

**Tough | Rugged | Reliable**  
**Since 1965...**

# Control & Switchgear Products



## PRICE LIST

Effective : 17th July 2023



**BCH**  
**ELECTRIC**  
**LIMITED**

# Modern facilities at Faridabad & Rudrapur



## Our Strengths

- ◆ State-of-the-art product development and R&D
- ◆ Modern manufacturing facilities
- ◆ Tool room with latest facilities
- ◆ Serving customers for five decades
- ◆ Presence in ~50 locations
- ◆ 650 channel partners
- ◆ ISO 14001:2015 and ISO 9001:2015 certified company

## Core Values

- ◆ Integrity
- ◆ Nurturing People
- ◆ Commitment to Customers
- ◆ Striving for Excellence
- ◆ Long Term Thinking

## Quality Policy

We as a member of BCH Electric Limited manufacturer of Low Voltage Switchgear & Controlgear products, are fully committed to provide Quality products and service in compliance with applicable Statutory and Regulatory requirements, to meet or exceed the customer need and expectations through -

- ◆ Continual improvement
- ◆ Involvement of employees
- ◆ Setting Quality objectives
- ◆ Training and development of employees

## Health & Safety Policy

We as a member of BCH Electric Limited manufacturer of Low Voltage Switchgear & Controlgear products, are fully committed to conduct Business in compliance to applicable Health & Safety legislation and regulation.

We shall continually improve through -

- ◆ Provide Safe & Healthy working conditions for the prevention of work related injury and ill health.
- ◆ Develop & maintain the Health & Safety objectives & targets and conduct health & safety programs for achieving the objectives and target.
- ◆ The prevention of accidents through the identification, assessment and elimination of workplace hazards and the promotion of health & safety awareness among its employees and contractors.
- ◆ Encourage employee's participation and consultation in matters affecting the health, safety and well being of our people and seek suggestions from our employees of ways in which health, safety & well being can be furthered.

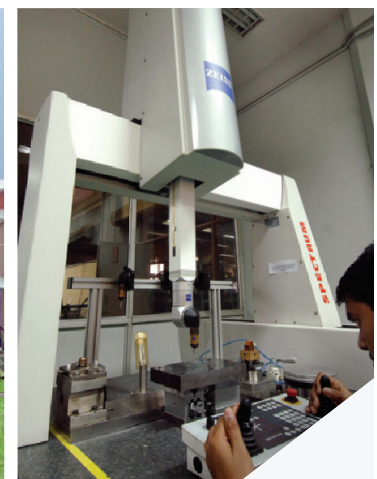
The Health & safety policy is publicly available on request.

## Environmental Policy

We as a member of BCH Electric Limited manufacturer of Low Voltage Switchgear & Controlgear products, are fully committed to conduct Business in compliance to applicable Environmental legislation and regulation.

We shall continually improve through -

- ◆ Provide a framework for setting and reviewing environmental objectives and targets.
- ◆ Regularly review the impact of our activities on environment and strive to reduce the pollution/waste.
- ◆ Involve employees in our environmental program and provide necessary training to enable them to discharge their responsibilities towards environment management.
- ◆ Sustain the program of continual improvement in environment in environmental performance incorporating suitable metrics and monitoring.

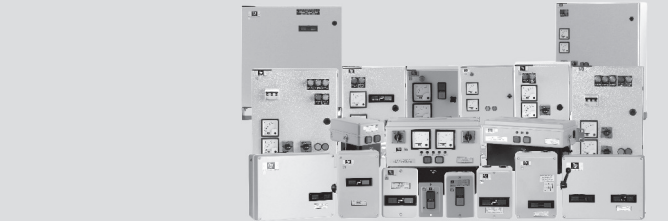


[www.bchindia.com](http://www.bchindia.com)

# Our Products



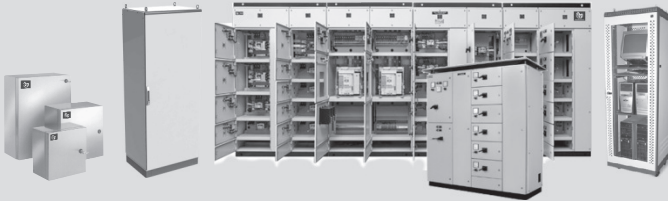
**Switchgear & Controlgear**



**Motor Starters & Submersible Pump Starters**



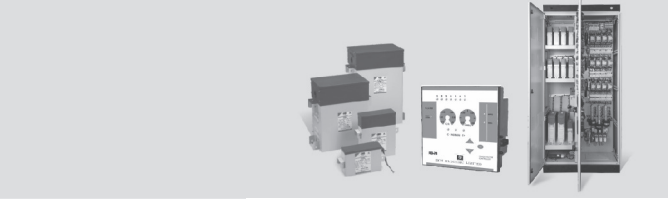
**Final Distribution Products**



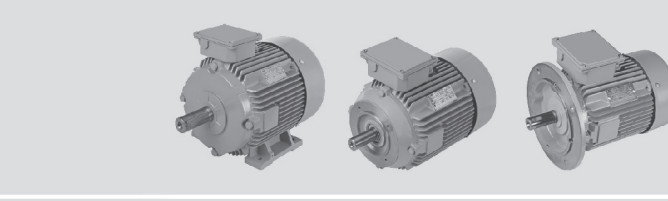
**Enclosure Systems**



**Wires & Cables**



**Power Factor Control Product**



**Motors**



**Automation Product**



**Motor Control Centres (MCCs), Power Control Centres (PCCs) & Custom Built Products**

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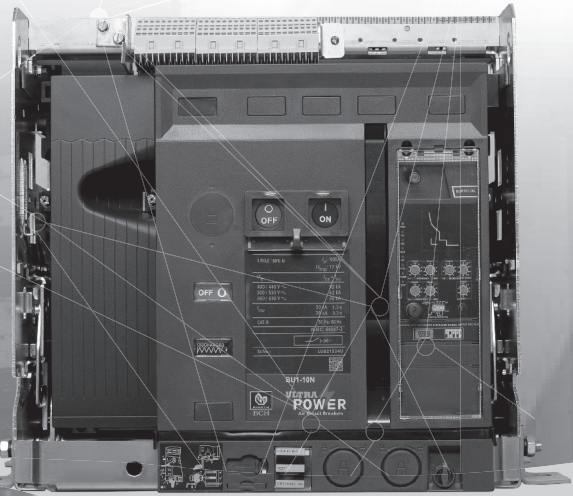


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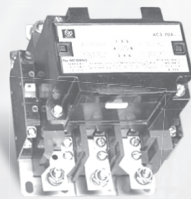
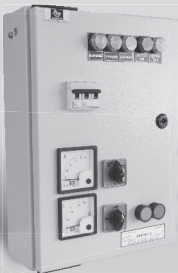
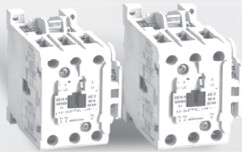
**ULTRA**   
**POWER**  
Air Circuit Breakers

# COMPLETE RANGE OF CIRCUIT BREAKERS



**BCH  
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# Low Voltage Switch Gear & Control Gear Products



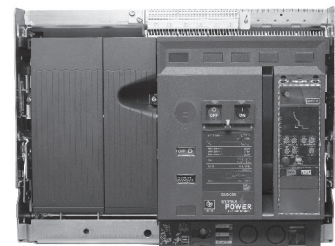
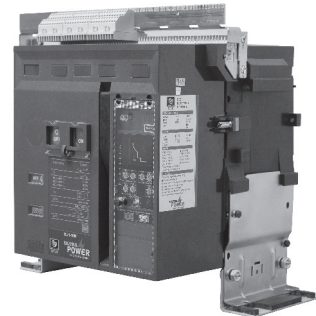
- Air Circuit Breakers
- MCCBs
- MCB, Isolator, MCB Distribution Boxes, RCCB New
- X-Line SDF, FSU, SDFU New
- AC Contactors
- DC Contactors
- Solid State Relays
- Overload Relays
- Electronic Overcurrent Relays (BOCR)
- Motor Protection Circuit Breakers (MPCB)
- Push Buttons, Indicating Lights, LEDs
- Motor Starters
  - DOL
  - Mini Manual
  - Star Delta
  - Spares-Motor Starters & Supersensible Pump Starters
- Submersible Pump Starters
  - Three Phase (DOL and Star Delta)
  - Single Phase
- Oil Immersed Starters

# Air Circuit Breakers.....BCH



## Range of Air Circuit Breakers **New**

- Complete range conforms to IS/IEC 60947-2
- Current rating from 800A to 6300A in 3 frame sizes
- Available in 3 Pole/4 Pole, Manually & Electrically operated, Fixed/Draw-out version
- Common Height & Depth across the range
- High short time fault withstand capacity,  $I_{cu} = I_{cs} = I_{cw}$  for 1 sec for total selectivity
- High mechanical and electrical operating life
- Neutral pole is 100% rated
- In-built Electrical & Mechanical Anti-Pumping
- Modular & snap-fit accessories
- Ease of on-site conversion from Fixed to Draw-out version
- Pollution Degree 4 suitability
- Best in Class Overlap with Bus bars
- Break Time of 25msec
- RoHS Compliant



BU-BTX1.0 BU-BTX1G BU-BTX1Gi BU-BTX1.5G BU-BTX1.5Gi



BU-BTX3.5/3.5H BU-BTX4.5

### BTX Release for Protection & Control Unit:

- Available in versions - BTX1.0/1G/1Gi/1.5G/1.5Gi, BTX3.5/3.5H & BTX4.5
- Unique O-LED display for metering
- Touch screen technology in BU-BTX4.5
- Unique withdrawable Communication & Power metering modules
- Dual protection curve settings & Password protection
- Soft-rating plug for precise protection at lower load currents
- Provision for on-load self-diagnosis of Releases & modules
- Power & Harmonics measurement
- Temperature rise monitoring & protection
- Easy to integrate with HMI & PLC
- Add-on modules for advance protections
- Protection Releases conform to EMI/EMC standard

### Breaking Capacities:

$I_{cu} = I_{cs} = I_{cw}$

Rated current	800A	1000A	1250A	1600A	2000A	2500A	3200A	4000A	5000A	6300A
N : 50kA										
S : 65kA										
H : 80kA										
V : 100kA										
	<b>BU1-08</b>	<b>BU1-10</b>	<b>BU1-12</b>	<b>BU1-16</b>	<b>BU1-20</b>	<b>BU2-25</b>	<b>BU2-32</b>	<b>BU2-40</b>	<b>BU3-50</b>	<b>BU3-63</b>
	Frame-1					Frame-2			Frame-3	



# Air Circuit Breakers.....BCH



## ACB ordering information:

BU 1 08 N X D 1 2 9 0 0	BU1 800N 3P ED 1.5G BotV
-------------------------	--------------------------

Selection for Termination (For Drawout ACBs Only)	
Standard Termination	0
For Top Horizontal (Long), Bottom Vertical for Fr2 & Fr3	X
For Top & Bottom Horizontal (Long) for Fr3	Y
Note: X is applicable for 4000A (Fr2 & Fr3) and 5000A (Fr3). Y is applicable for 4000A (Fr3) & 5000A (Fr3) X & Y recommended for Buscoupler only.	

Temperature Rise Monitoring <sup>(3)</sup>	
Not Required	0
Required	1

Selection for P&C Units	
B/C (w/o protection)	0
BU - BTX1.0	7
BU - BTX1G	8
BU - BTX1Gi	B
<b>BU - BTX1.5G</b>	<b>9</b>
BU - BTX1.5Gi	C
BU - BTX3.5	3
BU - BTX4.5	5
BU - BTX3.5H	6
BU - BTX3.5EC	4

Selection for control voltage <sup>(2)</sup>	
For Manually Operated	0
<b>240V AC ECD &amp; CR &amp; 240V AC SR</b>	<b>1</b>
240V AC ECD & CR & 24V DC SR	2

Version	
Draw-out	D
Fixed	F

Selection for No. of Poles	
<b>3 Pole</b>	<b>X</b>
4 Pole 100% N	F

Selection for Breaking Capacity (Icu=Ics) <sup>(1)</sup>	
<b>50kA (Fr-I upto 2000A &amp; Fr-2 upto 3200A)</b>	<b>N</b>
65kA (Fr-I & Fr-II)	S
80kA (Fr-II & Fr-III)	H
100kA (Fr-III)	V

Type	
Manually Operated	1
<b>Electrically Operated</b>	<b>2</b>

Current Ratings	
400A	04
630A	06
<b>800A</b>	<b>08</b>
1000A	10
1250A	12
1600A	16
2000A	20
2500A <sup>(4)</sup>	25
3200A	32
4000A	40
5000A	50
6300A	63

Frame Size	
Frame - I	1
Frame - II	2
Frame - III	3

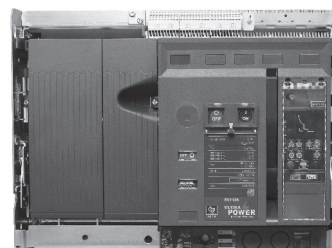
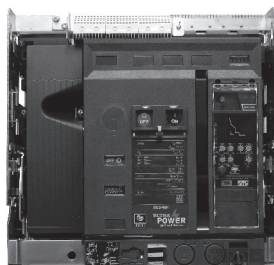
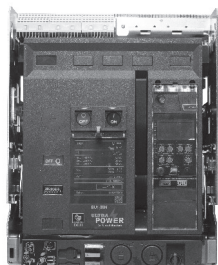
- Please Note :**
- (1) For low values please refer product catalogue
  - (2) Other options of control voltage are available as accessory
  - (3) Temperature protection is available in BU-BTX3.5/3.5H/4.5
  - (4) For Fr-1, 2500A selection, please contact the nearest branch

## ULTRA POWER ACBs are offered with following standard features:

<b>Draw-out Version:</b>	Ultra power ACBs with BU-BTX release will have inbuilt- Current Metering (BTX 1.5G/1.5Gi/3.5/3.5EC/3.5H/4.5), Common Fault Indication microswitch, 4NO+4NC Aux. contacts, Smart-racking shutter, Safety shutter assembly, Racking Handle, Door sealing frame, Pad-locking arrangement for ON/OFF button, Rating Error Preventer, Arc shield. A) For ratings upto 1600A, one side vertical terminal adaptors (Bottom) for Frames 1, 2 & 3. B) For ratings 2000A & above, both side vertical terminal adaptors (Top & Bottom) for Frames 1, 2 & 3. C) For rating 4000A and above, operation counter inbuilt for Frames 2 & 3 both.
<b>Fixed Version:</b>	Ultra power ACBs with BU-BTX release will have inbuilt- Current Metering (1.5G/1.5Gi/3.5/3.5EC/3.5H/4.5), Common Fault Indication microswitch, 4NO+4NC Aux. contacts, Door sealing frame & Pad-locking arrangement for ON/OFF push button. A) For ratings upto 1600A, one side vertical terminal adaptors (Bottom) for Frame 1, 2 & 3.

# Air Circuit Breakers.....BCH

**ULTRA POWER** ACBs with BU-BTX1G (LSING - BCD Switches) - 3 Pole  
Air Circuit Breakers



HSN Code : 8536

Current Rating	Version	3 Pole Manual Draw-out ACB with BU-BTX1G							
		N (50kA)		S (65kA)		H (80kA)		V (100kA)	
		Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]
800A	MDO	BU108NXD01800	*	BU108SXD01800	*	-	-	-	-
1000A		BU110NXD01800		BU110SXD01800					
1250A		BU112NXD01800		BU112SXD01800					
1600A		BU116NXD01800		BU116SXD01800					
2000A		BU120NXD01800		BU120SXD01800					
2500A		BU225NXD01800		BU225SXD01800					
3200A		-		BU232SXD01800					
4000A		-	-	BU240HXD01800					
5000A		-	-	-	-	BU350VXD01800	*		
6300A		-	-	-	-	BU363VXD01800			

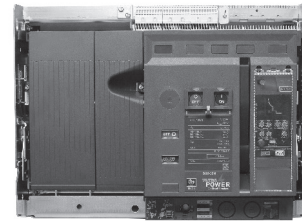
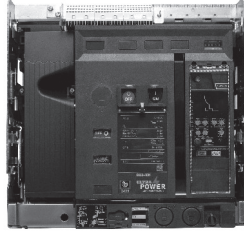
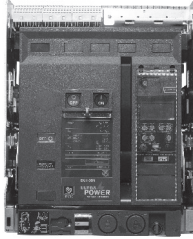
HSN Code : 8536

Current Rating	Version	3 Pole Manual Fixed ACB with BU-BTX1G			
		N (50kA)		S (65kA)	
		Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]
800A	MF	BU108NXF01800	*	-	-
1000A		BU110NXF01800		BU110SXF01800	*
1250A		BU112NXF01800		BU112SXF01800	
1600A		BU116NXF01800		BU116SXF01800	
2000A		BU120NXF01800		BU120SXF01800	
2500A		BU225NXF01800		BU225SXF01800	
3200A		BU232NXF01800		BU232SXF01800	

M.R.P. changes for product customization	M.R.P. [₹]
MDO to EDO or MF to EF conversion (Includes ECD 240V AC, CR 240V AC & SR 240V AC or 24V DC)	*
Buscoupler (without protection release)	
BU-BTX1.0 (LSI - BCD Switches)	
BU-BTX1Gi (LSING + Inbuilt ZSI - BCD Switches)	
BU-BTX1.5G (LSING + Current Metering - BCD Switches)	
BU-BTX1.5Gi (LSING + Current Metering + Inbuilt ZSI - BCD Switches)	
BU-BTX3.5 (LSING + Current Metering) + can be upgraded for Power Metering & Communication	
BU-BTX3.5EC (LSING + Power Metering + Communication)	
BU-BTX3.5H (LSING + Power Metering + Harmonic Metering)	
BU-BTX4.5 (LSING + Power Metering + Harmonic Metering + Communication with Touch Screen navigation + BU-PS Module)	
BU-PS (Auxiliary power supply module for display in No-load or OFF condition)	
COM Module (MODBUS) for communication	
PM Module for power metering	

# Air Circuit Breakers..... BCH

**ULTRA POWER** ACBs with BU-BTX1G (LSING - BCD Switches) - 4 Pole  
Air Circuit Breakers



HSN Code : 8536

Current Rating	Version	4 Pole Manual Draw-out ACB with BU-BTX1G								
		N (50kA)		S (65kA)		H (80kA)		V (100kA)		
		Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]	
800A	MDO	BU108NFD01800	*	-	*	-	-	-	-	
1000A		BU110NFD01800		BU110SFD01800						
1250A		BU112NFD01800		BU112SFD01800						
1600A		BU116NFD01800		BU116SFD01800						
2000A		BU120NFD01800		BU120SFD01800						
2500A		BU225NFD01800		BU225SFD01800						
3200A		BU232NFD01800		BU232SFD01800						BU232HFD01800
4000A		-		-						-
5000A						BU350VFD01800	*			
6300A						BU363VFD01800				

HSN Code : 8536

Current Rating	Version	4 Pole Manual Fixed ACB with BU-BTX1G			
		N (50kA)		S (65kA)	
		Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]
800A	MF	BU108NFF01800	*	-	*
1000A		BU110NFF01800		BU110SFF01800	
1250A		BU112NFF01800		BU112SFF01800	
1600A		BU116NFF01800		BU116SFF01800	
2000A		BU120NFF01800		BU120SFF01800	
2500A		BU225NFF01800		BU225SFF01800	
3200A		BU232NFF01800		BU232SFF01800	

## Accessories of Air Circuit Breakers



Draw-out ACBs Terminal Adaptors

HSN Code : 8538

Description	Cat. No.	M.R.P. [₹]
Terminal Adaptor for Draw-out ULTRA ACBs		
Frame-1 400-2000A N/S/H (Vertical / Horizontal)	BLCA609630000	*
Frame-2 400-3200A N/S/H (Vertical / Horizontal)	BLCA609640000	



Operation Counter

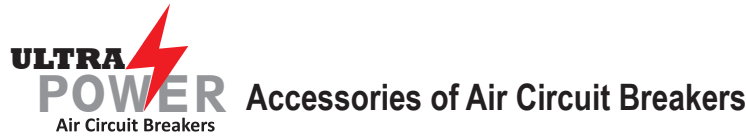


Door Interlock

HSN Code : 8538

Description	Cat. No.	M.R.P. [₹]
Other Accessories		
Operation Counter	BLOC909830000	*
Door Interlock	BLDI909780000	
Electrical Position Indication (EPI)	BLEPI958260000	
Microswitches for Indication		
Microswitch for Common Fault Indication (CFI)	BLCM909490000	*
Microswitch for Ready To Close Indication (RTC)	BLRCM909530000	
Microswitch for Shunt Release	BLSM909510000	
Microswitch for Undervoltage Release	BLUM909470000	

# Air Circuit Breakers..... BCH



R-Lock



C-Lock



Closing Release



Shunt Release

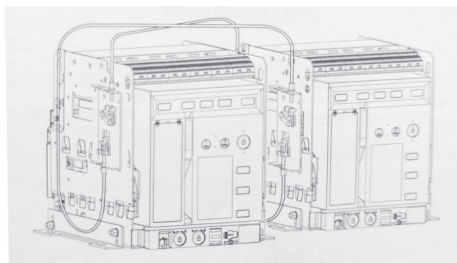


UV Release

HSN Code : 8538

Description	Cat. No.	M.R.P. [₹]
<b>Mechanical Interlock using Key &amp; Lock</b>		
R - Lock Type - 1	BLRL1006590000	*
R - Lock Type - 2	BLRL2006600000	
R - Lock Type - 3	BLRL3006610000	
R - Lock Type - 12	BLRL12006620000	
R - Lock Type - 23	BLRL23006630000	
Locking arrangement for OFF button with R - Lock (on breaker)	BLRL9081500000	
Locking arrangement for ISO position with R - Lock (on Cradle)	BLCLR9086500000	
Locking arrangement for ANY position with R - Lock (on Cradle)	BLCLR9092700000	
C - Lock Type - S	BLCLS0066400000	
C - Lock Type - T	BLCLT0066500000	
C - Lock Type - ST	BLCLST0066600000	
C - Lock Type - SS	BLCLSS0066700000	
C - Lock Type - TT	BLCLTT0066800000	
Locking arrangement for OFF button with C - Lock (on breaker)	BLCL9081400000	
Locking arrangement for ISO position for C - Lock (on Cradle)	BLCLC9098200000	
Locking arrangement for ANY position with C - Lock (on Cradle)	BLCLC9098100000	

Note : For mechanical interlock using Key & Lock, please order combination of lock & locking arrangement



Mechanical Interlock using Bowden Cable

HSN Code : 8538

Description	Cat. No.	M.R.P. [₹]
<b>Mechanical Interlock using Bowden Cable (3 meters length)</b>		
Between 2 Incomers	BLBC9065900000	*
Between 2 Incomers & 1 Buscoupler	BLBC9066200000	

Note : Common from 800A to 5000A & can be interlocked between fixed / drawout / mixed version

HSN Code : 8538

Description	Cat. No.	M.R.P. [₹]	
<b>Electrical Charging Device (ECD)</b>			
240V AC / 250V DC	BLECD9035900000	*	
415V AC / 400V DC	BLECD9036100000		
<b>Closing Release (CR)</b>			
220 - 240V AC / 220 - 250V DC	BLCR90817B0000		
415V AC	BLCR90817D0000		
<b>Shunt Release (SR)</b>			
24-30V DC	BLSH9081604000		
110V AC / 110V DC	BLSH908160A000		
220 - 240V AC / 220 - 250V DC	BLSH908160B000		
415V AC	BLSH908160D000		
<b>Under Voltage Release (UVR) with time delay (0-1-3-5 sec)</b>			
240V AC / 220V DC	BLUV90818B0000		
415V AC	BLUV90818D0000		

HSN Code : 8538

Description	Cat. No.	M.R.P. [₹]
<b>External Neutral CT for BU-BTX Releases</b>		
Frame-1, 800A	BLEN0071700000	*
Frame-1, 1000-1600A	BLEN0071800000	
Frame-1 2000A	BLEN0071900000	
Frame-2 & 3 2500-4000A	BLNCT0072000000	



BU-BTX1.0

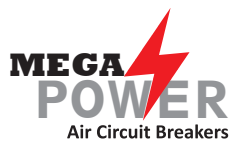


BU-BTX1.5G

HSN Code : 8538

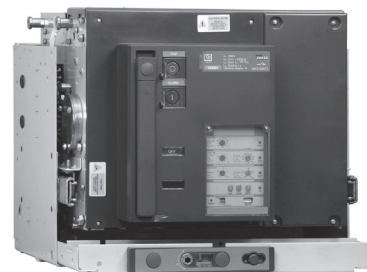
Description	Cat. No.	M.R.P. [₹]
<b>BTX Releases</b>		
BU-BTX1G	BLBTX9197100000	*
BU-BTX1Gi	BLBTX9056200000	
BU-BTX1.5G	BLBTX9196500000	
BU-BTX1.5Gi	BLBTX9055200000	
BU-BTX3.5	BLBTX9011300000	
BU-BTX3.5EC	BLBTX9064400000	
BU-BTX3.5H	BLBTX9197500000	
BU-BTX3.5K	BLBTX9037000000	
BU-BTX3.5L	BLBTX9037000000	
BU-BTX3.5M	BLBTX9037000000	

# Air Circuit Breakers.....BCH



## S1 Range of Air Circuit Breakers New

- Conforms to IS/IEC 60947-2
- Current rating from 800A to 6300A
- Available in 3 Pole/4 Pole, Manually & Electrically operated, Fixed & Draw-out versions
- High short time withstand capacity,  $I_{cu} = I_{cs} = I_{cw}$  for 1 sec for total selectivity
- High mechanical and electrical operating life
- 100% rated neutral pole
- Common height and depth across the range
- Protection through Microprocessor releases (BR18G)
- Self diagnostic Microprocessor based Releases with on-load testing through TEST button
- Inbuilt thermal memory
- Protection Releases conform to EMI/EMC standards



Mega power S1 ACB

### Breaking Capacities Offered:

I <sub>cu</sub> = I <sub>cs</sub> = I <sub>cw</sub> for 1 sec										
	800A	1000A	1250A	1600A	2000A	2500A	3200A	4000A	5000A	6300A
Frame : S1	50kA	50kA	50kA	50kA	50kA	60kA				
Frame : H2							75kA	75kA		
Frame : C									95kA	95kA
	Frame-1				Frame-2		Frame-3		Frame-4	

### MEGA POWER S1 3 & 4 Pole Draw-out ACBs

HSN Code : 8536

Rating	Breaking Capacity I <sub>cu</sub> =I <sub>cs</sub> =I <sub>cw</sub> (1 sec)	Version	Microprocessor Based BR18G			
			3 Pole		4 Pole	
			Cat. No.	M.R.P.[₹]	Cat. No.	M.R.P.[₹]
800A	50kA	MDO	BM960420000	187260	BM960620000	234990
800A	50kA	EDO	BM960520000	233830	BM960720000	281560
1000A	50kA	MDO	BM960430000	194760	BM960630000	246120
1000A	50kA	EDO	BM960530000	241330	BM960730000	292690
1250A	50kA	MDO	BM960440000	214850	BM960640000	271120
1250A	50kA	EDO	BM960540000	261420	BM960740000	317690
1600A	50kA	MDO	BM960450000	244350	BM960650000	300520
1600A	50kA	EDO	BM960550000	290920	BM960750000	347090
2000A	50kA	MDO	BM960460000	287020	BM960660000	352540
2000A	50kA	EDO	BM960560000	333590	BM960760000	399120
2500A	60kA	MDO	BM960470000	354820	BM960670000	427580
2500A	60kA	EDO	BM960570000	401400	BM960770000	474160

### MEGA POWER S1 3 & 4 Pole Fixed ACBs

HSN Code : 8536

Rating	Breaking Capacity I <sub>cu</sub> =I <sub>cs</sub> =I <sub>cw</sub> (1 sec)	Version	Microprocessor Based BR18G			
			3 Pole		4 Pole	
			Cat. No.	M.R.P.[₹]	Cat. No.	M.R.P.[₹]
630A	50kA	MF	BM955610000	116770	BM955810000	148770
630A	50kA	EF	BM955710000	163340	BM955910000	195340
800A	50kA	MF	BM955620000	116770	BM955820000	148770
800A	50kA	EF	BM955720000	163340	BM955920000	195340
1000A	50kA	MF	BM955630000	127530	BM955830000	160850
1000A	50kA	EF	BM955730000	174100	BM955930000	207420
1250A	50kA	MF	BM955640000	146840	BM955840000	183560

# Air Circuit Breakers..... BCH

## MEGA POWER MEGA POWER H2 3 & 4 Pole Draw-out ACBs Air Circuit Breakers



HSN Code : 8536

Rating	Breaking Capacity Icu=Ics=Icw (1 sec)	Version	Type	Microprocessor Based BR18G			
				3 Pole		4 Pole	
				Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]
3200A	75kA	MDO	H2	BM948220000	448280	BM948260000	550210
3200A	75kA	EDO	H2	BM948240000	494850	BM948280000	596770
4000A	75kA	MDO	H2	BM948230000	518990	BM948270000	673170
4000A	75kA	EDO	H2	BM948250000	565560	BM948290000	719750
5000A	95kA	MDO/EDO	C	On request		On request	
6300A	95kA	MDO/EDO	C	On request		On request	

M.R.P. changes for		M.R.P. [₹]
product customization w.r.t. BR18G M.R.P.		
Bus-Coupler (w/o protection)	Reduce	-14220

## MEGA POWER ACBs are offered with following standard features:

**Mega Power S1 Draw-Out ACB's** will have inbuilt - 2NO+2NC Aux contact for MDO & 6NO+6NC Aux contact for EDO breakers, Safety shutter assembly, Racking handle, Door sealing frame, Push-button cover & Rating error preventor.

**Mega Power S1 Fixed ACB's** will have inbuilt - 2NO+2NC Aux contact for MF & 6NO+6NC Aux contact for EF breakers, Door sealing frame & Push-button cover. Electrical version includes 240V AC Shunt trip coil, Closing coil and Motor for electrical charging.

## Accessories for Mega Power ACB's



LTPB



Shunt Release



UV Release

HSN Code : 8538

HSN Code : 8538

Description	Cat. No.	M.R.P. [₹]
<b>Lockable Trip Push Button (LTPB)</b>		
Type AA	BMLP93148000A	4370
Type BB	BMLP93148000B	4370
Type CC	BMLP93148000C	4370
Type DD	BMLP93148000D	4370
<b>Locking of ACB in Any position (LAP)</b>		
Type A	BMLP93147000A	4670
Type B	BMLP93147000B	4670
Type C	BMLP93147000C	4670
Type D	BMLP93147000D	4670
<b>Racking Interlock</b>		
Type AA	BMRI93149000A	6020
Type B B	BMRI93149000B	6020
Type C C	BMRI93149000C	6020
Type D D	BMRI93149000D	6020

Description	Cat. No.	M.R.P. [₹]
<b>Shunt Release (SR)</b>		
Type EA : 24/48V DC	BMSH927180400	3410
Type EA1 : 240V AC	BMSH927180B00	3410
Type EA1 : 415V AC	BMSH927180D00	3410
<b>Under Voltage Release (UVR)</b>		
Type MV : 240V AC	BMUV92720B000	4930
Type MV : 415V AC	BMUV92720D000	4930
<b>Microswitches for Indication</b>		
Test or Isolated Position Microswitch - Left (2)	BMTL931450000	1830

### Note :

- The Numerical in brackets, against various accessories indicate the SICs required for wiring purpose in Draw-Out breakers
- Shunt release requires one set of auxiliary contacts
- Maximum 24 SICs can be fitted on an ACB. In Electrical ACBs 5 SICs are prewired for control circuit purpose

HSN Code : 8538

Description	Cat. No.	M.R.P. [₹]
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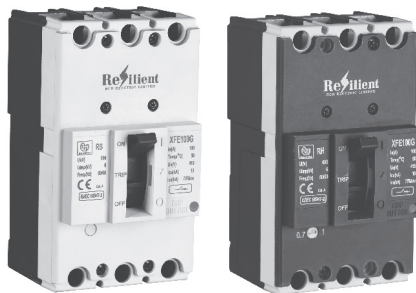
# MCCB ..... BCH

## XF Frame 1 / XA1 With Thermal - Magnetic Release:

<b>RATING (A)</b> Icu (kA)	16	20	25	32	40	50	63	80	100	125
10/ 15/ 25/ 30/ 36/ 50	XF Frame 1 - 3 Pole									
18	XA1 - 4 POLE									

### XF Frame 1 - 3 Pole

- Conforms to IS/IEC 60947-2
- Range: 16A - 100A
- High Performance Compact Size
- Suitability for Isolation
- Rated at 50 C °
- Line Load Interchangeability
- Double Insulation
- Thermal Magnetic Trip unit
  - Overload Setting: 0.7-1.0 In
  - Short Circuit Setting: Fixed



XF Frame 1 :  
I<sub>cu</sub>/I<sub>cs</sub> = 10/7.5, 15/15, 25/25, 30/15, 36/18, 50/25, 50/50 kA

XFE series with RAL-7035 (Light Grey) front Facia  
Other series with RAL-7016 (Dark Grey) front Facia

### XA1 Frame - 4 Pole

- Conforms to IS/IEC 60947-2
- Range: 25A to 125A, 4P
- I<sub>cs</sub>=100% of I<sub>cu</sub>
- High Electrical & Mechanical life
- Thermal Magnetic Release
- Compact size
- Adjustable overload setting : 0.8-1.0 x In
- Wide range of snap fit internal & external accessories



HSN Code : 8536

Type	Release Range (A)	Breaking Capacity Icu/Ics at 415V AC	3 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XF Frame 1	16, 20, 25, 32, 40, 50, 63	10/7.5kA (Fixed)	XFE***G	2280	1
	80, 100 (w/o spreader terminal)		XFE***G-WT	2390	1
	80, 100		XFE***G#	2550	1
	16, 20, 25, 32, 40, 50, 63	15/15kA (Fixed)	XFN***P	5220	1
	80, 100		XFN***P#	5320	1
	16, 20, 25, 32, 40, 50, 63	25/25kA	XFS***PV	8170	1
	80, 100		XFS***PV#	8320	1
	16, 20, 25, 32, 40, 50, 63	30/15kA	XFH***NV	5940	1
	80, 100		XFH***NV#	6070	1
	16, 20, 25, 32, 40, 50, 63	36/18kA	XFL***NV	7750	1
	80, 100		XFL***NV#	7880	1
	16, 20, 25, 32, 40, 50, 63	50/25kA	XFV***NV	13320	1
	80, 100		XFV***NV#	13460	1
	32, 40, 50, 63	50/50kA	XFV***PV	13770	1
80, 100	XFV***PV#		13970	1	

Note: Phase barriers are supplied along with all MCCBs.  
#Spreader terminals available as standard. (For MCCB without spreader, please contact our nearest branch)  
For accessories please refer page No.15 on Table 1 & 2

### Code - Current Rating XF Frame 1 - 3 Pole

Rating	16A	20A	25A	32A	40A	50A	63A	80A	100A
*Code	016	020	025	032	040	050	063	080	100

HSN Code : 8536

Type	Release Range (A)	Breaking Capacity Icu/Ics at 415V AC	4 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XA1	32	18/18kA	XA1R032PV4	8530	1
	40		XA1R040PV4	8530	1
	63		XA1R063PV4	8250	1
	100		XA1R100PV4	8250	1
	125		XA1R125PV4	10450	1

Note: - Phase barriers are supplied along with all MCCBs.  
- Spreader terminals available as accessories.

# MCCB ..... BCH

## XF2/XA2 With Thermal - Magnetic Release:

RATING (A) I <sub>cu</sub> (kA)	125	160	200	250
25	XF2 - 3 Pole			
25	XA2 - 4 Pole			
36	XF2 - 3 Pole			
36	XA2 - 4 Pole			
50	XF2 - 3 Pole			

HSN Code : 8536

### XF2 Frame - 3 Pole

- Conforms to IS/IEC 60947-2
- Range: 125A - 250A
- High Performance Compact Size
- Suitability for Isolation
- Rated at 50 C °
- Line Load Interchangeability
- Double Insulation
- Thermal Magnetic Trip unit
  - Overload Setting: 0.8-1.0 In
  - Short Circuit Setting: Fixed



XF2 Frame :  
I<sub>cu</sub>/I<sub>cs</sub> = 25/25, 36/18, 36/27, 36/36, 50/25, 50/50 kA

Type	Release Range (A)	Breaking Capacity I <sub>cu</sub> /I <sub>cs</sub> at 415V AC	3 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XF2 range	125	25/25kA	XF2E125PV	11900	1
	160		XF2E160PV	15500	1
	200		XF2E200PV#	20120	1
	250		XF2E250PV#	23590	1
	125	36/18kA	XF2N125NV	9660	1
	160		XF2N160NV	11120	1
	200		XF2N200NV#	14010	1
	250		XF2N250NV#	16080	1
	125	36/27kA	XF2N125GV	13120	1
	160		XF2N160GV	17540	1
	200		XF2N200GV#	22960	1
	250		XF2N250GV#	25270	1
	125	36/36kA	XF2N125PV	14690	1
	160		XF2N160PV	19570	1
	200		XF2N200PV#	24690	1
	250		XF2N250PV#	27310	1
	125	50/25kA	XF2H125NV	15230	1
	160		XF2H160NV	20660	1
	200		XF2H200NV#	24860	1
	250		XF2H250NV#	26900	1
125	50/50kA	XF2H125PV	20470	1	
160		XF2H160PV	23030	1	
200		XF2H200PV#	27290	1	
250		XF2H250PV#	29660	1	

Note: Phase barriers are supplied along with all MCCBs.

#Spreader terminals available as standard.

(For MCCB without spreader, please contact our nearest branch)

For accessories please refer page No.16 on Table1 & 2

### XA2 Frame - 4 Pole

- Conforms to IS/IEC 60947-2
- Range: 160A to 250A, 4P
- Compact size
- Wide Range of snap fit Internal and External Accessories
- Adjustable Overload Setting: 0.8 - 1.0 x In



HSN Code : 8536

Type	Release Range (A)	Breaking Capacity I <sub>cu</sub> /I <sub>cs</sub> at 415V AC	4 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XA2	160	25/12.5kA	XA2E160NV4	14880	1
	200		XA2E200NV4	17910	1
	250		XA2E250NV4	20480	1
	160	36/18kA	XA2N160NV4	16350	1
	200		XA2N200NV4	21870	1
	250		XA2N250NV4	24380	1



## XF3/XA3 With Thermal - Magnetic Release:

RATING (A) Icu (kA)	320	400	500	630
36	XF3 - 3 Pole			
50	XF3 - 3 Pole			
50	XA3 - 4 POLE			

HSN Code : 8536

### XF3 Frame - 3 Pole

- Conforms to IS/IEC 60947-2
- Range: 320A - 630A
- High Performance Compact Size
- Suitability for Isolation
- Rated at 50 C °
- Line Load Interchangeability
- Double Insulation
- Thermal Magnetic Trip unit



XF3 Frame :  
I<sub>cu</sub>/I<sub>cs</sub> = 36/36, 50/50 kA

Type	Release Range (A)	Breaking Capacity Icu/Ics at 415V AC	3 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XF3 range	320	36/36kA	XF3N320PV	33310	1
	400		XF3N400PV	34950	1
	500		XF3N500PV	39960	1
	630		XF3N630PV	43620	1
	320	50/50kA	XF3H320PV	35740	1
	400		XF3H400PV	37710	1
	500		XF3H500PV	43540	1
	630		XF3H630PV	46390	1

Note: Phase barriers are supplied along with all MCCBs.

Spreader terminals available as standard.

(For MCCB without spreader, please contact our nearest branch)

For MCCBs with 'Magnetic only' protection, prices available On Request.

For accessories please refer page No.16 on Table1 & 2

### XA3 Frame - 4 Pole

- Conforms to IS/IEC 60947-2
- Range: 320A to 400A, 4P
- Compact size
- Wide Range of snap fit Internal and External Accessories
- Adjustable Overload Setting: 0.8 - 1.0 x I<sub>n</sub>



XA3 Frame :  
I<sub>cu</sub>/I<sub>cs</sub> = 50/25 kA

HSN Code : 8536

Type	Release Range (A)	Breaking Capacity Icu/Ics at 415V AC	4 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XA3 Range	400	50/25kA	XA3H400NV4	34070	1

Note: Phase barriers are supplied along with all MCCBs.

Spreader terminals available as accessories.

