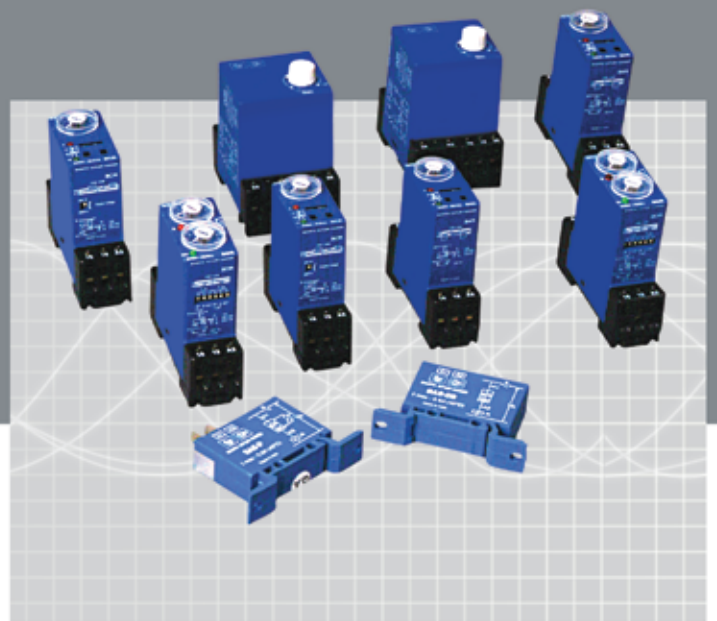
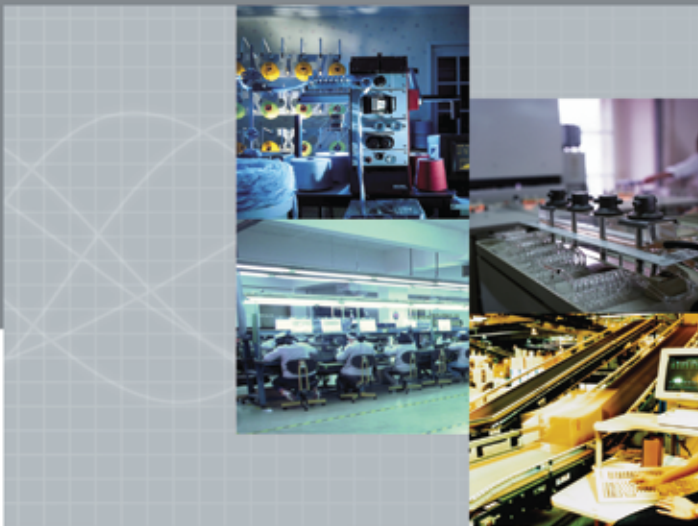




ELECTRONIC TIMERS



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 & 240V AC	24V AC/DC & 240V AC	24V AC/DC & 240V AC	415V AC / 240V AC
	24V AC/DC & 110V AC	24V AC/DC & 110V AC	24V AC/DC & 110V AC	24V AC/DC & 110V AC	240V AC
	12V DC	12V DC	12V DC	12V DC	110V AC
	24V AC	24V AC	24V AC	24V 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	50ms after timing ON 100ms during timing OFF	100ms Max	100ms during & after timing
Minimum Impluse Time		20ms		20 ms	
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 - Mechanical	2x10 ⁵ operations	2x10 ⁵ operations	2x10 ⁵ operations	2x10 ⁵ operations	2x10 ⁵ operations
	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

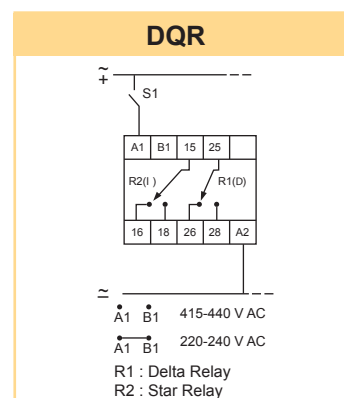
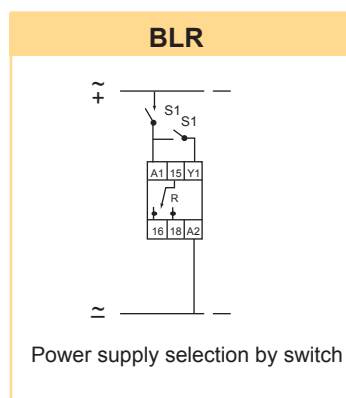
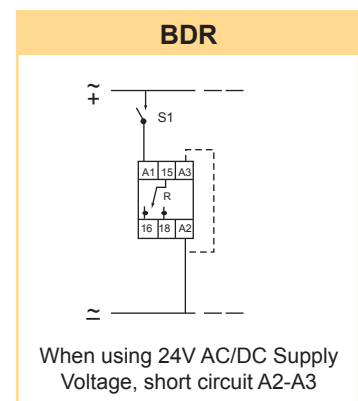
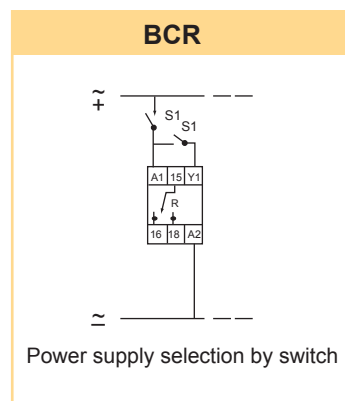
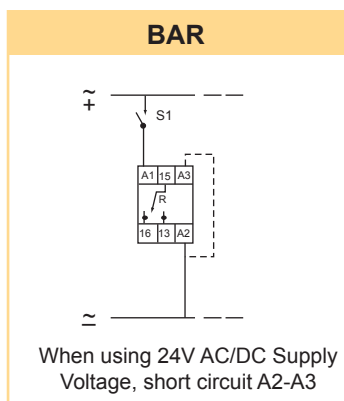


