



# CONTROLGEAR & SWITCHGEAR PRODUCTS

## PRICE LIST

Effective : 22nd May 2024



BHARTIA

BCH

BCH  
ELECTRIC  
LIMITED

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

# 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.

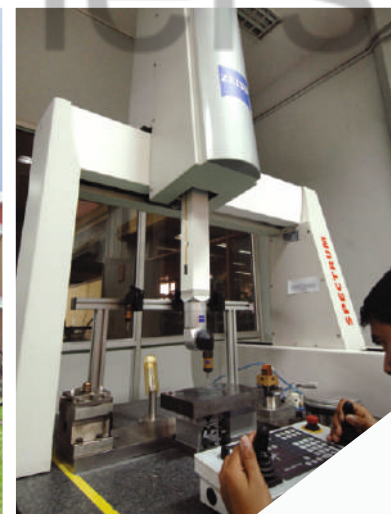
## Environmental Policy

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.

The Environment policy is publicly available on request.



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

# Our Products



**Switchgear & Controlgear**



**Motor Starters  
Submersible Pump Starters  
Contactor-NHD, CPG, CPGN**



**MCB & MCB Distribution Boxes**



**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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\* Terasaki ACB's & MCCB's products are also available on request.

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Complete range of  
**CIRCUIT BREAKERS**

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



**BCH  
ELECTRIC  
LIMITED**

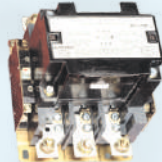
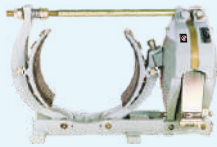
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Works 2 : 64-68, Sector-7, IIE, Pant Nagar, Rudrapur, Udham Singh Nagar - 263 153 (Uttarakhand) Tel. : 05944-250214/16 Fax : 05944-250215

# Low Voltage Switch Gear & Control Gear Products



- Air Circuit Breakers
- MCCBs
- MCB, Isolator, MCB Distribution Boxes, RCCB
- X-Line SDF, FSU, SDFU
- 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 & Supmersible Pump Starters
- Submersible Pump Starters
  - Three Phase (DOL and Star Delta)
  - Single Phase
- Oil Immersed Starters

Munimara Brothers



## Range of Air Circuit Breakers

- 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



### Basic Version



BU - BTX 1.0/1G/1Gi



BU - BTX 1.5G/1.5Gi

### 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

### Advanced Version



BU - BTX 3.5/3.5EC



BU - BTX 3.5H



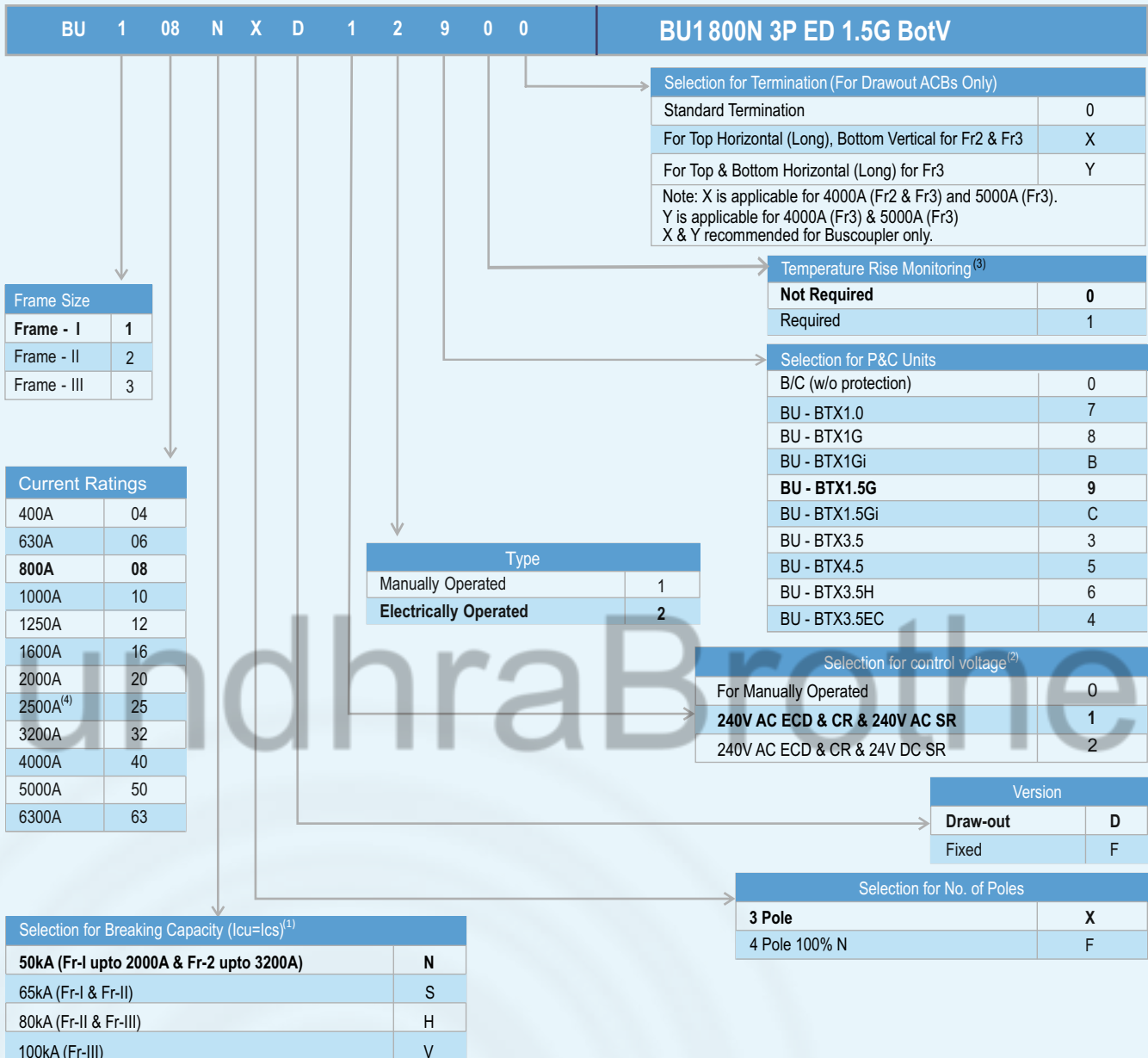
BU - BTX 4.5

### 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									■	■
	BU1-08	BU1-10	BU1-12	BU1-16	BU1-20	BU2-25	BU2-32	BU2-40	BU3-50	BU3-63
	Frame-1					Frame-2			Frame-3	

## ULTRA POWER ACB ordering information: Air Circuit Breakers



**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:

**Draw-out Version:** 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.

**Fixed Version:** 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.  
 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.  
 Electrically operated ACB includes ECD (240V AC), CR (240V AC) & SR (240V AC OR 24V DC).

## 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						BU232HXD01800	*		
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	

\* Available on request



## ULTRA POWER ACBs with BU-BTX1G (LSING - BCD Switches) - 4 Pole

Air Circuit Breakers



HSN Code : 8536

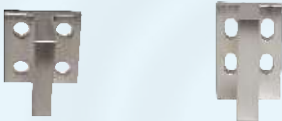
Current Rating	Version	4 Pole Manual Draw-out ACB with BU-BTX1G										
		N (50kA)		S (65kA)		H (80kA)		V (100kA)				
		Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]	Cat. No.	M.R.P. [₹]			
800A	MDO	BU108NFD01800	*	-	-	-	-	-	-			
1000A		BU110NFD01800		BU110SFD01800								
1250A		BU112NFD01800		BU112SFD01800								
1600A		BU116NFD01800		BU116SFD01800								
2000A		BU120NFD01800		BU120SFD01800								
2500A		BU225NFD01800		BU225SFD01800								
3200A		BU232NFD01800		BU232SFD01800	BU232HFD01800					*		
4000A		-		-	BU240HFD01800							
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	
Microswitch for Spring Charging Indication	BLMSC426720000	