For accessories please refer page No.16 on Table3, 4 & 5

## YG1/XB Range With Thermal - Magnetic Release:

RATING (A) I <sub>cu</sub> =I <sub>cs</sub> (kA)	100	125	160	200	250	320	400	630
25	XB0 - 4 Pole							
25		XB1 - 4 Pole						
36	XB0 - 4 Pole			XB2 - 4 Pole		XB3S - 4 Pole		
36		YG1 - 4 Pole			XB3 - 4 Pole			XB3 - 4 Pole
50		YG1 - 4 Pole						XB3 - 4 Pole
50			XB2 - 4 Pole		XB3 - 4 Pole			

### YG1 Frame - 4 Pole

- Conforms to IS/IEC 60947-2
- 84A to 160A, 4P
- 36kA & 50kA breaking capacities
- I<sub>cs</sub> = 100% of I<sub>cu</sub>
- Adjustable overload settings: 0.67 - 1.0 x I<sub>n</sub>
- Adjustable short-circuit settings: 6 - 12 x I<sub>n</sub>
- Transparent sealable release cover
- Compact size
- Wide range of accessories



YG1 Frame :  
I<sub>cu</sub>/I<sub>cs</sub> = 36/36, 50/50 kA

### XB Range - 4 Pole

- Conforms to IS/IEC 60947-2
- 80A to 630A, 4P
- 25kA, 36kA, 50kA breaking capacities
- I<sub>cs</sub> = 100% of I<sub>cu</sub>\*
- Adjustable overload settings: 0.8 - 1.0 x I<sub>n</sub>
- Manual, Rotary and Motorised versions available@
- Adjustable short-circuit settings: 6 - 10 x I<sub>n</sub>\*\*
- Wide range of accessories



### YG1/XB Range With Thermal - Magnetic Release - 4 Pole

HSN Code : 8536

Type	Release Range (A)	Breaking Capacity I <sub>cu</sub> /I <sub>cs</sub>	4 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XB0	40	36/18kA	XB0L040NV4	11140	1
	63		XB0L063NV4	10840	1
	100		XB0V100NV4	10840	1
XB1	125	25/25kA	XB0N125NV4	12590	1
	63		XB0S063PV4	11280	1
	100		XB0S100PV4	11280	1
	125		XB1E125PV4	14200	1
	160		XB1E160PV4	18330	1
	200		XB1E200PV4	22040	1
XB1	250	36/36kA	XB1E250PV4	25090	1
	100		YG1N100PV4	13460	1
	125		YG1N125PV4	15270	1
XB2	160	50/50kA	YG1N160PV4	19340	1
	200		XB2N200PV4	28800	1
	250		XB2N250PV4	30540	1
XB3S	320	50/50kA	XB3SN320PV4	37250	1
	400		XB3SN400PV4	37250	1
XB3	320	50/50kA	XB3N320PV4	47450	1
	630		XB3N630PV4	51490	1
YG1	125	50/50kA	YG1H125PV4	21320	1
	160		YG1H160PV4	25100	1
XB2	200	50/50kA	XB2H200PV4	33960	1
	250		XB2H250PV4	34790	1
XB3	320	50/50kA	XB3H320PV4	40470	1
	400		XB3H400PV4	40470	1
XB3	630	50/50kA	XB3H630PV4	56960	1

#### General Information

- Use of phase barriers is mandatory. These are supplied along with MCCBs
- It is recommended to use spreader terminals for enhancing termination capacity
- Spreader terminals are available as accessories, unless otherwise specified against cat. nos.

#### Special Applications

- XB range MCCBs with TM release can be used for DC application (4 Pole)
- XB range MCCBs can be used for Capacitor back-up protection

@ Motorized version available for XB2 AND XB3 Frames

\* XB0 : I<sub>cs</sub> = 50% I<sub>cu</sub>

\*\* For XB0, XB1, XB3S Short circuit setting : 9 I<sub>n</sub>

For accessories please refer page No.16 on Table3, 4 & 5

## XG1/XB Range With Microprocessor Release:

RATING (A) I <sub>cu</sub> =I <sub>cs</sub> (kA)	40	63	100	160	250	320	400	500	630	800	1000	1250
36/36	XG1-LSI/LSIG (3 & 4 Pole)											
	XF2 RANGE-LSIG (3 Pole)											
	XB2-LSI/LSIG (3 & 4 Pole)				XF3 RANGE-LSIG (3 Pole)							
	XB3-LSI/LSIG (3 & 4 Pole)											
	XB3-LSI/LSIG (3 & 4 Pole)											
50/50	XG1-LSI/LSIG (3 & 4 Pole)											
	XF2 RANGE-LSIG (3 Pole)											
	XB2-LSI/LSIG (3 & 4 Pole)				XF3 RANGE-LSIG (3 Pole)							
	XB3-LSI/LSIG (3 & 4 Pole)											
	XB3-LSI/LSIG (3 & 4 Pole)											XB4-LSI/LSIG (4 Pole)

## With Microprocessor Release BMR & GMR - LSI (3 & 4 Pole)



XB Frame - BMR :  
I<sub>cu</sub>/I<sub>cs</sub> = 36/36, 50/50 kA

### XB-BMR (LSI)

- Conforms to IS/IEC 60947-2
- 250A to 1250A, 3P & 4P
- 36kA, 50kA breaking capacities
- Adjustable overload setting from 0.4 to 1.0 x I<sub>n</sub>
- I<sub>cs</sub>=100% I<sub>cu</sub>
- Adjustable short-circuit setting from 1.5 to 8 x I<sub>r</sub>
- Inbuilt instantaneous Protection
- Switchable thermal memory
- Variable trip class
- Front LED Indication
- Manual, Rotary and Motorised versions available@
- Wide range of accessories



XG1 Frame - GMR :  
I<sub>cu</sub>/I<sub>cs</sub> = 36/36, 50/50 kA

### XG1-GMR (LSI)

- Conforms to IS/IEC 60947-2
- 16A to 160A, 3P & 4P
- 36kA & 50kA breaking capacities
- I<sub>cs</sub>=100% I<sub>cu</sub>
- Adjustable overload setting from 0.25 to 1.0 x I<sub>n</sub>
- Adjustable short-circuit setting from 1.5 to 12 x I<sub>r</sub>
- Instantaneous setting from 1.5 to 12 x I<sub>n</sub>
- Switchable thermal memory
- Variable trip class
- Transparent sealable release cover
- Compact size
- Adjustable overload setting from 0.25 to 1.0 x I<sub>n</sub>
- Wide range of accessories

HSN Code : 8536

Type	Release Range (A)	Breaking Capacity I <sub>cu</sub> /I <sub>cs</sub>	3 Pole		4 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	Cat. No.	MRP [₹]	
XG1	10-40	36/36kA	XG1L040PE3-LSI	18140	XG1L040PE4-LSI	22820	1
	16-63		XG1L063PE3-LSI	18140	XG1L063PE4-LSI	22820	1
	25-100		XG1L100PE3-LSI	18140	XG1L100PE4-LSI	22820	1
	40-160		XG1N160PE3-LSI	22970	XG1N160PE4-LSI	31910	1
XB2	100-250		XB2N250PE3-LSI	31700	XB2N250PE4-LSI	43440	1
XB3	160-400		XB3N400PE3-LSI	39310	XB3N400PE4-LSI	48530	1
	250-630		XB3N630PE3-LSI	43820	XB3N630PE4-LSI	57010	1
	XG1		10-40	XG1V040PE3-LSI	21620	XG1V040PE4-LSI	29980
16-63			XG1V063PE3-LSI	21620	XG1V063PE4-LSI	29980	1
25-100			XG1V100PE3-LSI	21620	XG1V100PE4-LSI	29980	1
40-160			XG1H160PE3-LSI	28290	XG1H160PE4-LSI	37010	1
XB2	100-250		XB2H250PE3-LSI	36270	XB2H250PE4-LSI	46430	1
XB3	160-400	XB3H400PE3-LSI	43020	XB3H400PE4-LSI	55490	1	
	250-630	XB3H630PE3-LSI	47210	XB3H630PE4-LSI	61570	1	
	XB4	320-800	XB4H800PE3-LSI	70920	XB4H800PE4-LSI	89310	1
400-1000		XB4H1000PE3-LSI	99250	XB4H1000PE4-LSI	143620	1	
500-1250		XB4H1250PE3-LSI	123840	XB4H1250PE4-LSI	167580	1	

@ Motorized version available for XB2 and XB3 Frames (please refer page no.16)

## XF3 Range With Microprocessor Release - LSIG (3 Pole)

HSN Code : 8536



XF2 & XF3 Frame - LSIG :  
I<sub>cu</sub>/I<sub>cs</sub> 36/36, 50/50 kA

### • Electronic Trip Unit (ETU)-LSIG

- Overload Setting: 0.4-1.0 In
- Short Circuit Setting: 1.5-10 In
- Earth Fault Setting: 0.2-0.55 In
- Instantaneous Setting: 12 In
- Short Circuit Delay: 50-500 ms
- Earth Fault Delay: 50-500 ms
- Pre Trip Alarm Indication



XB Frame - BMR :  
I<sub>cu</sub>/I<sub>cs</sub> 36/36, 50/50 kA

Type	Release Range (A)	Breaking Capacity I <sub>cu</sub> /I <sub>cs</sub> at 415V AC	3 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XF2 range	16 - 40	36/36kA	XF2N040PE-LSIG	32980	1
	25 - 63		XF2N063PE-LSIG	32980	1
	40 - 100		XF2N100PE-LSIG	32980	1
	63 - 160		XF2N160PE-LSIG	37470	1
	100 - 250		XF2N250PE-LSIG#	43600	1
XF3 range	160 - 400	36/36kA	XF3N400PE-LSIG#	55730	1
	250 - 630		XF3N630PE-LSIG#	57900	1
XF2 range	16 - 40	50/50kA	XF2H040PE-LSIG	35860	1
	25 - 63		XF2H063PE-LSIG	35860	1
	40 - 100		XF2H100PE-LSIG	35860	1
	63 - 160		XF2H160PE-LSIG	43200	1
	100 - 250		XF2H250PE-LSIG#	46550	1
	160 - 400		XF3H400PE-LSIG#	59600	1
XF3 range	250 - 630	50/50kA	XF3H630PE-LSIG#	62380	1

Note: Phase barriers are supplied along with all MCCBs.

# Spreader terminals available as standard.

(For MCCB without spreader, please contact our nearest branch)

For accessories please refer page No.16 on Table1 & 2

## With Microprocessor Release BMR & GMR - LSIG (3 & 4 Pole)

HSN Code : 8536

### XB-BMR (LSIG)

- Conforms to IS/IEC 60947-2
- 40A to 1250A, 3P & 4P
- 36kA, 50kA breaking capacities
- I<sub>cs</sub>=100% I<sub>cu</sub>
- Adjustable overload setting from 0.4 to 1.0 x In
- Adjustable short-circuit setting from 1.5 to 8 x Ir
- Inbuilt instantaneous Protection
- Inbuilt ground fault protection from 20%-50% of In
- Adjustable neutral overload protection from 50% to 150% of Ir
- Switchable thermal memory
- Variable trip class
- Front LED Indication
- Panel mounted display for current metering & trip record
- Manual, Rotary and Motorised versions available@
- Wide range of accessories



XG1 Frame - GMR :  
I<sub>cu</sub>/I<sub>cs</sub> 36/36, 50/50 kA

### XG1-GMR (LSIG)

- Conforms to IS/IEC 60947-2
- 16A to 160A, 3P & 4P
- 36kA & 50kA breaking capacities
- I<sub>cs</sub>=100% I<sub>cu</sub>
- Adjustable overload setting from 0.25 to 1.0 x In
- Adjustable short-circuit setting from 1.5 to 10 x Ir
- Adjustable Instantaneous setting, 6 In & 12 In
- Inbuilt ground fault protection from 20%-70% of In
- Adjustable neutral overload protection from 50% to 200% of Ir
- Switchable thermal memory
- Provision for release testing

Type	Release Range (A)	Breaking Capacity I <sub>cu</sub> /I <sub>cs</sub>	3 Pole		4 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	Cat. No.	MRP [₹]	
XG1	10-40	36/36kA	XG1L040PE3-LSIG	33290	XG1L040PE4-LSIG	38320	1
	16-63		XG1L063PE3-LSIG	33290	XG1L063PE4-LSIG	38320	1
	25-100		XG1L100PE3-LSIG	33290	XG1L100PE4-LSIG	38320	1
	40-160		XG1N160PE3-LSIG	37820	XG1N160PE4-LSIG	46880	1
XB2	40-100	36/36kA	-	-	XB2V100PE4-LSIG	42920	1
	63-160		-	-	XB2N160PE4-LSIG	52510	1
	100-250		XB2N250PE3-LSIG	44020	XB2N250PE4-LSIG	54120	1
XB3	160-400	36/36kA	XB3N400PE3-LSIG	53140	XB3N400PE4-LSIG	61570	1
	250-630		XB3N630PE3-LSIG	57600	XB3N630PE4-LSIG	70460	1
XG1	10-40	50/50kA	XG1V040PE3-LSIG	36200	XG1V040PE4-LSIG	43190	1
	16-63		XG1V063PE3-LSIG	36200	XG1V063PE4-LSIG	43190	1
	25-100		XG1V100PE3-LSIG	36200	XG1V100PE4-LSIG	43190	1
	40-160		XG1H160PE3-LSIG	43620	XG1H160PE4-LSIG	51990	1
XB2	40-100	50/50kA	-	-	XB2L100PE4-LSIG	48370	1
	63-160		-	-	XB2H160PE4-LSIG	56160	1
XB3	100-250	50/50kA	XB2H250PE3-LSIG	47000	XB2H250PE4-LSIG	57160	1
	160-400		XB3H400PE3-LSIG	56380	XB3H400PE4-LSIG	66030	1
	250-630		XB3H630PE3-LSIG	61250	XB3H630PE4-LSIG	78910	1
XB4	320-800	50/50kA	XB4H800PE3-LSIG	98160	XB4H800PE4-LSIG	117660	1
	400-1000		XB4H1000PE3-LSIG	126430	XB4H1000PE4-LSIG	169180	1
	500-1250		XB4H1250PE3-LSIG	148120	XB4H1250PE4-LSIG	191610	1

@ Motorized version available for XB2 and XB3 Frames

For accessories please refer page No.16 on Table3, 4 & 5

### General Information

- Use of phase barriers is mandatory. These are supplied along with MCCBs
- It is recommended to use spreader terminals for enhancing termination capacity
- Spreader terminals are available as accessories, unless otherwise specified

# MCCB

BCH

## MCCB for Motor back-up protection



HSN Code : 8536



- XF1, XF2 & XF3 Frame
- Conforms to IS/IEC 60947-2
- Range: 32A - 630A
- $I_{cu}/I_{cs} = 50/50kA$
- High Performance Compact Size
- Suitability for Isolation
- Rated at 50°C
- Line Load Interchangeability
- Double Insulation
- Magnetic Trip unit

Type	Release Range (A)	Breaking Capacity $I_{cu}/I_{cs}$ at 415V AC	3 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XF1 range	32	50/50kA	XFV032P-MO	6740	1
	40		XFV040P-MO	6740	1
	50		XFV050P-MO	6740	1
	63		XFV063P-MO	6740	1
	80		XFV080P-MO#	6740	1
	100		XFV100P-MO#	8580	1
XF2 range	125		XF2H125P-MO	9250	1
	160		XF2H160P-MO	17330	1
	200		XF2H200P-MO#	20500	1
	250		XF2H250P-MO#	23890	1
	320		XF3H320P-MO#	30070	1
XF3 range	400		XF3H400P-MO#	30810	1
	500		XF3H500P-MO#	34520	1
	630		XF3H630P-MO#	39810	1

Note: Phase barriers are supplied along with all MCCBs.

#Spreader terminals available as standard.

(For MCCB without spreader, please contact our nearest branch)

For accessories please refer page No.16 on Table1 & 2

## Accessories - XF Range MCCBs:



Shunt Release



UV Release



ATAC

**Table 1** HSN Code : 8538

Description	Internal		
	Cat. No.	MRP [₹]	Std. Pkg.
<b>Auxiliary + Trip Alarm Contact</b>			
1 C/O + 1C/O (F1, F2 & F3)	XFALAX11	1790	1
2 C/O (F1, F2 & F3)	XFAX2	1760	1
<b>Shunt Release</b>			
220V - 415V F1	XFSHT220V	1540	1
220V - 415V F2	XF2SHT220V	1570	1
220V - 415V F3	XF3SHT220V	2550	1
<b>Under Voltage Release</b>			
240V F1	XFUV240VA	2030	1
240V F2	XF2UV240VA	2050	1
240V F3	XF3UV240VA	3190	1
415V F1	XFUV415VA	2340	1
415V F2	XF2UV415VA	2340	1
415V F3	XF3UV415VA	3190	1

**Table 2** HSN Code : 8538

Description	External		
	Cat. No.	MRP [₹]	Std. Pkg.
Spreader Terminals	ACMF1TP100	430	Set of 6
	ACMF2TP250	1730	Set of 6
Extended Rotary Handle	F1ROHE	2200	1
	F2ROHE/F2ROHE-LSIG	2370	1
	F3ROHE	4530	1
Din Rail	F1DIN	250	1
Phase Barriers	F1PB	120	Set of 4
	F2PB	280	Set of 4
	F3PB	290	Set of 4
MCCB Enclosure	F1EU3P	1170	1
	F2EU3P	2530	1

**Table 3** HSN Code : 8538

Description	External		
	Cat. No.	MRP [₹]	Std. Pkg.
<b>Rotary Handle</b>			
XA1, XB0 Direct ROM	XB0A1ROHD	1270	1
XA2, XB1 Direct ROM	XB1A2ROHD	1360	1
XG1 Direct ROM	XG1ROHD	1390	1
XB2 Direct ROM	XB2ROHD	1400	1
XA3, XB3S, XB3 Direct ROM	XB3A3ROHD	2100	1
XA1, XB0 Extended ROM	XB0A1ROHE	1640	1
XA2, XB1 Extended ROM	XB1A2ROHE	1740	1
XG1 Extended ROM	XG1ROHE	1880	1
XB2 Extended ROM	XB2ROHE	2120	1
XA3, XB3S, XB3 Extended ROM	XB3A3ROHE	3460	1
XB4 Extended ROM	XB4ROHE	4390	1
<b>Stored Energy Electrical Operating Mechanism</b>			

## Accessories - XB/XG1 Range MCCBs:



Auxiliary Contact



ATAC



Shunt Release



UV Release

**Table 4** HSN Code : 8538

Description	Internal		
	Cat. No.	MRP [₹]	Std. Pkg.
<b>Auxiliary Contact</b>			
XA1, XA2, XB0, XB1 - 1 C/O - Right	XB01A12AUX1	990	1
XA1, XA2, XB0, XB1 - 2 C/O - Right	XB01A12AUX2	1760	1
XG1 - 1 C/O	XG1AUX1	990	1
XA3, XB2, XB3S, XB3, XB4 - 1 C/O	XB234A3AUX1	1150	1
XA3, XB2, XB3S, XB3, XB4 - 2 C/O	XB234A3AUX2	2230	1
<b>Trip Alarm Contact</b>			
XA1, XA2, XB0, XB1 - 1 C/O - Right	XB01A12ALR1	990	1
XG1 - 1 C/O	XG1AUX1	990	1
XA3, XB2, XB3S, XB3, XB4 - 1 C/O - Right	XB234ALR1	1220	1
<b>Auxiliary 1 C/O + TAC 1 C/O</b>			
XA1, XA2, XB0, XB1 - Right	XB01A12ALAX1	1690	1
XA3, XB2, XB3S, XB3, XB4 - Right	XB234ALAX1	2240	1
<b>Shunt Release</b>			
XA1, XA2, XB0, XB1 - 24V DC - Left	XB01A12SHT24V	1810	1
XA1, XA2, XB0, XB1 - 240/415V AC - Left	XB01A12SHTUNI	1970	1
XG1 - 240V AC	XG1SHT240V	2640	1
XA3, XB2, XB3S, XB3, XB4 - <sup>110/240/415V AC, 110/220V DC</sup>	XB234A3SHTUNI	2900	1
<b>Under Voltage Release</b>			
XA1, XA2, XB0, XB1 - 240V AC - Left	XB01A12UV240V	3280	1
XG1 - 240V AC	XG1UV240V	3320	1
XA3, XB2, XB3S, XB3 - 240V AC - Left	XB23UV240V	4030	1
XB4 - 240V AC - Left	XB4UV240V	4610	1

\*\* Use these catcode of UV with they look MCCBs only

**Table 5** HSN Code : 8538

Description	External		
	Cat. No.	MRP [₹]	Std. Pkg.
<b>Spreader Terminals - 3 Pole</b>			
XA1, XB0-100 - 3 Pole	XB0A1100TPST	400	Set of 6
XA1, XB0-125D - 3 Pole	XB0A1125TPST	520	Set of 6
XG1 - 160 - 3 Pole	XG160TPST	1590	Set of 6
XA2, XB1, XB2 - 250 - 3 Pole	XB12A2250TPST	1700	Set of 6
XA3, XB3S/XB3-400 - 3 Pole	XB3400TPST	3290	Set of 6
XB3-630 - 3 Pole	XB3630TPST	3810	Set of 6
XB4-800 - 3 Pole	XB4800TPST	8000	Set of 6
XB4-1000 - 3 Pole	XB41000TPST	16020	Set of 12
XB4-1250 - 3 Pole	XB41250TPST	31660	Set of 6
<b>Spreader Terminals - 4 Pole</b>			
XA1, XB0-100 - 4 Pole	XB0A1100FPST	630	Set of 8
XA1, XB0-125D - 4 Pole	XB0A1125FPST	750	Set of 8
XG1 - 160 - 4 Pole	XG160FPST	2100	Set of 8
XA2, XB1, XB2 - 250 - 4 Pole	XB12A2250FPST	2250	Set of 8
XA3, XB3S/XB3-400 - 4 Pole	XB3400FPST	4720	Set of 8
XB3-630 - 4 Pole	XB3630FPST	4830	Set of 8
XB4-800 - 4 Pole	XB4800FPST	10220	Set of 8

# MCB

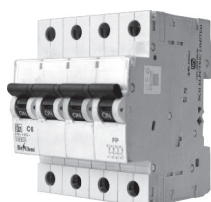
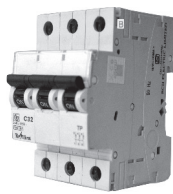
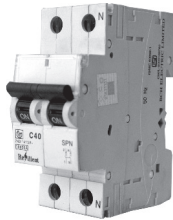
# BCH

New HSN Code : 8536



### Salient Features:

- Line load interchangeability
- Suitable for isolation
- Suitable for IT systems
- Current limiting design
- 45mm panel cutout, suitable for standard MCB distribution boards
- Possibility of busbar termination at both ends



Pole	Standard pack of	Rating	B Curve Cat. No.	MRP (per unit) [₹]	C Curve Cat. No.	MRP (per unit) [₹]	Rating	Lower Rating Cat. No.	MRP (per unit) [₹]
1P	12 units	6A	BCHX10SPB06	270	BCHX10SPC06	270	0.5A 1A 2A 3A 4A 5A	BCHX10SPCL5	450
		10A	BCHX10SPB10	270	BCHX10SPC10	270		BCHX10SPC01	450
		16A	BCHX10SPB16	270	BCHX10SPC16	270		BCHX10SPC02	450
		20A	BCHX10SPB20	270	BCHX10SPC20	270		BCHX10SPC03	450
		25A	BCHX10SPB25	270	BCHX10SPC25	270		BCHX10SPC04	450
		32A	BCHX10SPB32	270	BCHX10SPC32	270		BCHX10SPC05	450
		40A	BCHX10SPB40	605	BCHX10SPC40	605			
		50A	BCHX10SPB50	605	BCHX10SPC50	605			
		63A	BCHX10SPB63	615	BCHX10SPC63	615			
1P+N	6 units	6A			BCHX10SNC06	815			
		10A			BCHX10SNC10	815			
		16A			BCHX10SNC16	815			
		20A			BCHX10SNC20	815			
		25A			BCHX10SNC25	815			
		32A			BCHX10SNC32	815			
		40A			BCHX10SNC40	1220			
		50A			BCHX10SNC50	1220			
63A			BCHX10SNC63	1250					
2P	6 units	6A	BCHX10DPB06	880	BCHX10DPC06	880	0.5A 1A 2A 3A 4A 5A	BCHX10DPCL5	1245
		10A	BCHX10DPB10	880	BCHX10DPC10	880		BCHX10DPC01	1245
		16A	BCHX10DPB16	880	BCHX10DPC16	880		BCHX10DPC02	1245
		20A	BCHX10DPB20	880	BCHX10DPC20	880		BCHX10DPC03	1245
		25A	BCHX10DPB25	880	BCHX10DPC25	880		BCHX10DPC04	1245
		32A	BCHX10DPB32	880	BCHX10DPC32	880		BCHX10DPC05	1245
		40A	BCHX10DPB40	1380	BCHX10DPC40	1380			
		50A	BCHX10DPB50	1380	BCHX10DPC50	1380			
		63A	BCHX10DPB63	1415	BCHX10DPC63	1415			
3P	4 units	6A	BCHX10TPB06	1390	BCHX10TPC06	1390	0.5A 1A 2A 3A 4A 5A	BCHX10TPCL5	1705
		10A	BCHX10TPB10	1390	BCHX10TPC10	1390		BCHX10TPC01	1705
		16A	BCHX10TPB16	1390	BCHX10TPC16	1390		BCHX10TPC02	1705
		20A	BCHX10TPB20	1390	BCHX10TPC20	1390		BCHX10TPC03	1705
		25A	BCHX10TPB25	1390	BCHX10TPC25	1390		BCHX10TPC04	1705
		32A	BCHX10TPB32	1390	BCHX10TPC32	1390		BCHX10TPC05	1705
		40A	BCHX10TPB40	2120	BCHX10TPC40	2120			
		50A	BCHX10TPB50	2120	BCHX10TPC50	2120			
		63A	BCHX10TPB63	2170	BCHX10TPC63	2170			
3P+N	3 units	6A			BCHX10TNC06	1745			
		10A			BCHX10TNC10	1745			
		16A			BCHX10TNC16	1745			
		20A			BCHX10TNC20	1745			
		25A			BCHX10TNC25	1745			
		32A			BCHX10TNC32	1745			
		40A			BCHX10TNC40	2360			
		50A			BCHX10TNC50	2360			
63A			BCHX10TNC63	2415					
4P	3 units	6A	BCHX10FPB06	1870	BCHX10FPC06	1870	0.5A 1A 2A 3A 4A	BCHX10FPCL5	2340
		10A	BCHX10FPB10	1870	BCHX10FPC10	1870		BCHX10FPC01	2340
		16A	BCHX10FPB16	1870	BCHX10FPC16	1870		BCHX10FPC02	2340
		20A	BCHX10FPB20	1870	BCHX10FPC20	1870		BCHX10FPC03	2340
		25A	BCHX10FPB25	1870	BCHX10FPC25	1870		BCHX10FPC04	2340
		32A	BCHX10FPB32	1870	BCHX10FPC32	1870			
		40A	BCHX10FPB40	2875	BCHX10FPC40	2875			
		50A	BCHX10FPB50	2875	BCHX10FPC50	2875			

# ISOLATORS

BCH

HSN Code : 8536



Poles	Standard Pack of	Rating	Cat. No.	MRP (per unit) [₹]
2P	6 units	40A	BCHISODP40	540
	6 units	63A	BCHISODP63	665
3P	4 units	40A	BCHISOTP40	965
	4 units	63A	BCHISOTP63	1105
4P	3 units	40A	BCHISOFP40	1130
	3 units	63A	BCHISOFP63	1230

## MCB DISTRIBUTION BOXES



HSN Code : 8537



Description	No. of Modules (Incoming + Outgoing)	Single Door		Double Door	
		Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
4 WAY, SPN DB	4	BCHSPNSD04W	1100	BCHSPNDD04W	1880
6 WAY, SPN DB	6	BCHSPNSD06W	1120	BCHSPNDD06W	1925
8 WAY, SPN DB	8	BCHSPNSD08W	1385	BCHSPNDD08W	2210
12 WAY, SPN DB	12	BCHSPNSD12W	1815	BCHSPNDD12W	2965
16 WAY, SPN DB	16	BCHSPNSD16W	2320	BCHSPNDD16W	3790



HSN Code : 8537

Description	No. of Modules (Incoming + Outgoing)	Single Door		Double Door	
		Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
4 WAY, HTPN DB	8+12	BCHHTPNSD04W	3805	BCHHTPNDD04W	4770
6 WAY, HTPN DB	8+18	BCHHTPNSD06W	4565	BCHHTPNDD06W	5940
8 WAY, HTPN DB	8+24	BCHHTPNSD08W	5025	BCHHTPNDD08W	7380
12 WAY, HTPN DB	8+36	BCHHTPNSD12W	6670	BCHHTPNDD12W	10560

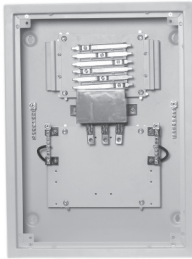
HSN Code : 8537

Description	Cat. No.	No. of Modules (Incoming + Outgoing)	MRP [₹]
4 WAY, DD, MCB I/C, VERTICAL TPN DB	BCHVTPNDD04W-A	8+12	10850
6 WAY, DD, MCB I/C, VERTICAL TPN DB	BCHVTPNDD06W-A	8+18	13585
8 WAY, DD, MCB I/C, VERTICAL TPN DB	BCHVTPNDD08W-A	8+24	15300
12 WAY, DD, MCB I/C, VERTICAL TPN DB	BCHVTPNDD12W-A	8+36	19545



# MCB DISTRIBUTION BOXES ..... BCH

**HSN Code : 8537**



Description	Cat. No.	Suitable for Resilient MCCB Frame	MRP [₹]
4 WAY, DD, 125A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD04W-B	FRAME 1	14785
8 WAY, DD, 125A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD08W-B	FRAME 1	16940
12 WAY, DD, 125A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD12W-B	FRAME 1	22955
4 WAY, DD, 250A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD04W-C	FRAME 2	On request
8 WAY, DD, 250A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD08W-C	FRAME 2	On request
12 WAY, DD, 250A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD12W-C	FRAME 2	On request

All above DB's are double door

**HSN Code : 8537**



Description	Cat. No.	No. of Modules (Incoming + Outgoing)	MRP [₹]
4 WAY, DD, 7 SEGMENT PHASE SEGREGATED DB	BCHPHSGDD04W	8+12+12	On request
6 WAY, DD, 7 SEGMENT PHASE SEGREGATED DB	BCHPHSGDD06W	8+12+18	On request
8 WAY, DD, 7 SEGMENT PHASE SEGREGATED DB	BCHPHSGDD08W	8+12+24	On request
12 WAY, DD, 7 SEGMENT PHASE SEGREGATED DB	BCHPHSGDD12W	8+12+36	On request

All above DB's are double door

**HSN Code : 8537**



Description	Cat. No.	No. of Modules (Incoming + Outgoing)	MRP [₹]
4 WAY, 40A, DD, PHASE SELECTOR DB	BCHPHSLDD04W-40		On request
6 WAY, 40A, DD, PHASE SELECTOR DB	BCHPHSLDD06W-40		On request
8 WAY, 40A, DD, PHASE SELECTOR DB	BCHPHSLDD08W-40		On request
12 WAY, 40A, DD, PHASE SELECTOR DB	BCHPHSLDD12W-40		On request
4 WAY, 63A, DD, PHASE SELECTOR DB	BCHPHSLDD04W-63		On request
6 WAY, 63A, DD, PHASE SELECTOR DB	BCHPHSLDD06W-63		On request
8 WAY, 63A, DD, PHASE SELECTOR DB	BCHPHSLDD08W-63		On request
12 WAY, 63A, DD, PHASE SELECTOR DB	BCHPHSLDD12W-63		On request

All above DB's are double door

**HSN Code : 8537**



Description	Cat. No.	No. of Modules (Incoming + Outgoing)	MRP [₹]
2 ROW, 13 MODULE, DD, ROW DB	BCHROWDB2R13	13	On request
3 ROW, 13 MODULE, DD, ROW DB	BCHROWDB3R13	13	On request
4 ROW, 13 MODULE, DD, ROW DB	BCHROWDB4R13	13	On request

All above DB's are double door

**HSN Code : 8537**



Description	Cat. No.	No. of Modules (Incoming + Outgoing)	MRP [₹]
SPN-10A, P&S DB	BCHPSDBSPN10		1495
SPN-20A, P&S DB	BCHPSDBSPN20		1495
TPN-20A, P&S DB	BCHPSDBTPN20		4295
TPN-30A, P&S DB	BCHPSDBTPN30		4295

**HSN Code : 8537**



Description	Cat. No.	No. of Modules (Incoming + Outgoing)	MRP [₹]
SP, ONE WAY MCB DB	BCHOWMCBDBSP		615
DP, ONE WAY MCB DB	BCHOWMCBDBDP		615
TP, ONE WAY MCB DB	BCHOWMCBDBTP		665



### RCCB, Double Pole

HSN Code : 8536

Description	Cat. No.	MRP [₹]
25A - 30mA	BCHRCB030DPC25	3440
40A - 30mA	BCHRCB030DPC40	3520
63A - 30mA	BCHRCB030DPC63	4730
25A - 100mA	BCHRCB100DPC25	3480
40A - 100mA	BCHRCB100DPC40	3610
63A - 100mA	BCHRCB100DPC63	4830
25A - 300mA	BCHRCB300DPC25	3480
40A - 300mA	BCHRCB300DPC40	3865
63A - 300mA	BCHRCB300DPC63	4830

All above RCCB's are 'AC' type



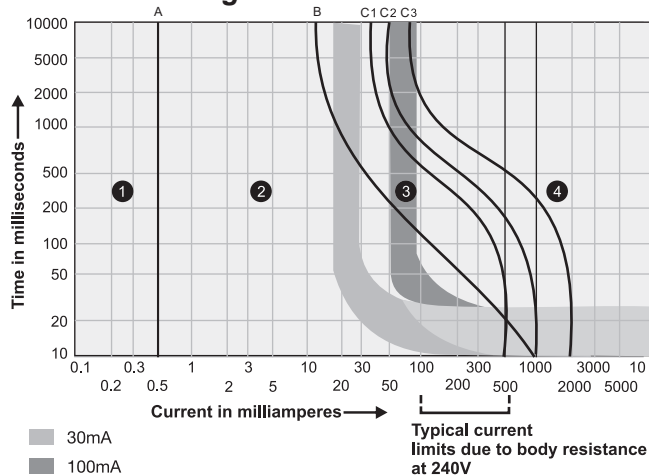
### RCCB, Four Pole

HSN Code : 8536

Description	Cat. No.	MRP [₹]
25A - 30mA	BCHRCB030FPC25	4440
40A - 30mA	BCHRCB030FPC40	4570
63A - 30mA	BCHRCB030FPC63	5145
25A - 100mA	BCHRCB100FPC25	4570
40A - 100mA	BCHRCB100FPC40	4765
63A - 100mA	BCHRCB100FPC63	5145
25A - 300mA	BCHRCB300FPC25	4570
40A - 300mA	BCHRCB300FPC40	4785
63A - 300mA	BCHRCB300FPC63	5145

All above RCCB's are 'AC' type

### Current Limiting Curve

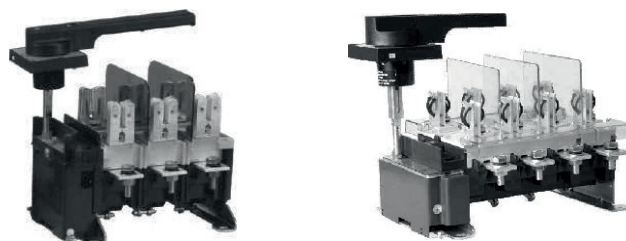


### Effect of Current

Zone	Effects
Zone 1	Usually no reactions
Zone 2	Usually no harmful effects
Zone 3	Muscle cramps can occur. There is normally no danger of ventricular fibrillation.
Zone 4	Chances of ventricular fibrillation increased upto 5% (Curve C2) upto 50% (Curve C3) and above 50% beyond Curve C3. Effects such as cardiac arrest, breathing arrest and heavy burns may also occur.

## X-Line TPN S-D-F suitable for DIN fuse-link (TPN & FP) in open execution

- Range 32A to 800A, 415V, AC 23A
- Conforms to IS/IEC 60947-3
- Terminal Shrouds on both sides and Phase Barriers included
- Telescopic shaft for depth adjustment
- TPN SDF has isolable neutral
- 4P SDF has Switched Neutral Pole and is 100% rated
- Door interlock & padlock facility



**HSN Code : 8537**

Size	Rated Current (A)	Suitable Fuse link for reference		Open Execution type TPN SDF - Suitable for DIN Fuse -link				Open Execution type FP SDF - Suitable for DIN Fuse -link			
		Type	Range (A)	Type	Cat No.	MRP [₹]	Std. Pkg (Nos.)	Type	Cat No.	MRP [₹]	Std. Pkg (Nos.)
Frame 1	32	HF Size 14x51	2 to 32	32 TPN / FP	BXL95518	2660	1	32 TPN / FP	BXL95518	2660	1
	32	HF Size 14x51	2 to 32	32 TPN / FP CE*	BXL95703*	2330	1	32 TPN / FP CE*	BXL95703	2330	1
	63	HF Size 14x51	2 to 63	63 TPN / FP	BXL95421	3540	1	63 TPN / FP	BXL95421	3540	1
	63	HF Size 14x51	2 to 63	63 TPN / FP CE*	BXL95704*	3160	1	63 TPN / FP CE*	BXL95704	3160	1
Frame 2	100	Size 000/00	63 to 100	100 TPN	BXL95568	6700	1	100 FP	BXL90496	7480	1
	125	Size 000/00	63 to 125	125 TPN	BXL95001	8680	1	125 FP	BXL90497	9620	1
	160	Size 000/00	63 to 160	160 TPN	BXL95713	9350	1	160 FP	BXL90498	10430	1
Frame 3	200	Size 0	80 to 200	200 TPN	BXL95418	12610	1	200 FP	BXL90471	14640	1
	250	Size 1	125 to 250	250 TPN	BXL95642	14420	1	250 FP	BXL90472	17120	1
Frame 4	315	Size 1	125 to 315	315 TPN	BXL95461	17280	1	315 FP	BXL90473	21490	1
	400	Size 2	200 to 400	400 TPN	BXL95481	20890	1	400 FP	BXL90480	23630	1
Frame 5	630	Size 3	315 to 630	630 TPN	BXL95521	34920	1	630 FP	BXL90481	40330	1
	800	Size 3	315 to 800	800 TPN	BXL95679	37540	1	800 FP	BXL90482	43490	1

\* 'CE' handle has door interlock facility without defeat feature

Note: Add a suffix "OOOO" for all the above mentioned catcodes

## X - Line TPN SDF in SS Enclosure

- Range 32A to 800A, 415V, AC 23A
- Spacious Sheet Steel Enclosure
- Separate cable gland box not required
- Terminal Shrouds on both sides and Phase Barriers included
- Conforms to IS/IEC 60947-3
- Suitable for Cylindrical/DIN fuse-link
- Door interlock & padlock facility



**HSN Code : 8537**

Size	Rated Current (A)	Suitable Fuse link for reference		In sheet steel Enclosure Type TPN SDF Suitable for DIN Fuse -link			
		Type	Range (A)	Type	Cat No.	MRP (₹)	Std. Pkg (Nos.)
Frame 1	32	HF Size 14x51	2 to 32	32 TPN / FP CE*	BXL90483*	6060	1
	63	HF Size 14x51	2 to 63	63 TPN / FP CE*	BXL90484*	7240	1
Frame 2	100	Size 000/00	63 to 100	100 TPN	BXL90485	11870	1
	125	Size 000/00	63 to 125	125 TPN	BXL90486	13420	1
	160	Size 000/00	63 to 160	160 TPN	BXL90487	14110	1
Frame 3	200	Size 0	80 to 200	200 TPN	BXL90488	20220	1
	250	Size 1	125 to 250	250 TPN	BXL90489	22230	1
Frame 4	315	Size 1	125 to 315	315 TPN	BXL90490	25680	1
	400	Size 2	200 to 400	400 TPN	BXL90491	28910	1
Frame 5	630	Size 3	315 to 630	630 TPN	BXL90492	44840	1
	800	Size 3	315 to 800	800 TPN	BXL90493	47680	1

\* 'CE' handle has door interlock facility without defeat feature

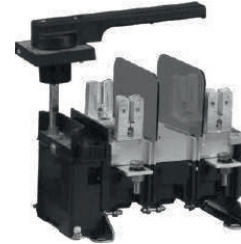
# X-Line SDF

## X-Line SDF suitable for DIN fuse-link (2P) in open execution

- Range 32A to 630A, 415V, AC 23A
- Conforms to IS/IEC 60947-3
- Terminal Shrouds on both sides and Phase Barriers included
- Telescopic shaft for depth adjustment
- Door interlock & padlock facility
- Also for 220V DC & 240V AC appluca on

HSN Code : 8537

Size	Rated Current (A)	Suitable Fuse link for reference	2P SDF Suitable for DIN Fuse link - Open Execution			
			Type	Cat No.	MRP [₹]	Std. Pkg (Nos.)
Frame 1	32	HF Size 14x51	32 2P	BXL95594	2160	1
	63	HF Size 14x51	63 2P	BXL95595	3090	1
Frame 2	100	Size 000/00	100 2P	BXL35086	5090	1
	125	Size 000/00	125 2P	BXL35087	7770	1
	160	Size 000/00	160 2P	BXL35088	8100	1
Frame 3	200	Size 0	200 2P	BXL35089	10060	1
	250	Size 1	250 2P	BXL31674	11890	1
Frame 4	315	Size 1	315 2P	BXL38930	15130	1
	400	Size 2	400 2P	BXL31676	16890	1
Frame 5	630	Size 3	630 2P	BXL35090	28590	1



2 Pole - Din Type Fuse link

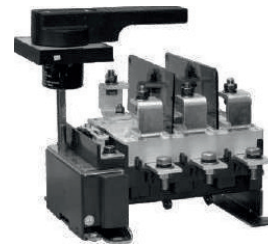
Note: Add a suffix "OOOO" for all the above mentioned catcodes

## X-Line SDF suitable for BS fuse-link (TPN) in open execution

- Range 32A to 630A, 415V, AC 23A
- Conforms to IS/IEC 60947-3
- Terminal Shrouds on both sides and Phase Barriers included
- Telescopic shaft for depth adjustment
- Door interlock & padlock facility

HSN Code : 8537

Size	Rated Current (A)	Suitable Fuse link for reference	TPN SDF Suitable for BOL TED Fuse link - Open Execution			
			Type	Cat No.	MRP [₹]	Std. Pkg (Nos.)
Frame 1	32	A1L	32 TPN	BXL95653	2480	1
	63	A1L	63 TPN	BXL95651	3410	1
Frame 2	100	A4	100 TPN	BXL95570	6630	1
	125	A4	125 TPN	BXL95009	8580	1
	160	A4	160 TPN	BXL95714	9130	1
Frame 3	200	B1 / B2	200 TPN	BXL95588	12820	1
	250	B2 / B3	250 TPN	BXL95682	14690	1
Frame 4	315	B3	315 TPN	BXL95590	17340	1
	400	B4	400 TPN	BXL95591	20760	1
Frame 5	630	C2	630 TPN	BXL95592	36040	1



