation	± 0.2 % at constant ambient ± 1.5% within temp. variation	± 0.2 % at constant ambient ± 1.5% within temp. variation	± 0.5 % at constant ambient ± 3.0% within temp. variation
Reset Time	50ms after timing 100ms during timing	100ms Max 20ms	50ms after timing ON 100ms during timing OFF	100ms Max 20 ms	100ms during & after timing
Minimum Impulse Time					
Output	SPDT relay, 10A @ 220V AC resistive load	SPDT relay, 10A @ 220V AC resistive load	SPDT relay, 10A @ 220V AC resistive load	SPDT relay, 10A @ 220V AC resistive load	2 C/O relay, 10A @ 220V AC resistive load
Life expectancy -Electrical	2x10 ⁵ operations	2x10 ⁵ operations	2x10 ⁵ operations	2x10 ⁵ operations	2x10 ⁵ operations
- Mechanical	2x10 ⁷ operations	2x10 ⁷ operations	2x10 ⁷ operations	2x10 ⁷ operations	2x10 ⁷ operations
No. of Operations	600 operations/hour at full load	600 operations/hour at full load	600 operations/hour at full load	600 operations/hour at full load	
Power Consumption	7 VA at 220V AC	7 VA at 220V AC	7 VA at 220V AC	7 VA at 220V AC	7 VA at 220V AC
Operating Temp	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C
Peak Current	15A < 0.01 Sec	15A < 0.01 Sec	15A < 0.01 Sec	15A < 0.01 Sec	15A < 0.01 Sec
Max. Switching Voltage	250V AC/DC	250V AC/DC	250V AC/DC	250V AC/DC	250V AC/DC
Approx. weight	80g	80g	80g	80g	100g

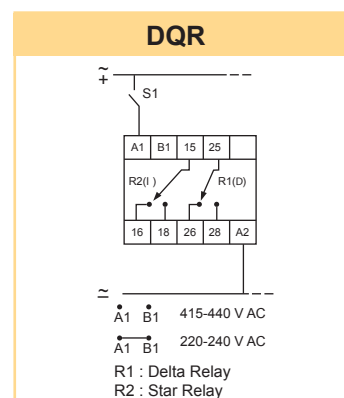
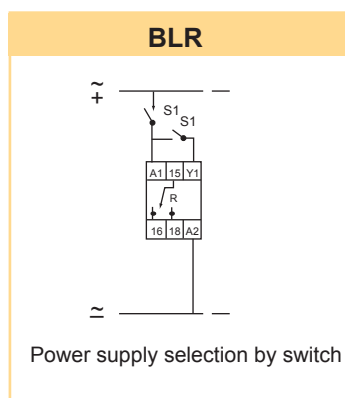
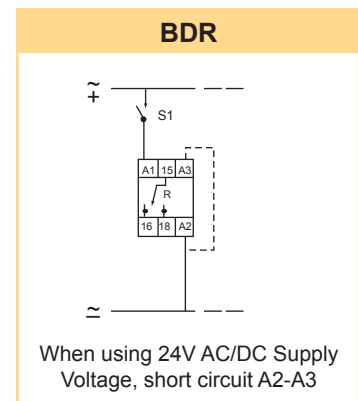
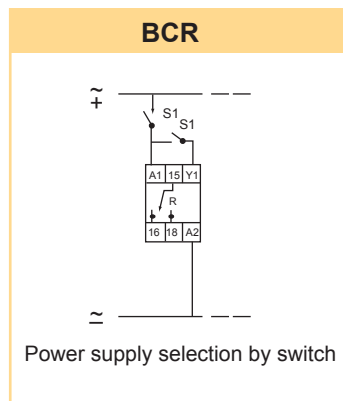
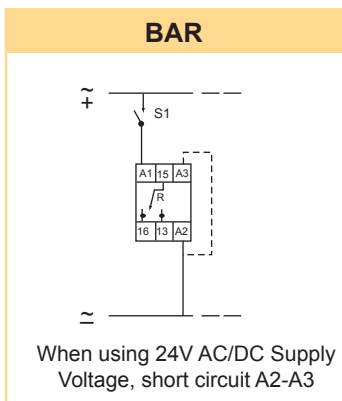