\* Available on request



## Accessories of Air Circuit Breakers



R-Lock



C-Lock



Closing Release



Shunt Release



UV Release

HSN Code : 8538

HSN Code : 8538

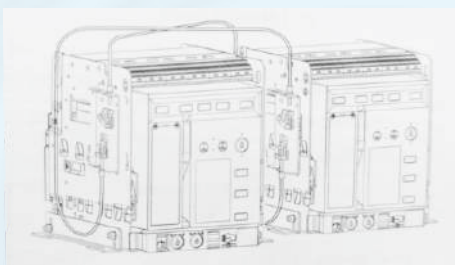
Description	Cat. No.	M.R.P. [₹]
<b>Mechanical Interlock using Key &amp; Lock</b>		
R - Lock Type - 1	BLRL1006590000	
R - Lock Type - 2	BLRL2006600000	
R - Lock Type - 3	BLRL3006610000	
R - Lock Type - 12	BLRL12006620000	
R - Lock Type - 23	BLRL23006630000	
Locking arrangement for OFF button with R - Lock (on breaker)	BLRL908150000	
Locking arrangement for ISO position with R - Lock (on Cradle)	BLCLR908650000	
Locking arrangement for ANY position with R - Lock (on Cradle)	BLCLR909270000	*
C - Lock Type - S	BLCLS006640000	
C - Lock Type - T	BLCLT006650000	
C - Lock Type - ST	BLCLST006660000	
C - Lock Type - SS	BLCLSS006670000	
C - Lock Type - TT	BLCLTT006680000	
Locking arrangement for OFF button with C - Lock (on breaker)	BLCL908140000	
Locking arrangement for ISO position with C - Lock (on Cradle)	BLCLC909820000	
Locking arrangement for ANY position with C - Lock (on Cradle)	BLCLC909810000	

Description	Cat. No.	M.R.P. [₹]
<b>Electrical Charging Device (ECD)</b>		
240V AC / 250V DC	BLECD903590000	
415V AC / 400V DC	BLECD903610000	
<b>Closing Release (CR)</b>		
220 - 240V AC / 220 - 250V DC	BLCR90817B000	
415V AC	BLCR90817D000	
<b>Shunt Release (SR)</b>		
24-30V DC	BLSH908160400	*
220 - 240V AC / 220 - 250V DC	BLSH908160B00	
415V AC	BLSH908160D00	
<b>Under Voltage Release (UVR) with time delay (0-1-3-5 sec)</b>		
240V AC / 220V DC	BLUV90818B000	
415V AC	BLUV90818D000	

HSN Code : 8538

Description	Cat. No.	M.R.P. [₹]
<b>External Neutral CT for BU-BTX Releases</b>		
Frame-1, 800A	BLEN007170000	
Frame-1, 1000-1600A	BLEN007180000	*
Frame-1 2000A	BLEN007190000	
Frame-2 & 3 2500-4000A	BLNCT007200000	

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	BLBC906590000	
Between 2 Incomers & 1 Buscoupler	BLBC906620000	*

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



BU-BTX1.5G



BU-BTX3.5

HSN Code : 8538

Description	Cat. No.	M.R.P. [₹]
<b>BTX Releases</b>		
BU-BTX1G	BLBTX919710000	
BU-BTX1Gi	BLBTX905620000	
BU-BTX1.5G	BLBTX919650000	
BU-BTX1.5Gi	BLBTX905520000	*
BU-BTX3.5	BLBTX901130000	
BU-BTX3.5EC	BLBTX906440000	
BU-BTX3.5H	BLBTX919750000	
Simulation Kit	BLSK907240000	

\* Available on request





## S1 Range of Air Circuit Breakers

- 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:

Icu = Ics = Icw 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 Icu=Ics=Icw (1 sec)	Version	Microprocessor Based BR18G			
			3 Pole		4 Pole	
			Cat. No.	M.R.P.[₹]	Cat. No.	M.R.P.[₹]
800A	50kA	MDO	BM960420000	204510	BM960620000	256580
800A	50kA	EDO	BM960520000	255280	BM960720000	307360
1000A	50kA	MDO	BM960430000	212720	BM960630000	268800
1000A	50kA	EDO	BM960530000	263490	BM960730000	319580
1250A	50kA	MDO	BM960440000	234650	BM960640000	296040
1250A	50kA	EDO	BM960540000	285430	BM960740000	346820
1600A	50kA	MDO	BM960450000	267600	BM960650000	329090
1600A	50kA	EDO	BM960550000	318380	BM960750000	379870
2000A	50kA	MDO	BM960460000	314270	BM960660000	386080
2000A	50kA	EDO	BM960560000	365050	BM960760000	436850
2500A	60kA	MDO	BM960470000	388480	BM960670000	468200
2500A	60kA	EDO	BM960570000	439260	BM960770000	518980

## MEGA POWER S1 3 & 4 Pole Fixed ACBs

HSN Code : 8536

Rating	Breaking Capacity Icu=Ics=Icw (1 sec)	Version	Microprocessor Based BR18G			
			3 Pole		4 Pole	
			Cat. No.	M.R.P.[₹]	Cat. No.	M.R.P.[₹]
630A	50kA	MF	BM955610000	125490	BM955810000	159940
630A	50kA	EF	BM955710000	175560	BM955910000	210010
800A	50kA	MF	BM955620000	125490	BM955820000	159940
800A	50kA	EF	BM955720000	175560	BM955920000	210010
1000A	50kA	MF	BM955630000	137110	BM955830000	172960
1000A	50kA	EF	BM955730000	187180	BM955930000	222930
1250A	50kA	MF	BM955640000	157840	BM955840000	197300
1250A	50kA	EF	BM955740000	207910	BM955940000	247370
1600A	50kA	MF	BM955650000	175060	BM955850000	225140
1600A	50kA	EF	BM955750000	225140	BM955950000	275110

## 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	493140	BM948260000	605210
3200A	75kA	EDO	H2	BM948240000	543910	BM948280000	655980
4000A	75kA	MDO	H2	BM948230000	570860	BM948270000	740510
4000A	75kA	EDO	H2	BM948250000	621630	BM948290000	791290
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 -13000

### 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	4810
Type BB	BMLP93148000B	4810
Type CC	BMLP93148000C	4810
Type DD	BMLP93148000D	4810
<b>Locking of ACB in Any position (LAP)</b>		
Type A	BMLP93147000A	4810
Type B	BMLP93147000B	4810
Type C	BMLP93147000C	4810
Type D	BMLP93147000D	4810
<b>Racking Interlock</b>		
Type AA	BMRI93149000A	6620
Type B B	BMRI93149000B	6620
Type C C	BMRI93149000C	6620
Type D D	BMRI93149000D	6620
<b>Other Accessories</b>		
Door Interlock	BMDI931500000	3530

Description	Cat. No.	M.R.P. [₹]
<b>Shunt Release (SR)</b>		
Type EA : 24/48V DC	BMSH927180400	3760
Type EA1 : 240V AC	BMSH927180B00	3760
Type EA1 : 415V AC	BMSH927180D00	3760
<b>Under Voltage Release (UVR)</b>		
Type MV : 240V AC	BMUV92720B000	5420
Type MV : 415V AC	BMUV92720D000	5420
<b>Microswitches for Indication</b>		
Test or Isolated Position Microswitch - Left (2)	BMTL931450000	2010

**Note :**

- a. The Numerical in brackets, against various accessories indicate the SICs required for wiring purpose in Draw-Out breakers
- b. Shunt release requires one set of auxiliary contacts
- c. 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. [₹]
<b>Protection Releases</b>		
Microprocessor based type BR18G	BMBR960300000	45070

## XF Frame 1 / XD0 / XA1 With Thermal - Magnetic Release:

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

HSN Code : 8536

### XF Frame 1 - 3 Pole

- Conforms to IS/IEC 60947-2
- Range: 16A - 125A
- 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> = 10/10, 15/15, 18/18, 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

Type	Release Range (A)	Breaking Capacity Icu/Ics at 415V AC	3 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
New	16, 20, 25, 32, 40, 50, 63	10/10kA (Fixed)	XFE***P	2570	1
	80, 100 (w/o spreader terminal)		XFE***P-WT	2570	1
	80, 100		XFE***P#	2700	
	125		XFE***P#	4320	1
New	16, 20, 25, 32, 40, 50, 63	15/15kA (Fixed)	XFN***P	5850	1
	80, 100		XFN***P#	5960	1
	125 (w/o spreader terminal)	18/18kA	XFR***PV-WT	8470	1
	125		XFR***PV#	8930	1
New	16, 20, 25, 32, 40, 50, 63	25/25kA	XFS***PV	8670	1
	80, 100		XFS***PV#	8820	1
	125 (w/o spreader terminal)		XFS***PV-WT	12150	1
	125		XFS***PV#	12610	1
New	16, 20, 25, 32, 40, 50, 63	30/15kA	XFH***NV	6840	1
	80, 100		XFH***NV#	6990	1
New	16, 20, 25, 32, 40, 50, 63	36/18kA	XFL***NV	8370	1
	80, 100		XFL***NV#	8520	1
	125 (w/o spreader terminal)		XFL***PV-WT	10070	1
	125		XFL***PV#	10530	1
New	16, 20, 25, 32, 40, 50, 63	50/25kA	XFV***NV	14260	1
	80, 100		XFV***NV#	14410	1
New	32, 40, 50, 63	50/50kA	XFV***PV	14880	1
	80, 100		XFV***PV#	15090	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

HSN Code : 8536

### XD0/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 I<sub>n</sub>
- Wide range of snap fit internal & external accessories



XD0 Frame :  
I<sub>cu</sub>/I<sub>cs</sub> = 10/10 kA

XA1 Frame :  
I<sub>cu</sub>/I<sub>cs</sub> = 18/18 kA

Type	Release Range (A)	Breaking Capacity Icu/Ics at 415V AC	4 Pole	MRP [₹]	Std. Pkg.
			Cat. No.		
New	16, 20, 25, 32, 40, 50	10/10kA	XD0E***P-4	4310	1
	63,80,100 (w/o spreader terminal)		XD0E***P-4-WT	4190	1
	80, 100		XD0E***P-4#	4850	1
	125		XD0E***P-4#	6420	1
New	32	18/18kA	XA1R032PV4	8910	1
	40		XA1R040PV4	8910	1
	63		XA1R063PV4	8660	1
	100		XA1R100PV4	8660	1
	125		XA1R125PV4	10980	1

Note: - Phase barriers are supplied along with all MCCBs. For accessories please refer page No.16 on Table3, 4 & 5  
- Spreader terminals available as accessories.