TPN Bolted Type Fuse link

Note: Add a suffix "OOOO" for all the above mentioned catcodes

## X-Line SDF - Spares & Accessories

HSN Code : 8538

Description		Type	Cat No.	MRP [₹]	Std. Pkg (Nos.)	
	Auxiliary Contact Kit (1NO + 1 NC)	32/63	BXL91302	570	1	
		100/125/160	BXL91328	680	1	
		200/250	BXL91329	910	1	
		315/400/630/800	BXL91330	960	1	
	2nd Aux. Contact (1NO + 1NC)	32/63	BXL90670	620	1	
		100 to 1000	BXL90696	710	1	
	Earthing Link	32 to 1000@	BXL90396	550	1	
		Terminal Shroud Kit	32/63	BXL91190	200	1
			100/125/160	BXL91137	250	1
			200/250	BXL91335	690	1
			315/400	BXL91346	710	1
			630/800	BXL91347	750	1
	Handle Assembly - A		32/63	BXL91257	540	1
		100 to 250	BXL91258	1140	1	
		315/400/630/800	BXL91259	1260	1	
	Handle Assembly - B	32/63	BXL91277	540	1	
		100 to 250	BXL91278	1140	1	
		315/400/630/800	BXL91279	1260	1	
Handle Assembly - CE	32/63	BXL91337	320	1		
	200	BXL91343	490	1		
	315/400	BXL91344	510	1		
Interphase Barrier Kit	630/800	BXL91345	520	1		
	Castell Type Lock	A	BXL00333	2670	1	
		B	BXL00334	2670	1	
C		BXL00335	2670	1		
D		BXL00336	2670	1		
A		BXL00345	2670	1		
B		BXL00346	2670	1		
	Castell Type Lock	C	BXL00347	2670	1	
		D	BXL00348	2670	1	
		Interphase Barrier Kit	100/125/160	BXL95233	5070	1
			200/250	BXL95516	5400	1

**Switch Disconnecter Fuse Units**

Suitable for DIN / BOLTED fuses in open execution

**HSN Code : 8536**

Rating (A) AC-23A	Cat No.	Fuse Type	Type	MRP [₹]
32A	PSFS323ND00	DIN	TPN	2500
32A	PSFS323ND000	DIN	TPN	2500
32A	PSFS323NB	Bolted	TPN	2500
32A	PSFS323B	Bolted	TP	2450
63A	PSFS633ND00	DIN	TPN	3550
63A	PSFS633ND000	DIN	TPN	3550
63A	PSFS633NB	Bolted	TPN	3460
63A	PSFS633B	Bolted	TP	3360
100	PSFS1003*	DIN/Bolted	TP	7250
100	PSFS1003N*	DIN/Bolted	TPN	7600
125	PSFS1253*	DIN/Bolted	TP	9580
125	PSFS1253N*	DIN/Bolted	TPN	10270
160	PSFS1603*	DIN/Bolted	TP	10530
160	PSFS1603N*	DIN/Bolted	TPN	11440
200	PSFS2003B	Bolted	TP	11710
200	PSFS2003NB	Bolted	TPN	12030

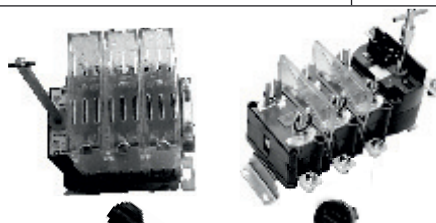
\* Use suffix 'D' for DIN type, 'B' for bolted type

**Switch Disconnecter**
**HSN Code : 8536**

Rating (A) AC-23A	Cat No.	Fuse Type	Type	MRP [₹]
32A	PSSD323N	-	TPN	2290
63A	PSSD633N	-	TPN	3150
100A	PSSD1003N	-	TPN	6910
125A	PSSD1253N	-	TPN	8590
160A	PSSD1603N	-	TPN	9680
200A	PSSD2003N	-	TPN	9940

**Fuse Switch Units Type FS**
**HSN Code : 8538**

Rating (A) AC-23A	Cat No.	Fuse Type	Type	MRP [₹]
32A	FS0N	BOLTED	TP	3010
63A	FS1N	BOLTED	TP	4050
Shroud	AC21TS			220
1NO+1NC	AC21EB11	for FS0 / FS1N		660
Neutral	AC21L	for FS0 / FS1N-		310
Handle assembly-32A	SP21FS0H	for FS0		440
Handle assembly-63A	SP21FS1H	for FS1		440


**Switch Disconnecter Fuse**

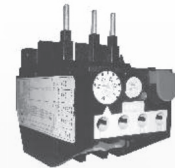
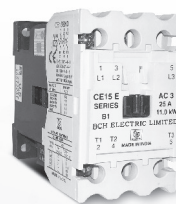
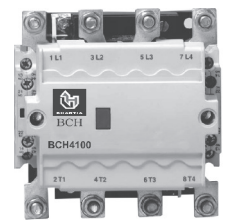
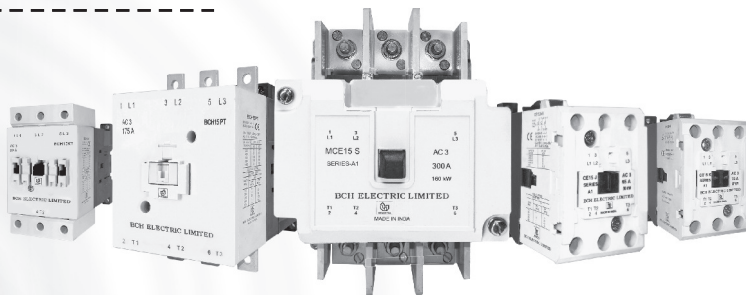
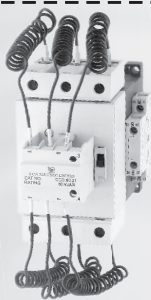
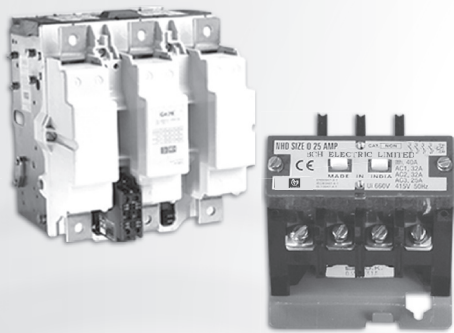
- Conforms to IS 13947-3
- TPN/TP version
- AC 23A duty
- Mechanism with 4 Breaks per pole
- Handle with door interlock and padlock



# Controlgear

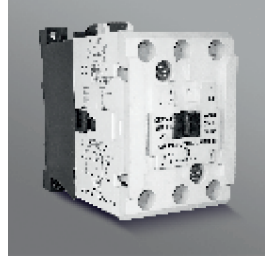
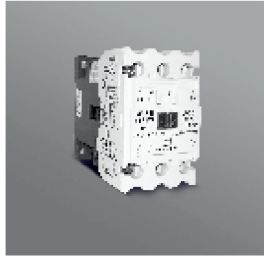
- FREEDOM CONTACTORS
- CITATION SERIES
- AGRI CONTACTORS
- CAPACITY DUTY CONTACTORS
- DEFINITE PURPOSE CONTACTORS

- **Contactors**
- **Overload Relays**
- **Electronic Over Current Relay**
- **Motor Protection Circuit Breaker**
- **Solid State Relay**
- **Push Buttons & Indicating Lights**

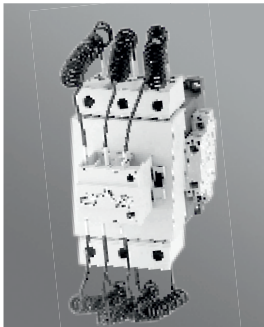
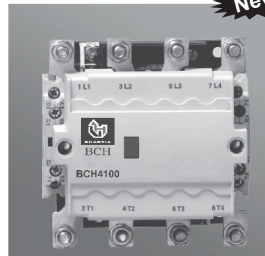


# Contactors ..... BCH

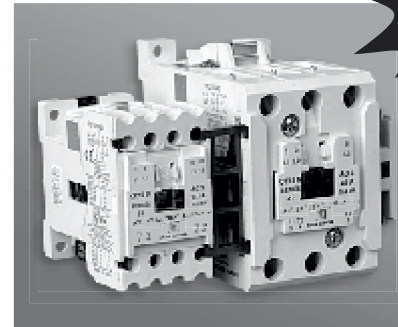
## FREEDOM RANGE



- Conforms to IEC 60947-4-1 / IS 13947
- No derating upto -20°C to 60°C
- 3 Pole and 4 Pole versions
- Widest Range from 6A to 1200A in 7 frame sizes
- Snap Open design for easy inspection
- Self Lifting Screws for quick termination
- Superior grade material with high temperature withstand capacity : Ideal for stringent applications
- Most compact design
- Low VA burden coils
- Successfully tested for Type - 2 coordination



- Range : 5 to 60 KVAR
- Enhanced equipment life
- Compact design
- Conforms to IEC 60947-4-1 & IS 13947-4-1 (AC-6b) utilization category



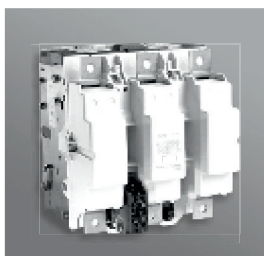
**Design Flexibility**

Interlocking 2 Different frames using a common Mechanical Interlock (Upto 75A)



### BCH Series : 400A to 1200A

- Conforms to IEC60947-4-1 / IS 13947
- Insulation voltage upto 1000V
- Universal Control : Same coil for AC and DC Supply
- Delayed Drop Off feature for networks with transient power problem ensuring continuity of power supply
- Special magnet design for reduced shock and vibration
- Front open design for ease of inspection



# Contactors ..... BCH

## Freedom Series 3 Pole (AC Control)

HSN Code : 8536

Size	AC1 Rating	AC3 Rating 415 V			Aux. Contact	Cat. No.	MRP [₹]	Lot Size
		A	HP	KW				
A	20	6	3	2.2	1NO	CE15ANS3 ■ B-N	1320	1
					1NC	CE15ANC3 ■ B-N		
B	20	9.1	5.5	4	1NO	CE15BNS3 ■ B-N	1360	
					1NC	CE15BNC3 ■ B-N		
C	20	12	7.5	5.5	1NO	CE15CNS3 ■ B-N	1560	
					1NC	CE15CNC3 ■ B-N		
D	32	16	10	7.5	1NO	CE15DN3.■.B10-N	1760	
					1NC	CE15DN3.■.B01-N		
	32	18	10	7.5	1NO	CE15D1N3.■.B10-N	1770	
					1NC	CE15D1N3.■.B01-N		
E	40	25	15	11	1NO	CE15EN3.■.B10-N	2460	
					1NC	CE15EN3.■.B01-N		
F	40	32	20	15	1NO	CE15FN3.■.B10-N	4890	
					1NC	CE15FN3.■.B01-N		
G	60	40	30	22	1NO+1NC	CE15GN3 ■	7390	
					-	CE15GN3 ■ NB	7000	
H	75	50	33.5	25	1NO+1NC	CE15HN3 ■	9300	
					-	CE15HN3 ■ NB	8940	
J	80	65	50	37	1NO+1NC	CE15JN3 ■	12640	
					-	CE15JN3 ■ NB	12280	
K	80	73	50	37	1NO+1NC	CE15KN3 ■	12980	
					-	CE15KN3 ■ NB	12570	
	80	75	50	37	1NO+1NC	CE15K1N3 ■	13100	
					-	CE15K1N3 ■ NB	12640	
K-1	115	80	53	40	1NO+1NC	BCH15KT.3.11. ■	14480	
L	125	95	62	47	1NO+1NC	BCH15LT.3.11. ■	17500	
M	135	110	80	60	1NO+1NC	BCH15MT.3.11. ■	21490	
N	230	150	100	75	1NO+1NC	BCH15NT.3.11. ■	28590	
P	250	175	125	95	1NO+1NC	BCH15PT.3.11. ■	35630	
R	300	200	150	100	1NO+1NC	MCE15RN3 ■ 7	43220	
S0	315	265	186	140	1NO+1NC	MCE15SON3 ■ 7	51170	
S	315	300	220	160	1NO+1NC	MCE15SN3 ■ 7	56510	

## Freedom Series 3 Pole (AC/DC Control)

HSN Code : 8536

Size	AC1 Rating(A)	AC3 Rating 415 V			Aux. Contact	Cat. No.	MRP [₹]
		A	HP	KW			
BCH54	600	400	320	240	2NO+2NC	BCH54.3.22. ■	72490
BCH55	600	450	320	240	2NO+2NC	BCH55.3.22. ■	93210
BCH57	760	550	420	315	2NO+2NC	BCH57.3.22. ■	105070
BCH62	1000	700	533	400	2NO+2NC	BCH62.3.22. ■	186480
BCH64	1000	860	666	500	2NO+2NC	BCH64.3.22. ■	300870
BCH76	1200	1000	800	600	1NO+2NC	BCH76.3.12. ■	545820
BCH78	1350	1200	933	700	1NO+2NC	BCH78.3.12. ■	578500

■ For Standard Coil Voltage Codes refer page 34

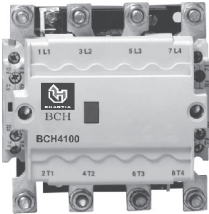
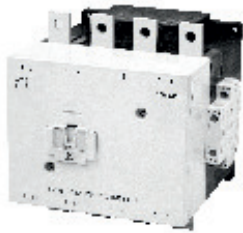
■ For Non Standard Coil Voltages, extra MRP to be added to Contactor MRP for :

Contactor size



# Contactors

BCH



- 20A to 500AAC1 (4 Pole)
- As per IS/IEC 60947-4-1
- Wide band coil 40A to 100AAC1

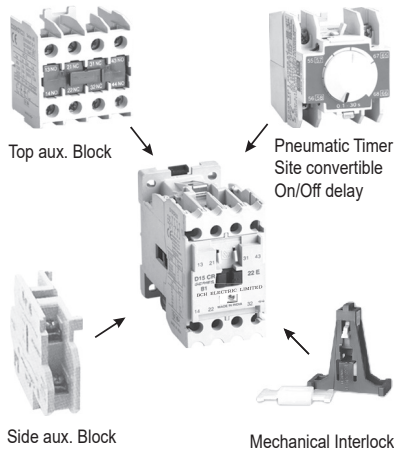
## Freedom series 4 Pole contactors (AC Control)

HSN Code : 8536

AC1 rating (A)	Cat No.	Aux Contact	MRP [₹]
20	CE15CN4-B-N	#	1850
40	BCH4040	#	2790
63	BCH4063	#	7060
80	BCH4080	#	10940
100	BCH4100	#	14120
130	BCH4130	#	16480
160	BCH15MNO.4.11.	1NO+1NC	23410
200	BCH15MN.4.11.	1NO+1NC	27720
250	BCH15NN.4.11.	1NO+1NC	30620
300	BCH15PN.4.11.	1NO+1NC	54810
400	BCH4400	2NO+2NC	90830
500	BCH4500	2NO+2NC	115030

DC coils also available on request # Aux contacts to order separately

### Common Accessories 'upto 73A'

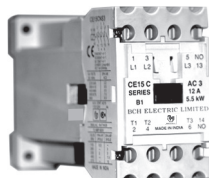


## Contactor : 3 Pole DC Control Type CE15

HSN Code : 8536

AC3 (A) at 415VAC	KW	Aux Contact	Cat No.	MRP [₹]
6	2.2	1NC	CE15ANC3-B-N	1870
		1NO	CE15ANS3-B-N	
9	4.4	1NC	CE15BNC3-B-N	1990
		1NO	CE15BNS3-B-N	
12	5.5	1NC	CE15CNC3-B-N	2090
		1NO	CE15CNS3-B-N	
16	7.5	-	CE15DN3-B-N	2530
25	11	-	CE15EN3-B-N	3440
32	15	-	CE15FN3-B-N	7270
40	22	-	CE15GN3	8770
50	25	-	CE15HN3	11180
65	37	-	CE15JN3	13300
73	37	-	CE15KN3	15660
75	37	-	CE15K1N3	15660

For Coil Voltage Codes refer Table on page 34



### DC Control

- Standard voltages 24VDC, 110VDC, 220VDC

Pure DC

## Freedom Series 3 Pole DC Control Type CE16

HSN Code : 8536

AC3 (A) at 415VAC	KW	Aux Contact	Cat No.	MRP [₹]
9.1	4	1NO	CE16BNS3*B	2080
		1NC	CE16BNC3*B	
12	5.5	1NO	CE16CNS3*B	2200
		1NC	CE16CNC3*B	
16	7.5	1NO+1NC	CE16DN3*B	2670
25	11	1NO+1NC	CE16EN3*B	3680
32	15	1NO+1NC	CE16FN3*B	7660

\*Coil Codes :

DC control

24V	U1
48V	W1
110V	A1
220V	B1
60V	X1
125V	E1



Pure DC

## Control Relay HSN Code : 8536

Aux Contact	Cat No.	MRP [₹]
2NO+2NC	D16CR22*	2280
3NO+1NC	D16CR31*	
4NO	D16CR40*	

## Control Relays Freedom Series HSN Code : 8536

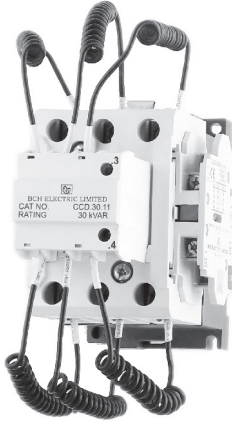
Size	Contact Configuration	Cat No.	MRP [₹]		Lot Size
			AC	DC	
CR	2NO+2NC 3NO+1NC 4NO	D15CR22-B-N D15CR31-B-N D15CR40-B-N	1490	2280	1

\*Coil Codes: DC control

# Contactors ..... BCH

## Freedom series Capacitor duty contactor (AC Control)

HSN Code : 8536



kVAR rating at 415V 3Ph 50Hz	Size	Cat No.	Aux Contacts	MRP [₹]
5	B	CCD.05.11.■	1NO+1NC	2670
10	C	CCD.10.11.■	1NO+1NC	2900
15	E	CCD.15.11.■	1NO+1NC	4240
20	F	CCD.20.11.■	1NO+1NC	4980
26	G	CCD.26.11.■	1NO+1NC	6110
30	H	CCD.30.11.■	1NO+1NC	9710
40	K	CCD.40.11.■	1NO+1NC	14790
50	KT	CCD.50.21.■	2NO+1NC	15550
60	LT	CCD.60.21.■	2NO+1NC	17450

- For Standard Coil Voltage refer table on page no. 34
- For Non Standard Coil Voltages, extra MRP to be added to Contactor MRP for :

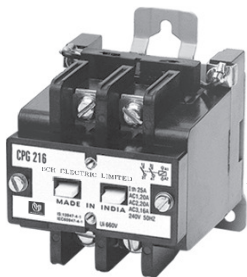
Contactor size

{	CCD.05 ~ CCD.40 @ ₹40
{	CCD.50 ~ CCD.60 @ ₹110

## 'NHD' Series 2 Pole Contactor

HSN Code : 8536

### 2 Pole Contactors



**The Real 2 Pole Contactor**

- 12, 16, 20, 25, 32 and 40 A rating
- Wide termination space

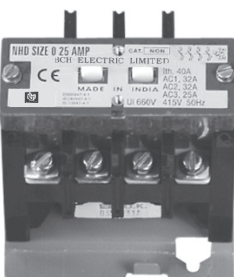
Ith (A)	AC3 (A) 240V AC	Cat. No.	MRP [₹]	Lot Size
20	12	CPG 212 ■	1360	1
25	16	CPG 216 ■	1545	
35	20	CPG 220 ■	2030	
40	25	CPG 225 ■	2335	
40	32	CPG 232 ■	2625	
50	40	CPG 240 ■	3005	

- For Coil Voltage Codes refer Table on page 34

## 'NHD' Series 4 Pole Contactor

HSN Code : 8536

### 4 Pole Contactors



- Superior Weld Resistant Contacts
- Rugged and heavy duty
- High Grade moulding for extremely long life
- Encapsulated Coil
  - : Shock Proof & Moisture Proof
  - : Withstand large voltage fluctuations

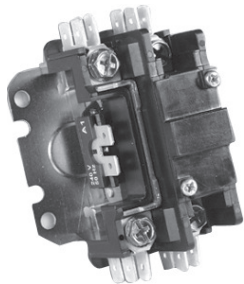
Size	AC1 (A)	AC3 Rating at 415 V			Cat. No.	MRP [₹]	Lot Size
		(A)	HP	KW			
CP12	20	12	7.5	5.5	CP12N ■	2595	1
00	20	16	10	7.5	C00N ■	2985	
CP20	30	20	12.5	9.3	CP20N ■	3810	
0	32	25	15	11	N0N ■	5350	
01	40	32	20	15	N01N ■	6620	
1	50	40	25	18.5	N1N ■	8290	

HSN Code : 8538

Description	Orientation	Cat. No.	MRP [₹]	Lot Size
Auxiliary Contact Blocks - NHD	1NO	001CB10	330	1
	1NO+1NC	001CB11	385	
	2NO	001CB20		

# Contactors

BCH



- Quick connect plugin terminals
- Specially designed low VA coil

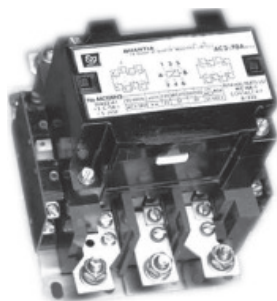
## Definite Purpose Contactors

HSN Code : 8536

1 Pole				2 Pole			
AC3 (A)	Type	Cat. No.	MRP [₹]	AC3 (A)	Type	Cat. No.	MRP [₹]
25	1 Pole	CPD251CK	940	20	2P, 140-200VAC	CPD202BL	1030
25	1 Pole with Neutral	CPD251NCK	960	25	2P, 220-240VAC	CPD252H	1080
40	1 Pole	CPD401CK	1010	25	2P, 415VAC	CPD252M	
40	1 Pole with Neutral	CPD401NCK	1090	40	2P, 220-240VAC	CPD402H	1140
				40	2P, 415VAC	CPD402M	



*wide band AC coil voltages for Defintie purpose Contactor				
Contactor	Cat No.	Voltage		
		170-240VAC	290-415VAC	140V-200VAC
25A 1P	CPD251*	KL	ML	BL
20A 2P	CPD202*			
40A 1P	CPD401*			

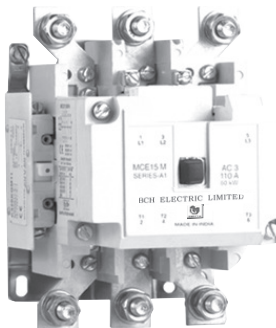


## Citation Series 3 Pole AC Control

HSN Code : 8536

Size	AC3 Rating at 415 V			Cat. No. (with Aux. contact 2NO+2NC)	MRP [₹]	Cat. No. (with Aux. contact 1NO+1NC)	MRP [₹]	Cat. No. (without Aux. contact)	MRP [₹]
	Amps	HP	KW						
C4	32	20	15	C4NE22 ■	6790	C4NE11 ■	6350	C4NE00 ■	5630
D	40	30	22	MC10DN22 ■	10750	MC10DN11 ■	9460	MC10DN00 ■	9390
D1	50	33.5	25	MC10D1N22 ■	POR	MC10D1N11 ■	POR	MC10D1N00 ■	POR
E	70	50	37	MC10EN22 ■	19250	MC10EN11 ■	18860	MC10EN00 ■	18490

- Standard coil voltages are 24, 110, 220, 240 & 415 VAC, 50 Hz. For voltage codes refer Table on page 34
- POR-Price on request



HSN Code : 8536

Size	AC1 Rating	AC3 Rating 415 V			Aux. Contact	Cat. No.	MRP [₹]	Lot Size
		A	HP	KW				
L	140	80	53	40	1NO+1NC	MCE15LN3 ■ 5	17540	1
M	150	95	62	47	1NO+1NC	MCE15M0N3 ■ 5	21040	
M-5	150	110	80	60	1NO+1NC	MCE15MN3 ■ 5	25740	
N	300	140	100	75	1NO+1NC	MCE15NN3 ■ 7	38390	1
Q	300	185	120	90	1NO+1NC	MCE15QN3 ■ 7	43460	

## Other Freedom Series Contactors

### Freedom Series 3 Pole AC Control



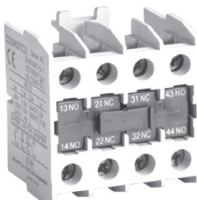



Size	Ac1 Rating	AC3 Rating 415 V			Aux. Contact	Cat. No.	MRP[₹]	Lot Size
		A	HP	KW				
D	32	16	10	7.5	1NO+1NC	CE15DN3 ■ B-N	1990	1
					-	CE15DN3 ■ -N	1640	
	32	18	10	7.5	1NO+1NC	CE15D1N3 ■ B-N	2000	
					-	CE15D1N3 ■ -N	1650	
E	40	25	15	11	1NO+1NC	CE15EN3 ■ B-N	2690	
					-	CE15EN3 ■ -N	2290	
F	40	32	20	15	1NO+1NC	CE15FN3 ■ B-N	5120	
					-	CE15FN3 ■ -N	4650	

- For Standard Coil Voltage refer table on page no. 34
- For Non Standard Coil Voltages, extra MRP to be added to Contactor MRP for :  
Contactor size

# Accessories - Contactors ..... BCH

## Freedom Series contactors Add-on accessories for sizes A to K, CR, BCH15KT to BCH15PT, R, S0 & S

HSN Code : 8538

Accessories	Configuration	Cat No.	Contactors Type	MRP [₹]	
 Aux. Contact Block (side Mounting)	1NO	C320KGSR10	CE15 & CR	250	
	1NO+1NC	C320KGSR11		610	
	1NC	C320KGSR01		250	
	2NO	C320KGSR20		610	
	1NO+1NC	BCH15S11	BCH15	730	
	1NO+1NC	MC320KB11	MCE15R	960	
	1NO+1NC (Late break type)	MC320KAS11	MCE15S0 & MCE15S	930	
	2NO+2NC	EF22	BCH54 to BCH64	7480	
	1NO+1NC	EB11	BCH76 to BCH78	11620	
		1NO+1NC (1st left)^	BCH4A04041SL11	BCH4040	870
		1NO+1NC (1st right)^	BCH4A04041SR11	BCH4040	870
1NO+1NC (1st left)^		BCH4A06131SL11	BCH4063-130	940	
1NO+1NC (1st right)^		BCH4A06131SR11	BCH4063-130	940	
4th Neutral Switching Pole	800A	NP800/5	BCH54 to 57	38400	
	1000A	NP1000/6	BCH62 to 64	45660	
	1000A	NP1000/7	BCH76 to 78	51980	
 Aux. Contact Block (Front Mounting)	1NO	C320KGT*10	CE15, CR	250	
	1NC	C320KGT*01			
	2NO	C320KGT*20			
	2NC	C320KGT*02			
	1NO+1NC	C320KGT*11		360	
	2NO+2NC	C320KGT*22			
	3NO+1NC	C320KGT*31			
	4NO	C320KGT*40	BCH15	630	
	1NO+3NC	C320KGT*13			
	4NC	C320KGT*04			
	4NO	BCH15T40			
	3NO+1NC	BCH15T31			
	2NO+2NC	BCH15T22			
	1NO+1NC	BCH15T11			
1NO	BCH15T10	1410			
1NC	BCH15T01	1120			
	1NO+1NC^	BCH4A0413T11	BCH4040-063	390	
Pneumatic Timer Block "ON/OFF" Delay site selectable	1NO+1NC (0.1 to 30 sec)	C320TP1	CE15 & CR	1720	
	1NO+1NC (10 to 180 sec)	C320TP2			
 Horizontal Mechanical Interlocks	-	C321KM60	CE15 & CR	560	
	-	MC321KM3	MCE15R to MCE15S	1640	
	Horizontal	BM5H	BCH54 to 57	9870	
		BM6H	BCH62 to 64	17260	
		BM7H	BCH76 to 78	45710	
	Vertical	BM5V	BCH54 to 57	9870	
		BM6V	BCH62 to 64	17260	
		BM7V	BCH76 to 78	40570	
	 Vertical Mechanical Interlocks	BM0H	BCH15KT/LT/MT	550	
		BM3H	BCH15NT/PT/MN/NN/PN	600	
		BCH4M0404	BCH4040	600	
BCH4M0608		BCH4063-080	1210		
BCH4M1013		BCH4100-130#	5640		
BCH4M4040		BCH4400	9600		

^ Minimum order qty 10 nos.

# Mech. Interlock it for BCH4100 / 130 comes with 2 left & 2 right side add-on aux. contact blocks i.e. 4NO + 4NC

# Accessories - Contactors ..... BCH



## Add-on accessories for sizes A to K, CR, BCH15KT to BCH15PT, R, S0 & S1 HSN Code : 8538

Accessories	Configuration	Cat No.	Contactors Type	MRP [₹]
Coil Surge Suppressors	24-48V (50/60Hz)	MC320LR11	CE15, CR	540
	110-240V (50/60Hz)	MC320LR12		
Mechanical latch #	§ to complete the cat no. suffix code given	AM5- §	BCH54 to BCH57	27380
		Am6 §	BCH62 to BCH64	38730

# Mechanical latch are supplied with AC coils only

### § Coil Voltage suffix code for Mechanical latch AM5 & AM6

Coil voltage	110-120	220-240	380-415	440-480
Suffix Code	AW4	BA4	LB4	CB4

## Accessories for Citation contactors size - L, M, M-5, N, Q, C4, D & E type HSN Code : 8538

Accessories	Configuration	Cat No.	Contactors Type	MRP [₹]
Aux. block side mounting	1NO+1NC	C320KGM11	L, M & M-5	830
	1NO+1NC	MC320KB11	N & Q	960
Aux. block add-on (Late break type)	1NO+1NC	MC320KAS11	L, M, M-5, N & Q	930
	1NO+1NC	AC34EA11	C4, D & E	670
Mechanical Interlock		MC321KM1	C4 & D	680
		MC321KM2	L, M, M-5 & E	740
		MC321KM3	N & Q	1640
Base block	1NO+1NC	MC320KB2	C4 & D	750
	1NO+1NC	AC35EB11	E	730

# Contactors

# BCH

## Spare Contacts set for Freedom Contactors

HSN Code : 8538

Size	Consisting of	Cat. No.	MRP [₹]
A	Complete top housing Consisting of fixed & moving contacts	SBANS3 SBANC3 SBAN4	1130
B		SBBNS3 SBBNC3 SBBN4	1200
C		SBCNS3 SBCNC3 SBCN4	1310
D		SBDN3	1590
E		SBEN3	1870
F		SBFN3	3670
G		6 Fixed contacts 3 Moving Contacts	6-65-4
H	3 springs	6-65-6	3980
J	6 Arc Bonnets	6-65-15	5410
K	3 Spring Retainer	6-65-17	5590
BCH15KT	Complete set of 6 fixed & 3 moving contacts with hardware, contact springs, spring retainers and arc runners	CP-BCH15KT-3	5690
BCH15LT		CP-BCH15LT-3	6530
BCH15MT		CP-BCH15MT-3	7030
BCH15NT		CP-BCH15NT-3	11600
BCH15PT		CP-BCH15PT-3	11600
BCH15MN0		CP-BCH15MN0-4	13980
BCH15MN		CP-BCH15MN-4	14960
BCH15NN		CP-BCH15NN-4	16410
BCH15PN		CP-BCH15PN-4	17140
R		6 Fixed contacts 3 Moving contacts 12 CSK screws & washers	6-288
S0	3 Springs Spring retainers Self tapping screws & washers	6-286-S0	26550
S	6 Arc Chute assly & screws	6-286	26790
BCH54	Complete set of 6 fixed & 3 moving contacts with hardware, contact springs, spring retainers and arc runners	CP-BCH54-3	33430
BCH55		CP-BCH55-3	38540
BCH57		CP-BCH57-3	54300
BCH62		CP-BCH62-3	99230
BCH64		CP-BCH64-3	133070
BCH76		CP-BCH76-3	290170
BCH78		CP-BCH78-3	326080

## Spare Contacts set for NHD & Citation Contactors

HSN Code : 8538

Size	Consisting of	Cat.No.	MRP [₹]
C00N N0N N01N N1N	<b>(4 - Pole contact kit)</b> 8 Fixed main contacts 4 Moving main contacts 4 Spring & 4 retainers	SP90A1 SP90B1 SP90D1 SP90C1	1240 2350 2800 3300
C00N N0N N01N N1N	<b>(1 - Pole contact kit)</b> 2 Fixed main contacts 1 Moving main contacts 1 Spring & 1 retainers	SP90A01 SP90B01 SP90D01 SP90C01	330 600 720 840
CPG216 CPG225 CPG240	4 Fixed contacts 2 Main contacts 2 Spring retainers	CPG162PSP CPG252PSP CPG402PSP	645 1630 2025
C4	6 Fixed main contacts 6 Pan head screws 6 Helical lock washers	SP34K	3090
MC10D	6 Fixed Main Contacts 3 Compression springs 3 Retainers	6-334	4250
MC10E	Same as above plus 6 Blow outs 6 M5/M4 self tapping screws	6-335	8020
L	6 Fixed Contacts 6 Pan Head Screws	6-385-L0	6170
M	6 Helical Lock Washers 3 Moving contacts	6-385-M	6940
M-5	3 Springs, 3 Retainers 6 Blowouts 6 self tapping screws	6-385	7020
N	6 Fixed contacts 12 CSK screws & washers 3 Moving contacts	6-293	17080
Q	3 Springs, Spring Retainers, Self tapping screws & Washers	6-288-Q	20440
<b>New</b> BCH4	Contact kit BCH4040 Contact kit BCH4063 Contact kit BCH4080 Contact kit BCH4100 Contact kit BCH4130 Contact kit BCH4400	- BCH4K06 BCH4K08 BCH4K10 BCH4K13 BCH4K40	- 3620 5060 6280 7680 39390

## Spare ARC chambers - BCH15KT to BHC15PT, BCH54 to BCH78


HSN Code : 8538

Contactors	Cat. No.	MRP [₹]
BCH15KT	PF-BCH15KT	840
BCH15LT	PF-BCH15LT	
BCH15MT	PF-BCH15MT	
BCH15NT	PF-BCH15NT	1460
BCH15PT	PF-BCH15PT	
BCH54/BCH55/BCH57 (for all 3 poles)	PF-BCH5	10050
BCH62/BCH64 (for all 3 poles)	PF-BCH6	27850
BCH76/78 (for single pole)	3PF-BCH78	57250

# Contactors ..... BCH

**Spare Coil - size CR, A to K, BCH4, MCE15R, MCE15S0, MCE15S, BCH15KT to BCHPT, BCH54 to BCH78**

**HSN Code : 8538**

Size	For Size	Cat. No.	MRP [₹]	
Magnetic coil	CR, A,B, C	MC15CW ■	630	
	CE16, D16 (Pure DC)	MC16FW ■	1010	
	D, E, F	MC15FW ■	700	
	G, H, J, K	MC15KW ■	1810	
	BCH15KT/LT	B02. ■	1700	
	BCH15MT	B022. ■	2900	
	BCH15NT / PT / MN / NN / PN	B031. ■	5790	
	R, S0, S	9-2412- ■	5260	
		BCH4040	BCH4C0404 ■	530
		BCH4063-080	BCH4C0608 ■	580
		BCH4100-130	BCH4C1013 ■	1640
		BCH4400	BCH4C4040 ■	10130
Magnetic coil (set of two)	BCH54/ BCH55/ BCH57	B51. ■	11800	
Feeder group		FG51. ■	12130	
Magnetic coil (set of two)	BCH62/ BCH64	B61. ■	34910	
Feeder group		FG61. ■	40800	
Magnetic coil (set of two)	BCH76/ BCH78	B8- ■	92500	
Feeder group		FG78- ■	93740	

- To specify coil voltage please refer page no.34
- For Non Standard Coil Voltages, extra MRP to be added to Coil MRP for :

Contactor size

}	A ~ K @ ₹40
	CR, CE16, D16 @ ₹40
	BCH15KT ~ PN @ ₹110, R ~ S @ ₹110
	BCH54 ~ BCH57 @ ₹220

Note : Coil set for BCH54 to BCH78 contactors consists of 2 half coils. Magnetic coil & Feeder group must have the same control voltage. For eg. If coil voltage is changed from 110V to 220V then Feeder group should also be changed to 220V

## Spare Coil - NHD & Citation Contactors

**HSN Code : 8538**

Description	Cat. No.	MRP [₹]	Lot size
Carrier for NHD	SP90CC	115	1
Carrier for CPG	CPG2PCC	75	1
Magnetic coil for NHD	SP90MC*	470	10
Magnetic coil for MCE15L, MCE15M0, MCE15M	9-2268- ■	2390	1
Magnetic coil for MCE15N & MCE15Q	9-2412- ■	5260	1
Magnetic coil for C4 & MC10D	9-2267- ■	1490	1
Magnetic coil for MC10E type	9-2268- ■	2390	1

- To specify coil voltage please refer page no. 34
- For Non Standard coil voltages, extra MRP to be added to coil MRP for :

Contactor size :

L ~ Q @ ₹110
C4 ~ E @ ₹50

# Coil Voltage Table ..... BCH

## COIL VOLTAGE: MASTER TABLE

PRODUCT	24V		48V		110V		160-220V		220V		220-240V		230-360V		240V		190-400V		260-400V		380V		380-415V		415V		440V		550V		
	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	
CR RELAY	U	U3	W	W3	A	A3	-	B	B3	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
#CE15A-F	U	U3	W	W3	A	A3	-	B	B3	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
#CE15G-K	U	U3	W	W3	A	A3	-	B	B3	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BCH15KT-LT	U	-	W	-	A	-	-	B	-	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BCH15MT	24	-	48	-	110	-	-	-	B3	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BCH15NT-PT	24	24	48	48	110	110	-	-	-	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BCH15MN-PN	24	24	48	48	110	110	-	-	-	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BCH4040-400	-	-	-	-	A	-	-	B	-	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MCE15R-S	U	U3	-	-	A	A3	-	B	-	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BCH54-64	-	-	-	-	110	110	-	220	220	220	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCH76&78	-	-	-	-	A7	-	-	B7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CPG 12,16,20	U	-	-	-	A	-	BW	-	-	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CPG 12,16,20	U	-	-	-	A	-	BW	-	-	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHAKTI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CP12N, C00N, CP20N, N0N	U	-	-	-	A	-	BW	-	-	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N01N & N1N	U	-	-	-	A	-	-	-	-	H	LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C4 & D	-	-	-	-	A	-	-	B	-	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MC10EN	U	-	-	-	A	-	-	B	-	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MCE15L-M5	U	-	W	-	A	-	-	B	-	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MCE15N-Q	U	U3	-	-	A	A3	-	B	-	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

1. For other coil voltages & wide band coil option please contact nearest sales office

#The interchangeability between AC & DC Coil of CE15 / D15 type contactors is not possible at site. Only Company fitted DC control is available for this range.