Encapsulated Timers

	SST 00	SST 02
Function	Delay on Make Function A	Special timer for compressor protection & heat pumps
Power Supply	220/240 V AC; 110V AC; 48V AC/DC; 24V AC/DC	220/240 V AC; 110V AC; 48V AC/DC; 24V AC/DC
Supply Tolerance	80% to 120% of rated supply	80% to 120% of rated supply
Frequency	50/60 HZ	50/60 HZ
Time Range	0.1-10 Sec; 1-100 Sec; 3-300 Sec	Fixed Timing - 3 min / 5 min
Repeat accuracy	± 0.5% at constant ambient ± 5% within temp. variation	± 0.4% at constant ambient ±10% within temp. variation
Reset Time	25ms after timing 150ms during timing	25ms after timing
Output	Solid State Output $I_{max} : 0.6 A$ (at 40°C)	Solid State Output $I_{max} : 0.6 A$ (at 40°C)
Leakage current	5 mA Max	6 mA Max
Voltage drop	3.5V	3.5V
Operating Temp	-20°C to + 60°C	-20°C to + 60°C
Peak Current	20A < 10ms	20A < 10ms
Max. Switching Voltage	250V AC/DC	250V AC/DC
Approx. weight	55g	55g

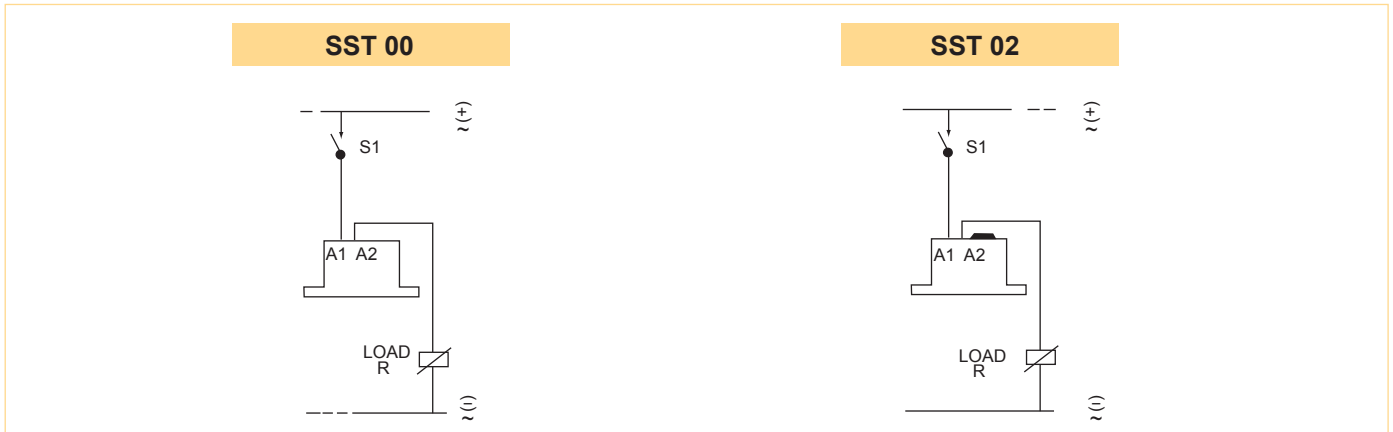
Connection Diagrams

Electronic Timers





Encapsulated Timers



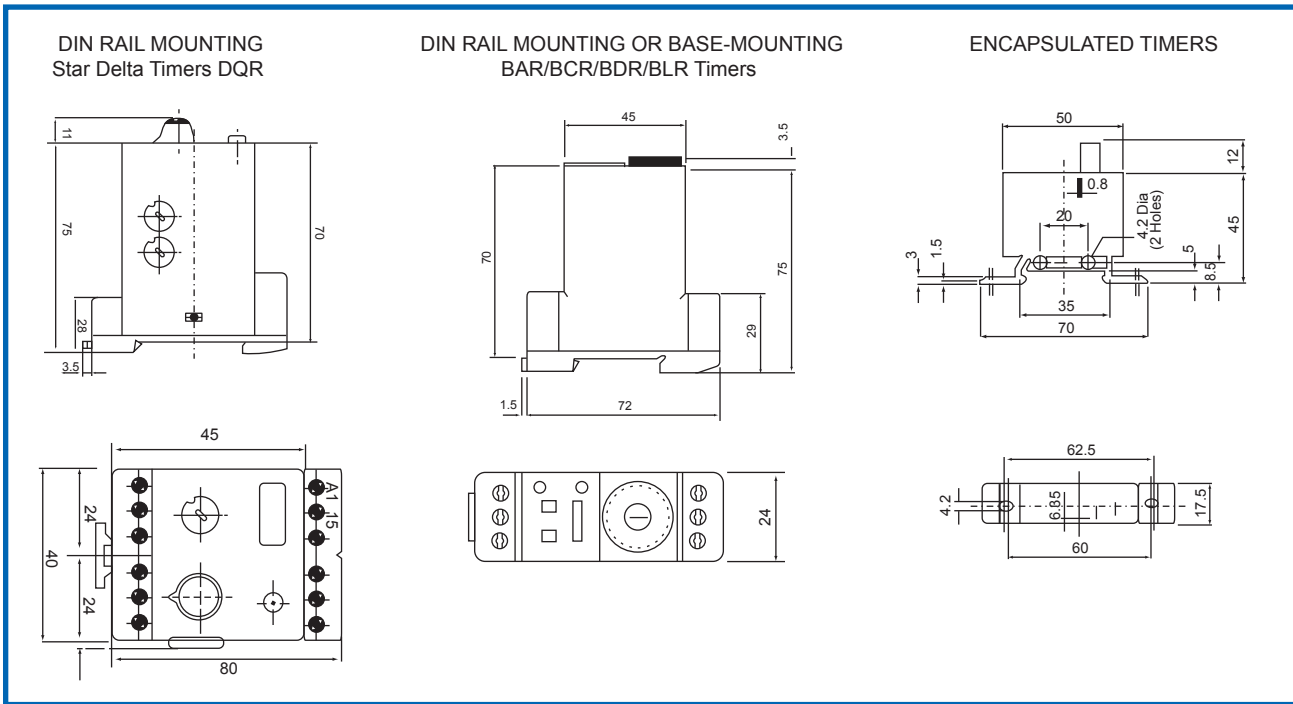
Curves

Function A	Function C	Function D & Di	Function B & Function H	Function Q	Encapsulated Timer for Compressor and heat Pump
<p>Delay on make timing commences with the supply on (S1). At the end of timing, the load R is energized.</p>	<p>The timer is permanently supplied. At the closure of contact S2, the load is energized until the set time has elapsed, after the opening of S2. If S2 is reclosed during timing, the output will remain energized. Command contact S2 should be isolated from