### Code - Current Rating XF/XD0 Frame

Rating	16A	20A	25A	32A	40A	50A	63A	80A	100A	125A
*Code	016	020	025	032	040	050	063	080	100	125

## XF2/XA2 With Thermal - Magnetic Release:

RATING (A) Icu (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 Icu/Ics at 415V AC	3 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XF2 range	160	25/25kA	XF2E160PV	16430	1
	200		XF2E200PV#	20930	1
	250		XF2E250PV#	24070	1
	160	36/18kA	XF2N160NV	12460	1
	200		XF2N200NV#	15700	1
	250		XF2N250NV#	18010	1
	125	36/27kA	XF2N125GV	14700	1
	160		XF2N160GV	19650	1
	200		XF2N200GV#	25720	1
	250		XF2N250GV#	28310	1
	125	36/36kA	XF2N125PV	16460	1
	160		XF2N160PV	21920	1
	200		XF2N200PV#	25440	1
	250		XF2N250PV#	28130	1
	125	50/25kA	XF2H125NV	17520	1
	160		XF2H160NV	23760	1
	200		XF2H200NV#	25860	1
	250		XF2H250NV#	27980	1
	125	50/50kA	XF2H125PV	23550	1
	160		XF2H160PV	26490	1
200	XF2H200PV#		28390	1	
250	XF2H250PV#		30850	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



XA2 Frame :  
I<sub>cu</sub>/I<sub>cs</sub> = 25/12.5, 36/18 kA

HSN Code : 8536

Type	Release Range (A)	Breaking Capacity Icu/Ics at 415V AC	4 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	
XA2	160	25/12.5kA	XA2E160NV4	15320	1
	200		XA2E200NV4	18410	1
	250		XA2E250NV4	21080	1
	160	36/18kA	XA2N160NV4	17010	1
	200		XA2N200NV4	22770	1
	250		XA2N250NV4	25160	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

## 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	33980	1
	400		XF3N400PV	35650	1
	500		XF3N500PV	43160	1
	630		XF3N630PV	47110	1
	320	50/50kA	XF3H320PV	37890	1
	400		XF3H400PV	38850	1
	500		XF3H500PV	50080	1
	630		XF3H630PV	51030	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	35140	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) Icu=Ics (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
- Ics= 100% of Icu
- Adjustable overload settings: 0.67 - 1.0 x In
- Adjustable short-circuit settings: 6 - 12 x In
- 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
- Ics= 100% of Icu\*
- Adjustable overload settings: 0.8 - 1.0 x In
- Manual, Rotary and Motorised versions available@
- Adjustable short-circuit settings: 6 - 10 x In\*\*
- Wide range of accessories



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

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

HSN Code : 8536

Type	Release Range (A)	Breaking Capacity Icu/Ics	4 Pole		Std. Pkg.	
			Cat. No.	MRP [₹]		
XB0	40	36/18kA	XB0L040NV4	12420	1	
	63		XB0L063NV4	12020	1	
	100		XB0V100NV4	12020	1	
	125		XB0N125NV4	14010	1	
XB0	63	25/25kA	XB0S020PV4	12910	1	
	100		XB0S025PV4	12910	1	
	XB1		125	XB0S032PV4	12910	1
			160	XB0S040PV4	12910	1
	XB0		63	XB0S063PV4	12520	1
			100	XB0S100PV4	12520	1
	XB1		125	XB1E125PV4	15790	1
			160	XB1E160PV4	20360	1
	XB1		200	XB1E200PV4	24430	1
			250	XB1E250PV4	27810	1
YG1	100	36/36kA	YG1N100PV4	14800	1	
	125		YG1N125PV4	16490	1	
	160		YG1N160PV4	20860	1	
XB2	200	XB2N200PV4	31980	1		
	250	XB2N250PV4	33870	1		
XB3S	320	XB3SN320PV4	41320	1		
	400	XB3SN400PV4	41320	1		
XB3	320	XB3N320PV4	52200	1		
	630	XB3N630PV4	57710	1		
YG1	100	50/50kA	YG1H100PV4	18380	1	
	125		YG1H125PV4	23040	1	
	160		YG1H160PV4	27120	1	
XB2	200	XB2H200PV4	37350	1		
	250	XB2H250PV4	38640	1		
XB3	320	XB3H320PV4	45290	1		
	400	XB3H400PV4	45290	1		
XB3	630	XB3H630PV4	63270	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 : Ics = 50% Icu

\*\* For XB0, XB1, XB3S Short circuit setting : 9 In

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

## YG1/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	YG1-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	YG1-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



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

- YG1-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 [₹]	
YG1	10-40	36/36kA	YG1L040PE3-LSI	20360	YG1L040PE4-LSI	25530	1
	16-63		YG1L063PE3-LSI	20360	YG1L063PE4-LSI	25530	1
	25-100		YG1L100PE3-LSI	20360	YG1L100PE4-LSI	25530	1
	40-160		YG1N160PE3-LSI	25730	YG1N160PE4-LSI	35760	1
XB2	100-250	36/36kA	XB2N250PE3-LSI	35160	XB2N250PE4-LSI	48170	1
XB3	160-400	36/36kA	XB3N400PE3-LSI	43210	XB3N400PE4-LSI	53440	1
	250-630		XB3N630PE3-LSI	48170	XB3N630PE4-LSI	62680	1
YG1	10-40	50/50kA	YG1V040PE3-LSI	24240	YG1V040PE4-LSI	32380	1
	16-63		YG1V063PE3-LSI	24240	YG1V063PE4-LSI	32380	1
	25-100		YG1V100PE3-LSI	24240	YG1V100PE4-LSI	32380	1
	40-160		YG1H160PE3-LSI	31690	YG1H160PE4-LSI	40030	1
XB2	100-250	50/50kA	XB2H250PE3-LSI	39930	XB2H250PE4-LSI	51550	1
XB3	160-400	50/50kA	XB3H400PE3-LSI	47280	XB3H400PE4-LSI	61090	1
	250-630		XB3H630PE3-LSI	51950	XB3H630PE4-LSI	67740	1
XB4	320-800	50/50kA	XB4H800PE3-LSI	78010	XB4H800PE4-LSI	98240	1
	400-1000		XB4H1000PE3-LSI	109160	XB4H1000PE4-LSI	158030	1
	500-1250		XB4H1250PE3-LSI	136280	XB4H1250PE4-LSI	184350	1

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

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 against cat. nos.