# Overload Relay ..... BCH

## Citation-M Overload Relays (Direct Mounting) with built-in single phase protection

### Citation Overload Relay



- Wide range : From 0.195 A to 600 A
- Built in Single Phasing Protection
- Ambient temperature compensated
- Test button for checking tripping mechanism
- Field convertible auto/manual reset
- Snap on cover
- Special Mechanism ensuring closest protection to motor
- Contactor mounting & separate mounting
- Successfully tested for Type-2 Coordination
- Suitable for almost all makes of Contactors
- Proven and tested

HSN Code : 8536

HSN Code : 8538

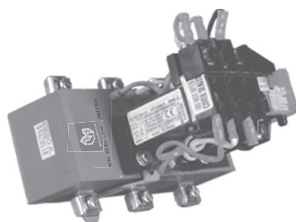
Relay Range	Cat. No.	MRP [₹]	Terminal Block for individual mounting	MRP [₹]
0.195 - 0.31	MC305ANA3A	1770	(Incoming) MC305TB1 (Outgoing) MC305TB3	250
0.30 - 0.48	MC305ANA3B			
0.47 - 0.75	MC305ANA3C			
0.72 - 1.14	MC305ANA3D			
1.07 - 1.70	MC305ANA3E			
1.58 - 2.50	MC305ANA3F			
2.40 - 3.80	MC305ANA3G			
3.80 - 6.00	MC305ANA3H			
6.00 - 9.30	MC305ANA3J			
8.90 - 13.50	MC305ANA3K			
13.20 - 20.00	MC305ANA3L	1960	(Incoming) MC305TB2 (Outgoing) MC305TB3	
17.40 - 24.00	MC305ANA3M	2160		
22.00 - 30.00	MC305ANA3N*	2790		
23.00 - 32.00	MC305ANA3P*	2810	(Incoming) MC305TB2 (Outgoing) MC305TB3	
26.00 - 40.00	MC305ANA3Q*	3050		

\* Overload relay type "N, P & Q" must be used with terminal block MC305TB3

## DIN rail mounting kit with incoming terminal block HSN Code : 8538

Relay Range (A)	Cat. No.	MRP [₹]
A to K	MC305DM1	300
L to N	MC305DM2	310

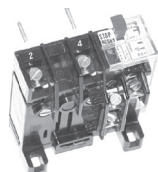
### CT Operated Overload Relay



## CT Operated Overload Relays-Individual Mounting HSN Code : 8536

Relay Range (A)	Cat. No.	MRP [₹]
24.4-39.0	CT1MC305ANA3C	5280
37.6-60.0	CT2MC305ANA3C	6810
56.4-90.0	CT3MC305ANA3C	7650
84.6-135.0	CT4MC305ANA3C	7770
131.6-210.0	CT5MC305ANA3C	11750
188.0-300.0	CT6MC305ANA3C	13460
263.2-420.0	CT7MC305ANA3C	13920
376.0-600.0	CT8MC305ANA3C	16160

### WP 2 Pole Overload Relay

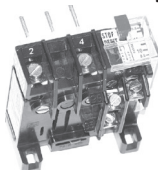


- Perfect protection to single phase Motors against overloads
- Ambient temperature compensated

## 2 Pole Overload Relays (Direct Mounting) HSN Code : 8536

Relay Range (A)	Cat. No.	MRP [₹]
1.58-2.50	MC307ANA2F	950
2.40-3.80	MC307ANA2G	
3.80-6.00	MC307ANA2H	
6.00-9.30	MC307ANA2J	
8.90-13.50	MC307ANA2K	
13.20-20.00	MC307ANA2L	1100
17.40-24.00	MC307ANA2M	1175
22.00-30.00	MC307ANA2N	1370
23.00-32.00	MC307ANA2P	1400

### WP Overload Relay



- Designed to withstand wide fluctuations in

## WP Overload Relays for WP & Oil Starter HSN Code : 8536

Relay Range (A)	Cat. No. (WP Starter / Oil Starter)	MRP [₹]
6.00 - 9.30	MC307ANA3J / MC307ANA3J-OS	1680
8.90 - 13.50	MC307ANA3K / MC307ANA3K-OS	
13.20 - 20.00	MC307ANA3L / MC307ANA3L-OS	1865

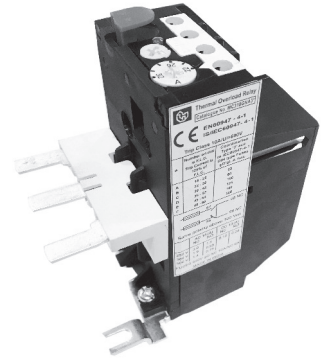
# Overload Relay ..... BCH

## Freedom Overload Relay



MC318ANA

- Range : From 0.1A to 80A
- IEC:60947-4-1
- Relay class-10A
- Built in Single Phasing Protection
- Ambient temperature compensated
- Test button for checking tripping mechanism
- Field convertible auto manual reset
- Contactor mounting / Individual Mounting



MC318GNA

## Freedom Overload Relays

HSN Code : 8536

HSN Code : 8538

Relay Range (A)	Suitable for Direct Mounting	Cat. No.	MRP [₹]	Accessories
0.1-0.16	CE15A to CE15F	MC318ANA3A	1650	Adaptor for Individual mounting Cat. No. <b>C318F1</b>  MRP Rs. 460
0.16-0.25		MC318ANA3B		
0.25-0.40		MC318ANA3C		
0.40-0.63		MC318ANA3D		
0.63-1.00		MC318ANA3E		
1.0-1.40		MC318ANA3F		
1.3-1.80		MC318ANA3G		
1.7-2.4		MC318ANA3H		
2.2-3.1		MC318ANA3J		
2.8-4.0		MC318ANA3K		
3.5-5.0		MC318ANA3L		
4.5-6.5		MC318ANA3M		
6.0-8.5		MC318ANA3N		
7.5-11		MC318ANA3P		
10.0-14.0	MC318ANA3Q			
13.0-19.0	CE15G to CE15K1	MC318ANA3R	1880	Adaptor for Individual mounting Cat No. C318F2  MRP Rs.510
18.0-25.0		MC318ANA3S	2600	
24.0-32.0		MC318ANA3T		
22.0-32.0		MC318GNA3B		
29.0-42.0		MC318GNA3C	2820	
36.0-52.0		MC318GNA3D	3810	
45.0-63.0		MC318GNA3E	4250	
60.0-80.0		MC318GNA3F	5230	

# Electronic Overcurrent Relay ..... BCH

## Bhartia Electronic Overcurrent Relay

HSN Code : 8536

### BOCR SS



- Over Current
- Locked Rotor
- Phase Loss

### BOCR SSD



- Over Current
- Locked Rotor
- Phase Loss

### BOCR DS3/DS1



- Over Current
- Phase Loss
- Locked Rotor
- Phase Reversal

### BOCR 3DE



- Over Current
- Under Current
- Phase Loss
- Phase imbalance
- Phase Reversal
- Locked Rotor

### BOCR 3EZ



- Over Current
- Under Current
- Phase Loss
- Phase Unbalance
- Phase Reversal
- Locked Rotor
- Ground Fault

### BOCR PMZ



- Over Current
- Under Current
- Phase Loss
- Phase Unbalance
- Phase Reversal
- Locked Rotor
- Ground Fault
- 4-20mA analog output
- RS-485 Comm.

### BOCR PFZ



### BOCR IFDM/IFDZ



- Over Current
- Phase Reversal

Model	Current Range	Cat. No.	Type	MRP [₹]
BOCR SS 05	0.5-6A	MP21SS005 ■	Analog model	4740
BOCR SS 30	3.0 -30A	MP21SS030 ■		
BOCR SS 60	5.0-60A	MP21SS060 ■		
BOCR SSD 05	0.5-6A	MP22SSD005 ■	Digital model/ Inbuilt display	8590
BOCR SSD 30	3.0 -30A	MP22SSD030 ■		
BOCR SSD 60	10-60A	MP22SSD060 ■		
BOCR DS3 05	0.5-6A	MP34DS3005 ■	Analog model (Definite time)	7300
BOCR DS3 30	3.0 -30A	MP34DS3030 ■		
BOCR DS3 60	5.0-60A	MP34DS3060 ■		
BOCR DS1 05	0.5-6A	MP32DS1005 ■	Analog model (Inverse time)	7300
BOCR DS1 30	3.0-30A	MP32DS1030 ■		
BOCR 3DE 05	0.5-7.0A	MP353DE05D ■H	built-in display, bottom hole	23950
BOCR 3DE 80	5.0-80A	MP353DE80D ■H		
BOCR FDE 05	0.5-7.0A	MP35FDE05D ■H	Flush mounted display #, bottom hole	27120
BOCR FDE 80	5.0-80A	MP35FDE80D ■H		
BOCR 3EZ 05	0.5-7.0A	MP363EZ05A ■H	built-in display, bottom hole, G/F protection	26070
BOCR 3EZ 80	5.0-80A	MP363EZ80A ■H		
BOCR FEZ 05	0.5-7.0A	MP36FEZ05A ■H	Flush mounted display #, bottom hole, G/F protection	29520
BOCR FEZ 80	5.0-80A	MP36FEZ80A ■H		
BOCR PMZ	0.5-100A	MP37PMZWDRD ■H	4-20mZ analog output, built-in display	54930
BOCR PFZ	0.5-100A	MP37PFZWDRD ■H	4-20mZ analog output, Flush mounted display#	55260
BOCR IFDM	0.5-60A	MP39-IFDM400H ■	RS-485 comm./ Flush mounted display#	32370
BOCR IFDZ	0.5-60A	MP39-IFMZ400H ■	RS-485 comm./Earth fault/ Flush mounted display#	41050

#### ■ Control Voltage suffix for BOCR

Model no.	Control voltage				
	24-240 VAC/DC	380-440 VAC	100-240 VAC	24 VDC	100-240 VAC/DC
BOCR-SS	S4	W1	-	-	-
BOCR-SSD	S4	W4	-	-	-
BOCR-DS3	S4	-	-	-	-
BOCR-DS1	S5	-	-	-	-
BOCR-3DE/FDE	-	-	Z4	-	-
BOCR-3EZ/FEZ	-	-	Z4	-	-
BOCR-PMZ/PFZ	-	-	-	-	U
BOCR-IFDM/IFDZ	-	-	-	-	U4

#### CTs

HSN Code : 8536

Cat No.	Description	MRP[₹]
2CT-D1-100-C	2CT EP 100/5	3050
2CT-DH-150-C	2CT EP 150/5	
2CT-D2-200-C	2CT EP 200/5	
2CT-D3-300-C	2CT EP 300/5	3300
2CT-D4-400-C	2CT EP 400/5	4550
3CT-H1-100-C	3CT version 100/5	4700
3CT-HH-150-C	3CT version 150/5	4880
3CT-H2-200-C	3CT version 200/5	5140
3CT-H3-300-C	3CT version 300/5	5460
3CT-H4-400-C	3CT version 400/5	5790
ZCT-035	ZCT version 35mm hole	5570
ZCT-080	ZCT version 80mm hole	7260
ZCT-120	ZCT version 120mm hole	12860

ZCT must be used for ground Fault protection alongwith BOCR

# Cable for separate display Models

HSN Code : 8536

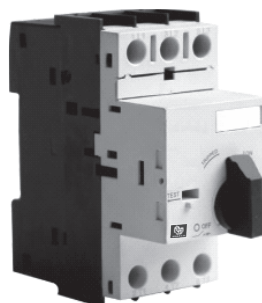
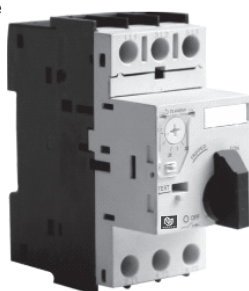
# MPCB

BCH

HSN Code : 8536

## MPH range (0.1 to 32A)

- ON/OFF Rotary knob with manual operation
- Clear trip indication with rotary knob
- 1 NO + 1 NC - Front & side mounted
- Trip indicator for visual discrimination between short circuit & over load tripping
- Undervoltage / Shunt Release
- Mag only version also available



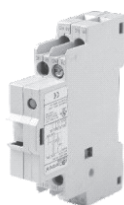
## Accessories MPH range MPCB



Front mounted aux contact



Side mounted aux contact



Trip indicator - side mounted



UV/Shunt - side mounted



Extended handle - 32A MPCB



Plastic enclosure - 32A MPCB

Cat code	Description	MRP[₹]
<b>(A) Thermal-Magnetic release</b>		
MPH32-0.16	MPCB 3P TM 0.1- 0.16A	3700
MPH32-0.25	MPCB 3P TM 0.16-0.25A	3750
MPH32-0.4	MPCB 3P TM 0.25-0.4A	
MPH32-0.63	MPCB 3P TM 0.4-0.63A	3890
MPH32-1.0	MPCB 3P TM 0.63-1.0A	4120
MPH32-1.6	MPCB 3P TM 1.0-1.6A	
MPH32-2.5	MPCB 3P TM 1.6-2.5A	4190
MPH32-4.0	MPCB 3P TM 2.5-4.0A	
MPH32-6.3	MPCB 3P TM 4.0-6.3A	4300
MPH32-10	MPCB 3P TM 6.3-10.0A	4360
MPH32-16	MPCB 3P TM 10.0-16.0A	4820
MPH32-20	MPCB 3P TM 16.0-20.0A	5760
MPH32-25	MPCB 3P TM 20.0-25.0A	6170
MPH32-32	MPCB 3P TM 25.0-32.0A	9690
<b>(B) With magnetic trip only (no Thermal release)</b>		
MPH32M-0.16	MPCB 3P Mag only 0.16 A	3610
MPH32M-0.25	MPCB 3P Mag only 0.25 A	3660
MPH32M-0.4	MPCB 3P Mag only 0.4 A	
MPH32M-0.63	MPCB 3P Mag only 0.63 A	3800
MPH32M-1.0	MPCB 3P Mag only 1.0 A	3720
MPH32M-1.6	MPCB 3P Mag only 1.6 A	
MPH32M-2.5	MPCB 3P Mag only 2.5 A	3940
MPH32M-4.0	MPCB 3P Mag only 4.0 A	
MPH32M-6.3	MPCB 3P Mag only 6.3 A	4040
MPH32M-10	MPCB 3P Mag only 10 A	4110
MPH32M-16	MPCB 3P Mag only 16 A	4360
MPH32M-20	MPCB 3P Mag only 20 A	4680
MPH32M-25	MPCB 3P Mag only 25 A	4640
MPH32M-32	MPCB 3P Mag only 32 A	8120

HSN Code : 8538

Cat code	Description	MRP[₹]
MPHF11	Front aux contact 1NO+1 NC MPCB	710
MPHS11	Side aux contact 1NO+1 NC MPCB	920
MPHT11	MPCB Trip Indicator	1080
MPH024UR	UV Rel. 24V 50HZ MPCB	1770
MPH020UR	UV Rel. 20V 50HZ MPCB	
MPH115UR	UV Rel. 110-115V 50HZ MPCB	
MPH180UR	UV Rel. 180V 50HZ MPCB	
MPH240UR	UV Rel. 230-240V 50HZ MPCB	
MPH380UR	UV Rel. 380V 50HZ MPCB	
MPH415UR	UV Rel. 400-415V 50HZ MPCB	
MPH500UR	UV Rel. 500V 50HZ MPCB	
MPH024SR	Shunt Rel. 20-24V 50/60HZ MPCB	
MPH048SR	Shunt Rel. 40-48V 50/60HZ MPCB	
MPH240SR	Shunt Rel. 200-240V 50/60HZ MPCB	
MPH440SR	Shunt Rel. 365-440V 50/60HZ MPCB	

## MPE Range (0.1 - 25A)



- Conforms to IEC 60947
- Perfect Coordinated system for Motor Control
- Electrical Life : 100000 Operations
- Excellent Current limiting characteristics
- Modular Snap fit Accessories

### MPCB (with thermal & magnetic release) HSN Code : 8536

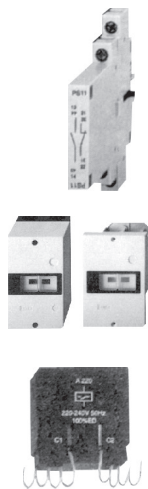
Cat ref	Setting Range (A)	Motor Rating in kW at 415 V	MRP [₹]
MPE-01	0.1...0.16	-	3280
MPE-02	0.16...0.25	0.06	
MPE-03	0.25...0.4	0.12	3620
MPE-04	0.4...0.63	0.18	
MPE-05	0.63...1	0.25, 0.37	3680
MPE-06	1...1.6	0.55	
MPE-07	1.6...2.5	0.75, 1.1	3740
MPE-08	2.5...4	1.5	
MPE-10	4...6.3	2.2, 3	3920
MPE-14	6.3...10	4, 5	
MPE-16	10...16	5.5, 9	4560
MPE-20	16...20	11	4860
MPE-22	20...25	12.5	5240



### Accessories of MPE Range

HSN Code : 8538

Reference	Contacts	MRP [₹]
Auxiliary	Switch	610
MPA-0010	1NO	
MPA-0001	1NC	
MPA-0011	1NO + 1NC	
MPA-0020	2NO	790
Enclosures (IP55)		
MPA-EF	Flush mounted	1080
MPA-ES	Surface mounted	1200
Voltage Releases		
MPA-U ■	Under Voltage Release	1660
MPA-S ■	Shunt Release	



■ A: 110 VAC, K: 240 VAC, M: 415 VAC, U: 24 VAC, R: 42 VAC

HSN Code : 8538

Reference	Tap-o *	MRP [₹]
Bus Bar		
MPA-BB245	2 Tap-o (45mm)	790
MPA-BB345	3 Tap-o (45mm)	1000
MPA-BB445	4 Tap-o (45mm)	1200
MPA-BB545	5 Tap-o (45mm)	1320
MPA-BB263	2 Tap-o (63mm)	790
MPA-BB463	4 Tap-o (63mm)	1190
MPA-BB1	Incoming Block	730



\*centre to centre distance.

# MPCB ..... BCH

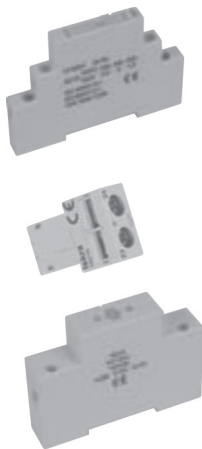
## MS32 range (0.1 to 32A)



- Auxiliary switch for side mounting & flush mounting
- Indication of release with trip indicating auxiliary switch

**HSN Code : 8536**

Cat ref	Setting range (A)	Motor rating in KW at 415V	MRP[₹]
MS32-0.16	0.1-0.16	-	3340
MS32-0.25	0.16-0.25	0.06	
MS32-0.4	0.25-0.4	0.09	
MS32-0.63	0.4-0.63	0.12 to 0.18	3570
MS32-1.0	0.63-1.0	0.18 to 0.25	
MS32-1.6	1.0-1.6	0.37 to 0.55	3640
MS32-2.5	1.6-2.5	0.75	
MS32-4.0	2.5-4	1.1 to 1.5	3930
MS32-6.3	4-6.3	2.2	
MS32-10	6.3-10	3 to 4	4760
MS32-14.0	9-14	5.5	
MS32-18	13-18	7.5	4640
MS32-23	17-23	9 to 11	5070
MS32-27	20-27	11	5500
MS32-32	25-32	15	8270



## Accessories - MS32 range

**HSN Code : 8538**

Cat ref	type	Contacts	MRP[₹]
HS11	Aux contact side mounting	1NO+1NC	860
HSV10	Aux contact top mounting	1NO	700
HSV01		1NC	
HRS10	Trip indicating block top mounting	1NO	960
HRS01		1NC	
MS32-UR	Under voltage release	-	1770
MS32-AR	Shunt release	-	

**Note:** For further details, please contact nearest sales office

# Solid State Relay ..... BCH



## Solid State Relays (SSR) Single Phase SSR's for Heating Applications SC9 Series 1-Phase ZERO CROSS Without LED HSN Code : 8536

Cat. No.	MOQ	AC51 Rating	I <sup>2</sup> t (A <sup>2</sup> S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SC941110L	5	12A	72	600V AC	12-280V AC	4-30V DC	2120
SC942110L	5	25A	288	600V AC	12-280V AC	4-30V DC	2480
SC944110L	5	40A	612	600V AC	12-280V AC	4-30V DC	3660

MOQ - Minimum Order Qty.

- Electronic Switching of loads - silent operation
- Life Over 100 million operations
- High Switching Frequency
- Ideal for dusty & corrosive atmosphere
- Impact & Vibration resistant
- Direct compatibility with PLC
- LED Indication as option

## SC9 Series 1-Phase ZERO CROSS With LED HSN Code : 8536

Cat. No.	MOQ	AC51 Rating	I <sup>2</sup> t (A <sup>2</sup> S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SC941160L	5	12A	72	600V AC	12-280V AC	4-30V DC	2140
SC942160L	5	25A	288	600V AC	12-280V AC	4-30V DC	2510
SC944160L	5	40A	612	600V AC	12-280V AC	4-30V DC	3720
SC945160L	5	50A	1500	600V AC	12-280V AC	4-30V DC	6630
SC947160L	5	75A	5000	600V AC	12-280V AC	4-30V DC	7370

MOQ - Minimum Order Qty.



## SO9 Series 1-Phase ZERO CROSS With LED in okpac® Housing IP20 Protection HSN Code : 8536

Cat. No.	MOQ	AC51 Rating	I <sup>2</sup> t(A <sup>2</sup> S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SO942560*	2	25A	600	600V AC	12-280V AC	7-30V DC	5650
SO963460*	2	35A	1250	1200V AC	24-600V AC	3.5-32V DC	7320
SO945460*	2	50A	2500	600V AC	12-280V AC	3-32V DC	7790
SO965460*	2	50A	2800	1200V AC	24-600V AC	3.5-32V DC	8160
SO967460*	2	90A	7200	1200V AC	24-600V AC	3.5-32V DC	9410

MOQ - Minimum Order Qty.

### Innovation - Performance-Design

- Removable IP20 flaps.
- Only 29 mm height.
- Designed for all types of loads.
- TMS<sup>2</sup> Technology with very long life expectancy.
- Control Status LED.
- Very low zero cross level.
- UL/cUL, VDE (EN60950), IEC/EN60947-4-3, CE marking

# Solid State Relay ..... BCH



## SU9 Series 1-Phase ZERO CROSS With LED in okpac® Housing IP20 Protection

HSN Code : 8536

Cat. No.	MOQ	AC51 Rating	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SU942460*	44	25A	600V AC	12-280V AC	3-32V DC	On Request
SU963460*	44	35A	1200V AC	24-600V AC	3.5-32V DC	On Request
SU965460*	44	50A	1200V AC	24-600V AC	3.5-32V DC	4440
SU967460*	44	75A	1200V AC	24-600V AC	3.5-32V DC	4780

### SU Range

- Designed for resistive load
- With pluggable connector on input
- IP20 protection with Removable
- For mounting on Heat sink or panel mount
- Over voltage protection on input
- Control Status LED
- Very low zero cross level
- Quick and easy connection



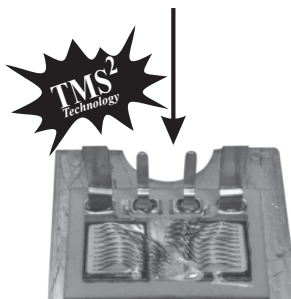
## Single Phase SSR's for Capacitor Control Applications SO8 Series 1-Phase With LED in okpac® Housing IP20 Protection

HSN Code : 8536

Cat. No.	MOQ	AC51 Rating	$I^2t(A^2S)$	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SO842074*	2	25A	600	600V AC	12-275V AC	3-32V DC	6880
SO863070*	2	35A	1250	1200V AC	24-510V AC	3.5-32V DC	7590
SO845070*	2	50A	2500	600V AC	12-275V AC	3-32V DC	8140
SO848070*	2	95A	14400	600V AC	12-275V AC	3-32V DC	12250
SO889060*	2	125A	24000	1600V AC	24-600V AC	3.5-32V DC	32520

MOQ - Minimum Order Qty.

### Direct Copper Bonding Technology



- Fewer joints, fewer layers results in better thermal characteristics
- Extremely low temperature rise ensures long life



# Solid State Relay ..... BCH

## Three Phase SSR's SGT Series 3-Phase With LED (ZERO CROSS) IP20 Protection

HSN Code : 8536



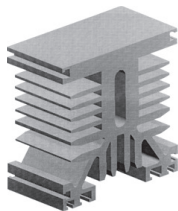
- IP20-RC and VDR Protection
- Designed for all types of load
- Thyristor technology

Cat. No.	MOQ	AC51 Rating	AC53 Rating	$I^2t(A^2S)$	Peak Voltage	Operating	Control Voltage	MRP [₹]
<b>DC CONTROL</b>								
SGT8850200	2	50A	12A	2800	1600VAC	24-640VAC	4-30VDC	33660
SGT8670500	2	75A	16A	7200	1600VAC	24-520VAC	4-30VDC	37020
SGT8690500	2	125A	32A	22000	1600VAC	24-520VAC	4-30VDC	45430
<b>AC/DC CONTROL</b>								
SGT8658500	2	50A	12A	2800	1600VAC	24-520VAC	24-255VAC/DC	35310
SGT8678500	2	75A	16A	7600	1600VAC	24-520VAC	24-255VAC/DC	38800
SGT8698500	2	125A	32A	22000	1600VAC	24-520VAC	24-255VAC/DC	47190

MOQ - Minimum Order Qty.



Common IP20 Protective Cover for SC series SSR.



### Heat Sink - 65 mm

- Wide range of Heat sinks offers perfect coordination with all SSRs

## Accessories for SSR HSN Code : 8538

Cat. No.	MOQ	Description	MRP [₹]
SC1K4600	20	IP20 Cover SC*	80
SCHS6 DIN	20	Din Clip	200
SCHS2200	5	Heat Sink 2.2K/W	1200
SCHS1100	5	Heat Sink 1.1 K/W	3880
SCHS0900	5	Heat Sink 0.9 K/W	4580
SCHS0300	5	Heat Sink 0.3K/W	7470

\*IP20 Protective Cover for complete SC range  
Refer to nearest branch office for heat sink selection

## Suggested Heat Sink Rth values (K/W) for load rating at diff.

### Ambient Temperature

SSR Rating (A)	25°C	35°C	45°C	55°C
12A	2.2	2.2	2.2	1.1
25A	1.1	1.1	0.3	0.3
40A	0.3	0.3	0.3	0.3
50A	0.3	0.3	0.3	0.3
75A	0.3	0.3	0.3	0.3
95A	0.3	0.3	0.3	-
125A	0.3	0.3	-	-

\* For Heat Sink Selection of S07 / S08 / S09 / SG4 / SG5 ranges refer to nearest sales office

Note: Apply heat sink compound between SSR base and external heat sink. In case of closely packed units the ambient temperature condition should be considered carefully. For proper protection, short-circuit protection device (SCPD) (having  $I^2t$  rating lower than that of SSR  $I^2t$ ) must be used.

# Push Button 30.5mm..... BCH

## Oil Tight Push Button & Indicating Lights - 'Type T' E 30.5 mm

HSN Code : 8536



### Range

- Non illuminated and illuminated
- Flush
- Extended
- Mushroom head
- Lever and key type selector switch
- Indicators-Direct/Resistor/Transformer type
- Conforms to EN/IEC-60947-5/IS-13947-5

### Features

- Protection degree - IP65
- Rugged construction
- Ideal for motor control centers and control panels
- Proven time tested design

Type	Description	Cat. No.	MRP [₹]	HSN Code	Lot Size
Actuator	<b>Standard flush Button</b> Red Green Black Yellow Blue Orange White	TSFB-R TSFB-G TSFB-B TSFB-Y TSFB-BL TSFB-O TSFB-W	290	8536	20
	<b>Long Button</b> Red Green Black Yellow Blue Orange White	TLB-R TLB-G TLB-B TLB-Y TLB-BL TLB-O TLB-W	310	8536	10
	<b>Mushroom Head</b> -Spring return Red -Spring return Green -Turn to release Red -Turn to release Green	TMH-R TMH-G TMHL-R TMHL-G	370 370 400 400	8536	10
	Selector Actuator -2 or 3 position	TSSA *••	730	8536	10
	Cylindrical Lock -2 or 3 positions	TCL*••	1060	8536	10
Station	Start/Stop Pushbutton	E20EA	1135	8536	1
Contact Block	1NO +1NC	050N1			
	2NO	050N2	370	8536	20
	2NC	050N3			
Aluminium Diecast Enclosure	One button	TEN-1	1200	8536	1
	Two buttons	TEN-2	1380		
	Three buttons	TEN-3	1865		
<b>HSN Code : 8538</b>					
Accessories	Wrench for retaining ring	TWN	365		
	Plug for hole	TPL	165	8538	1
	Legend plate	050L^	75		

Note: \* Position-2 or 3 • Function M-maintained, S-Springreturn ■ Cam code 1/2/3 ^ Suffix Legend Code

# Push Button 30.5mm ..... BCH

## Oil Tight Indicating Light - E 30.5mm HSN Code : 8536

Description	Application	Cat. No.	List Price [₹]	HSN Code	Lot Size
(Without lens) Direct type	AC & DC	TILD•10	520	8536	1
Transformer type	AC	TILT•10	660	8536	1
<b>HSN Code : 8538</b>					
Polycarbonate Lens	-	LENS*	85	8538	10
Spare Bulb	AC & DC	SP61L#	95		1

\* Lens available in colours given below # Suffix voltage code lamp

### Voltage Code (Direct type lamps)

Volts	6	12	24	48	110	220	240	415
Code	*	*	U	*	A	B	K	M

### Voltage Code (Transformer type lamps)

Volts	110/6	110/24	220/6	240/24	415/6
Code	A	*	*	K/U	*

\* Available on request

### Suffix Colour Code - 30.5 mm

Colour	Suffix	Colour	Suffix
Red	1P	Yellow	5P
Green	2P	White	6P
Blue	3P	Clear	7P
Amber	4P		

## Accessories for indicating light - E 30.5mm HSN Code : 8538

Description	Cat. No.	List Price [₹]	HSN Code	Lot Size
Signal lamp transformer	TR ■	380	8538	10



## Legend Plate - Suffix Code for E30 & 22.5

Inscription	Start	Stop	Inch	Forward	Reverse	UP	Down	Slow	Fast	Raise	Left	Motor Run	Motor Stop	Overload Tripped	Overload Reset	Power On
Suffix code Type T (30.5mm)	1	2	3	4	5	6	7	9	10	11	-	-	-	-	-	-
Suffix code E22 (22.5mm)	34	35	14	07	41	40	04	33	06	-	18	22	23	30	31	32

Inscription	Stop Reset	Test	Trip	Lower	Off	On	Jog	Emergency Stop	Reset	High	Run	Close	Open	Blank	On-Off
Suffix code Type T (30.5mm)	-	-	-	12	13	14	15	16	17	19	20	21	22	23	28
Suffix code E22 (22.5mm)	36	37	38	-	24	26	-	05	-	12	-	03	27	01	-

# Push Button 22.5mm ..... BCH

## Push Button & Indicating Lights - 22.5 mm



HSN Code : 8536



Description	Type	Cat. No.	MRP [₹]	Lot Size	
Push Button Actuators with Mounting Adaptor	Opaque	Flush	HEA11*M	130	10
		Extended	HEA12*M	135	
	Illuminated**	Flush	HEB11*M	185	
		Extended	HEB12*M	190	
	Mushroom Head 28mm Colour - Red/Black	Momentary	HEA21*M	170	10
		Twist to Release	HEA23*M	225	
		Stayput Key Release	HEA25*M	440	
		Mushroom Head 40mm Colour - Red/Black	Momentary	HEA22*M	
	Twist to Release		HEA24*M	255	
	Light Source Units (LSU)	Basic Unit with Mounting Adaptor	Lamp Holder & Lens	HPL22*	
LSU with Bulb-Direct Type		6/12/24/48/60/110V ac/dc	HLSUD#	125	
LSU with Bulb-Resistance Type ■		110V ac/dc & 240V ac	HLSUR#	135	
LED Indicating Light	Standard 6/12/24/48/60/110/240/415V ac*** 6-60V ac/dc; 110 & 240V dc	Color - R/Y/G/A	HFB2X*#	245	10
		Blue	HFB2XL#	490	1
		Clear	HFB2XC#	680	1
	Universal 24-240V ac/dc	Color - R/Y/G/A	HFB2X*UH4	330	
		Blue	HFB2XLUH4	605	
	Surge Protected 12-60V ac/dc; 110/240/415V ac; 110/240V dc	Color - R/Y/G/A	HFB2S*#	315	10
		Blue	HFB2SL#	520	1
		Clear	HFB2SC#	725	1
	Low Voltage Glow Protected 110V/240/415V ac	Color - R/Y/G/A	HFB2P*□	365	10
		Blue	HFB2PLH	650	1
	Surge & Low Voltage Glow Protected 110V/240/415V ac	Color - R/Y/G/A	HFB2SP*□	370	10
		Blue	HFB2SPLH	655	1
Selector Operators with Mounting Adaptor	Selector Key Operator (Color - Black)	2pos Maintained	Pls refer Ordering Sequence & Circuit Combination Table for exact Cat. Ref.	405	1
		2pos Spr Ret R>L		405	
		3pos Maintained		420	
		3pos Spr Ret L>C		420	
		3pos Spr Ret R>C		420	
		3pos Spr Ret L>C<R		420	
	Selector Knob or Lever Opaque	2pos Maintained		310	
		2pos Spr Ret R>L		310	
		3pos Maintained		335	
		3pos Spr Ret L>C		335	
		3pos Spr Ret R>C		335	
		3pos Spr Ret L>C<R		335	
	Selector Knob or Lever Illuminated •	2pos Maintained	355		
		2pos Spr Ret R>L	355		
		3pos Maintained	365		
		3pos Spr Ret L>C	380		
		3pos Spr Ret R>C	380		
		3pos Spr Ret L>C<R	380		

\* Colour Code Table 1 # Voltage Code Table 2

@ For extended bulb version, use code HLSUTE#

■ Not suitable for illuminated push button types

\*\* Light Source Unit (LSU) needs to be ordered separately.

# Push Button 22.5mm .....

BCH

Push Button - 22.5 mm



HSN Code : 8536



Description	Type	Cat. No.	MRP [₹]	Lot Size
Contact Block		1NO	HCB10	115
		1NC	HCB01	
	Early Make	1NO	HCB10EM	125
	Late Break	1NC	HCB01LB	
		1NO+1NC	HCB11	185
		2NO	HCB20	

## Ordering Sequence for Selector Operators

H	E				M
		A - Opaque ; B - Illuminated	Table 3 - Position/Cam	Table 4 - Type	Table 1 Color

HSN Code : 8538

Description	Type	Cat. No.	MRP [₹]	Lot Size
Spares & Accessories	Filament Bulb	Normal Bulb	9ED2#	65
	Filament Bulb	Extended Bulb	9ED3#	65
	Mounting Adaptor		HMR	65
	Lens for Indicating Lamp		H8ED1*	65
	Knob for Illum. Selector Actuator		H9ED1K*	65
	Lever for Illum. Selector Actuator		H9ED1L*	65
	Legend Plate with Std Inscription	Flush/Extended PB	8EA9 +	65
	Rubber Boot for IP66 Protection		HRB*	75
	Padlock to Prevent Operation		8EA1	90

## SELECTION CRITERIA FOR

### 3 POSITION SELECTOR OPERATOR CAM:

Selector Operators with CAM1 :

- When the Selector operator lever / knob is moved to the left side, it operated the left side contact block.
- When the Selector operator lever / knob is moved to the right side, it operates the right side contact block.

Selector Operator with CAM2 :

- When the Selector operator lever / knob is moved to the left side, it operates the left side contact block.
- When the Selector operator lever / knob is moved to the right side, it operates **both the right side contact block and the left side contact blocks.**

\* Color Code Table 1 # Voltage Code Table 2 + See Suffix code table on page 42

## Suffix Code Tables

Table 1		
Applicable for	(*) Color	Code
Opaque, Illuminated	Red	R
Opaque, Illuminated	Yellow	Y
Opaque, Illuminated	Green	G
Opaque, Illuminated	Blue	L
Opaque	Black	B
Illuminated	Amber	A
Opaque	White	W
Illuminated	Clear	C

Table 3	
Selector Operator Version	Code
Sel. Lever 2 pos	8L
Sel. Key 2 pos	8Y
Sel. Knob 2 pos	8K
Sel. Lever 3 pos Cam1	6L
Sel. Key 3 pos Cam1	6Y
Sel. Knob 3 pos Cam1	6K
Sel. Lever 3 pos Cam2	7L
Sel. Key 3 pos Cam2	7Y
Sel. Knob 3 pos Cam2	7K

Table 4		
Applicable for	Type	Code
Selector Operator	Maintained in All Position	D
Selector Operator	Spring Return Right>Centre	R
Selector Operator	Spring Return Left>Centre	T

## Suffix Code Tables

Table 2		
Applicable for	(*) Voltage	Code
LSU, LED	6V AC/DC (DIRECT)	P4
LSU, LED	12V AC/DC (DIRECT)	S4
LSU, LED	24V AC/DC (DIRECT)	U4
LSU, LED	48V AC/DC (DIRECT)	W4
LSU, LED	60V AC/DC (DIRECT)	Y4
LSU	110V AC/DC (DIRECT)	A4
LSU	110V AC/DC (RESISTOR)	A4
LED	110/120V AC	E
LED	110/120V DC	E1
LED	220/240V AC	H
LED	220/240V DC	H1
LED	415V AC	M
LED	220/240V AC (DIODE+RESISTOR)	H

Note : Key type Sel Operator available in Opaque version & Black color only.

# Motor Starters ..... BCH

## Direct On Line Starters



- DOL upto 40 HP
- Heavy duty 4 Pole Contactor
- Wide Band Coil Voltages (190-400V, 230-420V, 220-240V, 380-415V)
- Encapsulated & Hermetically sealed coil
- Easy inspection & maintenance

## Auto Start Direct on line Starters

- Automatically starts the Motor when the power comes back
- Upto 24 A relay rating (Shakti)
- 13.2 to 40A relay rating (Citation P)
- Time delay before restart to settle power supply fluctuations
- Monitors power supply condition before restarting
- Protection against single phasing, phase imbalance & phase reversal



## Star Delta Starters



- Semi Automatic upto 40 HP
- Fully Automatic upto 375 HP
- Wide Band Coil Voltages ( 230-360V, 260-400V, 380-415V)
- Single Phase & Overload Protection

- Range : 3 - Ph : upto to 10 HP  
          : 1 - Ph : upto 4 HP
- Proven time tested product
- Flush and base mounting

## Mini Manual Starters



## Mini Manual with UVT coil



- Automatic Version of Mini Manual Starter
- Prevents motor from restarting when power comes back
- Trips the starter automatically in low voltage conditions

## Manual Star Delta Starters

- Contactor based superior design with 25 A heavy duty switch
- Momentary Star position ensures perfect transition
- Ideal for Oil Mills, Flour Mills and agro industries



# Motor Starters - Shakti ..... BCH

## Shakti WP DOL Starter (190-400V AC Coil)

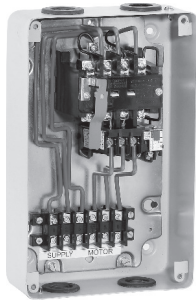
HSN CODE : 8536



Cat Code	Overload Relay Range (A)	Contactor Type	Contactor rating	MRP [₹]	Cat Code (Open Execution)	MRP [₹]	
SAWPGZA	2.4 - 3.8	Shakti	12 A	3045	-	-	
SAWPHZA	3.8 - 6.0						
SAWPJZA	6.0 - 9.3						
SAWPGZ	2.4 - 3.8		20 A	3085	3035	SAWPGZI	3035
SAWPHZ	3.8 - 6.0					SAWPHZI	
SAWPJZ	6.0 - 9.3					SAWPJZI	
SAWPKZ	8.9 - 13.5					SAWPKZI	
SAWPLZ	13.2 - 20.0				3250	SAWPLZI	3230
SAWPMZ	17.4 - 24.0				3410	SAWPMZI	3395

## Shakti WP DOL Starter (Big Enclosure + TB)

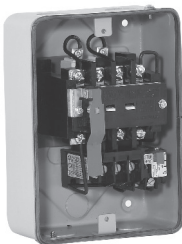
HSN CODE : 8536



Cat Code	Overload Relay Range (A)	Contactor Type	Contactor rating	MRP [₹]
SAWPKZ-BT	8.9 - 13.5	Shakti	20 A	4095
SAWPLZ-BT	13.2 - 20.0			4275
SAWPMZ-BT	17.4 - 24.0			4500

## Shakti DOL Starter (190-400V AC Coil)

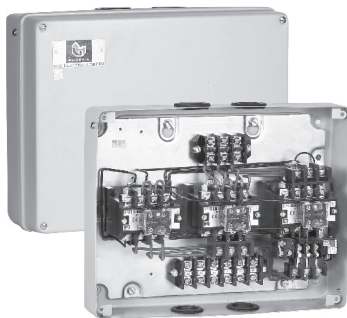
HSN CODE : 8536



Cat Code	Overload Relay Range (A)	Contactor Type	Contactor rating	MRP [₹]	Cat Code (Open Execution)	MRP [₹]
SAGZ	2.4 - 3.8	Shakti	20 A	3290	SAGZI	3240
SAHZ	3.8 - 6.0				SAHZI	
SAJZ	6.0 - 9.3				SAJZI	
SAKZ	8.9 - 13.5				SAKZI	
SALZ	13.2 - 20.0			3585	SALZI	3540
SAMZ	17.4 - 24.0			3730	SAMZI	3680

## Shakti Semi Automatic Star Delta Starter with 260-400V AC Coil

HSN CODE : 8536



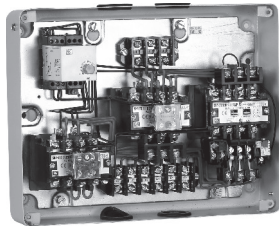
Cat Code	Overload Relay Range (A)	Contactor Type	Contactor rating	MRP [₹]
SASSGLEG	2.4 - 3.8	Shakti	16 A	11130
SASSHLEG	3.8 - 6.0			
SASSJLEG	6.0 - 9.3			
SASSKLEG	8.9 - 13.5			
SASSKLEG/LOR	13.2 - 20.0			11350
SASSKLEG-M	17.4 - 24.0			11725

For 380 - 415 V Coil Voltage replace Suffix 'G' by 'N'

# Motor Starters - Shakti..... BCH

## Shakti Fully Automatic Star Delta Starter with 260-400V AC Coil & Electronic Timer

HSN CODE : 8536



Cat Code	Overload Relay Range (A)	Contactor Type	Contactor rating	MRP [₹]
SASAGLEG	2.4 - 3.8	Shakti	16 A	12305
SASAHLEG	3.8 - 6.0			
SASAJLEG	6.0 - 9.3			
SASAKLEG	8.9 - 13.5			
SASAKLEG/LOR	13.2 - 20.0			12515
SASAKLEG/MOR	17.4 - 24.0			12870

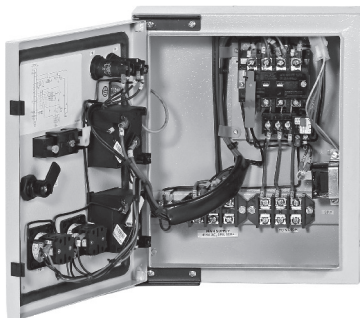
For 380 - 415 V Coil Voltage replace Suffix 'G' by 'N'

## Shakti Auto-Start DOL Starter ( With 5-Sec delay Auto Switch )

HSN CODE : 8536



3 Position Selection (Maunal - Manual SPP - Auto)	Description			MRP [₹]
Cat Code	Overload Relay Range (A)	Contactor Type	Contactor rating	
ASXGZ	2.4 - 3.8	Shakti	20 A	5605
ASXHZ	3.8 - 6.0			
ASXJZ	6.0 - 9.3			
ASXKZ	8.9 - 13.5			
ASXLZ	13.2 - 20.0			5880
ASXMZ	17.4 - 24.0			6220



## Shakti DOL Submersible Pump Starter (with Auto Switch)

HSN CODE : 8536



3 Position Selection (Maunal - Manual SPP - Auto)	Description			MRP [₹]
Cat Code	Overload Relay Range (A)	Contactor Type	Contactor Rating	
CPEYSAGZ	2.4 - 3.8	Shakti	20 A	9190
CPEYSAHZ	3.8 - 6.0			
CPEYSAJZ	6.0 - 9.3			
CPEYSAKZ	8.9 - 13.5			
CPEYSALZ	13.2 - 20.0			10165
CPEYSAMZ	17.4 - 24.0			10700

For 380 - 415 V coil voltage replace suffix "Z" with "N" in the Cat. Code

For Auto switch with 5 min time delay option, kindly contact nearest sales office