any other circuit. Power supply S1 has to be closed when operating S2</p>	<p>The timer is permanently supplied. The load is alternatively de-energised and energised repeatedly to the set time. Function D : Pause start cycle (Standard Supply) Function Di : Pulse start cycle</p>	<p>Function B : Single Shot The timer is permanently supplied. At the closure of the command contact S2 (either fleeting or maintained contact), the load R is energized. The load de-energized at the end of timing. Function H : Interval Timer At the closure of S1(Supply ON), the load is energized and timing starts. At the end of timing, the load de-energised</p>	<p>The star relay energizes when supply is applied to the timer and timing begins. After the timing, the star relay deenergises. After a pause of about 100ms, the delta relay energizes and will be maintained.</p>	<p>When a compressor is stopped by the Thermostat, it should not restart immediately on full load. A timer of 3 to 5 minutes is needed to equalise the Interior pressure in the system, or to avoid a sudden drop in the latter. In other words, the timer is needed to prevent reset of the thermostat and to ensure optimal operation of the equipment. For this application. BIL has developed a special low-cost timer with only 2 terminals, the SAS-CB (load in series with timer) Note : At the first supply "ON" the compressor starts instantaneously without loss of time</p>

Function A	Function C	Function D	Function B	Function Q	Encapsulated Timer for Compressor and heat Pump



Dimensions (mm)