## 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	34630	1
	25 - 63		XF2N063PE-LSIG	34630	1
	40 - 100		XF2N100PE-LSIG	34630	1
	63 - 160		XF2N160PE-LSIG	39350	1
	100 - 250		XF2N250PE-LSIG#	45780	1
XF3 range	160 - 400	36/36kA	XF3N400PE-LSIG#	59080	1
	250 - 630		XF3N630PE-LSIG#	62540	1
XF2 range	16 - 40	50/50kA	XF2H040PE-LSIG	37660	1
	25 - 63		XF2H063PE-LSIG	37660	1
	40 - 100		XF2H100PE-LSIG	37660	1
	63 - 160		XF2H160PE-LSIG	45360	1
	100 - 250		XF2H250PE-LSIG#	48880	1
XF3 range	160 - 400	50/50kA	XF3H400PE-LSIG#	63180	1
	250 - 630		XF3H630PE-LSIG#	67380	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



XB-BMR :  
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
- Individual fault indication LEDs
- Transparent sealable release cover
- Compact size
- Wide range of accessories



XG1 Frame - GMR :  
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>	3 Pole		4 Pole		Std. Pkg.
			Cat. No.	MRP [₹]	Cat. No.	MRP [₹]	
XG1	10-40	36/36kA	XG1L040PE3-LSIG	35860	XG1L040PE4-LSIG	41020	1
	16-63		XG1L063PE3-LSIG	35860	XG1L063PE4-LSIG	41020	1
	25-100		XG1L100PE3-LSIG	35860	XG1L100PE4-LSIG	41020	1
	40-160		XG1N160PE3-LSIG	41220	XG1N160PE4-LSIG	51250	1
XB2	40-100	36/36kA	-	-	XB2V100PE4-LSIG	48470	1
	63-160		-	-	XB2N160PE4-LSIG	57210	1
	100-250		XB2N250PE3-LSIG	48470	XB2N250PE4-LSIG	60090	1
XB3	160-400	36/36kA	XB3N400PE3-LSIG	58500	XB3N400PE4-LSIG	67740	1
	250-630		XB3N630PE3-LSIG	63370	XB3N630PE4-LSIG	77480	1
XG1	10-40	50/50kA	XG1V040PE3-LSIG	39730	XG1V040PE4-LSIG	47880	1
	16-63		XG1V063PE3-LSIG	39730	XG1V063PE4-LSIG	47880	1
	25-100		XG1V100PE3-LSIG	39730	XG1V100PE4-LSIG	47880	1
	40-160		XG1H160PE3-LSIG	47180	XG1H160PE4-LSIG	55520	1
XB2	40-100	50/50kA	-	-	XB2L100PE4-LSIG	54630	1
	63-160		-	-	XB2H160PE4-LSIG	60690	1
	100-250		XB2H250PE3-LSIG	51750	XB2H250PE4-LSIG	63470	1
XB3	160-400	50/50kA	XB3H400PE3-LSIG	61980	XB3H400PE4-LSIG	72610	1
	250-630		XB3H630PE3-LSIG	67340	XB3H630PE4-LSIG	86810	1
XB4	320-800	50/50kA	XB4H800PE3-LSIG	107970	XB4H800PE4-LSIG	129430	1
	400-1000		XB4H1000PE3-LSIG	139060	XB4H1000PE4-LSIG	186140	1
	500-1250		XB4H1250PE3-LSIG	162900	XB4H1250PE4-LSIG	210780	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 against cat. nos.

## 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	6880	1
	40		XFV040P-MO	6880	1
	50		XFV050P-MO	6880	1
	63	50/50kA	XFV063P-MO	6880	1
	80		XFV080P-MO#	6880	1
XF2 range	100	50/50kA	XFV100P-MO#	8760	1
	125		XF2H125P-MO	10180	1
	160	50/50kA	XF2H160P-MO	17680	1
	200		XF2H200P-MO#	20910	1
XF3 range	250	50/50kA	XF2H250P-MO#	24370	1
	320		XF3H320P-MO#	30680	1
	400		XF3H400P-MO#	31430	1
	500		XF3H500P-MO#	35220	1
	630		XF3H630P-MO#	40610	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

Mundhra Brothers

## 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	1880	1
2 C/O (F1, F2 & F3)	XFAX2	1850	1
<b>Shunt Release</b>			
220V - 415V F1	XFSHT220V	1620	1
220V - 415V F2	XF2SHT220V	1650	1
220V - 415V F3	XF3SHT220V	2680	1
<b>Under Voltage Release</b>			
240V F1	XFUV240VA	2140	1
240V F2	XF2UV240VA	2160	1
240V F3	XF3UV240VA	3350	1
415V F1	XFUV415VA	2460	1
415V F2	XF2UV415VA	2460	1
415V F3	XF3UV415VA	3350	1

**Table 2** **HSN Code : 8538**

Description	External		
	Cat. No.	MRP [₹]	Std. Pkg.
Spreader Terminals	ACMF1TP100	460	Set of 6
	ACMF2TP160-T	1820	Set of 6
	ACMF2TP250	1730	Set of 6
Extended Rotary Handle	F1ROHE	2310	1
	F2ROHE/F2ROHE-LSIG	2490	1
	F3ROHE	4760	1
Din Rail	F1DIN	280	1
Phase Barriers	F1PB	130	Set of 4
	F2PB	300	Set of 4
	F3PB	310	Set of 4
MCCB Enclosure	F1EU3P	1230	1
	F2EU3P	2660	1

**Table 3** **HSN Code : 8538**

Description	External		
	Cat. No.	MRP [₹]	Std. Pkg.
<b>Rotary Handle</b>			
XA1, XB0 Direct ROM	XB0A1ROHD	1400	1
XA2, XB1 Direct ROM	XB1A2ROHD	1500	1
XG1 Direct ROM	XG1ROHD	1530	1
XB2 Direct ROM	XB2ROHD	1550	1
XA3, XB3S, XB3 Direct ROM	XB3A3ROHD	2310	1
XA1, XB0 Extended ROM	XB0A1ROHE	1810	1
XA2, XB1 Extended ROM	XB1A2ROHE	1930	1
XG1 Extended ROM	XG1ROHE	2070	1
XB2 Extended ROM	XB2ROHE	2330	1
XA3, XB3S, XB3 Extended ROM	XB3A3ROHE	3810	1
XB4 Extended ROM	XB4ROHE	4830	1
<b>Stored Energy Electrical Operating Mechanism</b>			
XB2 - 240V AC*		33370	
XB3 - 240V AC*		41820	

\* Available as customised factory fitted solutions, please contact nearest sales office

## 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	XB23A3AUX1	1150	1
XA3, XB2, XB3S, XB3, XB4 - 2 C/O	XB23A3AUX2	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	XB23A3ALR1	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	XB23A3ALAX1	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>	XB23A3SHTUNI	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	430	Set of 6
XA1, XB0-125D - 3 Pole	XB0A1125TPST	560	Set of 6
XG1 - 160 - 3 Pole	XG160TPST	1750	Set of 6
XA2, XB1, XB2 - 250 - 3 Pole	XB12A2250TPST	1860	Set of 6
XA3, XB3S/XB3-400 - 3 Pole	XB3400TPST	3600	Set of 6
XB3-630 - 3 Pole	XB3630TPST	4160	Set of 6
XB4-800 - 3 Pole	XB4800TPST	8770	Set of 6
XB4-1000 - 3 Pole	XB41000TPST	17580	Set of 12
XB4-1250 - 3 Pole	XB41250TPST	34670	Set of 6
<b>Spreader Terminals - 4 Pole</b>			
XA1, XB0-100 - 4 Pole	XB0A1100FPST	680	Set of 8
XA1, XB0-125D - 4 Pole	XB0A1125FPST	810	Set of 8
XG1 - 160 - 4 Pole	XG160FPST	2290	Set of 8
XA2, XB1, XB2 - 250 - 4 Pole	XB12A2250FPST	2460	Set of 8
XA3, XB3S/XB3-400 - 4 Pole	XB3400FPST	5170	Set of 8
XB3-630 - 4 Pole	XB3630FPST	5280	Set of 8
XB4-800 - 4 Pole	XB4800FPST	11240	Set of 8
XB4-1000 - 4 Pole	XB41000FPST	22480	Set of 16
XB4-1250 - 4 Pole	XB41250FPST	44400	Set of 8