# Motor Starters - Citation ..... B.C.H.

## Citation DOL Motor Starter

HSN CODE : 8536



Cat Code	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating	MRP [₹]	Cat Code (Open Execution)	MRP [₹]
NADLEN	0.5 / 0.37	0.72 - 1.14	C00N	16 A	4415	NADLENI	4325
NAELEN	0.75 / 0.55	1.07 - 1.70				NAELENI	
NAFLEN	1 / 0.75	1.58 - 2.50				NAFLENI	
NAGLEN	2 / 1.5	2.4 - 3.8				NAGLENI	
NAHLEN	3 / 2.2	3.8 - 6.0				NAHLENI	
NAJLEN	5 / 3.7	6.0 - 9.3				NAJLENI	
NAKLEN	7.5 / 5.5	8.9 - 13.5				NAKLENI	
NALLEN	10 / 7.5	13.2 - 20.0				NALLENI	
NALLEN/MOR	12.5 / 10	17.4 - 24.0	CP20	20 A	5450	NALLENI/MOR	5505

## Citation DOL Motor Starter

### (A) with NHD Contactor

HSN CODE : 8536



Cat Code	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating	MRP [₹]
NAMLEN	15 / 11	17.4 - 24.0	N0N	25A	7190
NAMLEN/NOR	15 / 11	22.0 - 30.0	N0N	25A	7835
NAPLEN/MOR	15 / 11	17.4 - 24.0	N01N	32A	9720
NAPLEN	20 / 15	23.0 - 32.0	N01N	32A	10125
NANLEN	20 / 15	22.0 - 30.0	N1N	40A	11200
NAQLEN	25 / 18.5	26.0 - 40.0	N1N	40A	11365

### (B) 30 & 40HP DOL Starter

New

Cat Code	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating	MRP [₹]
CEHFRGDM*	30 / 22	36.0 - 52.0	Freedom	50A	19680
NACT2LEDM	30 / 22	37.6 - 60.0	Citation D	40A	24280
NACT2LEEM	40 / 30	37.6 - 60.0	Citation E	70A	31165

\*CEHFRGDM consist Freedom Contactor and Freedom OLR

## Citation P DOL Motor Starter

HSN CODE : 8536



Type	Cat Code	Coil	HP/ KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Rating	MRP [₹]
P2	NBMLEN/LOR	N & G	10 / 7.5	13.2 - 20	25A	5650
P2	NBMLEN	N & G	15 / 11	17.4 - 24	25A	6045
P2	NBMLEN/POR	N & G	15 / 11	23 - 32	25A	6045
P3	NBPLEN	N & WB	20 / 15	23 - 32	32A	6940
P3	NBPLEN/QOR	N & WB	20 / 15	26 - 40	32A	7130
P3H	NBQLEN	N & WB	25 / 18.5	26 - 40	40A	8300

## Citation P Auto DOL Motor Starter

HSN CODE : 8536

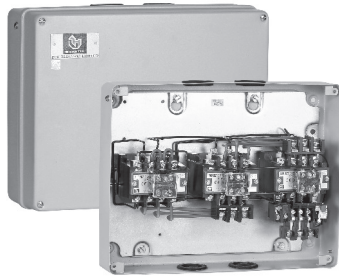


Type	Cat Code	Coil	HP/ KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Rating	MRP [₹]
P1A	ANBKLEN	N & G	7.5 / 5.5	8.9 - 13.5	16A	6360
P1A	ANBLEN	N & G	10 / 7.5	13.2 - 20	16A	6470
P1HA	ANBLEN/MOR	N & G	12.5 / 10	17.4 - 24	20A	6760
P2A	ANBMLEN	N & G	12.5 / 10	17.4 - 24	25A	7660

# Motor Starters - Citation ..... BCH

## Citation Semi Automatic Star Delta Starter with NHD Contactor

HSN CODE : 8536

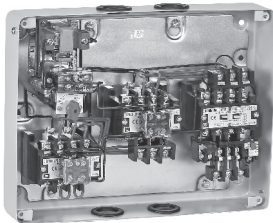


Cat Code	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating	MRP [₹]
NASSHLEN	5 / 3.7	3.8 - 6.0	C00N	16A	11995
NASSJLEN	10 / 7.5	6.0 - 9.3			
NASSKLEN	15 / 11	8.9 - 13.5			
NASSKLEN/LOR	15 / 11	13.2 - 20.0			12370
NASSLLEN	20 / 15	13.2 - 20.0	N0N	25A	18300
NASSMLEN	25 / 18.5	17.4 - 24.0			18415
NASSPLEN	25 / 18.5	23.0 - 32.0			19885
NASS01PLEN	35 / 26	23.0 - 32.0	N01N	32A	22585
NASS01QLEN	35 / 26	26.0 - 40.0	N01N	32A	22785
NASSNLEN	35 / 26	22.0 - 30.0	N1N	40A	32310
NASS01CT1LEN	40/30	24.4 - 39.0	N01N	32A	33910
NASSFRGCLEC4M	40/30	29.0 - 42.0 (FR)	C4	32A	35900

For other Coil Voltages, kindly refer "Coil Voltage Master Table" at page 64

## Citation Fully Automatic Star Delta Starter with NHD Contactor & Pneumatic Timers

HSN CODE : 8536



Cat Code	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating	MRP [₹]
NASAGLEN	3 / 2.2	2.4 - 3.8	C00N	16A	16510
NASAHLEN	5 / 3.7	3.8 - 6.0			
NASAJLEN	10 / 7.5	6.0 - 9.3			
NASAKLEN	15 / 11	8.9 - 13.5			
NASAKLEN/LOR	15 / 11	13.2 - 20.0			17305
NASALLEN	20 / 15	13.2 - 20.0	N0N	25A	20955
NASAMLEN	25 / 18.5	17.4 - 24.0			21065
NASAPLEN	30 / 22	23.0 - 32.0			21940
NASA01PLEN	35 / 26	23.0 - 32.0	N01N	32A	26130
NASANLEN	35 / 26	22.0 - 30.0	N1N	40A	36815
NASAQLEN	40 / 30	26.0 - 40.0			37030
NASACT1LEN	40 / 30	24.4 - 39.0			42930

## Citation Fully Automatic Star Delta Starter with Citation M Contactor & Pneumatic Timers

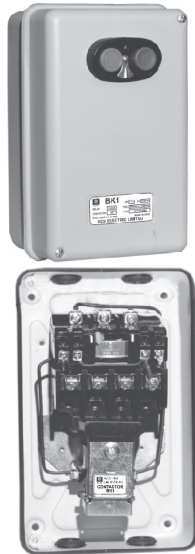
HSN CODE : 8536



Cat Code	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating	MRP [₹]
NASACT1LEDM	40 / 30	24.4 - 39.0	D	40A	50045
NASACT2LEDM	50 / 37	37.6 - 60.0			50845
NASACT2LEEM	75 / 55	37.6 - 60.0	E	70A	87765
NASACT3LEEM	85 / 65	56.4 - 90.0			93340
NASACT3LEC5M	100 / 75	56.4 - 90.0	M-5	110A	119195
NASACT4LEC5M	135 / 100	84.6 - 135.0			121860
NASACT4LENM	150 / 110	84.6 - 135.0	N	140A	164955
NASACT5LEC6M	250 / 185	131.6 - 210.0	S	300A	231610

# Motor Starters - BK1 New

BCH



## BK1 DOL Motor Starter

HSN CODE : 8536

Type	Cat Code	HP/ KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Rating	MRP [₹]
BK1 DOL	BK1DBFWB1	1 HP	1.5-2.5	16A	POR
BK1 DOL	BK1DBGWB1	2 HP	2.5-4	16A	POR
BK1 DOL	BK1DBHWB1	4 HP	4-6.5	16A	POR
BK1 DOL	BK1DBJWB1	6 HP	6-10	16A	POR
BK1 DOL	BK1DBKWB1	7.5 HP	9-14	16A	POR
BK1 DOL	BK1DBKLBW1	7.5 HP	11-18	16A	POR
BK1 DOL	BK1DBLWB1	7.5 HP	13-22	16A	POR
BK2 DOL	BK2DBLWB1	7.5 HP	13-22	25A	POR
BK2 DOL	BK2DBPWB1	7.5 HP	20-32	25A	POR

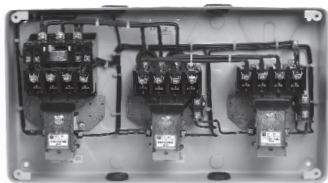
\*WB1 - 250-450V (415V) \*WB2 - 200-400V (360V)

## BK1 Semi-Automatic Motor Starter

HSN CODE : 8536

Type	Cat Code	HP/ KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Rating	MRP [₹]
BK1 SASD	BK1SSBHWB1	6 HP	4-6.5	16A	POR
BK1 SASD	BK1SSBJWB1	10 HP	6-10	16A	POR
BK1 SASD	BK1SSBKWB1	12.5 HP	9-14	16A	POR
BK1 SASD	BK1SSBKLWB1	15 HP	11-18	16A	POR
BK1 SASD	BK1SSBLWB1	15 HP	13-22	16A	POR
BK2 SASD	BK2SSBLWB1	15 HP	13-22	25A	POR
BK2 SASD	BK2SSBPWB1	15 HP	20-32	25A	POR

\*WB1 - 250-450V (415V) \*WB2 - 200-400V (360V)



## BK Contactors

HSN CODE : 8536

Cat Code	Description	MRP [₹]
BK1C16WB1	BK1 Contactor, 4P, 16A, 250-450V AC	POR
BK2C25WB1	BK2 Contactor, 4P, 25A, 250-450V AC	POR

## BK Overload Relay

HSN CODE : 8536

Cat Code	Description	MRP [₹]
BK1OLRBF	Overload Relay, 3P, BK, 1.5-2.5A	POR
BK1OLRBG	Overload Relay, 3P, BK, 2.5-4.0A	POR
BK1OLRBH	Overload Relay, 3P, BK, 4-6A	POR
BK1OLRBJ	Overload Relay, 3P, BK, 6-10A	POR
BK1OLRBK	Overload Relay, 3P, BK, 9-14A	POR
BK1OLRBKL	Overload Relay, 3P, BK, 11-18A	POR
BK1OLRBL	Overload Relay, 3P, BK, 13-22A	POR
BK2OLRBP	Overload Relay, 3P, BK, 20-32A	POR

## Spares for BK1 Starters

HSN CODE : 8538

Cat Code	Description	MRP [₹]
BK1-AS16	Housing (Arc Shield) for BK1 Contactor	POR
BK2-AS25	Housing (Arc Shield) for BK2 Contactor	POR
BK1-CB16	Contact Bridge for BK1 Contactor	POR
BK2-CB25	Contact Bridge for BK2 Contactor	POR
BK1-CK16	Contact Kit for BK1 Contactor	POR
BK2-CK25	Contact Kit for BK2 Contactor	POR
BKCWB1	Coil 250-450V AC for BK Contactors	POR
BKCWB2	Coil 200-400V AC for BK Contactors	POR
BK-PB	Twin Push Button for BK Starters	POR

# Motor Starters - Citation..... BCH

## Fully Automatic Star Delta Starter with Citation M Contactor, Pneumatic Timer & Electronic Over Current Relay with Ammeter & Voltmeter

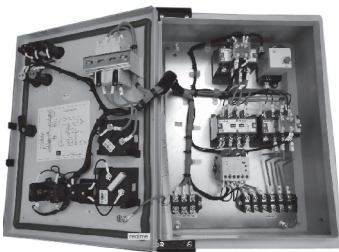
HSN CODE : 8536



Cat Code	HP / KW at 3Ø, 415V, 50Hz	EOCR Range (A)	Contactor Type (Citation)	Contactor Rating (A)	MRP [₹]
NASASS60LEDM-P	50 / 37	5-60 Amp	D	40A	61540
NASASS60LEEM-P	75 / 55	5-60 Amp	E	70A	96265
NASA2CTD1CLEM5M-P	100/ 75	0.5-6 Amp (with CT 100/5) (2CT model)	M-5	110A	136335
NASA2CT150LEM5M-P	135/ 100	0.5-6 Amp (with CT 150/5) (2CT model)	M-5	110A	141240

## Fully Automatic Star Delta Starter with NHD Contactor, Electronic Timer & Electronic Over Current Relay with Ammeter & Voltmeter and MCB

HSN CODE : 8536



Cat Code	HP / KW at 3Ø, 415V, 50Hz	EOCR Range (A)	Contactor Type (NHD)	Contactor Rating (A)	MCB Rating	MRP [₹]
NASASS30LEN-P-MCB	25 / 18.5	3-30 Amp	NA25N	25A	40A (TP)	36490

# Motor Starters - Freedom.....

## Industrial DOL Starters with Freedom Contactor & Overload Relay

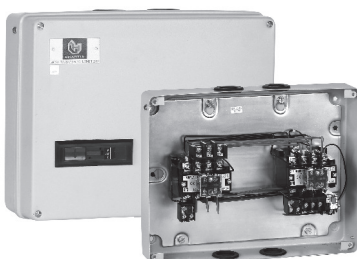
HSN CODE : 8536



Cat Code	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating	MRP [₹]
CEBFM	0.5/0.37	1.0-1.4	Freedom	9 A	3270
CEBGM	0.75/0.55	1.3-1.8	Freedom	9 A	
CEBHM	1.0/0.75	1.7-2.4	Freedom	9 A	
CEBJM	1.5/1.1	2.2-3.1	Freedom	9 A	
CEBKM	2.5/1.5	2.8-4.0	Freedom	9 A	
CEBMM	3.0/2.2	4.5-6.5	Freedom	9 A	
CEBPM	5.0/3.7	7.5-11	Freedom	9 A	3355
CECPM	5.0/3.7	7.5-11	Freedom	12 A	
CECQM	7.5/5.5	10-14	Freedom	12 A	4245
CEDQM	7.5/5.5	10-14	Freedom	18 A	
CEDRM	10/7.5	13-19	Freedom	18 A	

## DOL Reversing Starter

HSN CODE : 8536



Cat Code	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating	MRP [₹]
NARFLEN	1/0.75	1.58 - 2.50	C00N	16 A	10985
NARGLEN	2/1.5	2.4 - 3.8			
NARHLEN	3/2.2	3.8 - 6.0			
NARJLEN	5/3.7	6.0 - 9.3			
NARKLEN	7.5/5.5	8.9 - 13.5			
NARLLEN	10/7.5	13.2 - 20.0	N0N	25 A	14900

# Motor Starters..... BCH

## 1- Phase Mini Manual Motor Starter upto 4HP (Surface Mounting)

HSN CODE : 8536



Cat Code	Recommended HP 1Ø, 240V	Overload Relay Range (A)	MRP [₹]	Cat Code (with UV Coil)	MRP [₹]
AMLE-10-SP	-	0.23 - 0.47	1615	AMLEH-10-SP	2165
AMLE-20-SP	-	0.46 - 0.80		AMLEH-20-SP	
AMLE-30-SP	1 / 8	0.85 - 1.55		AMLEH-30-SP	
AMLE-40-SP	1 / 6	1.60 - 3.20		AMLEH-40-SP	
AMLE-50-SP	0.5 / 0.75	3.50 - 6.50		AMLEH-50-SP	
AMLE-60-SP	1 to 2	6.80 - 11.7		AMLEH-60-SP	
AMLE-70-SP	2 to 3	11.0 - 20.0		AMLEH-70-SP	

For flush mounting replace 'E' by 'C' and reduce price by ₹ 50

## 3- Phase Mini Manual Motor Starter upto 10 HP (Surface Mounting)

HSN CODE : 8536



Cat Code	Recommended HP at 3Ø, 415V	Overload Relay Range (A)	MRP [₹]	Cat Code (with UV Coil)	MRP [₹]
AMLE-10	-	0.23 - 0.47	2125	AMLEN-10	2450
AMLE-20	-	0.46 - 0.80		AMLEN-20	
AMLE-30	0.50 / 0.75	0.85 - 1.55		AMLEN-30	
AMLE-40	1.00 / 1.50	1.60 - 3.20		AMLEN-40	
AMLE-50	3	3.50 - 6.50		AMLEN-50	
AMLE-60	5	6.80 - 11.7		AMLEN-60	
AMLE-70	10	11.0 - 20.0		AMLEN-70	

For flush mounting replace 'E' by 'C' and reduce price by ₹ 50

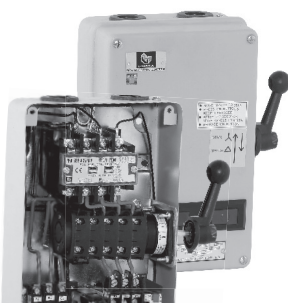
## 1-Phase DOL with 2P Contactor & 2P Overload Relay

HSN CODE : 8536

Type	Cat Code	HP/ KW at 1Ø, 220V, 50Hz	Overload Relay Range (A)	Contactor Rating	MRP [₹]
1P10	NAHLEBW-SP	0.75 / 0.55	3.8 - 6.0	16A	POR
1P10	NAJLEBW-SP	1 / 0.75	6.0 - 9.3	16A	POR
1P10	NAKLEBW-SP	1.5 / 1.10	8.9 - 13.5	16A	POR
1P10H	NALLEBW-SP	2 / 1.5	13.2 - 20	25A	POR
1P10H	NAMLEBW-SP	3 / 2.2	17.4 - 24	25A	POR

## Manual Star Delta Starter (with 260-400V AC Coil)

HSN CODE : 8536



Cat Code	HP at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating	MRP [₹]
HASSGLEG	3 HP	2.4 - 3.8	C00N	16 A	6715
HASSHLEG	5 HP	3.8 - 6.0			
HASSJLEG	10 HP	6.0 - 9.3			
HASSKLEG	15 HP	8.9 - 13.5	NON	25 A	7635

HSN CODE : 8538

# Motor Starters (SPS) - Citation.....BCH

## Submersible Pump Starters



## Three Phase

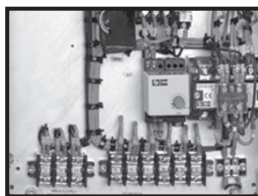
- Direct on line : upto 40 A relay rating
- Star Delta : upto 135 A relay rating
- Protections :
  - Phase failure
  - Phase imbalance
  - Phase reversal
- Short Circuit Protection Through MCB/MCCB : In case of Premium models
- Ammeter and Voltmeter
- On/Off and Trip indications
- Powder coated enclosure with PU gasket ensuring excellent finish and reliability
- Provision for connecting Dry run preventor



On/Trip Indicators



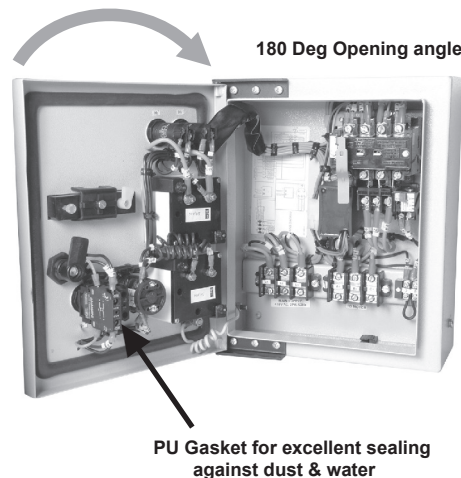
Isolated Terminal blocks for better termination



Properly laid down wires, bunched with cable ties Ferrules for ease of identification

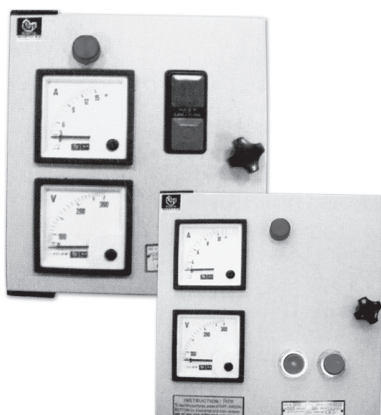


Phase indicators (For std & Premium models)



180 Deg Opening angle

PU Gasket for excellent sealing against dust & water



## Single Phase

- With Mini DOL (up to 11.0 - 20.0 A Relay)
  - Premium Model (With Ammeter & Voltmeter)
- With 2 Pole Contactor + 2 Pole Relay (up to 23.0 - 32.0 A Relay)
  - Economy Model (With Ammeter)
  - Standard Model (With Ammeter & Voltmeter)
  - Alfa Model (With Ammeter & Voltmeter)
  - With Dry Run Protection Model (Digital Meter)

# Motor Starters - Citation 3 - Phase ..... BCH

## Citation Submersible Pump Starter with 3-Position Selection (with Auto Switch) with or without MCB option

DOL (3-Ph)

HSN CODE : 8536



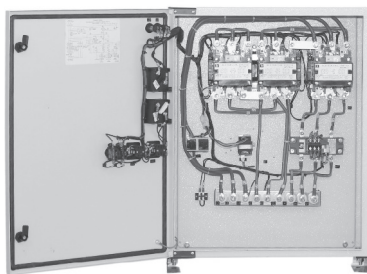
Overload Relay Range (A)	Contactor Type	Contactor Rating	DOL			
			Economy (without Short Circuit Protection)		Premium (with Short Circuit Protection) with MCB	
			Cat Code	MRP [₹]	Cat Code	MRP [₹]
1.58 - 2.50	C00N	16 A	CPEYNAFN*	9760	--	
2.4 - 3.8	C00N	16 A	CPEYNAGN*		--	
3.8 - 6.0	C00N	16 A	CPEYNAHN*		--	
6.0 - 9.3	C00N	16 A	CPEYNAJN*		CPPYNAJN*	14195
8.9 - 13.5	C00N	16 A	CPEYNAKN*		CPPYNAKN*	
13.2 - 20.0	C00N	16 A	CPEYNALN*	10460	CPPYNALN*	15185
17.4 - 24.0	N0N	25 A	CPEYNAMN*	11360	CPPYNAMN*	16795
23.0 - 32.0	N01N	32 A	CPEYNA01PN	12940	--	



## Citation Submersible Pump Starter with 3-Position Selection (with Auto Switch) with or without MCB / MCCB options

STAR DELTA (3-Ph)

HSN CODE : 8536



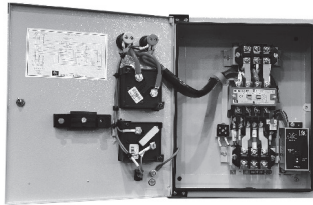
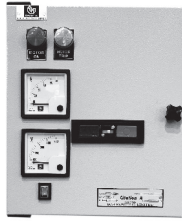
Overload Relay Range (A)	Contactor Type	Contactor Rating	Star Delta			
			Economy (without Short Circuit Protection)		Premium (with Short Circuit Protection) with MCB / MCCB	
			Cat Code	MRP [₹]	Cat Code	MRP [₹]
3.8 - 6.0	C00N	16 A	CPSDEYHN*	18915	--	
6.0 - 9.3	C00N	16 A	CPSDEYJN*		CPSPYJN*	23205
8.9 - 13.5	C00N	16 A	CPSDEYKN*		CPSPYKN*	
13.2 - 20.0	C00N	16 A	CPSDEYLN-C00	19250	CPSPYLN-C00	24090
17.4 - 24.0	CP20	20 A	CPSDEYMN-CP20	21155	--	
13.2 - 20.0	N0N	25 A	CPSDEYLN	22755	CPSPYLN	27700
17.4 - 24.0	N0N	25 A	CPSDEYMN	23970	CPSPYMN	29935
23.0 - 32.0	N01N	32 A	CPSDEY01PN	30070	CPSPY01PN	35155
22.0 - 30.0	N1N	40 A	CPSDEYNN	37460	CPSPYNN	42155
26.0 - 40.0	N1N	40 A	CPSDEYQN	38010	CPSPYQN	42740
24.4 - 39.0	N1N	40 A	CPSDEYCT1N	41765	CPSPYCT1N	49295
37.6 - 60.0	Citation E	70 A	CPSDEYCT2M	67575	CPSPYCT2M	76785
56.4 - 90.0	Citation E	70 A	CPSDEYECT3M	73530	--	
56.4 - 90.0	Citation M-5	110 A	CPSDEYCT3M	95080	CPSPYCT3M	101210
84.6 - 135.0	Citation M-5	110 A	CPSDEYCT4M	98085	CPSPYCT4M	107660

# Motor Starters - Citation P & Shakti P ..... BCH

## Citation P Submersible Pump Starter - Standard and Premium versions DOL (3-Ph)

HSN CODE : 8536

**New**



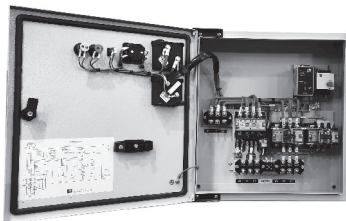
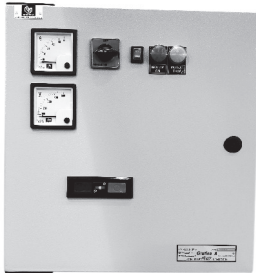
Type	Overload Relay Range (A)	Contactor Rating	Coil	Standard (without Short Circuit Protection)		Premium (with Short Circuit Protection) with MCB	
				Cat Code	MRP [₹]	Cat Code	MRP [₹]
CITATION P10	1.58 - 2.5	16 A	N & G	CPEYNBF*	9520	CPPYNBF*	POR
CITATION P10	2.4 - 3.8	16 A	N & G	CPEYNBG*	9520	CPPYNBG*	POR
CITATION P10	3.8 - 6	16 A	N & G	CPEYNBH*	9520	CPPYNBH*	POR
CITATION P10	6 - 9.3	16 A	N & G	CPEYNBJ*	9520	CPPYNBJ*	POR
CITATION P10	8.9 - 13.5	16 A	N & G	CPEYNBK*	9520	CPPYNBK*	POR
CITATION P10	13.2 - 20	16 A	N & G	CPEYNBL*	9805	CPPYNBL*	POR
CITATION P10B	13.2 - 20	20 A	N & G	CPEYNBL2*	10000	CPPYNBL2*	POR
CITATION P10H	17.4 - 24	25 A	N & G	CPEYNBM*	10375	CPPYNBM*	POR
CITATION P11	23 - 32	32A	N & WB	CPEYNBP01*	11605	CPPYNBP01*	POR
CITATION P11	26 - 40	32A	N & WB	CPEYNBQ01*	11760	CPPYNBQ01*	POR
CITATION P12	26 - 40	40A	N & WB	CPEYNBQ*	12105	CPPYNBQ*	POR

For spare contactor refer page 64

## Citation P Submersible Pump Starter - Standard and Premium versions STAR DELTA (3-Ph)

HSN CODE : 8536

**New**



Type	Overload Relay Range (A)	Contactor Rating	Coil	Standard (without Short Circuit Protection)		Premium (with Short Circuit Protection) with MCB/MCCB	
				Cat Code	MRP [₹]	Cat Code	MRP [₹]
CITATION P20	6 - 9.3	16 A	N & G	CPSDEYNBJ*	18375	CPSDPYNBJ*	POR
CITATION P20	8.9 - 13.5	16 A	N & G	CPSDEYNBK*	18375	CPSDPYNBK*	POR
CITATION P20	13 - 20	16 A	N & G	CPSDEYNBL*	18550	CPSDPYNBL*	POR
CITATION P20A	13.2 - 20	20 A	N, LV & G	CPSDEYNBL2*	19565	CPSDPYNBL2*	POR
CITATION P20A	17.4 - 24	20 A	N, LV & G	CPSDEYNBM2*	19675	CPSDPYNBM2*	POR
CITATION P20B	23 - 32A	25 A	N, LV & G	CPSDEYNBP*	22690	CPSDPYNBP*	POR
CITATION P20H	22 - 30A	32 A	N & WB	CPSDEYNB01N*	23300	CPSDPYNB01N*	POR
CITATION P20H	23 - 32A	32 A	N & WB	CPSDEYNB01P*	23315	CPSDPYNB01P*	POR
CITATION P20H	26 - 40A	32 A	N & WB	CPSDEYNB01Q*	23555	CPSDPYNB01Q*	POR
CITATION P21	26 - 40A	40 A	N & WB	CPSDEYNBQ*	29015	CPSDPYNBQ*	POR

Type	Overload Relay Range (A) (Freedom OLR )	Contactor Rating (Citation 3P)	Cat Code	Coil	MRP [₹]
Citation P32	22-32	32 Amp	CPSDEYNBC4FRGBM	M	POR
Citation P40	36-52	40 Amp	CPSDEYNBDFRGDM	M	POR
Citation P50	45-63	50 Amp	CPSDEYNBD1FRGEM	M	POR
Citation P70	36-52	70 Amp	CPSDEYNBEFRGDM	M & LA	POR
Citation P70	45-63	70 Amp	CPSDEYNBEFRGEM	M & LA	POR
Citation P70	60-80	70 Amp	CPSDEYNBEFRGFM	M & LA	POR
Citation P100	60-80	100 Amp	CPSDEYNBM5FRGFM	M & LA	POR

## Shakti P DOL Submersible Pump Starter (3-Ph)

HSN CODE : 8536



Type	Overload Relay Range (A)	Contactor Rating	Cat Code	Coil	MRP [₹]
SHAKTI P6	1.58 - 2.5	12 A	CPEYSBF*	Z & N	8505
SHAKTI P6	2.4 - 3.8	12 A	CPEYSBG*	Z & N	
SHAKTI P6	3.8 - 6	12 A	CPEYSBH*	Z & N	
SHAKTI P6	6 - 9.3	12 A	CPEYSBJ*	Z & N	
SHAKTI P10	8.9 - 13.5	20 A	CPEYSBK*	Z & N	8605



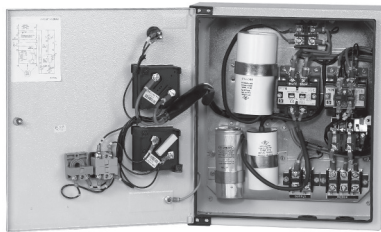
# Motor Starters 1-Phase SPS ..... BCH

1-Phase SPS With 2P Contactor + Overload Relay (Ammeter + Voltmeter) with 160-220V AC Coil

HSN CODE : 8536



HP at 1Ø, 220V, 50Hz	Overload Relay Range (A)	Contactor Rating	Cat Code	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP [₹]
0.5 / 0.75 HP	3.8 - 6.0	12 Amp	CPNSHBW-SPE	25	80/100	5320
0.5 / 0.75 HP	3.8 - 6.0	16 Amp	CPNSHBW-SP	25	80/100	5430
			CPNSHBW-SP(RC36)	36	80/100	5475
			CPNSHBW-RC25-SC120	25	100/120	5605
			CPNSHBW-RC30-SC200	30	150/200	6340
1 HP	6.0 - 9.3	12 Amp	CPNSJBW-SPE	36	100/120	5530
1 HP	6.0 - 9.3	16 Amp	CPNSJBW-SP	36	100/120	5610
			CPNSJBW-RC20SC100	20	80/100	5575
			CPNSJBW-RC25SC100	25	80/100	5655
			CPNSJBW-RC50SC100	50	80/100	5820
			CPNSJBW-RC60SC150	60	120/150	6090
			CPNSJBW-RC72SC150	72	120/150	6220
			CPNSJBW-SP(RC30)	30	100/120	5655
			CPNSJBW-SP(RC50)	50	100/120	5655
			CPNSJBW-SP(SC100)	36	80/100	6040
			CPNSJBW-RC36-SC200	36	150/200	6460
1.5 HP	8.9 - 13.5	12 Amp	CPNSKBW-SPE	50	120/150	6085
1.5 HP	8.9 - 13.5	16 Amp	CPNSKBW-SP	50	120/150	6120
			CPNSKBW-RC30SC120	30	100/120	6030
			CPNSKBW-RC36SC120	36	100/120	6050
			CPNSKBW-SP(RC36)	36	120/150	6090
			CPNSKBW-SP(RC72)	36+36	120/150	6280
			CPNSKBW-RC50-SC200	50	150/200	6695
2 HP	13.2 - 20.0	16 Amp	CPNSLBW-SP	72	150/200	6550
			CPNSLBW-SP (2RC36)	36+36	150/200	6715
			CPNSLBW-RC100SC150	100	120/150	6600
			CPNSLBW-RC90SC150	45+45	120/150	6725
			CPNSLBW-SP(SC150)	72	120/150	6725
			CPNSLBW-RC72SC250	72	200/250	7095
3 HP	17.4 - 24.0	20 Amp	CPNSMBW-SPE	100	200/250	6990
3 HP	17.4 - 24.0	25 Amp	CPNSMBW-SP	100	200/250	7285
			CPNSMBW-SP(2RC50)	50+50	200/250	7565
	22.0 - 30.0		CPNSNBW-SP	100	200/250	7790
			CPNSNBW-SP(2RC50)	50+50	200/250	8010
5 HP	23.0 - 32.0	32 A & 12 A	CPNSPBW-SPE	100+50	200/250	10145
5 HP	23.0 - 32.0	40 A & 16 A	CPNSPBW-SP	100+50	200/250	10400
			CPNSPBW-SP(3RC50)	50+50+50	200/250	10650



\*Suffix "D" in Cat Code for Dry Run Protection panel (only Extra Terminal is provided to connect Dry Run unit)

\*\*For 170-240V coil, replace "BW" in above cat codes with "BBW"



## 1-Phase SPS With 2 Pole Contactor + Overload Relay (With Ammeter)

HSN CODE : 8536

Cat Code	HP at 1Ø, 220V, 50Hz	Relay Range (Amp.)	Contactor Rating	Run Capacitor (mfd)	Start Capacitor(mfd)	MRP [₹]
CPNEHBW-SP	0.5 / 0.75 HP	3.8 - 6.0	16 Amp	25	80/100	5070
CPNEJBW-SP	1 HP	6.0 - 9.3	16 Amp	36	100/120	5350
CPNEKBW-SP	1.5 HP	8.9 - 13.5	16 Amp	50	120/150	5845
CPNELBW-SP	2 HP	13.2 - 20.0	16 Amp	36+36	150/200	6235
CPNEMBW-SP	3 HP	17.4 - 24.0	25 Amp	50+50	200/250	7110
CPNEPBW-SP	5 HP	23.0 - 32.0	40 Amp	50+50+50	200/250	10205

Suffix "D" in Cat Code for Dry Run Protection panel (only Extra Terminal is provided to connect Dry Run unit)

## 1-Phase SPS With Mini Manual DOL Starter (With Ammeter + Voltmeter)

HSN CODE : 8536



Cat Code	HP at 1Ø, 220V, 50Hz	Relay Range (A)	Run Capacitor (mfd)	MRP [₹]
CPPM50-25-SP	0.5 / 0.75 HP	3.5 - 6.5	25	3820
CPPM50H-25-SP	0.5 / 0.75 HP	3.5 - 6.5	25	4345
CPPM60-25-SP	1 HP	6.8 - 11.7	25	3845
CPPM60H-36-SP	1 HP	6.8 - 11.7	36	4370
CPPM60-50-SP	1.5 HP	6.8 - 11.7	50	4045

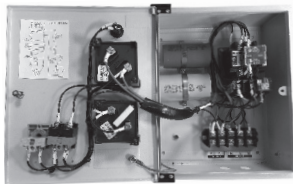
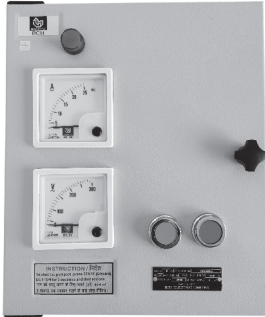
# Motor Starters 1-Phase SPS ..... BCH

## 1-Phase SPS (Alfa Model) With 2P Contactor + Overload Relay (Ammeter + Voltmeter)

HSN CODE : 8536

**New**

HP at 1 $\phi$ , 220V, 50Hz	Overload Relay Range (A)	Contactor Rating	Cat Code	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP [₹]
0.75 HP	3.8 - 6	16 Amp	CPGNShBW-SP	25	80-100	4585
1 HP	6 - 9.3	16 Amp	CPGNsJBW-SP	36	100-120	4940
1 HP	6 - 9.3	16 Amp	CPGNsJBBW-SP	36	100-120	4940
1 HP	6 - 9.3	16 Amp	CPGNsJBW-SP(RC50)	50	100-120	4940
1 HP	6 - 9.3	16 Amp	CPGNsJBBW-SP(RC50)	50	100-120	4940
1 HP	6 - 9.3	16 Amp	CPGNsJBW-RC50SC100	50	80-100	4940
1.5 HP	8.9 - 13.5	16 Amp	CPGNsKBW-SP	50	120-150	5315
1.5 HP	8.9 - 13.5	16 Amp	CPGNsKBBW-SP	50	120-150	5315
1.5 HP	8.9 - 13.5	16 Amp	CPGNsKBW-SP(RC72)	72	120-150	5315
1.5 HP	8.9 - 13.5	16 Amp	CPGNsKBBW-SP(RC72)	72	120-150	5315
2 HP	13.2 - 20	16 Amp	CPGNsLBW-SP	72	150-200	5655
2 HP	13.2 - 20	16 Amp	CPGNsLBBW-SP	72	150-200	5655
2 HP	13.2 - 20	16 Amp	CPGNsLBW-SP(2RC36)	36x2	150-200	5655
2 HP	13.2 - 20	16 Amp	CPGNsLBBW-SP(2R36)	36x2	150-200	5655
2 HP	13.2 - 20	16 Amp	CPGNsLBW-RC90SC150	45X2	120-150	5655
2 HP	13.2 - 20	16 Amp	CPGNsLBW-R100SC150	100	120-150	5655
3 HP	17.4 - 24	25 Amp	CPGNsMBW-SP	100	200-250	6175
3 HP	17.4 - 24	25 Amp	CPGNsMBBW-SP	100	200-250	6175
3 HP	17.4 - 24	25 Amp	CPGNsMBW-SP(2RC50)	50x2	200-250	6175
3 HP	17.4-24	25 Amp	CPGNsMBBW-SP(2R50)	50x2	200-250	6175
3 HP	22 - 30	25 Amp	CPGNsNBW-SP(2RC50)	50x2	200-250	6485

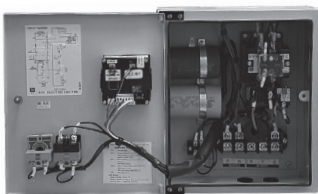


## 1-Phase SPS With 2P Contactor + Overload Relay + Dry Run Protection

HSN CODE : 8536

**New**

HP at 1 $\phi$ , 220V, 50Hz	Overload Relay Range (A)	Contactor Rating	Cat Code	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP [₹]
0.75 HP	3.8 - 6	16 Amp	CPGND1HBW-SP	25	80-100	5705
1 HP	6 - 9.3	16 Amp	CPGND1JBW-SP	36	100-120	5895
1 HP	6 - 9.3	16 Amp	CPGND1JBBW-SP	36	100-120	5895
1 HP	6 - 9.3	16 Amp	CPGND1JBW-SP(RC50)	50	100-120	5940
1 HP	6 - 9.3	16 Amp	CPGND1JBW-R50S100	50	100-120	6115
1.5 HP	8.9 - 13.5	16 Amp	CPGND1KBW-SP	50	120-150	6430
1.5 HP	8.9 - 13.5	16 Amp	CPGND1KBBW-SP	50	120-150	6430
1.5 HP	8.9 - 13.5	16 Amp	CPGND1KBW-SP(RC72)	72	120-150	6595
2 HP	13.2 - 20	16 Amp	CPGND1LBW-SP	72	150-200	6880
2 HP	13.2 - 20	16 Amp	CPGND1LBBW-SP	72	150-200	6880
2 HP	13.2 - 20	16 Amp	CPGND1LBW-SP-2R36	36x2	150-200	7055
2 HP	13.2 - 20	16 Amp	CPGND1LBBW-SP-2R36	36x2	150-200	7055
2 HP	13.2 - 20	16 Amp	CPGND1LBW-R90S150	45X2	150-200	7065
2 HP	13.2 - 20	16 Amp	CPGND1LBW-R100S150	100	150-200	6935
3 HP	17.4 - 24	25 Amp	CPGND1MBW-SP	100	200-250	7650
3 HP	17.4 - 24	25 Amp	CPGND1MBW-SP-2R50	50x2	200-250	7945
3 HP	17.4 - 24	25 Amp	CPGND1MBBW-SP-2R50	50x2	200-250	7945
3 HP	22 - 30	25 Amp	CPGND1NBW-SP-2R50	50x2	200-250	8410



# Motor Starters - Oil Immersed..... BCH

## DOL Starter - 3 Phase

HSN CODE : 8536

Cat. Code	Overload Relay Range (A)	HRC Fuse Rating (EE Type) (max)	MRP[₹]
OISWPGT	2.4 - 3.8	16A	4095
OISWPHT	3.8 - 6.0	20A	
OISWPJT	6.0 - 9.3	25A	
OISWPKT	8.9 - 13.5	36A	
OISWPLT	13.2 - 20.0	50A	4175
OISWPMT	17.4 - 24.0	63A	4520

Note : The last alphabet in the Cat No. indicates coil voltage : N-380-415VAC ; T-220-400VAC ; Y-240-400VAC

## Star Delta Starter - Fully Automatic

HSN CODE : 8536

Cat. Code	Overload Relay Range (A)	HRC Fuse Rating (EE Type) (max)	MRP[₹]
OISDAWPJ*	6.0 - 9.3	20A	12445
OISDAWPK*	8.9 - 13.5	32A	
OISDAWPL*	13.2 - 20.0	35A	
OISDAWPM*	17.4 - 24.0	50A	13310
OISDAWPP*	23.0 - 32.0	63A	13940



## Star Delta Starter - Semi Automatic

HSN CODE : 8536

Cat. Code	Overload Relay Range (A)	HRC Fuse Rating (EE Type) (max)	MRP[₹]
OISDSWPJ*	6.0 - 9.3	20A	11175
OISDSWPK*	8.9 - 13.5	32A	
OISDSWPL*	13.2 - 20.0	35A	
OISDSWPM*	17.4 - 24.0	50A	12015
OISDSWPP*	23.0 - 32.0	63A	12610