BCH ELECTRIC LIMITED

Visit us at : www.bchindia.com

Corporate Office : 1105, New Delhi House, 27, Barakhamba Road, New Delhi - 110 001 Tel. : 91-11-23316029/3610/6539 Fax : 91-11-23715249 E-Mail : marketing@bchindia.com
Registered Office : Block 1E, 216, Acharya Jagadish Chandra Bose Road, Kolkata - 700 017
Works : 20/4, Mathura Road, Faridabad - 121 006 (Haryana) Tel. : 0129-4063000/4061026 Fax : 0129-2304024

Sales Offices :

Ahmedabad
93, City Centre,
Near Swastik Char Rasta,
C.G.Road, Navrangpura,
Ahmedabad - 380 009
Tel. : (079) 26565719, 26565728
Mobile: 98256-07601
Fax : (079) 26561210
E-mail: ahmedabad@bchindia.com

Bangalore
B.M.H. Complex, IInd Floor,
No. 22, Kengal Hanumanthiah Road,
Bangalore - 560 027
Tel. : 080-22273478, 41144878, 41144879
Mobile : 98455-46105
Fax : 080-22236759
E-mail: bangalore@bchindia.com

Bhubaneswar
Plot No. 4708/1,
Gajapati Nagar,
Bhubaneswar - 750 005
Tel. : 0674-2301767
Mobile : 98610-81767
E-mail: bhubaneswar@bchindia.com

Chandigarh
SCO 121-22-23, 1st Floor,
Sector 34-A, Chandigarh - 160 022
Tel. : 0172-5078957
Mobile : 98554-87089
E-mail: chandigarh@bchindia.com

Chennai
3rd Floor, Maya Vile,
No. 7, Seshadri Road,
Alwarpet, Chennai - 600 018
Tel. : 044-24997042, 24997002
Mobile : 98402-85500
Fax : 044-24998853
E-mail: chennai@bchindia.com

Cochin
2nd Floor, 32/1495
B-1, Chakos Chambers,
By Pass Junction,
Cochin - 682 025
Tel. : 0484-6593697
Mobile : 98477-43393
E-mail: cochin@bchindia.com

Coimbatore
87, Dr. Nanjappa Road,
Coimbatore - 641 018
Tel. : 0422-2305311
Mobile : 98430-53555
Fax : 0422-2302599
E-mail: coimbatore@bchindia.com

Faridabad
110 & 117, Om Shubham Tower
Neelam Bata Road, N.I.T.
Faridabad - 121 001 (Haryana)
Mobile : 98180-10700
E-mail: faridabad@bchindia.com

Gurgaon
SF-203, Navkriti Arcade
Block-A, Sushant Lok, Phase-II
Gurgaon - 122 001 (Haryana)
Mobile : 99101-55464
E-mail: gurgaon@bchindia.com

Guwahati
2nd Floor, Aastha Trade Centre,
'Q' Road, Bistupur,
Jamshedpur - 831001
Tel. : 0657-6573507
Mobile : 98351-82109
Fax : 0657-2420439
E-mail: jamshedpur@bchindia.com

Hospet
940C, Third Cross
Third Ward, Patel Nagar
Station Road,
Hospet-583201
Tel. : 09845930782
E-mail: hospet@bchindia.com

Hubli
A-5, Navaniketan Apartments
Ashok Nagar
Hubli (Karnataka)
Tel. : 0836-3090472
Mobile No. 98602-90471
E-mail: hubli@bchindia.com

Hyderabad
210, Prajaya Corporate House,
1-10-63&64, Chikoti Garden,
Begumpet, Hyderabad - 500 016
Tel. : 040-66206263/27763325
Mobile : 98493-99240
Fax : 040-66207273
E-mail: hyderabad@bchindia.com

Indore
330-331, Indraprastha Tower,
6, MG Road, Indore - 452 001
Tel. : 0731-2510011
Mobile : 98266-66091
E-mail: indore@bchindia.com

Jaipur
25, Hathroi, Gopalbari,
Jaipur - 302 001
Tel. : 0141-5104521
Mobile : 98290-10813
Fax : 0141-2363521
E-mail: jaipur@bchindia.com

Jamshedpur
3rd Floor, Aastha Trade Centre,
'Q' Road, Bistupur,
Jamshedpur - 831001
Tel. : 0657-6573507
Mobile : 98351-82109
Fax : 0657-2420439
E-mail: jamshedpur@bchindia.com