Note: Phase barriers are supplied along with MCCBs



**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 [₹]	C Curve Cat. No.	MRP (per unit)[₹]	Rating	Lower Rating Cat. No.	MRP (per unit)[₹]
1P	12 units	6A	BCHX10SPB06	280	BCHX10SPC06	280	0.5A 1A 2A 3A 4A 5A	BCHX10SPCL5 BCHX10SPC01 BCHX10SPC02 BCHX10SPC03 BCHX10SPC04 BCHX10SPC05	470 470 470 470 470 470
		10A	BCHX10SPB10	280	BCHX10SPC10	280			
		16A	BCHX10SPB16	280	BCHX10SPC16	280			
		20A	BCHX10SPB20	280	BCHX10SPC20	280			
		25A	BCHX10SPB25	280	BCHX10SPC25	280			
		32A	BCHX10SPB32	280	BCHX10SPC32	280			
		40A	BCHX10SPB40	630	BCHX10SPC40	630			
		50A	BCHX10SPB50	630	BCHX10SPC50	630			
		63A	BCHX10SPB63	640	BCHX10SPC63	640			
1P+N	6 units	6A			BCHX10SNC06	870			
		10A			BCHX10SNC10	870			
		16A			BCHX10SNC16	870			
		20A			BCHX10SNC20	870			
		25A			BCHX10SNC25	870			
		32A			BCHX10SNC32	870			
		40A			BCHX10SNC40	1300			
50A			BCHX10SNC50	1300					
63A			BCHX10SNC63	1340					
2P	6 units	6A	BCHX10DPB06	940	BCHX10DPC06	940	0.5A 1A 2A 3A 4A 5A	BCHX10DPCL5 BCHX10DPC01 BCHX10DPC02 BCHX10DPC03 BCHX10DPC04 BCHX10DPC05	1330 1330 1330 1330 1330 1330
		10A	BCHX10DPB10	940	BCHX10DPC10	940			
		16A	BCHX10DPB16	940	BCHX10DPC16	940			
		20A	BCHX10DPB20	940	BCHX10DPC20	940			
		25A	BCHX10DPB25	940	BCHX10DPC25	940			
		32A	BCHX10DPB32	940	BCHX10DPC32	940			
		40A	BCHX10DPB40	1470	BCHX10DPC40	1470			
		50A	BCHX10DPB50	1470	BCHX10DPC50	1470			
		63A	BCHX10DPB63	1510	BCHX10DPC63	1510			
3P	4 units	6A	BCHX10TPB06	1490	BCHX10TPC06	1490	0.5A 1A 2A 3A 4A 5A	BCHX10TPCL5 BCHX10TPC01 BCHX10TPC02 BCHX10TPC03 BCHX10TPC04 BCHX10TPC05	1820 1820 1820 1820 1820 1820
		10A	BCHX10TPB10	1490	BCHX10TPC10	1490			
		16A	BCHX10TPB16	1490	BCHX10TPC16	1490			
		20A	BCHX10TPB20	1490	BCHX10TPC20	1490			
		25A	BCHX10TPB25	1490	BCHX10TPC25	1490			
		32A	BCHX10TPB32	1490	BCHX10TPC32	1490			
		40A	BCHX10TPB40	2260	BCHX10TPC40	2260			
		50A	BCHX10TPB50	2260	BCHX10TPC50	2260			
		63A	BCHX10TPB63	2320	BCHX10TPC63	2320			
3P+N	3 units	6A			BCHX10TNC06	1860			
		10A			BCHX10TNC10	1860			
		16A			BCHX10TNC16	1860			
		20A			BCHX10TNC20	1860			
		25A			BCHX10TNC25	1860			
		32A			BCHX10TNC32	1860			
		40A			BCHX10TNC40	2520			
50A			BCHX10TNC50	2520					
63A			BCHX10TNC63	2580					
4P	3 units	6A	BCHX10FPB06	2000	BCHX10FPC06	2000	0.5A 1A 2A 3A 4A 5A	BCHX10FPCL5 BCHX10FPC01 BCHX10FPC02 BCHX10FPC03 BCHX10FPC04 BCHX10FPC05	2500 2500 2500 2500 2500 2500
		10A	BCHX10FPB10	2000	BCHX10FPC10	2000			
		16A	BCHX10FPB16	2000	BCHX10FPC16	2000			
		20A	BCHX10FPB20	2000	BCHX10FPC20	2000			
		25A	BCHX10FPB25	2000	BCHX10FPC25	2000			
		32A	BCHX10FPB32	2000	BCHX10FPC32	2000			
		40A	BCHX10FPB40	2850	BCHX10FPC40	2850			
		50A	BCHX10FPB50	2850	BCHX10FPC50	2850			
		63A	BCHX10FPB63	2920	BCHX10FPC63	2920			



HSN Code : 8536

Poles	Standard Pack of	Rating	Cat. No.	MRP (per unit) [₹]
2P	6 units	40A	BCHISODP40	560
	6 units	63A	BCHISODP63	690
3P	4 units	40A	BCHISOTP40	1000
	4 units	63A	BCHISOTP63	1140
4P	3 units	40A	BCHISOFP40	1170
	3 units	63A	BCHISOFP63	1270

## 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	1180	BCHSPNDD04W	2010
6 WAY, SPN DB	6	BCHSPNSD06W	1260	BCHSPNDD06W	2060
8 WAY, SPN DB	8	BCHSPNSD08W	1480	BCHSPNDD08W	2360
12 WAY, SPN DB	12	BCHSPNSD12W	1940	BCHSPNDD12W	3160
16 WAY, SPN DB	16	BCHSPNSD16W	2480	BCHSPNDD16W	4040



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	4060	BCHHTPNDD04W	5090
6 WAY, HTPN DB	8+18	BCHHTPNSD06W	4870	BCHHTPNDD06W	6330
8 WAY, HTPN DB	8+24	BCHHTPNSD08W	5360	BCHHTPNDD08W	7860
12 WAY, HTPN DB	8+36	BCHHTPNSD12W	7110	BCHHTPNDD12W	11250

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	11560
6 WAY, DD, MCB I/C, VERTICAL TPN DB	BCHVTPNDD06W-A	8+18	14470
8 WAY, DD, MCB I/C, VERTICAL TPN DB	BCHVTPNDD08W-A	8+24	16300
12 WAY, DD, MCB I/C, VERTICAL TPN DB	BCHVTPNDD12W-A	8+36	20820

All above DB's are double door

# MCB DISTRIBUTION BOXES



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	15750
8 WAY, DD, 125A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD08W-B	FRAME 1	18050
12 WAY, DD, 125A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD12W-B	FRAME 1	24450
4 WAY, DD, 250A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD04W-C	FRAME 2	19190
8 WAY, DD, 250A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD08W-C	FRAME 2	23450
12 WAY, DD, 250A, MCCB I/C, VERTICAL TPN DB	BCHVTPNDD12W-C	FRAME 2	27380

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		1600
SPN-20A, P&S DB	BCHPSDBSPN20		1600
TPN-20A, P&S DB	BCHPSDBTPN20		4580
TPN-30A, P&S DB	BCHPSDBTPN30		4580

HSN Code : 8537



Description	Cat. No.	No. of Modules (Incoming + Outgoing)	MRP [₹]
SP, ONE WAY MCB DB	BCHOWMCBDBSP		660
DP, ONE WAY MCB DB	BCHOWMCBDBDP		660
TP, ONE WAY MCB DB	BCHOWMCBDBTP		710
FP, ONE WAY MCB DB	BCHOWMCBDBFP		710



### RCCB, Double Pole

HSN Code : 8536

Description	Cat. No.	MRP [₹]
25A - 30mA	BCHRCB030DPC25	3670
40A - 30mA	BCHRCB030DPC40	3750
63A - 30mA	BCHRCB030DPC63	5040
25A - 100mA	BCHRCB100DPC25	3710
40A - 100mA	BCHRCB100DPC40	3850
63A - 100mA	BCHRCB100DPC63	5150
25A - 300mA	BCHRCB300DPC25	3710
40A - 300mA	BCHRCB300DPC40	4120
63A - 300mA	BCHRCB300DPC63	5150

All above RCCB's are 'AC' type

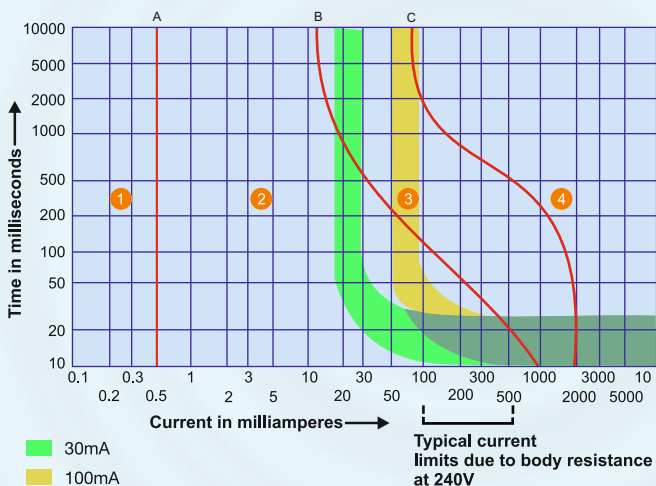


### RCCB, Four Pole

HSN Code : 8536

Description	Cat. No.	MRP [₹]
25A - 30mA	BCHRCB030FPC25	4730
40A - 30mA	BCHRCB030FPC40	4870
63A - 30mA	BCHRCB030FPC63	5480
25A - 100mA	BCHRCB100FPC25	4870
40A - 100mA	BCHRCB100FPC40	5080
63A - 100mA	BCHRCB100FPC63	5480
25A - 300mA	BCHRCB300FPC25	4870
40A - 300mA	BCHRCB300FPC40	5100
63A - 300mA	BCHRCB300FPC63	5480