## Star Delta Starter - Fully Automatic with Auto Unit SPP & 3 Position Auto Manual Switch

HSN CODE : 8536

Cat. Code	Overload Relay Range (A)	HRC Fuse Rating (EE Type) (max)	MRP[₹]
OISDYWPJ*	6.0 - 9.3	20A	14570
OISDYWPK*	8.9 - 13.5	32A	
OISDYWPL*	13.2 - 20.0	35A	
OISDYWPM*	17.4 - 24.0	50A	15495
OISDYWPP*	23.0 - 32.0	63A	16210

## Star Delta Starter - Fully Automatic with Ammeter & Voltmeter

HSN CODE : 8536

Cat. No.	Overload Relay Range (A)	HRC Fuse Rating (EE Type) (max)	MRP[₹]
OISDPYWPL*	13.2 - 20.0	35 A	17910
OISDPYWPM*	17.4 - 24.0	50 A	18845
OISDPYWPP*	23.0 - 32.0	63 A	19710

'N' for 380-415VAC coil & 'Y' for 240-400VAC coil

## Spares for Oil Starter

HSN CODE : 8538

Description	Cat No.	MRP[₹]
Contact kit without coil for DOL - Power & Auxiliary contacts (set of fix contact, moving contact, hex screws, spring washer, spring clip, spring cap, contact spring)	OCK	540
Power kit without coil for all 3 contactor of star delta starter (fix contact, moving contact, hex screw, spring washer, spring clip, spring cap, contact spring )	Upto L Relay - OCKSD20	1325
	M, P Relay OCKSD30	1535
Auxiliary Contact Kit set for Star Delta Starter	Upto L Relay - OCKSDAUX20	360
	M, P Relay OCKSDAUX30	
Coil -Main & Delta Contactor	220-400V	OCT
	240-400V	OCY
	380-415V	OCN
Coil -Star Contactor	220-400V	OCT-STAR
	240-400V	OCY-STAR
	380-415V	OCN-STAR
ON-Push Button	OPB-ON	170
OFF-Push Button	OPB-OFF	
Incoming Mounting KIT for 20A	OCTKSD20	185
Incoming Mounting KIT for 30A	OCTKSD30	255

# Spares for Starter ..... BCH

## Spares for Shakti Starters

HSN CODE : 8538

Cat. No.	Description	MRP[₹]
SHA	Contact Kit	1075
SHAA	Contact Kit 12A (1 Aux + 3P)	925
SHZ	Coil 190- 400 V	460
SHCC	Contact carrier	105
SHPB	Extended Button Assembly	310
SHCO	Contact for DOL	2680
SHACO	Contact for Star Delta	2965
SHCOA	Contact 12A (3+1 Aux)	2290
NCPNYAU*-5S or 5M	SPP (for ASX & OISDY)-6 Wire	915
CPTB630	Terminal Block 30A 6 way	320
CPAMS-3P/ASX	Auto Manual Switch 3 position	525

## Spares for 3-Phase Submersible Pump Starter

HSN CODE : 8538

Cat. No.	Description	MRP[₹]
NCPYAU*-5S or 5M	SPP (3 Position SPS)-6 Wire	915
BCHSPP1*-5S or 5M	SPP 6-Wire	915
CPAM25	Ammeter 25A	650
CPAM50	Ammeter 50A	650
CPAM100	Ammeter 100A	685
CPVM500	Voltmeter 500V	650
SPSATG	Electronic Timer (Star Delta)	1370
CPTB215	Terminal Block 15A 2 way	80
CPTB360	Terminal Block 60A 3 way	245
CPTB660	Terminal Block 60A 6 way	400
CPTB3100	Terminal Block 100A 3 way	820
CPMB	Mounting Bracket Set	165
CPAMS-2P	Auto Manual Switch 2 position	400
CPAMS-3P	Auto Manual Switch 3 position	425
CPVSS	Voltmeter Selector Switch	430
HEA11GM-PB	Start PB ( Green )	220
HEA11RM-PB	Stop PB ( Red )	220
HCB10	Aux Block (1 NO)	115
HCB01	Aux Block (1 NC)	115
HFB2PAH	LED-Amber (R-Y-B)	365
HFB2XAM	LED-Amber (Motor Trip)	245
HFB2XRM	LED-RED (415 VAC)	245

## Spares for Freedom DOL

HSN CODE : 8538

Cat. No.	Description	MRP[₹]
C320SCB	Start Contact Block	210
CPB1	Push Button - Green	110

## Spares for Citation M Starters

HSN CODE : 8538

Cat. No.	Description	MRP[₹]
SP100PB3	Start & Stop reset button unit assembly for DOL & SD (upto 150HP)	370
SP100CB	Start actuator Block for DOL	310
SP100CBS	Start actuator Block for SD	310
SP100TB	Terminal Block for Star Delta Starters	310
CPTB975	Terminal Block for SD Starters (40-50 HP)	965
SPSATG	Electronic Timer (Star Delta)	1370
<b>For 250-375 HP SD Starter</b>		
TSFB-R	Push Button (RED)	290
TSFB-G	Push Button (Green)	290
050N1	Aux Contact Block(1NO+1NC)	370

Discontinued Cat Code	SPP Type	Alternate* Cat Code	SPP used in
CPAU*-5*	2-Pos SPP	NCPAU*-5*	2-Pos SPS
CPYAU*-5*	3-Pos SPP	NCPYAU*-5*	3-Pos SPS
CPNYAU*-5*	3-Pos SPP	NCPNYAU*-5*	Oil SD & Auto DOL

\*Extra plate to be used alongwith alternate SPP

## Spares for 1-Phase Submersible Pump Starter

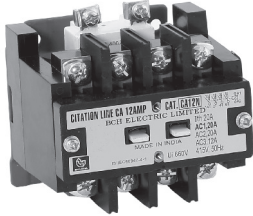
HSN CODE : 8538

Cat. No.	Description	MRP[₹]
ILR-B	"ON" Indication Lamp	90
SPAM-10	Ammeter 10A	650
SPAM-15	Ammeter 15A	
SPAM-25	Ammeter 25A	
SPAM-50	Ammeter 50A	
SPVM-300	Voltmeter 300V	
CPTB530	Terminal Block 30A 5 way (Mini Version)	160
CPTB530H	Terminal Block 30A 5 way (Contr. Version)	260
CPTB330	Terminal Block 30A 3 way	115
CPTB240	Terminal Block 40A 2 way	165
SPGC	"ON" Push Button GREEN upto 24A relay range	305
SPGB	"ON" Push Button GREEN For 32A relay range	305
SPRC	"OFF" Push Button RED	250
MC305TB4	Add-on Terminal Block for 23-32A relay (outgoing side)	250



# Spares for Starter..... BCH

## 1Aux + 3 P Contactor



- Superior Weld Resistant Contacts
- Rugged and heavy duty
- High Grade moulding for extremely long life
- Encapsulated Coil
  - Shock Proof & Moisture Proof
  - Withstand large voltage fluctuations



## 'NHD' Series 1 Aux + 3 P\* Contactor

HSN Code : 8536

Size	AC1 (A)	AC3 Rating at 415 V			Cat. No.	MRP [₹]
		(A)	HP	KW		
CA12	20	12	7.5	5.5	CA12N	2305
CA16	20	16	10	7.5	CA16N	2670
CA20	30	20	12.5	9.3	CA20N	3370
NA25	32	25	15	11	NA25N	4740
NA32	40	32	20	15	NA32N	5865
NA40	50	40	25	18.5	NA40N	7200

\*Auxiliary contact is at left side in 1 Aux + 3P Contactor

## KIT for NHD

HSN CODE : 8538

Contactor Rating	4P KIT	MRP [₹]	1P KIT	MRP [₹]	3P+1 Aux KIT	MRP [₹]
	Cat Code		Cat Code		Cat Code	
12A	SP90E1	1060	SP90E01	285	SP90E2	965
16A	SP90A1	1240	SP90A01	330	SP90A2	1130
20A	SP90F1	1645	SP90F01	430	SP90F2	1495
25A	SP90B1	2350	SP90B01	600	SP90B2	2135
32A	SP90D1	2800	SP90D01	720	SP90D2	2545
40A	SP90C1	3300	SP90C01	840	SP90C2	3000

\* 4P Kit consist of - 8 Fixed main contacts, 4 moving main contacts, 4 springs & 4 retainers

\* 1 Aux + 3P Kit consist of - 6 Fixed main contacts, 3 moving main contacts, 2 Aux main contacts, 1 Aux moving contact, 4 springs & 4 retainers

## KIT for CPG

HSN CODE : 8538

Contactor Rating	Cat Code	MRP [₹]
12A	CPG122PSP	570
16A	CPG162PSP	645
20A	CPG202PSP	1025
25A	CPG252PSP	1630
32A	CPG322PSP	1720
40A	CPG402PSP	2025

\* 2P Kit consist of - 4 Fixed contacts, 2 moving contacts, 2 springs & 2 retainers

## Spares for P series SPS

HSN CODE : 8538

Cat Code	Description	MRP [₹]
CPRS-ON-OFF	ROCKER SWITCH ON-OFF	85
CPTB210	10A, 2 way TB for P series SPS	75
CPLED-R	LED RED 415V	235
CPLED-A	LED AMBER 415V	235
SP100CBP	Start Actuator block for P series SPS	310
CPAM10-WH, CPAM15-WH, CPAM25-WH	Ammeter with White Bezel (for Shakti P SPS)	650
CPVM500-WH	Voltmeter 500V White Bezel	650

## Dual Meter

HSN CODE : 9030

Cat. No.	MRP [₹]
CPAM10VM300, CPAM15VM300, CPAM25VM300, CPAM30VM300, CPAM50VM300	890
CPAM10VM500, CPAM15VM500, CPAM30VM500, CPAM60VM500	950
CPAM30-60VM500S72	925
CPAM60-120VM500S72	1000
CPAM30-60VM500S96	1180
CPAM60-120VM500S96	1320

## Spares for 1-ph Dry Run SPS

HSN CODE : 8538

Cat Code	Description	MRP [₹]
SPDRPH0.75-S1	DRY RUN PROTECTOR S1, 3.8-6.0A, 0.75 HP	1065
SPDRPJ1-S1	DRY RUN PROTECTOR S1, 6.0-9.3A, 1 HP	1065
SPDRPK1.5-S1	DRY RUN PROTECTOR S1, 8.9-13.5A, 1.5 HP	1065
SPDRPL2-S1	DRY RUN PROTECTOR S1, 13.2-20A, 2 HP	1065
SPDRPM3-S1	DRY RUN PROTECTOR S1, 17.4-24A, 3 HP	1065
SPDRPN3-S1	DRY RUN PROTECTOR S1, 22-30A, 3 HP	1065
SPDRPP5-S1	DRY RUN PROTECTOR S1, 23-32A, 5HP	1065
SPDRP-CT-S1	CT FOR DRY RUN PROTECTOR S1	125

## 2P Contactor

HSN CODE : 8536

Contactor Rating	Cat Code	MRP [₹]
16A	CPGN216*	POR
20A	CPGN220*	POR
25A	CPGN225*	POR

## 2P Contactor Kit HSN CODE : 8538

Rating	Cat Code	MRP [₹]
16A	CPGN162PSP	POR
20A	CPGN202PSP	POR

# Motor Starters & Coil Master Table..... BCH

## 1-Phase DOL with 2P CPG Contactor & 2P Overload Relay

HSN CODE : 8536



Cat Code	HP / KW at 1Ø, 220V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating	MRP [₹]
NAAEBW-SP	-	1.07 - 1.70	2P CPG	12A	3170
NAAHBW-SP	0.75 / 0.55	3.8 - 6.0		16A	3210
NAHBW-SP	0.75 / 0.55	3.8 - 6.0		12A	3170
NAAJBW-SP	1 / 0.75	6.0 - 9.3		16A	3210
NAJBW-SP	1 / 0.75	6.0 - 9.3		20A	3290
NAKBW-SP	1.5 / 1.10	8.9 - 13.5		25A	3590
NAALBW-SP	2 / 1.5	13.2 - 20.0			3645
NALBW-SP	2 / 1.5	13.2 - 20.0			
NAMBW-SP	3 / 2.2	17.4 - 24.0			

## COIL VOLTAGE : MASTER TABLE

	PRODUCT	160-220V	170-240V	220-240V	230-360V	260-400V	310-400V	190-400V	230-420V	275-420V	380-415V	415V	440V	550V
	WORKING VOLTAGE BAND	136-242V	145-264V	187-264V	195-396V	221-440V	264-440V	162-440V	196-462V	234-462V	323-456V	353-456V	374-484V	468-605V
CPG 2P	CPG216	BW	BBW	H	-	-	-	-	-	-	N	-	-	-
	CPG225	BW	BBW	H	-	-	-	-	-	-	N	-	-	-
	CPG240	BW	BBW	H	-	-	-	-	-	-	N	-	-	-
SHAKTI	SHAKTI DOL	-	-	-	-	G	-	Z	ZB	-	N	-	-	-
	SHAKTI STAR DELTA	-	-	-	-	G	-	Z	-	MB	N	-	-	-
NHD 4P	CP12, C00N, CP20	-	-	H	-	G	-	-	-	MB	N	-	C	D
	N0N	-	-	H	LV	G	-	-	-	MB	N	-	C	D
	N01N	-	-	H	LV	-	WB	-	-	-	N	-	-	-
	N1N	-	-	H	-	-	WB	-	-	-	N	-	C	D
CITATION	C4 & MC10D	-	-	-	-	-	-	-	-	-	-	M	C	D
	MC10EN	-	-	-	-	-	-	-	-	-	-	M	C	D
FREEDOM SERIES	MCE15L TO M5	-	-	-	-	-	-	-	-	-	-	M	C	D
	MCE15N, Q & S	-	-	-	-	-	-	-	-	-	-	M	C	D

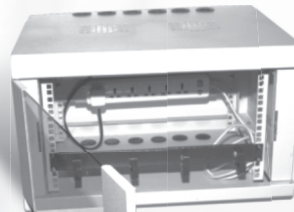
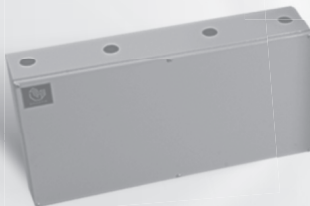
\* For N1N DL Coil (340-460V) option is available

\* For Citation E & M-5 (70A & 110A) LA Coil (320-400V) option is available

# Enclosure Systems



- Bhartia Boxes IP: 55, IP: 66
- 'BCH-SS' (Stainless Steel) Boxes
- Terminal Boxes IP:55 & IP:66
- Techno - Modular Enclosures
- Smartline - Modular Enclosures
- TEOS Plus Enclosure
- TCE Series Enclosure
- Compartmentalized Enclosure (Fixed & Draw-out)
- IT Racks - 19" and ETSI Racks



# Enclosure Systems ..... BCH

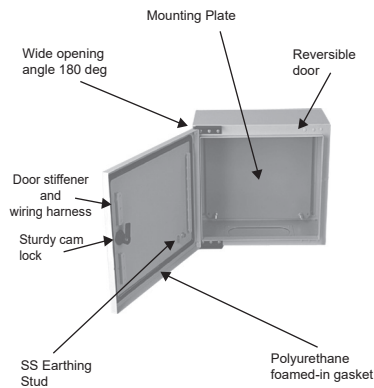
## Bhartia Boxes

HSN Code : 8538



- 51 Different Versions
- Single/Double door versions
- Min. Size : 200 X 200 X 150
- Max Size : 1200 X 1400 X 400
- Degree of protection IP55/IP66/IK10
- CE Certified

### Double door version



#### Technical Particulars (BHARTIA BOXES)

- Fabricated from 1.2mm / 1.6mm CRCA sheet steel ( Sizes upto BIL-50180 made from 1.2mm CRCA, beyond this using 1.6mm CRCA )
- Foamed-in PU gasket
- Hinged door, interchangeable LHS / RHS, opening angle 180 deg for standard hinge & 120 deg for concealed hinge in bigger sizes.
- Degree of protection IP55/IP66/IK10
- CE Certified
- Cable gland plate 2mm thick provided at bottom
- Cam locking arrangement
- Powder coated to RAL : 7035 structure finish
- Mounting Plate made up of 2.0mm Galvanised steel

Note : Cutout charges will be extra  
 : Wall mounting bracket set is an additional accessory  
 (for Bhartia Box & Terminal box it is not a part of standard packing)

HSN Code : 8538

Type	Cat. No.	MOQ	List Price [₹]
Set of Wall Mounting bracket (small)	BIL-WM-S	1	185
Set of Wall Mounting bracket (big)	BIL-WM-B	1	205
Set of Wall Mounting bracket Kit 20mm	BIL-WM-H20	1	310

Type	Size (WxHxD) mm	IP-55 Range			IP-66 Range	
		MOQ Nos.	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]
SINGLE DOOR BOX	200x200x150	1	BIL-50000	3040	BIL-60000	3190
SINGLE DOOR BOX	200x300x150	1	BIL-50010	3475	BIL-60010	3550
SINGLE DOOR BOX	250x300x150	1	BIL-50020	3610	BIL-60020	3725
SINGLE DOOR BOX	300x300x150	1	BIL-50030	3895	BIL-60030	4050
SINGLE DOOR BOX	300x300x200	1	BIL-50050	4150	BIL-60050	4395
SINGLE DOOR BOX	300x400x150	1	BIL-50060	4325	BIL-60060	4560
SINGLE DOOR BOX	300x400x200	1	BIL-50080	4855	BIL-60080	4885
SINGLE DOOR BOX	400x300x150	1	BIL-50090	4240	BIL-60090	4495
SINGLE DOOR BOX	400x300x200	1	BIL-50110	4755	BIL-60110	4825
SINGLE DOOR BOX	400x400x150	1	BIL-50120	4855	BIL-60120	4945
SINGLE DOOR BOX	400x400x200	1	BIL-50140	5145	BIL-60140	5305
SINGLE DOOR BOX	400x500x150	1	BIL-50150	5480	BIL-60150	5770
SINGLE DOOR BOX	400x500x200	1	BIL-50170	5810	BIL-60170	5970
SINGLE DOOR BOX	500x500x200	1	BIL-50180	6845		
SINGLE DOOR BOX	400x600x200	1	BIL-50190	6845	BIL-60190	6940
SINGLE DOOR BOX	500x600x200	1	BIL-50210	7855	BIL-60210	8090
SINGLE DOOR BOX	500x700x200	1	BIL-50220	8930		
SINGLE DOOR BOX	500x700x300	1	BIL-50230	10275		
SINGLE DOOR BOX	600x400x200	1	BIL-50240	6975	BIL-60240	7235
SINGLE DOOR BOX	600x400x300	1	BIL-50250	8965		
SINGLE DOOR BOX	600x500x200	1	BIL-50260	8090	BIL-60260	8745
SINGLE DOOR BOX	600x600x200	1	BIL-50270	8420		
SINGLE DOOR BOX	600x600x300	1	BIL-50280	10120		
SINGLE DOOR BOX	600x700x200	1	BIL-50290	10145		
SINGLE DOOR BOX	600x800x200	1	BIL-50300	10175		
SINGLE DOOR BOX	600x800x300	1	BIL-50320	11640		
SINGLE DOOR BOX	600x1000x200	1	BIL-50330	12825		
SINGLE DOOR BOX	600x1000x300	1	BIL-50340	14555		
SINGLE DOOR BOX	800x800x300	1	BIL-50310	13575		
SINGLE DOOR BOX	800x1000x200	1	BIL-50350	15115		
SINGLE DOOR BOX	800x1000x250	1	BIL-50360	15435		
SINGLE DOOR BOX	800x1000x300	1	BIL-50390	15615		
SINGLE DOOR BOX	800x1200x300	1	BIL-50395	19455		
DOUBLE DOOR BOX	1000x800x200	1	BIL-50500	16315		
DOUBLE DOOR BOX	1000x800x300	1	BIL-50520	18710		
DOUBLE DOOR BOX	1000x1000x300	1	BIL-50540	21760		
DOUBLE DOOR BOX	1000x1200x300	1	BIL-50550	25015		
DOUBLE DOOR BOX	1000x1400x300	1	BIL-50560	29920		
DOUBLE DOOR BOX	1200x1400x300	1	BIL-50570	33265		
DOUBLE DOOR BOX	1000x1400x400	1	BIL-50580	31550		
DOUBLE DOOR BOX	1200x1400x400	1	BIL-50590	34720		

MOQ. Minimum order quantity in nos.

### Canopy for Bhartia Boxes

HSN Code : 8538

Size (WxHxD) mm	Cat. No.	MOQ Nos.	List Price [₹]	Size (WxHxD) mm	Cat. No.	MOQ Nos.	List Price [₹]
200WX150D	BIL-12-CAN-2015	1	795	600WX200D	BIL-16-CAN-6020	1	1530
250WX150D	BIL-12-CAN-2515	1	905	600WX300D	BIL-16-CAN-6030	1	1875
300WX150D	BIL-12-CAN-3015	1	965	800WX300D	BIL-16-CAN-8030	1	2290
300WX200D	BIL-12-CAN-3020	1	1055	800WX200D	BIL-16-CAN-8020	1	1855
400WX150D	BIL-12-CAN-4015	1	1095	800WX250D	BIL-16-CAN-8025	1	2005
400WX200D	BIL-12-CAN-4020	1	1210	1000WX200D	BIL-16-CAN-1020	1	2180
500WX200D	BIL-12-CAN-5020	1	1370	1000WX300D	BIL-16-CAN-1030	1	2685



# Enclosure Systems ..... BCH



- Fabricated from 1.2/1.5 mm stainless steel sheet
- Mounting Plate made up of 2.0mm Galvanised steel
- SS grade 304
- Foamed - in PU gasket
- Box upto BIL - 90405020 is made up of 1.2 mm SS & above of 1.5 MM SS.
- Degree of protection IP66
- 120 deg door open-able concealed hinge door with cam locking arrangement.

## 'BCH - SS' (Stainless Steel)

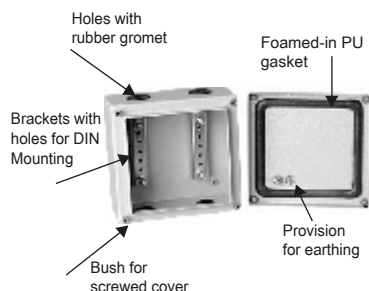
HSN Code : 8538

Type	Size (WxHxD) mm	MOQ Nos.	Cat No.	List Price [₹]
SINGLE DOOR BOX	200X300X150	3	BIL-90203015	6980
SINGLE DOOR BOX	300X300X200	3	BIL-90303020	9670
SINGLE DOOR BOX	400X400X200	3	BIL-90404020	12795
SINGLE DOOR BOX	400X500X200	3	BIL-90405020	14250
SINGLE DOOR BOX	400X600X200	3	BIL-90406020	16335
SINGLE DOOR BOX	500X600X200	3	BIL-90506020	20925
SINGLE DOOR BOX	600X600X200	3	BIL-90606020	22380
SINGLE DOOR BOX	600X800X200	3	BIL-90608020	26600
SINGLE DOOR BOX	500X700X300	3	BIL-90507030	27020
SINGLE DOOR BOX	800X800X300	3	BIL-90808030	37200

MOQ - Minimum order quantity in nos.  
Note - SS grade 304



- 43 Different Versions
- Min. Size : 150 X 150 X 80
- Max Size : 800 X 400 X 120
- Degree of protection IP55/IP66/IK10
- CE Certified



### Technical Particulars (TERMINAL BOXES)

- Fabricated from 1.2mm CRCA sheet steel
- Powder coated to shade RAL 7035 Structure finish
- Foamed-in PU gasket
- Provided with screwed cover on top
- Degree of protection IP55/IP66/IK10
- CE Certified
- Brackets provided inside to facilitate DIN rail mounting
- Holes with Gromet provided to facilitate cable entry in IP 55 terminal boxes

Note: Cutout charges will be extra

## Terminal Boxes

HSN Code : 8538

Box Size (W x H x D)	IP-55 Range			IP-66 Range	
	MOQ	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]
150x150x80	5	BIL-70000	1510	BIL-80000	1555
200x150x80	-			BIL-80100	1715
300x150x80	5	BIL-70010	1775	BIL-80010	1980
200x200x80	5	BIL-70020	1695	BIL-80020	1805
300x200x80	5	BIL-70030	1855	BIL-80030	1930
400x200x80	-			BIL-80110	2060
600x200x80	-			BIL-80130	2805
150x150x120	5	BIL-70040	1670	BIL-80040	1775
200x150x120	-			BIL-80150	1835
300x150x120	5	BIL-70050	1980	BIL-80050	2020
200x200x120	5	BIL-70060	1930	BIL-80060	1980
300x200x120	5	BIL-70070	2150	BIL-80070	2195
400x200x120	5	BIL-70080	2410	BIL-80080	2495
300x300x120	5	BIL-70090	2565	BIL-80090	2665
400x150x120	-			BIL-80170	2380
400x300x120	5	BIL-70180	2840	BIL-80180	3190
400x400x120	5	BIL-70190	3340	BIL-80190	3610
500x200x120	5	BIL-70200	2930	BIL-80200	3130
500x300x120	5	BIL-70210	3255	BIL-80210	3445
600x200x120	5	BIL-70220	3275	BIL-80220	3455
600x300x120	5	BIL-70230	4005	BIL-80230	4170
600x400x120	5	BIL-70240	4395	BIL-80240	4540
800x200x120	5	BIL-70250	4630	BIL-80250	4785
800x400x120	5	BIL-70260	5635	BIL-80260	5745

MOQ-Minimum order quantity in nos.

# Enclosure Systems ..... BCH

## Techno Modular Enclosures

HSN Code : 8538

Size of Enclosure (W x H x D in mm)	Cat. No.	Enclosure Version*				Plinth		Side Covers (Pair)	
		Ver 001 LP [₹]	Ver 002 LP [₹]	Ver 003 LP [₹]	Ver 004 LP [₹]	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]
600 x 1800 x 400	TME 061804	29445	32800	23385	26995	TPL 061804	2855	TSC 061804	5700
800 x 1800 x 400	TME 081804	35180	38600	26740	30915	TPL 081804	3255	TSC 081804	5700
1000 x 1800 x 400	TME 101804	48415	52180	37545	41065	TPL 101804	3650	TSC 101804	5700
1200 x 1800 x 400	TME 121804	54395	60770	42210	46785	TPL 121804	4005	TSC 121804	5700
600 x 1800 x 500	TME 061805	30760	33860	24950	28050	TPL 061805	3060	TSC 061805	6625
800 x 1800 x 500	TME 081805	35815	40325	28635	32060	TPL 081805	3445	TSC 081805	6625
1000 x 1800 x 500	TME 101805	49730	53490	39180	43195	TPL 101805	3835	TSC 101805	6625
1200 x 1800 x 500	TME 121805	55445	62990	44410	49900	TPL 121805	4175	TSC 121805	6625
800 x 1800 x 600	TME 081806	38185	40090	31085	34025	TPL 081806	3595	TSC 081806	7370
600 x 2000 x 400	TME 062004	31740	35665	24375	28965	TPL 062004	2855	TSC 062004	6135
800 x 2000 x 400	TME 082004	36935	40570	28225	32045	TPL 082004	3255	TSC 082004	6135
1000 x 2000 x 400	TME 102004	52910	55860	41145	43995	TPL 102004	3650	TSC 102004	6135
1200 x 2000 x 400	TME 122004	56840	62820	45480	51540	TPL 122004	4005	TSC 122004	6135
600 x 2000 x 500	TME 062005	33690	36475	27645	31250	TPL 062005	3060	TSC 062005	7200
800 x 2000 x 500	TME 082005	37795	41720	29125	33210	TPL 082005	3445	TSC 082005	7200
1000 x 2000 x 500	TME 102005	52345	58565	41720	46295	TPL 102005	3835	TSC 102005	7200
1200 x 2000 x 500	TME 122005	57235	62990	44985	49900	TPL 122005	4175	TSC 122005	7200
600 x 2000 x 600	TME 062006	34180	37545	29280	32645	TPL 062006	3225	TSC 062006	8015
800 x 2000 x 600	TME 082006	39100	42610	31400	34920	TPL 082006	3595	TSC 082006	8015
1000 x 2000 x 600	TME 102006	53170	61010	42365	49390	TPL 102006	3980	TSC 102006	8015
1200 x 2000 x 600	TME 122006	58365	64700	47260	53325	TPL 122006	4345	TSC 122006	8015
600 x 2000 x 800	TME 062008	35180	37795	29365	33035	TPL 062008	3595	TSC 062008	10305
800 x 2000 x 800	TME 082008	40725	43755	33285	36445	TPL 082008	3980	TSC 082008	10305
1000 x 2000 x 800	TME 102008	58365	62245	44985	49900	TPL 102008	4295	TSC 102008	10305
1200 x 2000 x 800	TME 122008	61350	68040	50395	55445	TPL 122008	4730	TSC 122008	10305
600 x 2200 x 600	TME 062206	38525	42210	30595	36310	TPL 062206	3225	TSC 062206	9285
800 x 2200 x 600	TME 082206	43600	46460	35085	38685	TPL 082206	3595	TSC 082206	9285
1000 x 2200 x 600	TME 102206	60365	65015	49600	54255	TPL 102206	3980	TSC 102206	9285
1200 x 2200 x 600	TME 122206	62725	70015	48755	54470	TPL 122206	4345	TSC 122206	9285
600 x 2200 x 800	TME 062208	42015	45570	32230	37215	TPL 062208	3595	TSC 062208	12060
800 x 2200 x 800	TME 082208	50705	53665	38945	42365	TPL 082208	3980	TSC 082208	12060
1000 x 2200 x 800	TME 102208	64280	69260	52180	56115	TPL 102208	4295	TSC 102208	12060
1200 x 2200 x 800	TME 122208	69525	73440	56930	60770	TPL 122208	4730	TSC 122208	12060

\*Baying kit (BIL-14280) Rs. 1930/- is also available for Enclosure Version. For extra accessories, please contact nearest branch office.

MOQ-Minimum order quantity in nos.

Note : Cutout charges will be extra

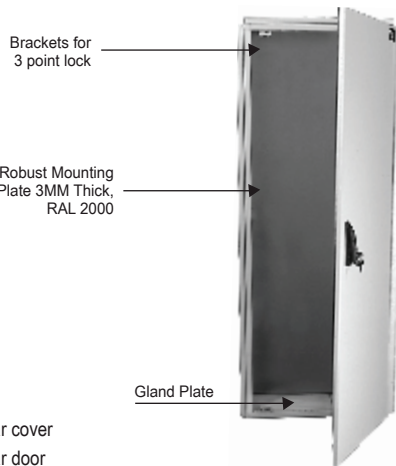
Freight charges will be extra at actuals

# Enclosure Systems ..... BCH



## Modular Enclosures

- Enclosures
- Minimum size in mm :  
600 x 1800 x 400 (W x H x D)
- Maximum size in mm :  
1200 x 2200 x 800 (W x H x D)
- Degree of protection IP55/IK10
- CE Certified
- Wide range of accessories



## Features

- Completely modular in all the three axis
- Powder coated surface (RAL 7035) for excellent finish and durability
- PU Gasket ensuring higher degree of ingress protection
- 3mm mounting plate as a standard
- Manufactured on CNC Turret punch press for higher precision, finish and repeated accuracy
- Ideal for :
  - Special purpose machines
  - Control panels
  - Drives
  - Starter enclosures
  - Accessories for mounting 19" equipment

### Enclosure Versions

- 001 - with mounting plate and rear cover
- 002 - with mounting plate and rear door
- 003 - without mounting plate and with rear cover
- 004 - without mounting plate and with rear door

### To Order And Calculate List Price

- (a) Choose Cat. No. and LP of Enclosure version from 001, 002, 003 or 004
- (b) Add Cat. No. and LP of Plinth
- (c) Add Cat. No. and LP of Side Covers pair

### General Technical Particulars

- Degree of protection IP55/IK10
- CE Certified
- Fabricated from 2/1.6 mm CRCA/GPSP (frame made up of 2.0mm GPSP, doors & covers made up of 1.6 mm CRCA).
- Fully bolted construction
- Mounting Plate with sliding arrangement - standard & Powder coated to RAL-2000
- Modular Plinth (optional) 100mm high fabricated from CRCA
- Cable entry provision is given from Bottom & made in 3-part construction with Galvanized steel [Unpainted]
- Foamed-in PU gasket
- Powder coated to RAL : 7035 structure finish
- Hinge design allows 120 deg. Door opening
- 3 point lock provided as standard
- Door stiffener with provision of drilling holes for wiring harness.
- Side Covers - Pair : consisting of 1no. LHS and 1no. RHS cover
- To calculate limiting dimension of the enclosure, add 44mm to the width to account for Side Covers,
- 22mm to the height for Top Cover & 44mm to the depth on account of Front and Rear door / cover

# Smartline Modular Enclosure ..... BCH

## SmartLine TME

HSN Code : 8538

Size of Enclosure (W x H x D in mm)	Cat. No.	Enclosure Version*				Plinth		Side Covers (Pair)	
		Ver 001 LP [₹]	Ver 002 LP [₹]	Ver 003 LP [₹]	Ver 004 LP [₹]	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]
600 x 1800 x 500	SLE 061805	28635	32400	23220	26740	TPL 061805	3060	SLSC 061805	5980
800 x 1800 x 600	SLE 081806	35665	38275	29280	32545	TPL 081806	3595	SLSC 081806	6625
600 x 2000 x 600	SLE 062006	31905	35665	27315	30595	TPL 062006	3225	SLSC 062006	7235
800 x 2000 x 600	SLE 082006	36550	40480	29365	33190	TPL 082006	3595	SLSC 082006	7235
1200 x 2000 x 600	SLE 122006	55550	61475	44985	50665	TPL122006	4345	SLSC 122006	7235
600 x 2000 x 800	SLE 062008	32645	35910	27490	31010	TPL 062008	3595	SLSC 062008	9295
800 x 2000 x 800	SLE 082008	38685	41545	31010	34595	TPL 082008	3980	SLSC 082008	9295
1200 x 2000 x 800	SLE 122008	57085	64775	47930	52725	TPL 122008	4730	SLSC 122008	9295

Note : Cutout / customization charges will be extra.

\*Baying kit (BIL-14280) Rs. 1930/- is also available for Enclosure Version. For extra accessories, please contact nearest branch office.

## Enclosure Versions

- 001 - With mounting plate and rear cover.
- 002 - With mounting plate and rear door
- 003 - Without mounting plate and with rear cover
- 004 - Without mounting plate and with rear door

To Order and Calculate List Price

- (a) Choose Cat. No. and LP of Enclosure version from 001, 002, 003 or 004
- (b) Add Cat. No. and LP of Plinth
- (c) Add Cat. No. and LP of Side Covers pair

## General Technical Particulars

- IP-54 degree of protection
- Fabricated from CRCA/GPSP (frame made up of GPSP, doors & covers made up of CRCA sheet).
- Modular construction
- Mounting plate and cable entry plate made up of Galvanized steel [Unpainted]
- Plinth (optional) 100mm high fabricated from CRCA sheet.
- Cable entry provision is given from Bottom as standard
- Foamed-in PU gasket
- Powder coated to RAL : 7035 structure finish
- Hinge design allows 120 deg. Door opening
- 3 point lock provided as standard
- Door stiffener with provision of drilling holes for wiring harness.
- Side Covers - Pair: consisting of 1no. LHS and 1no. RHS cover
- To calculate limiting dimension of the enclosure, add 44mm to the width to account for SideCovers, 22mm to the height for Top Cover & 44mm to the depth on account of Front and Rear door / cover.

**Note :** Upto 800 mm width single door. 1000 mm & 1200 mm width double leaf door

# TEOS Plus Enclosure ..... BCH-TEKPAN

## TEOS Plus Enclosure

HSN Code : 8538

Size of Enclosure (W x H x D in mm)	Cat. No.	List Price [₹]
600 x 1800 x 500	TEOS061805	On Request
800 x 1800 x 600	TEOS081806	
600 x 2000 x 600	TEOS062006	
800 x 2000 x 600	TEOS082006	
800 x 2000 x 800	TEOS082008	
1200 x 2000 x 600	TEOS122006	
1000 x 2000 x 800	TEOS102008	
1200 x 2000 x 800	TEOS122008	

Front Door, Rear Door, Rear Cover & Mounting plate shall be supplied as per requirement.



## Plinth Corner

HSN Code : 8538

Description	Cat. No.	List Price [₹]
PLINTH CORNER PART H100mm	708.100	On Request

Supply included:- 4 pcs 100mm height corner & mounting accessories.

## Plinth Front Cover

HSN Code : 8538

Description	Cat. No.	List Price [₹]
PLINTH FRONT PROFILE :600	709.160	On Request
PLINTH FRONT PROFILE :800	709.180	
PLINTH FRONT PROFILE :1000	709.100	
PLINTH FRONT PROFILE :1200	709.120	

Supply included:- 2 pcs 100mm height front cover & mounting accessories.

## Plinth Side Cover

HSN Code : 8538

Description	Cat. No.	List Price [₹]
PLINTH SIDE PROFILE :500	710.150	On Request
PLINTH SIDE PROFILE :600	710.160	
PLINTH SIDE PROFILE :800	710.180	

Supply included:- 2 pcs 100mm height side cover & mounting accessories.

## Side Cover

HSN Code : 8538

Description	Cat. No.	List Price [₹]
Pair of side cover 500*1800	706.185	On Request
Pair of side cover 600*1800	706.186	
Pair of side cover 600*2000	706.206	
Pair of side cover 800*1800	706.188	
Pair of side cover 800*2000	706.208	

Supply included:- 2 pcs side cover & mounting accessories

## Technical Particulars (TEOS Plus Enclosure)

- Multifold (12-Fold) structure with 100% Modularity.
- IP-65 Degree of Protection.
- SEISMIC Tested for Zone-4 and UL Certified.
- Easy Assembly & Logistic advantages.
- 4-Point lock with Swing Handle..