Kolkata
East India House,
3rd Floor, 20-B, Abdul Hamid
Street, Kolkata - 700 069
Tel. : 033-22138508 / 10
Mobile : 98303-36101
Fax : 033-22138512
E-mail: kolkata@bchindia.com

Lucknow
Madan Plaza, 3rd Floor,
14, Station Road, Lucknow
Tel. : 0522-4025597/4025997/4025697
Mobile : 98399-12304
E-mail: lucknow@bchindia.com

Ludhiana
S.C.O - 18, IInd Floor,
Feroze Gandhi Market,
Ludhiana - 140 001
Tel. : 0161-5021807
Mobile : 98765-87088
Fax : 0161-2771807
E-mail: ludhiana@bchindia.com

Madurai
E 168/69, Santanaram Road
TVS Nagar
Madurai-625003
Tel. : 09843133990
E-mail: madurai@bchindia.com

Mumbai
A-151, Mittal Tower,
Nariman Point,
Mumbai - 400 021
Tel. : 022-22822947/22826039
Mobile : 98923-00706
Fax : 022-22822858
E-mail: mumbai@bchindia.com

Nagpur
Block No. 238-B,
Opp. Dharamdas Darbar,
Nr. Choudhary Chowk, Jaripatka,
Nagpur, Maharashtra - 440 014
Mobile : 99701-80877
E-mail: nagpur@bchindia.com

New Delhi
801, Akash Deep,
26A, Barakhamba Road,
New Delhi - 110 001
Tel. : 011-23313878
Mobile : 98102-12502
Fax : 011-23739230
E-mail: delhi@bchindia.com

Pune
8, Sarosh Bhawan,
16-B/1, Dr. Ambedkar Road,
Pune - 411 001
Tel. : 020-26052590
Mobile : 98220-11086
Fax : 020-26135224
E-mail: pune@bchindia.com

Raipur
2nd Floor,
Building No- B- 234,
Indira Gandhi
Vyavasayik Parisar,
Pandri, Raipur - 492 004
Tel. : 0771-4020213
Mobile : 98266-66092
E-mail: raipur@bchindia.com

Surat
601/A, 21st Century Business Centre
Ring Road
Surat - 395 002
Mobile : 91 982560717
E-mail: surat@bchindia.com

Trichy
Kingston Park,
Second Floor,
19/1, Puttur High Road,
Ramalinga Nagar,
Trichy - 620 003.
Mobile: 99406 76502
Email : trichy@bchindia.com

Vadodara
101, Toran Complex,
Vikas Nagar
Old Padra Road
Vadodara - 390 020.
Tel. : 0265-6548444
E-mail: baroda@bchindia.com

Vishakapatnam
Venu Vaibhavam, 2nd Floor,
Flat No. 201, Palace
Layout, Pedda Waltair,
Vishakapatnam - 530 017
Mobile : 98493-99238
E-mail: vizag@bchindia.com

Western UP & Uttarakhand
8, Cooperative Industrial Estate
Patel Nagar
Dehradun : 248001
Uttarakhand
Mobile : 976005793
E-mail: dehradun@bchindia.com

Resident Engineers Locations Tel.

Agartala	94361-28939	Kolhapur	98906-26205	Kota	98290-14899	Mangalore	98457-31944	Tirupathi	98661-30930
Haldwani	99970-12643	Nashik	98900-12944	Nav Mumbai	98923-00701	Pondichery	98942-22033	Warangal	98495-51691
Kanpur	98392-34539	Salem	98433-19533	Silchar	94354-04033	Siliguri	98320-11433		
Muzaffarnagar	98970-73741	Udaipur	98292-44085	Vijayawada	98662-20504	Bhilai	98266-12907		
Renukoot	98399-55117	Bhopal	98266-66093	Baddi	93187-78975	Gwalior	98268-03658		
Ambala	93541-18839	Ghaziabad	98107-44937	Gorakhpur	98392-24988	Jodhpur	98292-18618		
Durgapur	97320-03364	Jabalpur	98268-03656	Jalandhar	98763-47188	Rajkot	98256-04709		

Since product improvement is a continuous process, the data furnished in this brochure may undergo revision without prior notice.