All above RCCB's are 'AC' type



### 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	2820	1	32 TPN / FP	BXL95518	2820	1
	32	HF Size 14x51	2 to 32	32 TPN / FP CE*	BXL95703*	2470	1	32 TPN / FP CE*	BXL95703	2470	1
	63	HF Size 14x51	2 to 63	63 TPN / FP	BXL95421	3750	1	63 TPN / FP	BXL95421	3750	1
	63	HF Size 14x51	2 to 63	63 TPN / FP CE*	BXL95704*	3350	1	63 TPN / FP CE*	BXL95704	3350	1
Frame 2	100	Size 000/00	63 to 100	100 TPN	BXL95568	7110	1	100 FP	BXL90496	8080	1
	125	Size 000/00	63 to 125	125 TPN	BXL95001	9210	1	125 FP	BXL90497	10050	1
	160	Size 000/00	63 to 160	160 TPN	BXL95713	9910	1	160 FP	BXL90498	11260	1
Frame 3	200	Size 0	80 to 200	200 TPN	BXL95418	13370	1	200 FP	BXL90471	16080	1
	250	Size 1	125 to 250	250 TPN	BXL95642	15280	1	250 FP	BXL90472	18390	1
Frame 4	315	Size 1	125 to 315	315 TPN	BXL95461	18290	1	315 FP	BXL90473	22310	1
	400	Size 2	200 to 400	400 TPN	BXL95481	22110	1	400 FP	BXL90480	24620	1
Frame 5	630	Size 3	315 to 630	630 TPN	BXL95521	36980	1	630 FP	BXL90481	41510	1
	800	Size 3	315 to 800	800 TPN	BXL95679	39800	1	800 FP	BXL90482	46730	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*	BXLENC90483*	6510	1
	63	HF Size 14x51	2 to 63	63 TPN / FP CE*	BXLENC90484*	7780	1
Frame 2	100	Size 000/00	63 to 100	100 TPN	BXLENC90485	12760	1
	125	Size 000/00	63 to 125	125 TPN	BXLENC90486	14470	1
	160	Size 000/00	63 to 160	160 TPN	BXLENC90487	15180	1
Frame 3	200	Size 0	80 to 200	200 TPN	BXLENC90488	21710	1
	250	Size 1	125 to 250	250 TPN	BXLENC90489	23920	1
Frame 4	315	Size 1	125 to 315	315 TPN	BXLENC90490	27640	1
	400	Size 2	200 to 400	400 TPN	BXLENC90491	31050	1
Frame 5	630	Size 3	315 to 630	630 TPN	BXLENC90492	48240	1
	800	Size 3	315 to 800	800 TPN	BXLENC90493	51250	1

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

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

- 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 applu 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	2220	1
	63	HF Size 14x51	63 2P	BXL95595	3090	1
Frame 2	100	Size 000/00	100 2P	BXL35086	5440	1
	125	Size 000/00	125 2P	BXL35087	7770	1
Frame 3	160	Size 000/00	160 2P	BXL35088	8100	1
	200	Size 0	200 2P	BXL35089	10250	1
Frame 4	250	Size 1	250 2P	BXL31674	12260	1
	315	Size 1	315 2P	BXL38930	15180	1
Frame 5	400	Size 2	400 2P	BXL31676	17090	1
	630	Size 3	630 2P	BXL35090	28640	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 BOLTED Fuse link - Open Execution			
			Type	Cat No.	MRP [₹]	Std. Pkg (Nos.)
Frame 1	32	A1L	32 TPN	BXL95653	2630	1
	63	A1L	63 TPN	BXL95651	3550	1
Frame 2	100	A4	100 TPN	BXL95570	6960	1
	125	A4	125 TPN	BXL95009	8880	1
Frame 3	160	A4	160 TPN	BXL95714	9670	1
	200	B1 / B2	200 TPN	BXL95588	13170	1
Frame 4	250	B2 / B3	250 TPN	BXL95682	15180	1
	315	B3	315 TPN	BXL95590	18190	1
Frame 5	400	B4	400 TPN	BXL95591	21810	1
	630	C2	630 TPN	BXL95592	36780	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.)	
	32/63	BXL91302	590	1	
	100/125/160	BXL91328	710	1	
	200/250	BXL91329	950	1	
	315/400/630/800	BXL91330	1000	1	
2nd Aux. Contact (1NO + 1NC)	32/63	BXL90670	640	1	
	100 to 1000	BXL90696	740	1	
	32 to 1000@	BXL90396	570	1	
Terminal Shroud Kit	32/63	BXL91190	200	1	
	100/125/160	BXL91137	250	1	
	200/250	BXL91335	720	1	
	315/400	BXL91346	740	1	
	630/800	BXL91347	780	1	
	32/63	BXL91257	560	1	
	100 to 250	BXL91258	1200	1	
	315/400/630/800	BXL91259	1320	1	
	32/63	BXL91277	560	1	
Handle Assembly - B	100 to 250	BXL91278	1200	1	
	315/400/630/800	BXL91279	1320	1	
Handle Assembly - CE	32/63	BXL91337	330	1	
Interphase Barrier Kit	200	BXL91343	510	1	
	315/400	BXL91344	530	1	
	630/800	BXL91345	540	1	
	A	100/125/160/200/250	BXL00333	2800	1
	B		BXL00334	2800	1
	C		BXL00335	2800	1
	D		BXL00336	2800	1
	A	315/400/630/800	BXL00345	2800	1
	B		BXL00346	2800	1
	C		BXL00347	2800	1
	D		BXL00348	2800	1
	100/125/160	BXL95233	5320	1	
	200/250	BXL95516	5670	1	
	315/400	BXL95517	6130	1	
	630/800	BXL95546	8600	1	

@For terminating earth busbar upto 25mm width. Order Qty 1 for 10 earthing links  
Note: Add a suffix "OOOO" for all the above mentioned catcodes

**Switch Disconnecter Fuse Units**

Suitable for DIN / BOLTED fuses in open execution

Rating (A) AC-23A	Cat No.	Fuse Type	Type	MRP [₹]
32A	PSFS323ND00	DIN	TPN	2600
32A	PSFS323ND000	DIN	TPN	2600
32A	PSFS323NB	Bolted	TPN	2600
32A	PSFS323B	Bolted	TP	2700
63A	PSFS633ND00	DIN	TPN	3700
63A	PSFS633ND000	DIN	TPN	3700
63A	PSFS633NB	Bolted	TPN	3600
63A	PSFS633B	Bolted	TP	3700
100	PSFS1003*	DIN/Bolted	TP	7830
100	PSFS1003N*	DIN/Bolted	TPN	8210
125	PSFS1253*	DIN/Bolted	TP	10350
125	PSFS1253N*	DIN/Bolted	TPN	11100
160	PSFS1603*	DIN/Bolted	TP	11380
160	PSFS1603N*	DIN/Bolted	TPN	12360
200	PSFS2003B	Bolted	TP	12890
200	PSFS2003NB	Bolted	TPN	13240

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

**Switch Disconnecter**

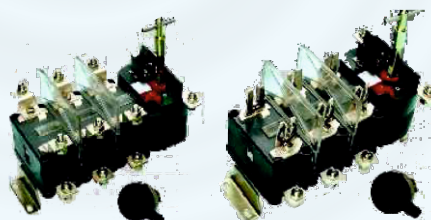
HSN Code : 8536

Rating (A) AC-23A	Cat No.	Fuse Type	Type	MRP [₹]
32A	PSSD323N	-	TPN	2390
63A	PSSD633N	-	TPN	3280
100A	PSSD1003N	-	TPN	7470
125A	PSSD1253N	-	TPN	9280
160A	PSSD1603N	-	TPN	10460
200A	PSSD2003N	-	TPN	10940

**Fuse Switch Units Type FS**

HSN Code : 8538

Rating (A) AC-23A	Cat No.	Fuse Type	Type	MRP [₹]
32A	FS0N	BOLTED	TP	3320
63A	FS1N	BOLTED	TP	4460
Shroud	AC21TS			240
1NO+1NC	AC21EB11	for FS0 / FS1N		730
Neutral	AC21L	for FS0 / FS1N-		350
Handle assembly-32A	SP21FS0H	for FS0		490
Handle assembly-63A	SP21FS1H	for FS1		490



**Switch Disconnecter Fuse**

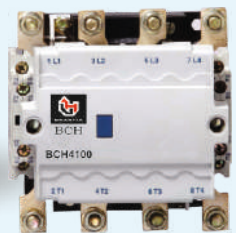
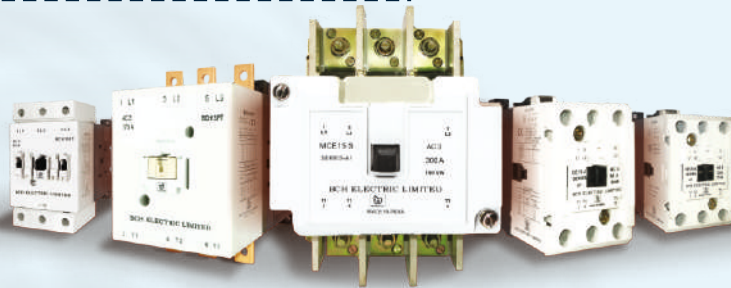
- Conforms to IS 13947-3
- TPN/TP version
- AC 23A duty
- Mechanism with 4 Breaks per pole
- Handle with door interlock and padlock