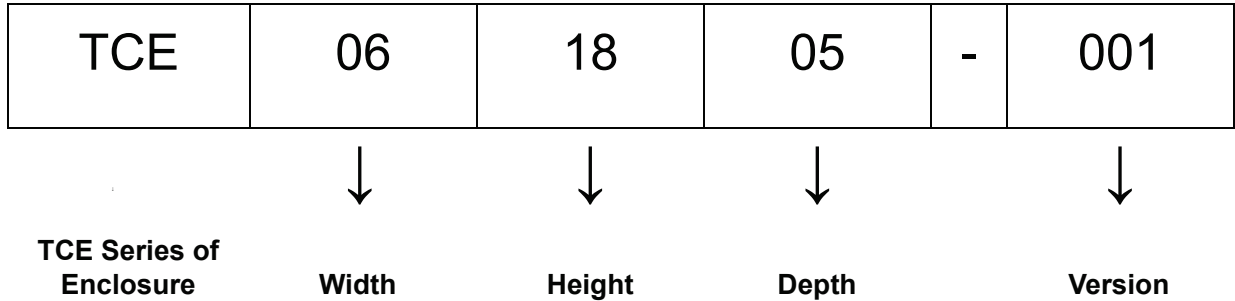
### Note :

- Upto 800 mm width single door. 1000 mm & 1200 mm width double leaf door
- Cutout / customization charges will be extra
- For extra accessories, please contact nearest branch office

# TCE Series Enclosure..... BCH

## TCE Series Enclosure Code Selection |

Example:-



## Sizes Available |

Width	Height	Depth
06-600 W	18-1800 H	04-400 D
08-800 W	20-2000 H	05-500 D
10-1000 W	22-2200 H	06-600 D
12-1200 W		08-800 D

## Version Details |

001	002	003	004	005
Structure: Front Door with Hinge Rear Bolted Cover STD Gland Plate Top Cover Eye Bolt 01 Mounting Plate	Structure: Front Door with Hinge Rear Door with Hinge STD Gland Plate Top Cover Eye Bolt 01 Mounting Plate	Structure: Front Door with Hinge Rear Bolted Cover STD Gland Plate Top Cover Eye Bolt No Mounting Plate	Structure: Front Door with Hinge Rear Door with Hinge STD Gland Plate Top Cover Eye Bolt No Mounting Plate	Structure: Front Door with Hinge Rear Door with Hinge STD Gland Plate Top Cover Eye Bolt 2 Mounting Plate

# TCE Series Enclosure.....BCH

## Technical Particulars for TCE Series

- IP66-IK10 for single door enclosure
- IP65-IK10 for double door enclosure
- Structure made up with 2.0mm CRCA
- Door made up with 2.0mm CRCA and covers made up with 1.6mm CRCA
- Bottom 3-part cable entry provision as standard and made up with 2.0mm GPSP
- Mounting plate with sliding arrangement and made up with 3.0mm CRCA.
- Push fit Die casted hinge provided at doors.
- Door with Interchangeability features (LHS/RHS)
- 4-point locking provides as standards
- Separate locking at LHS door with swing handle
- Door stiffener with provision of drilling holes for wiring harness.
- Eye bolt as standard for lifting
- Modular Plinth (optional) 100mm Height with Black finish
- Side Covers – Pair consisting of 1no. LHS and 1no. RHS cover
- Surface finish to enclosure RAL-7035 and Mounting plate RAL-2000



**Note:** up to 800 mm width single door  
1000 mm & 1200 mm width double door

**IK 10**



**CE**

# TCE Series Enclosure..... BCH

**HSN Code: 8538**

Size of Enclosure in mm			Cat No.	Enclosure Version*				
Width (H)	Height (H)	Depth (D)		VER-001 LP [₹]	VER-002 LP [₹]	VER-003 LP [₹]	VER-004 LP [₹]	VER-005 LP [₹]
600	1800	400	TCE061804	31545	35140	25055	28935	
800	1800	400	TCE081804	37685	41350	28650	33120	
1000	1800	400	TCE101804	51870	55900	40225	43995	
1200	1800	400	TCE121804	58290	65105	45215	50120	
600	1800	500	TCE061805	32960	36280	26735	30050	
800	1800	500	TCE081805	38375	43205	30675	34345	
1000	1800	500	TCE101805	53270	57320	41965	46270	
1200	1800	500	TCE121805	59400	67485	47575	53455	
800	1800	600	TCE081806	40920	42935	33300	36450	49885
800	1800	800	TCE081808	42695	46975	35515	39780	56985
600	2000	400	TCE062004	34000	38225	26110	31020	
800	2000	400	TCE082004	39580	43460	30240	34330	
1000	2000	400	TCE102004	56680	59850	44070	47135	
1200	2000	400	TCE122004	60885	67300	48720	55220	
600	2000	500	TCE062005	36085	39080	29620	33475	
800	2000	500	TCE082005	40485	44690	31195	35570	
1000	2000	500	TCE102005	56075	62750	44690	49590	
1200	2000	500	TCE122005	61315	67485	48200	53455	
600	2000	600	TCE062006	36625	40225	31365	34970	48405
800	2000	600	TCE082006	41890	45645	33635	37405	54180
1000	2000	600	TCE102006	56970	65365	45375	52905	79255
1200	2000	600	TCE122006	62530	69325	50640	57130	84170
600	2000	800	TCE062008	37685	40485	31470	35400	52735
800	2000	800	TCE082008	43635	46865	35660	39050	57070
1000	2000	800	TCE102008	62530	66675	48200	53455	77875
1200	2000	800	TCE122008	65730	72910	53995	59400	86985
600	2200	600	TCE062206	41275	45215	32770	38900	54180
800	2200	600	TCE082206	46710	49775	37600	41450	58085
1000	2200	600	TCE102206	64675	69660	53145	58125	81415
1200	2200	600	TCE122206	67200	75020	52225	58355	93310
600	2200	800	TCE062208	45005	48820	34530	39865	51950
800	2200	800	TCE082208	54325	57490	41710	45375	62850
1000	2200	800	TCE102208	68875	74210	55900	60120	86480
1200	2200	800	TCE122208	74495	78690	61000	65105	97530



# TCE Series Enclosure..... BCH

## TCE Bottom Plinth 100mm Height

HSN Code: 8538

Size in MM		Cat No	LP [₹]
Width (H)	Depth (D)		
600	400	TCEPL0604	2835
800	400	TCEPL0804	3240
1000	400	TCEPL1004	3625
1200	400	TCEPL1204	3970
600	500	TCEPL0605	3040
800	500	TCEPL0805	3410
1000	500	TCEPL1005	3810
1200	500	TCEPL1205	4145
600	600	TCEPL0606	3210
800	600	TCEPL0806	3565
1000	600	TCEPL1006	3940
1200	600	TCEPL1206	4305
600	800	TCEPL0608	3565
800	800	TCEPL0808	3940
1000	800	TCEPL1008	4265
1200	800	TCEPL1208	4685



## TCE Side Panel

HSN Code: 8538

Size in MM		Cat No	LP [₹]
Height (H)	Depth (D)		
1800	400	TCESP0418	5665
1800	500	TCESP0518	6575
1800	600	TCESP0618	7315
1800	800	TCESP0818	9755
2000	400	TCESP0420	6080
2000	500	TCESP0520	7155
2000	600	TCESP0620	7945
2000	800	TCESP0820	10230
2200	600	TCESP0622	9205
2200	800	TCESP0822	11965

MOQ-Minimum order quantity in nos.  
 Note: Cutout charges will be extra  
 Freight charges will be extra at actuals

# TCE Series Enclosure..... BCH

## TCE Series Enclosure Accessories

### Baying system

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Baying Kit	TCE-14280	2100
2	Combination Angle (Pack of 2)	TCE-14281	1100

### Mounting plate filler profile

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Filler plate for 1800mm Height	TCE-FP-1800	1595
2	Filler plate for 2000mm Height	TCE-FP-2000	1760
3	Filler plate for 2200mm Height	TCE-FP-2200	1930

### Wiring plan pocket

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	File pocket 500mm Width	TCE-TPKT-500	775
2	File pocket 600mm Width	TCE-TPKT-600	935
3	File pocket 800mm Width	TCE-TPKT-800	1210

### Lamp rail

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Lamp rail 600mm Width	TCE-LAMP-RAIL-600	220
2	Lamp rail 800mm Width	TCE-LAMP-RAIL-800	300
3	Lamp rail 1000mm Width	TCE-LAMP-RAIL-1000	375
4	Lamp rail 1200mm Width	TCE-LAMP-RAIL-1200	455

### Limit switch with fixing arrangement

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	BCH Limit switch	TCE-LC	935

### Punched section for depth

HSN Code: 8538

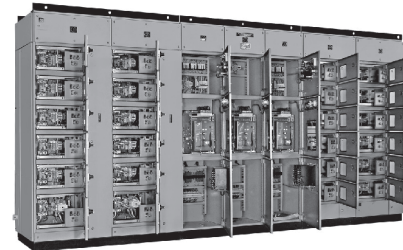
Sl. No	Description	Cat No	LP [₹]
1	Punched section 400mm depth	TCE-PSD-400	550
2	Punched section 500mm depth	TCE-PSD-500	775
3	Punched section 600mm depth	TCE-PSD-600	995
4	Punched section 800mm depth	TCE-PSD-800	1325

### Punched section for width

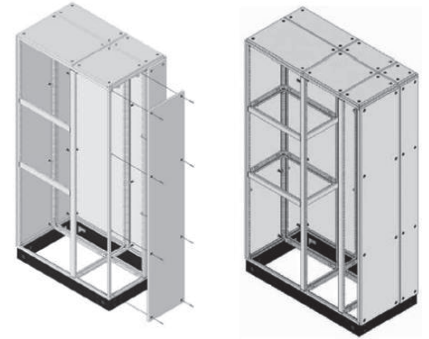
HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Punched section 600mm width	TCE-PSW-600	1100
2	Punched section 800mm width	TCE-PSW-800	1325
3	Punched section 1000mm width	TCE-PSW-1000	1545

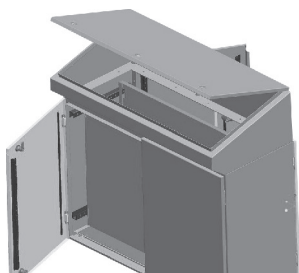
# Highlights of **BCH** Compartmentalized **MCC / PCC / PMCC** Solution (Fixed & Drawed Type)



- 100% Modular Structure; can be dispatched in flat pack.
- Flexible compartmentalized -up to From 4.
- IP 54 degree of protection with polyurethane foam gasket.
- Compartment size available from 200mm height & multiplies of 100mm.
- Additional accessories like Cable support, Busbar support, Limit Switch and Lamp brackets are available.
- Adjustable mounting plates (Depth wise at the pitch of 25mm).
- Panel can be expanded in all 3 dimensions and bayed together by using Baying Kit.
- All Structure members (Corner & Cross bar) having M6 extrude hole at 25mm intervals, No need of any Captive hardware.
- Standard Module dimension for Drawout Enclosures.
  - ▷ Single Front :- 900(W) x 2400(H) x 600(D)
  - ▷ Double Front :- 900(W) x 2400(H) x 1200(D)
- Draw-out feeder available from 200mm height (2SU) to 800mm height (8SU).
- Colours :- RAL-7035 (Structure finish) for structure, doors, covers & internal parts RAL-2000 (smooth finish) for Mounting plates, Ral-9000 (Smooth Finish) for Plinth .
- Sheet thickness 2.0mm GPSP for structure, 2.0mm CRCA for Mounting Plate & Mounting rail, 1.6mm CRCA for Doors & Covers, 1.2mm CRCA for Separation plates.



## **BCH** Control Desk



# Enclosure Systems ..... *technoRACKS* BCH



### Key Attributes:

- Aesthetic & robust construction
- Mounting Fan /s in top doesn't take usable "U" space.
- Special type of Wallmounting hardware.
- Provision for earthing available in the cabinets.
- Highly corrosion resistant in nature.
- Power coated to shade RAL : 7035 structure finish.

## 19" Wall Mount Racks

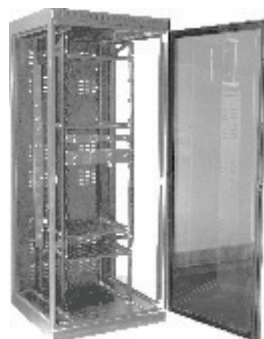
HSN Code : 8538

Dimensions (H x W x D) mm	MOQ Nos.	Cat. No.	List Price [₹]
6UX550X400	1	BIL-W-6-5504	5670
9UX550X400	1	BIL-W-9-5504	6840
6UX550X500	1	BIL-W-6-5505	6260
9UX550X500	1	BIL-W-9-5505	7300
12UX550X500	1	BIL-W-12-5505	8105
15UX550X500	1	BIL-W-15-5505	9540

MOQ-Minimum order quantity in nos.

Standard Configuration: Wallmount cabinet, 2-Pairs of 19" rail.

Notes : Accessories viz. Shelves, Fans, power strips, cable managers captive H/W & wall mounting hardware etc. will be extra as per the accessories list furnished in the price list.  
Wall mount racks price do not include freight & will be extra at actuals



### Key Attributes:

- Floor mounting robust design.
- Lockable & removable side panels.
- 2-pairs of adjustable 19" rails.
- Front door with toughened glass & perforation.
- High load bearing capacity.
- Rear vented door.
- Provision for fan mounting in top which doesn't take usable "U" Space.
- Superior cable management facility in extra wide racks.
- 4-integrated vertical cable managers are default design of 800mm wide racks.
- Rear space saving split door with 3-point secure locking in extra wide (800mm) racks.
- Power coated to shade RAL : 7035 structure finish.

## 19" Networking Racks

HSN Code : 8538

Dimensions (H x W x D) mm	MOQ Nos.	Cat. No.	List Price [₹]
24U X 600 X 600	1	BIL-N-062406	31725
24U X 600 X 800	1	BIL-N-062408	35075
24U X 800 X 600	1	BIL-N-082406	39755
24U X 800 X 800	1	BIL-N-082408	43445
30U X 600 X 600	1	BIL-N-063006	35075
30U X 600 X 800	1	BIL-N-063008	38430
30U X 800 X 600	1	BIL-N-083006	43445
30U X 800 X 800	1	BIL-N-083008	47620
36U X 600 X 600	1	BIL-N-063606	38430
36U X 600 X 800	1	BIL-N-063608	42600
36U X 800 X 600	1	BIL-N-083606	47640
36U X 800 X 800	1	BIL-N-083608	51725
42U X 600 X 600	1	BIL-N-064206	44290
42U X 600 X 800	1	BIL-N-064208	47455
42U X 800 X 600	1	BIL-N-084206	52125
42U X 800 X 800	1	BIL-N-084208	57630
45U X 600 X 600	1	BIL-N-064506	50960
45U X 600 X 800	1	BIL-N-064508	53485
45U X 800 X 600	1	BIL-N-084506	55965
45U X 800 X 800	1	BIL-N-084508	60980

MOQ-Minimum order quantity in nos.

Notes : 1) Networking racks price do not include freight & this will be extra at actuals.

For more details visit : [www.bchindia.com/technorack](http://www.bchindia.com/technorack)

# Enclosure Systems ..... **technoRACKS** BCH

## 19" Server Racks

HSN Code : 8538

### Key Attributes:

- Floor mounting robust design.
- Lockable & removable side panels.
- 2-pairs of adjustable 19" rails.
- Front door with toughened glass & perforation.
- High load bearing capacity.
- Rear vented door.
- Provision for fan mounting in top which doesn't take usable "U" Space.
- Superior cable management facility in extra wide racks.
- 4-integrated vertical cable managers are default design of 800mm wide racks.
- Rear space saving split door with 3-point secure locking
- locking in extra wide (800mm) racks.
- Power coated to shade RAL : 7035 structure finish.

Dimensions (H x W x D) mm	MOQ Nos.	Cat. No.	List Price [₹]
24U X 600 X 900	1	BIL-S-062409	35840
24U X 600 X 1000	1	BIL-S-062410	38090
30U X 600 X 900	1	BIL-S-063009	40525
30U X 600 X 1000	1	BIL-S-063010	42105
36U X 600 X 900	1	BIL-S-063609	44435
36U X 600 X 1000	1	BIL-S-063610	46805
42U X 600 X 900	1	BIL-S-064209	49965
42U X 600 X 1000	1	BIL-S-064210	53135
42U X 800 X 1000	1	BIL-S-084210	61145
45U X 600 X 900	1	BIL-S-064509	57735
45U X 600 X 1000	1	BIL-S-064510	61090

MOQ - Minimum order quantity in nos.

Notes : Server racks price do not include freight & this will be extra at actuals.

**STANDARD CONFIGURATION:** Basic frame, Top & bottom, Front Glass door with perforation, Rear vented door, Lockable & detachable side panels, 2-Pairs of 19" rails with depth members.



### Key Attributes:

- Includes 1-Pair of 21" rails.
- Integrated side panels.
- Grouting arrangements along with grouting bolts as std. BOM
- Provision for power & detachable Cable entry/exit in top & bottom.
- Power coated to shade RAL : 7035 structure finish.

## ETSI Racks

HSN Code : 8538

Dimensions (H x W x D) mm	MOQ Nos.	Cat. No.	List Price [₹]
2200 X 600 x 300	1	ITE-062203	12880
2200 X 600 x 600	1	ITE-062206	20725

MOQ - Minimum order quantity in nos.

Notes : Above ETSI configuration do not include front & rear door and covers.

All other accessories will be extra & will be furnished on request.  
The prices mentioned above do not include freight.



### Key Attributes:

- 1-Pair of vertical cable manager is default design.
- Surface pretreated and advance powder coated
- Grouting bolts as std. BOM.
- Power coated to shade RAL : 7035 structure finish.

## 19" Open Racks

HSN Code : 8538

Dimensions (H x W ) mm	MOQ Nos.	Cat. No.	List Price [₹]
36U X 600	1	ITE-OF-0636	8365
45U X 600	1	ITE-OF-0645	9855

MOQ - Minimum order quantity in nos.

Notes : 1) Above Open Rack configuration does not include Shelves, Doors and Covers. All other accessories prices will be extra and will be furnished on request.

2) The Prices above do not include Freight and this will be extra at actuals.

For more details, visit : [www.bchindia.com/technorack](http://www.bchindia.com/technorack)

\* List Prices are Ex-works Faridabad. For detail Refer Enclosure Selling Terms & Conditions on page no.108.

**\*GST to be charged extra**

# Enclosure Systems ..... *technoRACKS* BCH

## Accessories for 19" Racks

### Fixed Shelf/Stationary Shelf

- Compatible to keep monitor, servers, non 19" Networking & allied equipments.

### Key-Board Tray

- Sliding & rotatory type.

### Canteliver Shelf

- It can accommodate light weighted networking & allied equipments like modem, routers etc.

### Equipment Support Angle

- "L" type angles. Useful to keep non 19" heavy duty equipment in rack mounting position.

### Sliding Shelf

- Useful to keep servers, networking & allied equipment which are required to slide out for operational & other purpose.

### Fans/Fan Tray

- 220V 90 CFM Capacity. Can be mounted at the top either directly or through Fan housing unit (Fan Tray)

### 6-Point 5A Hor. Power Strip

- All universal type socket along with on/off switch with fuse & indicator. Internal strips are made up of Berellium copper that has high rate of heat & mechanical tolerance.
- Other 5A or 5/15A Power strips have Indian style (Anchor) Sockets with on/off switch/MCB.

### Castors

- 1-Set includes 4Nos. of castors, 2Nos. with foot operated brake & remaining 2 are free.

### Levelling Feet

- 1-Set includes 4Nos. of Levelling Feet.

### Stability Plate

- It Prevents the racks from toppling while taking out heavy duty servers.

### Shelves

HSN Code : 8538

Description	Cat No.	List Price [₹]
Fixed Shelf (600mmD)	BIL-A-FS-L-06	1440
Fixed Shelf (800mmD)	BIL-A-FS-L-08	2230
Fixed Shelf (900mmD)	BIL-A-FS-L-09	2480
Fixed Shelf (1000mmD)	BIL-A-FS-L-10	2670
Modem Tray	BIL-A-MD	1365
Key board tray (Sliding & Rotatory)	BIL-A-KB-06	4265
Canteliver Shelf (1U)	BIL-A-CS-1	860
Canteliver Shelf (2U)	BIL-A-CS-2	1280
Equipment Support Angle (600mmD)	BIL-A-ESA-06	535
Equipment Support Angle (800mmD)	BIL-A-ESA-08	605
Equipment Support Angle (900mmD)	BIL-A-ESA-09	755
Equipment Support Angle (1000mmD)	BIL-A-ESA-10	875
Sliding Shelf (900mmD)	BIL-A-SS-09	4265
Sliding Shelf (1000mmD)	BIL-A-SS-10	4430

### Thermal Management

HSN Code : 8538

Description	Cat No.	List Price [₹]
1-Fan (Direct mounted)	BIL-A-SF	1440
Fan-tray with 2-Fans (FHU)	BIL-A-FHU-2FANS	3085
Fan-tray with 4-Fans (FHU)	BIL-A-FHU-4FANS	5370

### Cable Management

HSN Code : 8538

Description	Cat No.	List Price [₹]
Horizontal Cable Manager (1U)	BIL-A-HCM-1U	340
Horizontal Cable Manager (2U)	BIL-A-HCM-2U	420
Vertical Cable Manager (24U)	BIL-A-VCM-24U	535
Vertical Cable Manager (30U)	BIL-A-VCM-30U	685
Vertical Cable Manager (36U)	BIL-A-VCM-36U	780
Vertical Cable Manager (42U)	BIL-A-VCM-42U	860
Vertical Cable Manager (45U)	BIL-A-VCM-45U	940

### Power Management

HSN Code : 8538

Description	Cat No.	List Price [₹]
6-Point 5Amp Horizontal Power Strip (19")	BIL-A-HPS-5AMP	1405
5-Point 5/15Amp Horizontal Power Strip (19")	BIL-A-HPS-15AMP	1875
12-Point 5Amp Vertical Power Strip	BIL-A-12VPS-5AMP	2745
10-Point 5/15Amp Vertical Power Strip	BIL-A-10VPS-15AMP	3155
Earth continuity Kit (Earthing Kit)	BIL-A-ECT	1065

### Stability Management

HSN Code : 8538

Description	Cat No.	List Price [₹]
Castors (1-Set) Heavy Duty	BIL-A-CAS-HD	5150
Castors (1-Set) Light Duty	BIL-A-CAS	4100
Levelling Feet (1-Set)	BIL-A-LF	700
Stability Plate	BIL-A-SP	2585

### Miscellaneous

HSN Code : 8538

Description	Cat No.	List Price [₹]
BAYING KIT	BIL-A-BK	505
BLANKING PANEL (1U)	BIL-A-BP-1U	235
BLANKING PANEL (2U)	BIL-A-BP-2U	310
BLANKING PANEL (3U)	BIL-A-BP-3U	395
BLANKING PANEL (4U)	BIL-A-BP-4U	490
BLANKING PANEL (5U)	BIL-A-BP-5U	545
Captive H/w (set of 10)	BIL-A-Captive-M6	235
Wallmounting H/w (set of 4)	BIL-A-WALLMOUNTHW	245



# Wires & Cables

- 
- **3-Core Flat Cables for Submersible Pump Applications**
  - **FR & FRLS Single Core Flexible Cables**
  - **Shielded Cables**
  - **Multi Core PVC Flexible Cables**



# Wires & Cables .....

BCH

BCH Three Core Flat Cables with annealed bare & bunched copper conductor insulated & sheathed with PVC for submersible pump motors for voltage grade 1100 V as per I.S. 694 / 2010, conforming & marked with I.S. 694 / 2010 upto 95 sqmm.

### 3 Core Flat Cable PVC Insulated Type CS- 500 Mtrs MOQ

HSN Code : 8544

BCH Code	Flat Cable	LP Per 500 Mtrs in [₹]	Remark
CS0010BM	1.0 Sqmm x 3 core Flat cable	On request	Also Available in 100 mtrs & 1000 mtrs
CS0015BM	1.5 Sqmm x 3 core Flat cable	On request	
CS0025BM	2.5 Sqmm x 3 core Flat cable	On request	
CS0040BM	4.0 Sqmm x 3 core Flat cable	On request	
CS0060BM	6.0 Sqmm x 3 core Flat cable	On request	
CS0080BM	8.0 Sqmm x 3 core Flat cable	On request	
CS0100BM	10 Sqmm x 3 core Flat cable	On request	
CS0160BM	16 Sqmm x 3 core Flat cable	On request	
CS0250BM	25 Sqmm x 3 core Flat cable	On request	
CS0350BM	35 Sqmm x 3 core Flat cable	On request	
CS050BM	50 Sqmm x 3 core Flat cable	On request	
CS070BM	70 Sqmm x 3 core Flat cable	On request	
CS095BM	95 Sqmm x 3 core Flat cable	On request	
CS120BM	120 Sqmm x 3 core Flat cable	On request	

BCH Three Core Flat Cables with annealed bare & bunched copper conductor insulated & thick sheathed with PVC for submersible pump motors for voltage grade 1100 V as per I.S. 694 / 2010, conforming & marked with I.S. 694 / 2010 upto 16.0 sqmm.

### 3 Core Flat Cable PVC Insulated Thick Type CFT- 500 Mtrs MOQ

HSN Code : 8544

BCH Code	Flat Cable	LP Per 500 Mtrs in [₹]	Remark
CFT-03-0010BM	1.0 Sqmm x 3 core Flat cable Thick	On request	Also Available in 100 mtrs & 1000 mtrs
CFT-03-0015BM	1.5 Sqmm x 3 core Flat cable Thick	On request	
CFT-03-0025BM	2.5 Sqmm x 3 core Flat cable Thick	On request	
CFT-03-0040BM	4.0 Sqmm x 3 core Flat cable Thick	On request	
CFT-03-0060BM	6.0 Sqmm x 3 core Flat cable Thick	On request	
CFT-03-0100BM	10 Sqmm x 3 core Flat cable Thick	On request	
CFT-03-0160BM	16 Sqmm x 3 core Flat cable Thick	On request	

BCH Three Core Flat Cables with annealed bare & bunched copper conductor XLPE insulated & PVC sheathed for submersible pump motors of voltage grade 1100 V. suitable for heavy duty usage and areas having frequent supply undervoltage / overvoltage conditions upto 16.0 sqmm.

### 3 Core Flat Cable XLPE Insulated Type CFTX- 500 Mtrs MOQ

HSN Code : 8544

BCH Code	Flat Cable	LP Per 500 Mtrs in [₹]	Remark
CFTX-03-0015BM	1.5 Sqmm x 3 core Flat cable XLPE insulated Thick	On request	Also Available in 100 mtrs & 1000 mtrs
CFTX-03-0025BM	2.5 Sqmm x 3 core Flat cable XLPE insulated Thick	On request	
CFTX-03-0040BM	4.0 Sqmm x 3 core Flat cable XLPE insulated Thick	On request	
CFTX-03-0060BM	6.0 Sqmm x 3 core Flat cable XLPE insulated Thick	On request	
CFTX-03-0080BM	8.0 Sqmm x 3 core Flat cable XLPE insulated Thick	On request	
CFTX-03-0100BM	10 Sqmm x 3 core Flat cable XLPE insulated Thick	On request	
CFTX-03-0160BM	16 Sqmm x 3 core Flat cable XLPE insulated Thick	On request	

### 3 Core Flat Cable XLPE Insulated Thick with higher copper conductor Type CFTHX- 500 Mtrs MOQ

HSN Code : 8544

BCH Code	Flat Cable	LP Per 500 Mtrs in [₹]	Remark
CFTHX-03-0010BM	1.0 Sqmm x 3 core Flat cable XLPE insulated Thick with higher copper conductor	On request	Also Available in



# Wires & Cables ..... BCH

## Single Core FR PVC Flexible Cables As Per IS 694: 2010 - With ISI Marking

HSN Code : 8544

- Individual conductors drawn from 99.98% bright electrolytic grade copper with more than 100% conductivity
- Special formulation of PVC compounds as per IS 5831:2013 ensures longer and trouble free service life.
- Use only RoHS insulation and sheathing compounds. Ensures cleaner environment and better health.
- Online measurement and monitoring of O.D., core dia and dielectric strength.
- Suitable for -15 to +70°C.
- Flame Retardent

Cat. No.	Conductor Area (nominal)	Safe Current Carrying Capacity 2 wires, Single Phase		LP Per 100 mtrs
		In conduit / Trunking	Unenclosed clipped directly to a surface or on cable tray	
<b>Single Core</b>	(Sq. mm)	(Amp.)	(Amp.)	in [₹]
CRFR01-0005A-AAA	0.5	4	4.5	On request
CRFR01-0008A-AAA	0.75	7	8	On request
CRFR01-0010A-AAA	1	11	12	On request
CRFR01-0015A-AAA	1.5	13	16	On request
CRFR01-0025A-AAA	2.5	18	22	On request
CRFR01-0040A-AAA	4	24	29	On request
CRFR01-0060A-AAA	6	31	37	On request
CRFR01-0100A-AAA	10	42	51	On request
CRFR01-0160A-AAA	16	57	68	On request
CRFR01-0250A-AAA	25	71	86	On request
CRFR01-0350A-AAA	35	91	100	On request
CRFR01-0500A-AAA	50	120	145	On request
<b>HSN Code : 8544</b>				
CRFR01-0700A -AAA	70	-	214	On request
CRFR01-0950A -AAA	95	-	260	On request
CRFR01-1200A-AAA	120	-	305	On request
CRFR01-1500A-AAA	150	-	355	On request
CRFR01-1850A -AAA	185	-	415	On request
CRFR01-2400A-AAA	240	-	500	On request
CRFR01-3000A-AAA	300	-	560	On request

Individual conductors drawn from 99.98% bright electrolytic grade copper with more than 100% conductivity  
**Note :** Standard packing of 100m, 500m & 1000m available. For price of 500m & 1000m , please contact nearest sales office.

## Single Core Double Insulation FR PVC Flexible Cables As Per IS 694: 2010 - With ISI Marking

HSN Code : 8544

- Glossy & smooth surface finish
- Anti Rodent properties
- Lead free
- Energy saving

Cat. No.	Conductor Area (nominal)	Safe Current Carrying Capacity 2 wires, Single Phase		LP Per 90 / 100 mtrs
		In conduit / Trunking	Unenclosed clipped directly to a surface or on cable tray	
<b>Single Core</b>	(Sq. mm)	(Amp.)	(Amp.)	in [₹]
CRDFR01-0005D-AAA	0.5	4	4.5	On request
CRDFR01-0008D-AAA	0.75	7	8	On request
CRDFR01-0010D-AAA	1	11	12	On request
CRDFR01-0015D-AAA	1.5	13	16	On request
CRDFR01-0025D-AAA	2.5	18	22	On request
CRDFR01-0040D-AAA	4	24	29	On request
CRDFR01-0060D-AAA	6	31	37	On request

**Note:** Standard packing of 90m, 180m & 270m available. For prices of 90m, 180m & 270m, please contact nearest sales office.



## Single Core FRLS Flexible Cables As Per IS 694: 2010-With ISI Marking

HSN Code : 8544

Cat. No.	Conductor Area (nominal)	Safe Current Carrying Capacity 2 wires		LP Per 90 mtrs
		In conduit / Trunking	Unenclosed clipped directly to a surface or on cable tray	
<b>Single Core</b>	(Sq. mm)	(Amp.)	(Amp.)	in [₹]
CRLS01-0005A-AAA	0.5	4	4.5	On request
CRLS01-0008A-AAA	0.75	7	8	On request
CRLS01-0010A-AAA	1	11	12	On request
CRLS01-0015A-AAA	1.5	13	16	On request
CRLS01-0025A-AAA	2.5	18	22	On request
CRLS01-0040A-AAA	4	24	29	On request
CRLS01-0060A-AAA	6	31	37	On request
CRLS01-0100A-AAA	10	42	51	On request
CRLS01-0160A-AAA	16	57	68	On request
CRLS01-0250A-AAA	25	71	86	On request

# Wires & Cables .....

BCH

## Multi Core PVC Flexible Cables

HSN Code : 8544

Conductor area (Normal)	Cat. No. 2 Core	LP per 100 Mtrs	Cat. No. 3 Core	LP per 100 Mtrs	Cat. No. 4 Core	LP per 100 Mtrs	Current Rating (Amps)
0.5 sqmm	CR02-0005A-AAA-M	On request	CR03-0005A-AAA-M	On request	CR04-0005A-AAA-M	On request	4
0.75 sqmm	CR02-0008A-AAA-M	On request	CR03-0008A-AAA-M	On request	CR04-0008A-AAA-M	On request	7
1.0 sqmm	CR02-0010A-AAA-M	On request	CR03-0010A-AAA-M	On request	CR04-0010A-AAA-M	On request	12
1.5 sqmm	CR02-0015A-AAA-M	On request	CR03-0015A-AAA-M	On request	CR04-0015A-AAA-M	On request	15
2.5 sqmm	CR02-0025A-AAA-M	On request	CR03-0025A-AAA-M	On request	CR04-0025A-AAA-M	On request	20
4.0 sqmm	CR02-0040A-AAA-M	On request	CR03-0040A-AAA-M	On request	CR04-0040A-AAA-M	On request	27
6.0 sqmm	CR02-0060A-AAA-M	On request	CR03-0060A-AAA-M	On request	CR04-0060A-AAA-M	On request	35
10 sqmm	CR02-0100A-AAA-M	On request	CR03-0100A-AAA-M	On request	CR04-0100A-AAA-M	On request	46
16 sqmm	CR02-0160A-AAA-M	On request	CR03-0160A-AAA-M	On request	CR04-0160A-AAA-M	On request	62
25 sqmm	CR02-0250A-AAA-M	On request	CR03-0250A-AAA-M	On request	CR04-0250A-AAA-M	On request	80
35 sqmm	CR02-0350A-AAA-M	On request	CR03-0350A-AAA-M	On request	CR04-0350A-AAA-M	On request	102
50 sqmm	CR02-0500A-AAA-M	On request	CR03-0500A-AAA-M	On request	CR04-0500A-AAA-M	On request	138

Conductor area (Normal)	Cat. No. 5 Core	LP per 100 Mtrs	Cat. No. 6 Core	LP per 100 Mtrs	Cat. No. 7 Core	LP per 100 Mtrs	Current Rating (Amps)
0.5 sqmm	CR05-0005A-AAA-M	On request	CR06-0005A-AAA-M	On request	CR07-0005A-NAA-M	On request	4
0.75 sqmm	CR05-0008A-AAA-M	On request	CR06-0008A-AAA-M	On request	CR07-0008A-NAA-M	On request	7
1.0 sqmm	CR05-0010A-AAA-M	On request	CR06-0010A-AAA-M	On request	CR07-0010A-NAA-M	On request	12
1.5 sqmm	CR05-0015A-AAA-M	On request	CR06-0015A-AAA-M	On request	CR07-0015A-NAA-M	On request	15
2.5 sqmm	CR05-0025A-AAA-M	On request	CR06-0025A-AAA-M	On request	CR07-0025A-NAA-M	On request	20
4.0 sqmm	CR05-0040A-AAA-M	On request	CR06-0040A-AAA-M	On request	CR07-0040A-NAA-M	On request	27
6.0 sqmm	CR05-0060A-AAA-M	On request					35

Conductor area (Normal)	Cat. No. 8 Core	LP per 100 Mtrs	Cat. No. 10 Core	LP per 100 Mtrs	Cat. No. 12 Core	LP per 100 Mtrs	Current Rating (Amps)
0.5 sqmm	CR08-0005A-NAA-M	On request	CR10-0005A-NAA-M	On request	CR12-0005A-NAA-M	On request	4
0.75 sqmm	CR08-0008A-NAA-M	On request	CR10-0008A-NAA-M	On request	CR12-0008A-NAA-M	On request	7
1.0 sqmm	CR08-0010A-NAA-M	On request	CR10-0010A-NAA-M	On request	CR12-0010A-NAA-M	On request	12
1.5 sqmm	CR08-0015A-NAA-M	On request	CR10-0015A-NAA-M	On request	CR12-0015A-NAA-M	On request	15
2.5 sqmm	CR08-0025A-NAA-M	On request	CR10-0025A-NAA-M	On request	CR12-0025A-NAA-M	On request	20
4.0 sqmm	CR08-0040A-NAA-M	On request	CR10-0040A-NAA-M	On request	CR12-0040A-NAA-M	On request	27

Conductor area (Normal)	Cat. No. 14 Core	LP per 100 Mtrs	Cat. No. 16 Core	LP per 100 Mtrs	Cat. No. 19 Core	LP per 100 Mtrs	Current Rating (Amps)
0.5 sqmm	CR14-0005A-NAA-M	On request	CR16-0005A-NAA-M	On request	CR19-0005A-NAA-M	On request	4
0.75 sqmm	CR14-0008A-NAA-M	On request	CR16-0008A-NAA-M	On request	CR19-0008A-NAA-M	On request	7
1.0 sqmm	CR14-0010A-NAA-M	On request	CR16-0010A-NAA-M	On request	CR19-0010A-NAA-M	On request	12
1.5 sqmm	CR14-0015A-NAA-M	On request	CR16-0015A-NAA-M	On request	CR19-0015A-NAA-M	On request	15
2.5 sqmm	CR14-0025A-NAA-M	On request	CR16-0025A-NAA-M	On request	CR19-0025A-NAA-M	On request	20
4.0 sqmm	CR14-0040A-NAA-M	On request	CR16-0040A-NAA-M	On request	CR19-0040A-NAA-M	On request	27

Conductor area (Normal)	Cat. No. 24 Core	LP per 100 Mtrs	Cat. No. 25 Core	LP per 100 Mtrs	Cat. No. 30 Core	LP per 100 Mtrs	Current Rating (Amps)
0.5 sqmm	CR24-0005A-NAA-M	On request	CR25-0005A-NAA-M	On request	CR30-0005A-NAA-M	On request	4
0.75 sqmm	CR24-0008A-NAA-M	On request	CR25-0008A-NAA-M	On request	CR30-0008A-NAA-M	On request	7
1.0 sqmm	CR24-0010A-NAA-M	On request	CR25-0010A-NAA-M	On request	CR30-0010A-NAA-M	On request	12
1.5 sqmm	CR24-0015A-NAA-M	On request	CR25-0015A-NAA-M	On request	CR30-0015A-NAA-M	On request	15
2.5 sqmm	CR24-0025A-NAA-M	On request	CR25-0025A-NAA-M	On request	CR30-0025A-NAA-M	On request	20
4.0 sqmm	CR24-0040A-NAA-M	On request	CR25-0040A-NAA-M	On request	CR30-0040A-NAA-M	On request	27

Conductor area (Normal)	Cat. No. 36 Core	LP per 100 Mtrs	Current Rating (Amps)
0.5 sqmm	CR36-0005A-NAA-M	On request	4
0.75 sqmm	CR36-0008A-NAA-M	On request	7
1.0 sqmm	CR36-0010A-NAA-M	On request	12
1.5 sqmm	CR36-0015A-NAA-M	On request	15

The conductor construction given above is indicative only and will be such that all requirements of strand diameter and conductor resistance as per IS 694:2010 and IS 8130:2013 are met.

Sizes 0.5 to 35 Sq. mm from 2 to 4 cores with ISI

# Power Factor Control Products

- **LT Power Capacitors - Cylindrical Type**
- **LT Power Capacitors - Box Type**
- **Freedom Series Capacitor Duty Contactor**
- **Super Heavy Duty Box Type Capacitor**
- **Detuned Reactors**
- **Thyristor Switched Module**
- **Automatic Power Factor Controllers (APFC)  
& Intelligent Power Factor Controllers (IPFC)**
- **Network Analysers**
- **APFC Panels**



# LT Power Capacitors..... BCH

## MPP Can type capacitors



### MPP Can Type Capacitors(with ISI Mark) (440V)

HSN Code : 8532

KVAR	Normal Duty		Heavy Duty	
	Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
1	BCHMCN001B	380	BCHMCH001B	550
2	BCHMCN002B	760	BCHMCH002B	1100
3	BCHMCN003B	1140	BCHMCH003B	1650
4	BCHMCN004B	1530	BCHMCH004B	2190
5	BCHMCN005B	1850	BCHMCH005B	2490
7.5	BCHMCN007B	2770	BCHMCH007B	3730
10	BCHMCN010B	3320	BCHMCH010B	4600
12.5	BCHMCN012B	4160	BCHMCH012B	5750
15	BCHMCN015B	4980	BCHMCH015B	6900
20	BCHMCN020B	6640	BCHMCH020B	9210
25	BCHMCN025B	8300	BCHMCH025B	11500

Heavy edge Zn Al Alloy MPP film

**MPP Capacitors (IS13340)**

MPP capacitors are manufactured using Zn-Al metallized polypropylene film. These modules are provided with pressure interrupter arrangement for safety against bursting due to internal pressure arised due to prolonged high voltage / current. The modules are assembled in aluminium case or CRCA container

.02 - .03 micron metallised layer



### MPP Box Type Capacitors(with ISI Mark) (440V)

HSN Code : 8532

KVAR	Normal Duty		Heavy Duty	
	Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
1	BCHMBN001B	440	BCHMBH001B	550
2	BCHMBN002B	860	BCHMBH002B	1100
3	BCHMBN003B	1290	BCHMBH003B	1650
4	BCHMBN004B	1710	BCHMBH004B	2200
5	BCHMBN005B	2010	BCHMBH005B	2590
7.5	BCHMBN007B	3030	BCHMBH007B	3880
10	BCHMBN010B	4010	BCHMBH010B	5160
12.5	BCHMBN012B	5040	BCHMBH012B	6460
15	BCHMBN015B	6040	BCHMBH015B	7750
20	BCHMBN020B	8040	BCHMBH020B	10340
25	BCHMBN025B	10050	BCHMBH025B	12930

# LT Power Capacitors..... BCH



## APP Box Type Single Layer Capacitors & Super Heavy Duty Box Type Capacitors (with ISI Mark) (440V)

HSN Code : 8532

KVAR	APP Capacitor		SHD Capacitor	
	Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
1	BCHAPS001B	1090	BCHSHD001B	2200
2	BCHAPS002B	2160	BCHSHD002B	4370
3	BCHAPS003B	3230	BCHSHD003B	6550
4	BCHAPS004B	4300	-	-
5	BCHAPS005B	5230	BCHSHD005B	9350
7.5	BCHAPS007B	7850	BCHSHD007B	14040
10	BCHAPS010B	9710	BCHSHD010B	18720
12.5	BCHAPS012B	12150	BCHSHD012B	23390
15	BCHAPS015B	14560	BCHSHD015B	28070
20	BCHAPS020B	19430	BCHSHD020B	37430
25	BCHAPS025B	24300	BCHSHD025B	46780

Double thick double hazy pp film

**APP Capacitors**

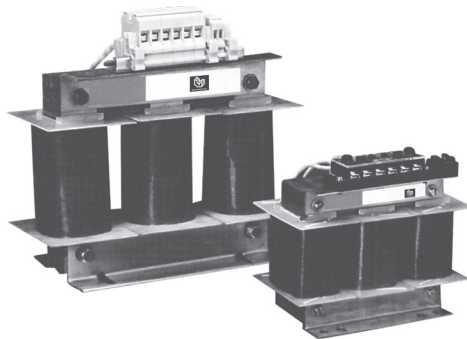
Non self healing APP capacitors manufactured using double hazy and double thick polypropylene films between two electrodes of thick aluminium foil have extended foil construction to ensure low watt losses

Aluminium foil

Price of 480V & 525V Capacitors available on request.