Encapsulated Timers

	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 $I_{max} : 0.6 \text{ A}$ (at 40°C)	Solid State Output $I_{max} : 0.6 \text{ A}$ (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

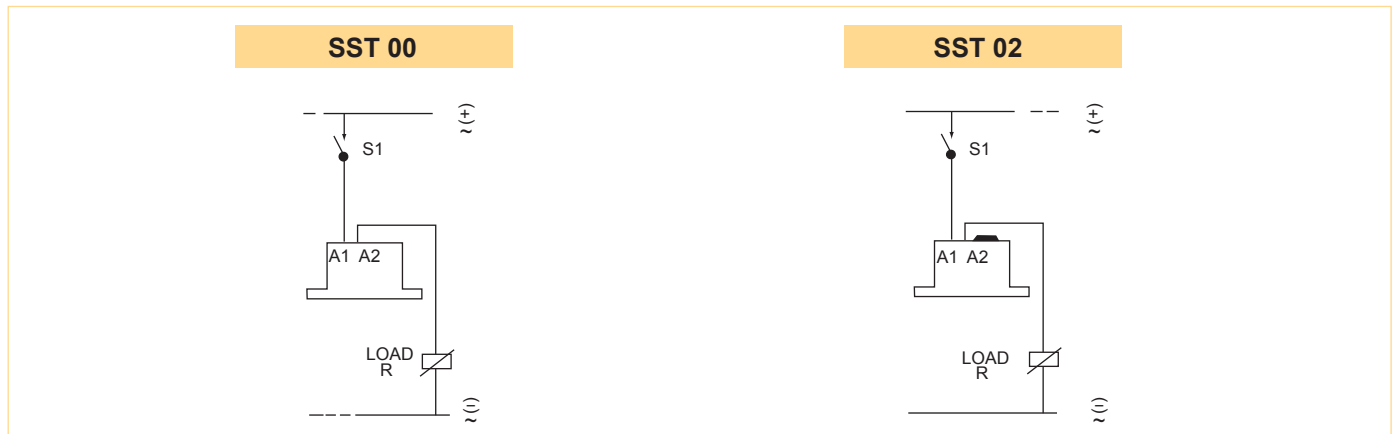
Connection Diagrams

Electronic Timers





Encapsulated Timers



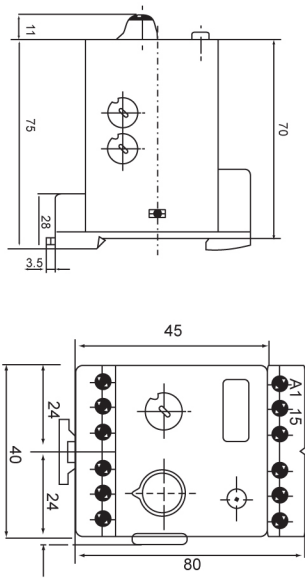
Curves

Function A	Function C	Function D & Di	Function B & Function H	Function Q	Encapsulated Timer for Compressor and heat Pump
Delay on make timing commences with the supply on (S1). At the end of timing, the load R is energized.	The timer is permanently supplied. At the closure of contact S2, the load is energised until the set time has elapsed, after the opening of S2. If S2 is reclosed during timing, the output will remain energised. Command contact S2 should be isolated from any other circuit. Power supply S1 has to be closed when operating S2	The timer is permanently supplied. The load is alternatively de-energised and energised repeatedly to the set time. Function D : Pause start cycle Function Di : Pulse start cycle	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 energised and timing starts. At the end of timing, the load de-energised	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.	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

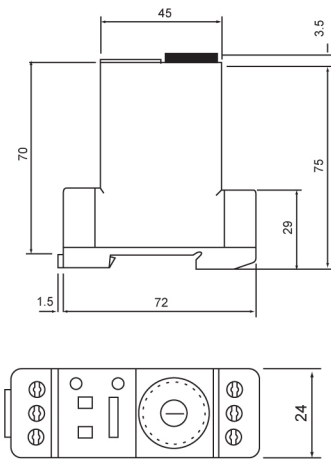
Function A	Function C	Function D	Function B	Function Q	Encapsulated Timer for Compressor and heat Pump
		Function Di	Function H		

Dimensions (mm)

DIN RAIL MOUNTING
Star Delta Timers DQR



DIN RAIL MOUNTING OR BASE-MOUNTING
BAR/BCR/BDR/BLR Timers



ENCAPSULATED TIMERS