# Controlgear

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

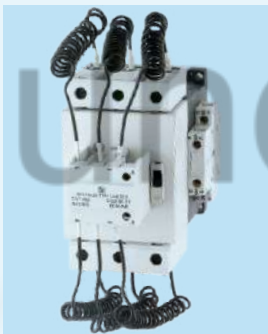
- **Contactors**
- **Overload Relays**
- **Electronic Over Current Relay**
- **Motor Protection Circuit Breaker**
- **Solid State Relay**



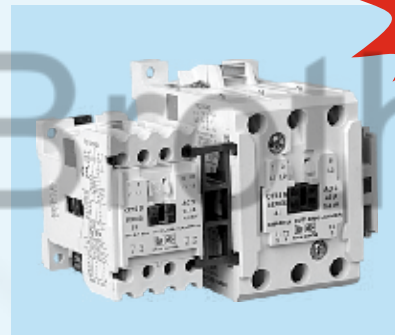
## FREEDOM RANGE



- 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



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

## 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	1380	1
					1NC	CE15ANC3 ■ B-N		
B	20	9.1	5.5	4	1NO	CE15BNS3 ■ B-N	1430	
					1NC	CE15BNC3 ■ B-N		
C	20	12	7.5	5.5	1NO	CE15CNS3 ■ B-N	1640	
					1NC	CE15CNC3 ■ B-N		
D	32	16	10	7.5	1NO	CE15DN3. ■ B10-N	1840	
					1NC	CE15DN3. ■ B01-N		
	32	18	10	7.5	1NO	CE15D1N3. ■ B10-N	1850	
					1NC	CE15D1N3. ■ B01-N		
E	40	25	15	11	1NO	CE15EN3. ■ B10-N	2580	
					1NC	CE15EN3. ■ B01-N		
F	40	32	20	15	1NO	CE15FN3. ■ B10-N	5120	
					1NC	CE15FN3. ■ B01-N		
G	60	40	30	22	1NO+1NC	CE15GN3 ■	7730	
					-	CE15GN3 ■ NB	7320	
H	75	50	33.5	25	1NO+1NC	CE15HN3 ■	9720	
					-	CE15HN3 ■ NB	9350	
J	80	65	50	37	1NO+1NC	CE15JN3 ■	13210	
					-	CE15JN3 ■ NB	12840	
K	80	73	50	37	1NO+1NC	CE15KN3 ■	13570	
					-	CE15KN3 ■ NB	13140	
	80	75	50	37	1NO+1NC	CE15K1N3 ■	13690	
					-	CE15K1N3 ■ NB	13210	
K-1	115	80	53	40	1NO+1NC	BCH15KT.3.11. ■	15140	
L	125	95	62	47	1NO+1NC	BCH15LT.3.11. ■	18290	
M	135	110	80	60	1NO+1NC	BCH15MT.3.11. ■	22460	
N	230	150	100	75	1NO+1NC	BCH15NT.3.11. ■	29880	
P	250	175	125	95	1NO+1NC	BCH15PT.3.11. ■	37240	
R	300	200	150	100	1NO+1NC	MCE15RN3 ■ 7	45800	
S0	315	265	186	140	1NO+1NC	MCE15SON3 ■ 7	53480	
S	315	300	220	160	1NO+1NC	MCE15SN3 ■ 7	59060	

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

HSN Code : 8536

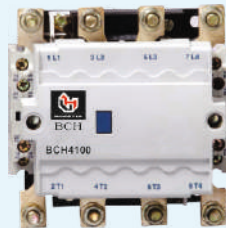
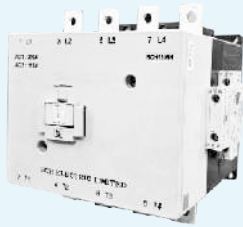
Size	AC1 Rating(A)	AC3 Rating 415 V			Aux. Contact	Cat. No.	MRP [₹]
		A	HP	KW			
BCH54	600	400	320	240	2NO+2NC	BCH54.3.22. ■	75760
BCH55	600	450	320	240	2NO+2NC	BCH55.3.22. ■	97410
BCH57	760	550	420	315	2NO+2NC	BCH57.3.22. ■	109800
BCH62	1000	700	533	400	2NO+2NC	BCH62.3.22. ■	194880
BCH64	1000	860	666	500	2NO+2NC	BCH64.3.22. ■	314410
BCH76	1200	1000	800	600	1NO+2NC	BCH76.3.12. ■	570390
BCH78	1350	1200	933	700	1NO+2NC	BCH78.3.12. ■	604540

■ For Standard Coil Voltage Codes refer page 36

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

Contactor size

{ A ~ K @ ₹ 40  
K-1 ~ S @ ₹ 110  
BCH 54 ~ BCH 57 @ ₹ 220



- 20A to 500A AC1 (4 Pole)
- As per IS/IEC 60947-4-1
- Wide band coil 40A to 100A AC1

## Freedom series 4 Pole contactors (AC Control)

HSN Code : 8536

AC1 rating (A)	Cat No.	Aux Contact	MRP [₹]
20	CE15CN4-B-N	#	1940
40	BCH4040	#	2920
63	BCH4063	#	7380
80	BCH4080	#	11440
100	BCH4100	#	14760
130	BCH4130	#	17230
160	BCH15MNO.4.11.	1NO+1NC	24820
200	BCH15MN.4.11.	1NO+1NC	29390
250	BCH15NN.4.11.	1NO+1NC	32460
300	BCH15PN.4.11.	1NO+1NC	57280
400	BCH4400	2NO+2NC	94920
500	BCH4500	2NO+2NC	120210

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

### Common Accessories 'upto 73A'

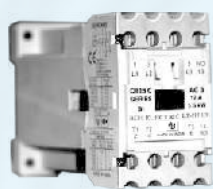


## Contactor : 3 Pole DC Control Type CE15

HSN Code : 8536

AC3 (A) at 415VAC	KW	Aux Contact	Cat No.	MRP [₹]
6	2.2	1NC	CE15ANC3-N	1960
		1NO	CE15ANS3-N	
9	4.4	1NC	CE15BNC3-N	2080
		1NO	CE15BNS3-N	
12	5.5	1NC	CE15CNC3-N	2190
		1NO	CE15CNS3-N	
16	7.5	-	CE15DN3-N	2650
25	11	-	CE15EN3-N	3600
32	15	-	CE15FN3-N	7600
40	22	-	CE15GN3	9170
50	25	-	CE15HN3	11690
65	37	-	CE15JN3	13900
73	37	-	CE15KN3	16370
75	37	-	CE15K1N3	16370

■ For Coil Voltage Codes refer Table on page 36



### DC Control

- Standard voltages 24VDC, 110VDC, 220VDC

Pure DC

## Freedom Series 3 Pole DC Control Type CE16

HSN Code : 8536

\*Coil Codes :

DC control

AC3 (A) at 415VAC	KW	Aux Contact	Cat No.	MRP [₹]
9.1	4	1NO	CE16BNS3*B	2180
		1NC	CE16BNC3*B	
12	5.5	1NO	CE16CNS3*B	2300
		1NC	CE16CNC3*B	
16	7.5	1NO+1NC	CE16DN3*B	2800
25	11	1NO+1NC	CE16EN3*B	3850
32	15	1NO+1NC	CE16FN3*B	8010

24V	U1
30V	V3
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*	2390
3NO+1NC	D16CR31*	
4NO	D16CR40*	

\*Coil Codes : DC control

24V	48V	110V	220V
U1	W1	A1	B1

## Control Relays Freedom Series HSN Code : 8536

Size	Contact Configuration	Cat No.	MRP [₹]		Lot Size
			AC	DC	
CR	2NO+2NC	D15CR22-N	1560	2390	1
	3NO+1NC	D15CR31-N			
	4NO	D15CR40-N			