## 7% Aluminium wound & Copper wound 440V Detuned Reactors

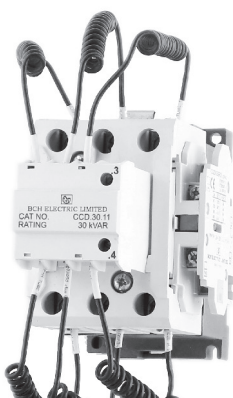
HSN Code : 8504



KVAR	Aluminium wound		Copper wound	
	Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
5	BCHRAL005B	On request	BCHRCU005B	On request
10	BCHRAL010B	On request	BCHRCU010B	On request
15	BCHRAL015B	On request	BCHRCU015B	On request
20	BCHRAL020B	On request	BCHRCU020B	On request
25	BCHRAL025B	On request	BCHRCU025B	On request
50	BCHRAL050B	On request	BCHRCU050B	On request
75	BCHRAL075B	On request	BCHRCU075B	On request
100	BCHRAL100B	On request	BCHRCU100B	On request

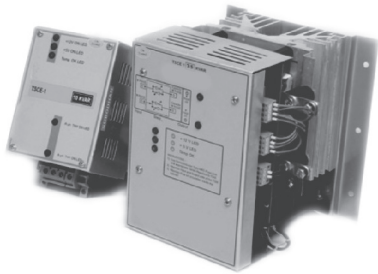
## Freedom series Capacitor duty contactor (AC Control)

HSN Code : 8536



kVAR rating at 415V 3Ph 50Hz	Cat No.	Aux Contacts	MRP [₹]
5	CCD.05.11.■	1NO+1NC	2670
10	CCD.10.11.■	1NO+1NC	2900
15	CCD.15.11.■	1NO+1NC	4240
20	CCD.20.11.■	1NO+1NC	4980
26	CCD.26.11.■	1NO+1NC	6110
30	CCD.30.11.■	1NO+1NC	9710
40	CCD.40.11.■	1NO+1NC	14790

# LT Power Capacitors..... BCH



## Thyristor Switched Module with Visual Circuit Indicator HSN Code : 8538

KVAR	Type	Rated Voltage (V)	Cat. No.	MRP[₹]
5	TSM	440	BCHTSM005	On request
10	TSM	440	BCHTSM010	On request
15	TSM	440	BCHTSM015	On request
20	TSM	440	BCHTSM020	On request
25	TSM	440	BCHTSM025	On request
50	TSM	440	BCHTSM050	On request
75	TSM	440	BCHTSM075	On request
100	TSM	440	BCHTSM100	On request

## APFC

### Intelligent Power Factor Controllers (IPFC)

Steps	Cat. No.	Voltage	Brief description	MRP [₹]
12 STEP - 3φ	RG3-12C	230V	12 Step intelligent PFC	41760
12 STEP - 3φ	RG3-12CS	230V	12 Step intelligent PFC with RS 485 communication	46970
15 STEP - 3φ	RG3-15C	230V	15 Step , Intelligent PFC relay	43770
15 STEP - 3φ	RG3-15CL	230V	15 Step , Intelligent PFC relay with 3 steps for reactor	On request
15 STEP - 3φ	RG3-15CS	230V	15 Step , Intelligent PFC relay with RS485 communication	52950
15 STEP - 3φ	RG3-15CLS	230V	15 Step , Intelligent PFC relay with 3 steps for reactor and RS485 communication	On request

Note : \*\*RG3-8/12/15 and RG3-12/15CS available in 230V only



- 3-Phase / 3CTs
- Connecting Single-Phase & 3-Phase Capacitors
- Compensation of Each Phase
- Measures : A, Cos-φ, Total W, Total VAR, Total VA, Total KWH, Total KVArh
- Harmonic Measurement (up to 19th)
- THD 1% THD V%
- Programmable THD Protection
- Programmable Discharge Time
- Programmable THD Alarm
- Password Protection for setup
- Overheat Protection (Optional)
- RS-485 Communication (Optional)
- RG-15C - Intelligent relay PFC with smart switching with all 15 steps relay connection

### Automatic Power Factor Controllers (APFC)

Steps	Cat. No.	Voltage	Brief description	MRP [₹]
6 STEP - 1 φ	RG-6T-230-96	230V	PFC (96X96) WITH 6 STEPS , 230 V	16180
6 STEP - 1 φ	RG-6T-415-96	415V	PFC (96X96) WITH 6 STEPS , 415 V	16180
6 STEP - 1 φ	RG-6T-230	230V	PFC (144X144) WITH 6 STEPS, 230 V	16910
6 STEP - 1 φ	RG-6T-415	415V	PFC (144X144) WITH 6 STEPS, 415 V	16910
8 STEP - 1 φ	RG-8T-230	230V	PFC (144X144) WITH 8 STEPS, 230 V	19220
8 STEP - 1 φ	RG-8T-415	415V	PFC (144X144) WITH 8 STEPS, 415 V	19220
8 STEP - 3 φ	RG3-8T-230	230V	PFC 144X144, 8 STEPS, 230V UNBALANCE LOAD	25830
12 STEP - 1 φ	RG-12T-230	230V	PFC (144X144) WITH 12 STEPS, 230 V	24070
12 STEP - 1 φ	RG-12T-415	415V	PFC (144X144) WITH 12 STEPS, 415 V	24070
12 STEP - 3 φ	RG3-12T-230	230V	PFC 144X144 12 STEPS 230V UNBALANCE LOAD	31280

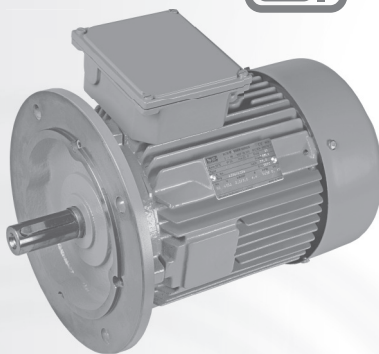
# Motors

Low Voltage AC TEFC Squirrel  
Cage Induction Motors

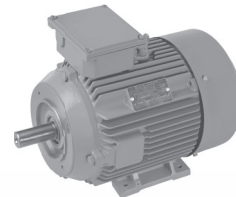
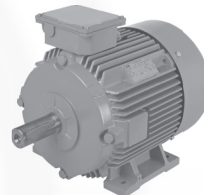
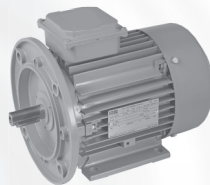
## IE2, IE3 & IE4

50°C  
ambient temperature

Class F

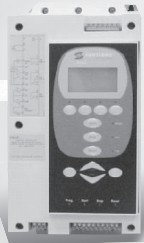


- **0.12 HP to 425 HP**
- **2 to 8 Poles**
- **With forced cooling**
- **Upto 40 intermediate standard ratings**
- **High efficiency, consistent - life long**
- **Low loss for entire life**
- **Inverter duty motor**
- **No deration upto 50° C**
- **Dual coat winding wire as standard feature**
- **6 terminals across the range**
- **Top, LHS, RHS termination flexibility**
- **ISI marking**



# Automation Products

- **AC Drives**
- **Digital DC Drives**
- **Soft Starters**
- **e-prox Sensors**
- **Plug-in Relays**
- **Electronic Timers**





# AC Drives ..... BCH

## SINUS B AC Drive



- 0.37~2.2Kw, Input-1Phase 200-230V AC
- Output - 3 Phase 200-230V AC
- Sensorless vector and V/F control
- Build in PID function

## AC Drive



### Sinus Penta AC Drive

- 4.5 - 3000 KW, 3 Phase 380 - 415 VAC
- One Drive - Five functions
  - Vector modulation IFD functionality for general-purpose applications
  - Sensorless vector VTC functionality for high torque-demanding applications
  - Vector FOC functionality with an encoder for accurate torque requirements and a wide speed range
  - Vector SYN functionality for applications with brushless, synchronous motors
  - RGN functionality for the inverter application as an AC/DC converter for the DC supply of multiple drives
- In built Braking chopper upto 132KW rating (S30)
- Serial communication port RS485 – MODBUS RTU Protocol
- Starting Torque upto 240% max
- PID function / second PID function
- Control keypad panel with 12 keys and large back-lit LCD
- Intelligent cooling system
- Encoder feedback
- Full compatibility with teleservice software, "REMOTE DRIVE" on internet
- Compatible with Easy Harmonics, tool for the calculation of Harmonic currents



# DC Drives/Soft Starters ..... BCH

## Digital DC Drives



- From 10A to 4500A ( 2.4 KW to 2205 KW )  
3 Phase 220-690VAC
- 2 & 4 Quadrant digital drive
- Local control from keypad
- 12/7 programmable I/Os
- Predictive control and field boost
- Feedback from dynamo/encoder/armature
- Auto switching in armature F/B against  
encoder/tacho feed back failure

### Digital DC Drives

HSN Code - 8504

Cat. No.	Armature Current (A)	Field Current (A)
DCREG*.10 POT440V	10	5
DCREG*.20 POT440V	20	5
DCREG*.40 POT440V	40	5
DCREG*.70 POT440V	70	5
DCREG*.100 POT440V	100	5
DCREG*.150 POT440V	150	15
DCREG*.180 POT440V	180	15
DCREG*.250 POT440V	250	15
DCREG*.350 POT440V	350	15
DCREG*.410 POT440V	410	35
DCREG*.500 POT440V	500	35
DCREG*.600 POT440V	600	35
DCREG*.900 POT440V	900	35
DCREG*.1200 POT440V	1200	35

\* to complete cat code suffix : 2- for II Quadrant drive 4 - for IV Quadrant drive



### ASA4.0 Series Soft-Starter

24A to 580A, 3 Phase 200V to 525V AC or 380-690V AC  
overload upto 600% of the rated current

#### Protection:

- over / under current
- current imbalance
- Motor Thermistor
- Phase Sequence
- Phase Loss
- Power Loss



### Medium Voltage Soft-Starter

- Power supply 2300VAC to 15000VAC, Rated current 200A to 600A



## Standard Version of Inductive Proximity Switches

HSN Code - 8536



- Sizes from 8mm to 30mm Dia
- Switching Distance from 1.5mm to 15mm
- IP 67, CE Marked
- Sensors with Linear output (4 - 20 mA/0-10VDC )

### General Specifications

- High switching capacity
- 200mA upto 12mm Dia
- 400mA for 18mm and 30mm Dia
- Wide range of outputs
- Voltages AC/DC
- Status LED Indication
- Built in Short circuit protection

### Special Versions

- Non Standard sizes from 4mm to 80mm dia
- High temperature sensors upto 125 Deg C
- Square / Slot / Rectangular sensors
- Sensor with shielded cable

Cat. No.	Dia (mm)	Nominal Sn Distance (mm)	Output	Max. Load (mA)	MRP [₹]	Lot Size
Flush Version Nominal Voltage 12-30V DC 3 Wire Output LED Indication Integrated cable 3C/2M						
DINE8SP10	8	1.5	PNP-NO	100	1245	10
DINE8SN10	8	1.5	NPN-NO	100	1245	
DINE12SP10	12	2	PNP-NO	200	1015	
DINE12SN10	12	2	NPN-NO	200	1015	
DINE18SP10	18	5	PNP-NO	200	1060	
DINE18SN10	18	5	NPN-NO	200	1060	
DINE30SP10	30	10	PNP-NO	400	1435	
DINE30SN10	30	10	NPN-NO	400	1435	
Non Flush Version Nominal Voltage 12-30V DC 3 Wire Output LED Indication Integrated cable 3C/2M						
DINE8NP10	8	2	PNP-NO	100	1245	10
DINE8NN10	8	2	NPN-NO	100	1245	
DINE12NP10	12	4	PNP-NO	200	1015	
DINE12NN10	12	4	NPN-NO	200	1015	
DINE18NP10	18	8	PNP-NO	200	1060	
DINE18NN10	18	8	NPN-NO	200	1060	
DINE30NP10	30	15	PNP-NO	400	1435	
DINE30NN10	30	15	NPN-NO	400	1435	
Flush Version Nominal Voltage 240V AC* 2 Wire Output LED Indication Integrated cable 3C/2M						
DINE12SA10	12	2	NO	200	1320	10
DINE12SA01	12	2	NC	200	1320	
DINE18SA10	18	5	NO	400	1395	
DINE18SA01	18	5	NC	400	1395	
DINE30SA10	30	10	NO	400	1625	
DINE30SA01	30	10	NC	400	1625	
Non Flush Version Nominal Voltage 240V AC* 2 Wire Output LED Indication Integrated cable 3C/2M						
DINE12NA10	12	4	NO	200	1320	10
DINE12NA01	12	4	NC	200	1320	
DINE18NA10	18	8	NO	400	1395	
DINE18NA01	18	8	NC	400	1395	
DINE30NA10	30	15	NO	400	1625	
DINE30NA01	30	15	NC	400	1625	

\*110V AC input voltage is also available, For 110V AC replace A by 2A

## ePROX Range

### Capacitive Proximity Switches

HSN Code - 8536



- Sizes: 18mm and 30mm dia
- Switching Distance: upto 15mm
- IP 67, CE Compliance

#### General Specifications

- Max. load current : 400mA
- Wide range of outputs
- Built in Short circuit & polarity reversal protection
- Sensitivity adjustment thru trimmer

Cat. No.	Dia (mm)	Nominal Sn Distance (mm)	Output	Max. Load (mA)	MRP [₹]	Lot Size
Flush Version 12-30V DC 3 Wire Output LED Indication Integrated 3C/2M						
DCAE18SN10	18	1 to 5	NPN-NO	400	2540	10
DCAE18SP10	18	1 to 5	PNP-NO	400	2540	
DCAE30SN10	30	1 to 10	NPN-NO	400	2910	
DCAE30SP10	30	1 to 10	PNP-NO	400	2910	
Non Flush Version 12-30V DC 3 Wire Output LED Indication Integrated 3C/2M						
DCAE18NN10	18	2 to 10	NPN-NO	400	2540	10
DCAE18NP10	18	2 to 10	PNP-NO	400	2540	
DCAE30NN10	30	3 to 15	NPN-NO	400	2910	
DCAE30NP10	30	3 to 15	PNP-NO	400	2910	

### Photoelectric Sensors

HSN Code - 8536



- Size : M18 cylindrical
- Mode : diffuse, retro and thru beam
- LED indication
- Sensing distance 20cm to 5mtr.

#### Special Versions

- Sensors in Rectangular housing

Cat. No.	Dia (mm)	Nominal Sn Distance (mm)	Output	Max. Load (mA)	MRP [₹]	Lot Size
Nominal Voltage : 12-30V DC Diffuse Scan DC 4-W Output LED Indication Prewired with 2 m Cable						
DPHE18D2N11	18	200	NPN-NO+NC	200	3855	10
DPHE18D2P11	18	200	PNP-NO+NC	200	3855	
Nominal Voltage : 12-30V DC Retro Reflective DC 4-W Output LED Indication Prewired with 2 m Cable						
DPHE18RRN11	18	1000	NPN-NO+NC	200	3870	10
DPHE18RRP11	18	1000	PNP-NO+NC	200	3870	
Nominal Voltage : 12-30V DC Through Beam DC 4-W Output LED Indication Prewired with 2 m Cable						
DPHE18TBRP11	18	5000	PNP-NO+NC	200	4630	10
DPHE18TBRN11	18	5000	NPN-NO+NC	200	4630	

#### Note :

- Prices for Thru Beam, Photo Sensors are inclusive of emitters & receivers.
- Prices for Retro Reflective Sensors are inclusive of reflectors.

# Electronic Sensors ..... BCH



## Standard Version of Inductive Proximity Switches

HSN Code - 8536

Cat. No.	Dia (mm)	Nominal Sn Distance (mm)	Output	Connector Size	MRP [₹]	Lot Size
Flush Version Nominal Voltage 12-30V DC 3 Wire Output LED Indication, 200 mA Load upto 12mm & 400 mA for 18 mm						
DINE8SP10K	8	1.5	PNP-NO	M8 Connector	1280	10
DINE8SN10K	8	1.5	NPN-NO	M8 Connector	1280	
DINE12SP10K	12	2	PNP-NO	M12 Connector	1275	
DINE12SN10K	12	2	NPN-NO	M12 Connector	1275	
DINE18SP10K	18	5	PNP-NO	M12 Connector	1290	
DINE18SN10K	18	5	NPN-NO	M12 Connector	1290	
DINE30SP10K	30	10	PNP-NO	M12 Connector	1600	
DINE30SN10K	30	10	NPN-NO	M12 Connector	1600	
Non Flush Version Nominal Voltage 12-30V DC 3 Wire Output LED Indication						
DINE8NP10K	8	2	PNP-NO	M8 Connector	1280	10
DINE8NN10K	8	2	NPN-NO	M8 Connector	1280	
DINE12NP10K	12	4	PNP-NO	M12 Connector	1275	
DINE12NN10K	12	4	NPN-NO	M12 Connector	1275	
DINE18NP10K	18	8	PNP-NO	M12 Connector	1290	
DINE18NN10K	18	8	NPN-NO	M12 Connector	1290	
DINE30NP10K	30	15	PNP-NO	M12 Connector	1600	
DINE30NN10K	30	15	NPN-NO	M12 Connector	1600	
Cat. No.	Description Female Connectors				MRP [₹]	
DM8K3	M8 3-Wire straight connector w/o LED & 2 m cable				985	10
DM8K390LE	M8 3-Wire "L" type connector with LED & 2 m cable				985	
DM12K4	M12 4-Wire straight connector w/o LED & 2 m cable				665	
DM12K490	M12 4-Wire "L" type connector w/o LED & 2 m cable				970	
DM12K490LE	M12 4-Wire "L" type connector with LED & 2 m cable				1040	
Linear Output Inductive Proximity Sensor - Nominal Voltage 24V DC, 2m Integrated Cable						
DINE18LIN	18	5	0 - 10V	2 m long PVC Cable	2185	10
DINE18LINMA	18	5	4 - 20 mA		2185	

## Standard Version DC 2 Wire Proximity Switches

HSN Code - 8536

Cat. No.	Dia (mm)	Nominal Sensing Distance (mm)	Output	Max. Load (mA)	MRP [₹]	Lot Size
Flush Version Nominal Voltage 24V DC 2 Wire Output LED Indication, Integrated 3C/2m long PVC Cable 65mm long tubular Metallic Housing						
DINE8SD10	8	1.5	NO	200	1515	10
DINE12SD10	12	2	NO	200	1055	
DINE18SD10	18	5	NO	400	1085	
DINE30SD10	30	10	NO	400	1405	
Non Flush Version, Nominal Voltage 12-30V DC 2 Wire Output LED Indication, Integrated 3C/2m long PVC Cable 65mm long tubular Metallic Housing						
DINE8ND10	8	2	NO	200	1515	10
DINE12ND10	12	4	NO	200	1055	
DINE18ND10	18	8	NO	400	1085	
DINE30ND10	30	15	NO	400	1405	

# Electronic Sensors ..... BCH



## Short Housing Inductive Proximity Switch-45mm length

HSN Code - 8536

Cat. No.	Dia (mm)	Nominal Sensing Distance (mm)	Output	Max. Load (mA)	MRP [₹]	Lot Size
Flush Version Nominal Voltage 12-30V DC, 3 Wire Output, LED Indication, Integrated 3C/2m long PVC Cable						
45mm long tubular Metallic Housing						
DINE8SP10S	8	1.5	PNP-NO	200	1570	10
DINE8SN10S	8	1.5	NPN-NO	200	1570	
DINE12SP10S	12	2	PNP-NO	200	1095	
DINE12SN10S	12	2	NPN-NO	200	1095	
DINE18SP10S	18	5	PNP-NO	400	1105	
DINE18SN10S	18	5	NPN-NO	400	1105	
Non Flush Version, Nominal Voltage 12-30V DC, 3 Wire Output, LED Indication, Integrated 3C/2m long PVC Cable						
45mm long tubular Metallic Housing						
DINE8NP10S	8	2	PNP-NO	200	1570	10
DINE8NN10S	8	2	NPN-NO	200	1570	
DINE12NP10S	12	4	PNP-NO	200	1095	
DINE12NN10S	12	4	NPN-NO	200	1095	
DINE18NP10S	18	8	PNP-NO	400	1105	
DINE18NN10S	18	8	NPN-NO	400	1105	

## Square / Rectangular Proximity Switch

HSN Code - 8536

Cat. No.*	Size (mm)	Nominal Sensing Distance (mm)	Output	Max. Load (mA)	MRP [₹]	Lot Size
Flush Version, Nominal Voltage 12-30V DC, 3 Wire Output, LED Indication, Integrated 3C/2m long PVC Cable, Plastic Housing						
DINE1717SP10P	17x17x30	5	PNP-NO	200	1095	10
DINE5025SP10P	50x25x10	5	PNP-NO	200	1145	
DINE1717SN10P	17x17x30	5	NPN-NO	200	1095	
DINE5025SN10P	50x25x10	5	NPN-NO	200	1145	

\* For NC Output, Replace Suffix 10 by 01

\*\* For 110V AC input, Replace A by 2A

\*\*\* High Ambient Temp upto 125°C Proximity switch are available on request

# Plug in Relays-ASP Series.....BCH

## Plug In Relays - Universal (ASPU)

HSN Code - 8536



- Type ASPU
- 10 Amp (Res) Contact rating
- 2 Change over / 3 Change over

Coil Voltage	Cat. No.	Contacts	MRP [₹]	Lot Size
8 Pin - contact rating 10A (Res.) at 24V DC/240V AC, LED Indication				
12V DC	ASPU212DLE	2 C/O	440	10
24V DC	ASPU224DLE		435	
110V DC	ASPU2110DLE		485	
12V AC	ASPU212ALE		485	
24V AC	ASPU224ALE		515	
110V AC	ASPU2110ALE		510	
240V AC	ASPU2240ALE		560	
11 Pin - contact rating 10A (Res.) at 24V DC/240V AC, LED Indication				
12V DC	ASPU312DLE	3 C/O	530	10
24V DC	ASPU324DLE		520	
110V DC	ASPU3110DLE		565	
24V AC	ASPU324ALE		585	
110V AC	ASPU3110ALE		580	
240V AC	ASPU3240ALE		620	

## Plug In Relays - Universal (ASPS)

HSN Code - 8536



- Type ASPS
- 5 Amp (Res) Contact rating
- 2 Change over / 3 Change over

Coil Voltage	Cat. No.	Contacts	MRP [₹]	Lot Size
8 Pin - contact rating 5A (Res.) at 24V DC/240V AC, LED Indication				
12V DC	ASPS212DLE	2 C/O	395	10
24V DC	ASPS224DLE		395	
48V DC	ASPS248DLE		430	
110V DC	ASPS2110DLE		445	
12V AC	ASPS212ALE		425	
24V AC	ASPS224ALE		430	
110V AC	ASPS2110ALE		425	
240V AC	ASPS2240ALE	485		
11 Pin - contact rating 5A (Res.) at 24V DC/240V AC, LED Indication				
12V DC	ASPS312DLE	3 C/O	485	10
24V DC	ASPS324DLE		485	
48V DC	ASPS348DLE		570	
110V DC	ASPS3110DLE		550	
24V AC	ASPS324ALE		465	
110V AC	ASPS3110ALE		485	
240V AC	ASPS3240ALE		545	

## Sockets for ASPU / ASPS Plug in Relay

HSN Code - 8538

Cat. No.	Type	MRP [₹]	Lot Size
10A, 240V AC, Screw Terminals, 35mm DIN Rail Mounting			
ASSU11	SOCKET 11 PIN FOR ASPS/ASPU Relay	235	10
ASSU8	SOCKET 8 PIN FOR ASPS/ASPU Relay	180	

# Plug in Relays-ASP Series..... BCH

## Plug In Relays - Miniature (ASPM)

HSN Code - 8536



- Type ASPM
- 5 Amp (Res) Contact rating
- 2 Change over / 4 Change over

Coil Voltage	Cat. No.	Contacts	MRP [₹]	Lot Size
14 Pin - contact rating 5A (Res.) at 24V DC/240V AC, LED Indication				
12V DC	ASPM412DLE	4 C/O	350	20
24V DC	ASPM424DLE		350	
48V DC	ASPM448DLE		355	
110V DC	ASPM4110DLE		355	
24V AC	ASPM424ALE		380	
110V AC	ASPM4110ALE		395	
240V AC	ASPM4240ALE		395	
8 Pin - contact rating 5A (Res.) at 24V DC/240V AC, LED Indication				
12V DC	ASPM212DLE	2 C/O	295	20
24V DC	ASPM224DLE		295	
48V DC	ASPM248DLE		350	
110V DC	ASPM2110DLE		350	
24V AC	ASPM224ALE		350	
110V AC	ASPM2110ALE		350	
240V AC	ASPM2240ALE		350	

## Sockets - for ASPM Plug in Relay

HSN Code - 8538

Cat. No.	Type	MRP [₹]	Lot Size
5A, 240V AC, Screw Terminals, 35mm DIN Rail Mounting			
ASSM14	SOCKET 14 PIN FOR ASPM Relay	270	20
ASSM8	SOCKET 8 PIN FOR ASPM Relay	195	

\* For price of other coil voltage, please contact our nearest sales office.



# Electronic Timers..... BCH

## On Delay



- Fixed Voltage, Fixed Time
- Wide range of input supply - 220VAC; 110VAC; 24V AC/DC
- Large calibrated dial for easy and accurate time setting
- LED indications for Input supply and Output status
- Surface mounting & DIN rail mounting
- 1 changeover relay output (SPDT)
- All Purpose On Delay timer

## Multi Function



- 4 Functions - On delay, Interval, Off delay, Single Shot
- Multi Time Range - Sec / Min / Hr
- Universal Voltage - 24 V- 230VAC/DC
- Large calibrated dial for easy and accurate time setting
- Compact Design
- LED indications for Input supply and Output status
- Surface mounting & DIN rail mounting
- 1 changeover relay output (SPDT)
- All Purpose Timer

## IBT Electronic Timer

### Fixed Voltage; Fixed Time Range - IBTA

HSN Code - 9107

Cat No.	Time Range	Function	MRP [₹]
IBT00=0-	0.6-6/3-30/6-60/18-180 Sec	On Delay	1140

- Voltage Code
- Timing Range for IBTA On Delay Timer

## Voltage Codes

Voltage	Voltage Code
240V AC	1
110V AC	2
24V AC/DC	3
12V DC	4

## Timing Code for IBTA On Delay Timer

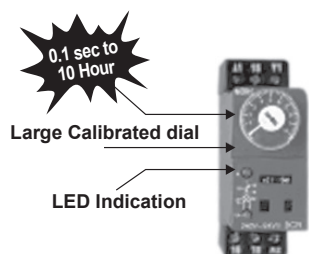
Time Range	Code
0.6 - 6 Sec.	1
3 - 30 Sec.	2
6 - 60 Sec.	3
18 - 180 Sec.	4

## Universal Voltage, Multi Time, Multi Function - IBTMU

HSN Code - 9107

Cat No.	Time Range	Function	Voltage	MRP [₹]
IBT04500	0.1S - 10 Hr.	On Delay, Off Delay, Interval, Single Shot	24-240V AC/DC	2185

# Electronic Timers ..... BCH



- On Delay
- Off Delay
- Cyclic
- Multifunction
- Star Delta
- Special version for Compressor application
- AC / DC Supply
- Widest timing range from 0.1 sec to 10 Hours in Single Unit
- Calibrated time scale for easy time setting
- DIN rail mounting
- Excellent repeat accuracy

## Electronic Timers

HSN Code - 9107

Description	Cat.No.	MRP [₹]
Timer Encapsulated on delay Timer Type SAS-P (Solid State output) Voltages : 240V AC, 110V AC, 48V AC/DC, 24V AC/DC Time Range : 1 sec. or 0.1-10 Sec. or 1-100 Sec., or 3-300 Sec.	SST00-0-	1205
Encapsulated on delay timer type SAS-CB (Solid State output) (Compressor/Heat pump) Voltages : 240V AC, 110V AC, 48V AC/DC, 24V AC/DC Time Range : 180 Sec. fixed	SST02-00	1205
Chronos Delay on make type BAR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC or 12V DC	SBT00-00	2100
Delay on break type BCR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC or 12V DC	SBT01-00	2290
Recycling type BDR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC	SBT02-00	3050
Multifunction type BLR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC	SBT03-00	2315

- Voltage Code
- Timing Range for SAS Timer



## Star Delta Timer DQR Plus



Description	Cat No.	MRP [₹]
Star-Delta Timer DQR Plus, 3-120 Sec		
240-415VAC	SDTP00000	1025
240VAC	SDTP00100	900
110VAC	SDTP00200	900

## Voltage Codes

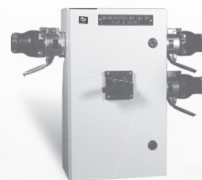
Type	Voltage	Voltage Code
B	240V AC; 24 V AC/DC	1
	110 V AC; 24 V AC/DC	2
	12 V DC	5
SAS	240V AC	1
	110V AC	2
	48V AC/DC	3
	24V AC/DC	4

## Timing Code

Type	Timing	Code
SAS	1 Sec.	0
	10 Sec.	1
	100 Sec.	2
	300 Sec.	3

# Custom Built Products

- **MCC & PCC**
- **APFC Panels**
- **Crane Control Panels**
- **Punch Grid Resistors & Panels, NGR & DBR**
- **Special Purpose Starters**
- **Power Receptacles**
- **Auto Transformer Starters**



## Motor Control Centres (MCC) & Power Control Centres (PCC)



### SWITCHBOARD DATA SHEET

BCH Switchboards are manufactured at Faridabad works complying to latest design standard & manufacturing processes, with inhouse powder coating paint shop, gasketing shop, fabrication shop equipped with AMADA punching & bending machines.

Switchboards are modular in design, metal clad, free standing, air insulated, floor mounted & compartmentalized type suitable for most critical and rugged indoor/outdoor application & tough industrial environment.

#### TECHNICAL DATA

Standard & Specification

#### Power Switchgear & Controlgear assembly as per IEC 61439 - 1 & 2

- Short circuit Test - Bus-bar system designed for 50 KA rms / 1sec, and peak fault withstanding Strength 105 KA & 65KA rms/1sec & 143KA peak fault withstand as per IS: 8623 and IEC: 61439
- Temperature rise - Panel tested for 800 A to 4000 A from CPRI Bhopal as per IS: 8623 and IEC: 61439
- Impulse withstand test - Rated impulse withstand test for 8Kv from CPRI, Bangalore as per Sub clause 10.9 of IEC 61439-1 & 2
- Seismic Zone & Resonance search test - As per IEE693:2018, PERFORMANCE LEVEL ZPA0.5g

#### Product range

- PCC upto 6300A- Single Tire/Two Tire/Three Tire version
- PMCC/IMCC/CMCC- Fixed/drawout version
- Power Distribution Panel / Lighting panel

#### Electrical Data

- Rated insulation voltage (Ui) 1000V
- Rated operating voltage (Ue) Upto 690V
- Rated impulse withstand voltage (Uimp) 8KV
- Rated frequency (fn) 50 / 60 Hz

#### Main Horizontal Bus Bar -

Aluminum grade E 91E as per IS:5082 & Electrolytic grade Copper Bus-bars

- Rated current (Ie) Up to 6300 A
- Rated peak withstand current (Ipk) Up to 220 KA
- Rated short-time withstand current(Icw) Up to 80 KA-1sec

#### Vertical Distribution Bus Bar

- Rated current (Ie) up to 2000 A
- Rated peak withstand current (Ipk) up to 220 KA
- Rated short-time withstand current (Icw) up to 80 KA-1sec

#### Insulation characteristics

- Clearence >20 mm
- Creepage distance >20 mm
- Pollution degree 3

#### Degree of protection

- According to IEC 60529 :
  - IP 54/IP 55 for switchboards & IP-65 for non compartmentalized distribution Boards. CPRI & ERDA TESTED

#### Gasketting

#### Enclosure

- Modular design, uses CR Grade CRCA and Electro galvanized steel for structures are SKIN Pass, Zero spangle with high GSM zinc coating. Ensuring high corrosion resistance against extreme climatic condition after powder coating.

#### Mechanical Impact

- According to IEC 62262 : 2002 IK-10 followed by IP 55; ERDA tested

#### Forms of separation

- According to IEC 61439-2 Up to Form 4 Type 6

#### Structure components

- Sheet steel of frame & load bearing member 2.0mm/GI
- Door partition & Cover with stiffner Upto 2mm
- Gland plate Upto 3mm
- Base frame channel ISMC 75/100 or 3mm CRCA

#### Surface treatment / Painting

- Frame including internal subdivisions & external Standard paint shade - RAL-7035, RAL-7032 and 631 as per IS:5. Ten tank spray type pre-treatment prior to powder coating with fully automated powder coating shop.

#### Plastic components

- Flame retardant, halogen free flame retardant, halogen free

#### Resistance to corrosion

- Salt spray test - Tri Cataionic Zinc Phosphate based powder coated enclosure can withstand 1000 Hrs in SST as per IS

#### Bus bar systems

- Bus bar insulation
  - Main Bus bars & vertical bus bars are fully sleeved with insulated heat shrunk PVC Sleeves except at the joints for electrical insulation.

# APFC Panels ..... BCH

## 3Phase Automatic Power Factor Correction (APFC) Panels

### Key Features

- Advanced Micro Controller based Power Factor Controller with Self-diagnostic Sensing and Control of Capacitor Bank Stages.
- High performance 'BCH' Cylindrical & Box type Capacitors.
- Capacitor duty Contactors for reliable & trouble free operation.
- Choice of BCH Make Thyristor switch for capacitor switching & CU/AL wound Detuned reactor as an option.
- Choice of selection of Capacitors as per application & site conditions.
- Thoughtfully designed Panels with provision for louvres & cooling fan for proper ventilation to manage heat load.
- Enclosure with Epoxy based paint shade RAL 7035
- PU Foam Gasketing for sustained Ingress Protection of the Panel.



**Five Standard Versions of APFC Panels are available depending upon Switching Sequence, Mode of Control (Automatic & Manual options) & Type of Capacitors (Cylindrical / Box type) used.**

VERSION 1 - With BCH MPP Heavy Duty Cylindrical Capacitors & **WITHOUT** Manual option.

VERSION 2 - With BCH MPP Heavy Duty Box Capacitors & **WITHOUT** Manual option.

VERSION 3 - With BCH MPP Heavy Duty Cylindrical Capacitors & **WITH** Manual option.

VERSION 4 - With BCH MPP Heavy Duty Box Capacitors & **WITH** Manual option.

VERSION 5 - With BCH APP Box Type Capacitors & **WITH** Manual option.

(Other tailor made versions on request)

### Common Features

CAPACITOR RATING - 40 to 200KVAR in Standard Ratings of 40, 50, 60, 75, 100, 125, 150, 175 & 200 KVAR with suitable banking arrangement.

MOUNTING - Wall Mounting up-to 75KVAR & Floor Mounting above 75 KVAR ratings.

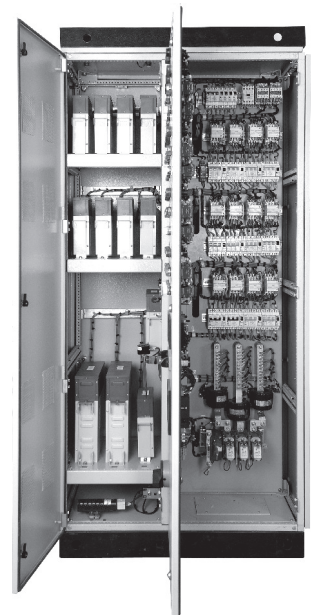
INCOMING - BCH-Resilient 3-P MCCB with Rotary handle.

OUTGOING - TP MCB or HRC fuses with fuse base as standard (BCH-Resilient 3-P MCCB or SDFU and Compartmentalized outgoing feeders can also be provided depending upon size of panel on request).

CONTACTORS - BCH Capacitor Duty Contactors as standard (BCH Thyristor switches on request).

R-Y-B INDICATIONS - RYB for Incomer & ON-OFF for Outgoing

AMMETER/VOLTMERS - Provided for VERSIONS 3, 4 & 5 only.



**For prices contact our nearest sales office.**

# Crane Control Panels ..... BCH



## AC Crane Control Bridge and Trolley Motion

This controller provides reversing and plugging operation of slip ring induction motors in heavy duty cranes on Trolley services. Upto 5 motor speeds are achieved in conjunction with a master controller.

### Design Features

- Simplified reliable circuitary
- Inverse Time delay Magnetic Overload protection
- Time Limit acceleration
- Speed Control by series resistors
- No Volt protection
- Special Unique plugging circuit with a voltage relay
- CRCA Sheet steel construction of the panel.
- 7 Tank pretreated panels for extremely long life
- Panels for indoor and outdoor protection



## AC Crane Control Hoisting Motion

- Plain rotor resistance
- AC Single phase dynamic braking
- Counter torque lowering
- Oprotor Control
- Creep Speed



## DC Crane Control Hoisting Motion

This control is for use with series wound motors drive for crane hoists and is arranged for reversing and dynamic lowering service. control

### Design Features

- Simplified reliable circuitary
- Inductive time limit acceleration on hoisting & lowering
- Better speed control on light or heavy loads when hoisting or lowering
- CRCA Sheet steel construction of the panel.
- 7 Tank pretreated panels for extremely long life



## DC Crane Control (Bridge and Trolley motion)

This controller provides reversing and plugging operation of series wound motors in heavy duty cranes on Trolley services. Upto 5 motor speeds are achieved in conjunction with a master controller.

### Design Features

- Simplified, reliable circuitary
- Rectifier controlled plugging
- Instantaneous and Inverse time delay magnetic overload protection
- No volt protection
- Heavy duty DC Contactors equipped with magnetic blowouts
- CRCA Sheet steel construction of the panel.
- 7 Tank pretreated panels for extremely long life

# Power Receptacles.....BCH

## Power Receptacles

### Range

- Single / Multiple outlet boxes
- 16/32/63/125A rating
- With or without protection
- Option of back up protection with :  
MCBs  
SDFUs  
MCCBs
- Modular and compact construction
- Loop in Loop out facility
- Higher degree of Ingress Protection
- 7 Tank processed powder coated enclosure
- PU Gasketing for excellent sealing against dust and water



## Plugs and Socket outlets with / without protection, mounted in CRCA enclosure of suitable size

Single Outlet	Incomer ( 1 No.)			Standard Version Cat reference	Loop in loop out version Cat reference
	Switch Type	MCCB Type	MCB		
1 No DS1A7A1 and 1 No. DS1B7A1	PSFS323ND000/ PSFS323ND00	-	-	PR16SDF-1	PR16SDF-1-LILO
1 No DS1A7A1 and 1 No. DS1B7A1	-	-	16A,TPN	PR16MCB-1	PR16MCB-1-LILO
1 No DS1A7A1 and 1 No. DS1B7A1	-	-	-	PR16WP-1	PR16WP-1-LILO
1 No DS3A7A1 and 1 No. DS3B7A1	PSFS323ND000/ PSFS323ND00	-	-	PR32SDF-1	PR32SDF-1-LILO
1 No DS3A7A1 and 1 No. DS3B7A1	-	-	32A,TPN	PR32MCB-1	PR32MCB-1-LILO
1 No DS3A7A1 and 1 No. DS3B7A1	-	-	-	PR32WP-1	PR32WP-1-LILO
1 No DS6A7A1 and 1 No. DS6B7A1	PSFS633ND000/ PSFS633ND00	-	-	PR63SDF-1	PR63SDF-1-LILO
1 No DS6A7A1 and 1 No. DS6B7A1	-	XFE063N+ separate Neutral Link + Rotary Handle	-	PR63MCCB-1	PR63MCCB-1-LILO
1 No DS6A7A1 and 1 No. DS6B7A1	-	-	63A,TPN	PR63MCB-1	PR63MCB-1-LILO
1 No DS6A7A1 and 1 No. DS6B7A1	-	-	-	PR63WP-1	PR63WP-1-LILO
1 No DS9A7A1 and 1 No. DS9B7A1	PSFS1253ND	-	-	PR125SDF-1	PR125SDF-1-LILO
1 No DS9A7A1 and 1 No. DS9B7A1	-	XF2H125NV+ separate Neutral Link + Rotary Handle	-	PR125MCCB-1	PR125MCCB-1-LILO
1 No DS9A7A1 and 1 No. DS9B7A1	-	-	-	PR125WP-1	PR125WP-1-LILO

### Double Outlet

2 No DS6A7A1 and 2 No. DS6B7A1	-	XF2H125NV+ separate Neutral Link + Rotary Handle	-	PR63MCCB-2	PR63MCCB-2-LILO
2 No DS6A7A1 and 2 No. DS6B7A1	PSFS1253ND	-	-	PR63SDF-2	PR63SDF-2-LILO

\* Prices : Available on request

# Auto Transformer ..... BCH

## Auto Transformer Starter Panels upto 800 HP

### Advantages

Good Starting Torque and current performance  
 Possibility of adjusting starting parameters  
 No break in supply to the motor during starting  
 Best suited when maximum reduction of Inrush current is desired or motor requires longer acceleration time with Good starting torque

- Blowers   ■ Compressors   ■ Crushers
- Pumps   ■ Extruders

### Range & Specifications

- Available upto 800HP
- Standard Tappings : 50% , 65% and 80%
- Air Cooled design & Oil cooled
- 7 Tank pre treated bolted construction enclosure
- Superior gasket

### Protections

- Short Circuit
- Overload and Single Phasing (Thru Overload relay)
- Under voltage
- Other protections available on request

### Metering and indication

- Voltmeter with selector switch
- Ammeter with selector switch
- R,Y, B phase indication
- Motor ON, OFF and Trip indication



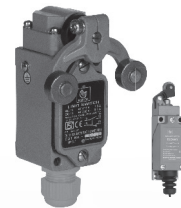
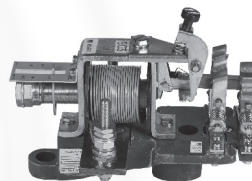
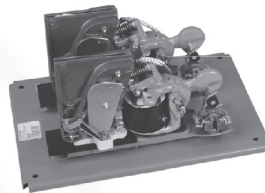
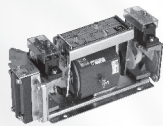
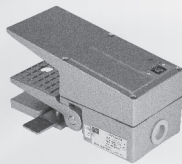
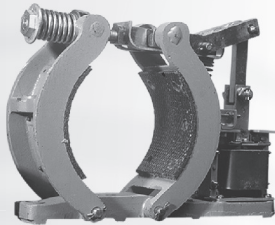
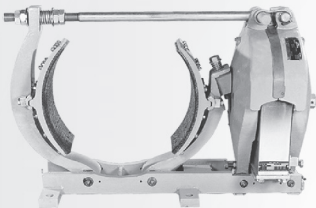
**HSN Code - 8537**

BIL Auto Transformer Starter - STANDARD RATINGS	MODEL 1 - BASIC ATS : PU door-gasket Enclosure, 3nos. Power Contactor, Citation OLR, Start/Stop PB, Motor ON LED		MODEL 2 - PREMIUM Version : PU door- gasket Enclosure, MCCB Incomer, 3nos. Power Contactor, Citation OLR, Electronic SPP, Ammeter/voltmeter with selector switches, Start/Stop PB, Phase & Motor ON/Trip LEDs.	
	HP	Cat. code for Air cooled	Cat. code for Oil cooled	Cat. code for Air cooled
20	ATEA20	ATEO20	ATPA20	ATPO20
25	ATEA25	ATEO25	ATPA25	ATPO25
30	ATEA30	ATEO30	ATPA30	ATPO30
35	ATEA40	ATEO40	ATPA40	ATPO40
40	ATEA40	ATEO40	ATPA40	ATPO40
50	ATEA50	ATEO50	ATPA50	ATPO50
60	ATEA60	ATEO60	ATPA60	ATPO60
75	ATEA75	ATEO75	ATPA75	ATPO75
100	ATEA100	ATEO100	ATPA100	ATPO100
125	ATEA125	ATEO125	ATPA125	ATPO125
150	ATEA150	ATEO150	ATPA150	ATPO150
175	ATEA175	ATEO175	ATPA175	ATPO175
200	ATEA200	ATEO200	ATPA200	ATPO200
225	ATEA225	ATEO225	ATPA225	ATPO225
250	ATEA250	ATEO250	ATPA250	ATPO250
300	ATEA300	ATEO300	ATPA300	ATPO300
350	ATEA350	ATEO350	ATPA350	ATPO350



# Industrial Core Products

- DC Contactors
- Limit Switches
- Heavy Duty Foot Switches
- AC Solenoid & Brakes
- DC Brakes
- Plugs & Sockets
- Plug & Socket Boxes
- Punched Grid Resistors



For above products, please refer "Industrial core products" price list