■ For Standard Coil Voltage Codes refer page 36

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

Contactor size { A ~ K @ ₹ 40  
BCH15MN ~ BCH15PN @ ₹ 110  
D15CR ~ D16CR @ ₹ 40

## 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	2800
10	C	CCD.10.11.▣	1NO+1NC	3040
15	E	CCD.15.11.▣	1NO+1NC	4440
20	F	CCD.20.11.▣	1NO+1NC	5210
26	G	CCD.26.11.▣	1NO+1NC	6390
30	H	CCD.30.11.▣	1NO+1NC	10150
40	K	CCD.40.11.▣	1NO+1NC	15460
50	KT	CCD.50.21.▣	2NO+1NC	16250
60	LT	CCD.60.21.▣	2NO+1NC	18240

- ▣ For Standard Coil Voltage refer table on page no. 36
- ▣ 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

## FS1 Contactor

HSN Code : 8536



Size	AC1 Rating	AC3 Rating 415V			Aux Contact	Cat No	MRP[₹]	Lot Size
		A	HP	KW				
B	20	9	5.5	4	1NO	CN14BNS3 ▣	1355	1
					1NC	CN14BNC3 ▣		
C	20	12	7.5	5.5	1NO	CN14CNS3 ▣	1530	1
					1NC	CN14CNC3 ▣		
D	20	16	10	7.5	1NO	CN14DNS3 ▣	1695	1
					1NC	CN14DNC3 ▣		

- ▣ For Standard AC Coil Voltage refer table on page no. 36

## 'NHD' Series 2 Pole Contactor

HSN Code : 8536



2 Pole Contactors

Ith (A)	AC3 (A) 240V AC	Cat. No.	MRP [₹]	Lot Size
20	12	CPG 212 ▣	1540	1
25	16	CPG 216 ▣	1750	
35	20	CPG 220 ▣	2295	
40	25	CPG 225 ▣	2640	
40	32	CPG 232 ▣	2810	
50	40	CPG 240 ▣	3220	

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

- ▣ For Coil Voltage Codes refer Table on page 36

## 'NHD' Series 4 Pole Contactor

HSN Code : 8536



4 Pole Contactors

Size	AC1 (A)	AC3 Rating at 415 V			Cat. No.	MRP [₹]	Lot Size
		(A)	HP	KW			
CP12	20	12	7.5	5.5	CP12N ▣	2775	1
00	20	16	10	7.5	C00N ▣	3190	
CP20	30	20	12.5	9.3	CP20N ▣	4070	
0	32	25	15	11	N0N ▣	5825	
01	40	32	20	15	N01N ▣	7075	
1	50	40	25	18.5	N1N ▣	8855	

- ▣ 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

HSN Code : 8538

Description	Orientation	Cat. No.	MRP[₹]	Lot Size
Auxiliary Contact Blocks - NHD	1NO	001CB10	340	1
	1NO+1NC	001CB11	400	
	2NO	001CB20		
	2NC	001CB02		

- ▣ Standard coil voltages are 24, 110, 220/240 & 380/415 VAC, 50 Hz. For voltage codes refer Table on page 36



### Mini Contactor AC Coil HSN Code : 8536

Rating AC3	Cat no.	Aux Contact (NO/NC)	MRP [₹]
07	CA1507P3001A***F	1NC	1460
07	CA1507P3010A***F	1NO	1460
09	CA1509P3001A***F	1NC	1580
09	CA1509P3010A***F	1NO	1580
12	CA1512P3001A***F	1NC	1680
12	CA1512P3010A***F	1NO	1680
16	CA1516P3001A***F	1NC	1990
16	CA1516P3010A***F	1NO	1990

### Mini Contactor DC Coil HSN Code : 8536

Rating AC3	Cat no.	Aux Contact (NO/NC)	MRP [₹]
07	CA1507P3001D***	1NC	2130
07	CA1507P3010D***	1NO	2130
09	CA1509P3001D***	1NC	2210
09	CA1509P3010D***	1NO	2210
12	CA1512P3001D***	1NC	2430
12	CA1512P3010D***	1NO	2430
16	CA1516P3001D***	1NC	2650
16	CA1516P3010D***	1NO	2680

\*\*\* Replace with suitable coil voltage given in Table below



### Mini Control Relays AC Coil

HSN Code : 8536

Rating AC1	Cat no.	Aux Contact (NO/NC)	MRP [₹]
16	CR1516P0022A***F	22	1700
16	CR1516P0031A***F	31	1700
16	CR1516P0013A***F	13	1700
16	CR1516P0040A***F	40	1700
16	CR1516P0004A***F	04	1700

### Mini Controls Relays DC Coil

HSN Code : 8536

Rating AC1	Cat no.	Aux Contact (NO/NC)	MRP [₹]
16	CR1516P0022D***	22	2250
16	CR1516P0031D***	31	2250
16	CR1516P0013D***	13	2250
16	CR1516P0040D***	40	2250
16	CR1516P0004D***	04	2250

\*\*\* Replace with suitable coil voltage given in Table below

Coil Voltage Table

AC, 50 Hz	24	48	110	120	120	230	240	400	415	480	600
DC	12	24	110	125	250						

### Bimetal Thermal Overload Relays



Description	Cat no.	MRP [₹]
0.28 ~ 0.4A	MC15BRL40	2080
0.4 ~ 0.63A	MC15BRL63	2080
0.56 ~ 0.8A	MC15BRL80	2080
0.8 ~ 1.2A	MC15BRM12	2080
1.2 ~ 1.8A	MC15BRM28	2080
1.8 ~ 2.8A	MC15BRM40	2080
2.8 ~ 4A	MC15BRL40	2100
4 ~ 06.3A	MC15BRM63	2100
5.6 ~ 8A	MC15BRM80	2100
7 ~ 10A	MC15BRH10	2100
8 ~ 12.5A	MC15BRH12	2140
10 ~ 15A	MC15BRH15	2140
11 ~ 17A	MC15BRH17	2140

## Accessories

### Auxiliary Contacts Front Mounted for Mini Contactor



Description	Cat no.	MRP [₹]
2 NO	MA15AF20	460
1 NO + 1 NC	MA15AF11	460
2 NC	MA15AF02	460
4 NO	MA15AF40	720
2 NO + NC	MA15AF22	720
4 NC	MA15AF04	720
3 NO + 1 NC	MA15AF31	720
1 NO + 3 NC	MA15AF13	720

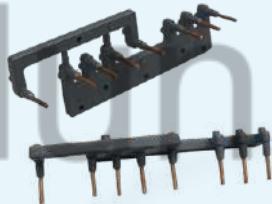
### Auxiliary Contacts Front Mounted for Control Relay

Description	Cat no.	MRP [₹]
2 NO	MR15AF20	460
1 NO + 1 NC	MR15AF11	460
2 NC	MR15AF02	460
4 NO	MR15AF40	720
2 NO + NC	MR15AF22	720
4 NC	MR15AF04	720
3 NO + 1 NC	MR15AF31	720
1 NO + 3 NC	MR15AF13	720



### Mechanical Interlock

Description	Cat no.	MRP [₹]
Front Mounted Mech. Interlock	MA15AMMIL	410



### Reversing Wiring Module

Description	Cat no.	MRP [₹]
Reversing Power Wiring Module	M15A16LDRW	380
	M15A16LNRW	380



### Surge Suppressor RC Type

Description	Cat no.	MRP [₹]
12-24V AC 50/60Hz	M15ASSR024	685
24-48V AC 50/60Hz	M15ASSR048	685
48-127V AC 50/60Hz	M15ASSR127	685
127-250V AC 50/60Hz	M15ASSR250	685
250-380V AC 50/60Hz	M15ASSR380	685
380-510V AC 50/60Hz	M15ASSR510	685

### Surge Suppressor Varistor Type

Description	Cat no.	MRP [₹]
12-48V AC/12-60V DC	M15ASSV048	680
50-127V AC/60-180V DC	M15ASSV127	680
130-275V AC/80-300V DC	M15ASSV275	680
270-380V AC/300-510V DC	M15ASSV380	680
400-510V AC	M15ASSV510	680

Description	Cat no.	MRP [₹]
Surge Supr. Diode 12-600VDC	M15FSSD600	210

## Definite Purpose Contactors

HSN Code : 8536



- Quick connect plugin terminals
- Specially designed low VA coil

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	CPDN202BL	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	

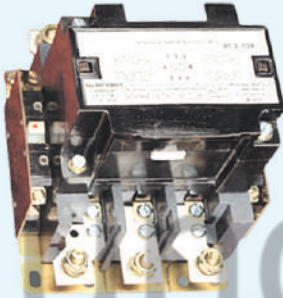
\*wide band AC coil voltages for Definite purpose Contactor

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

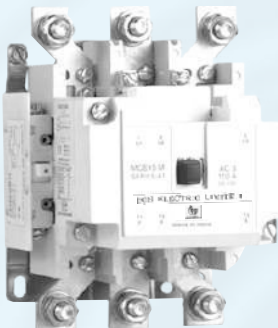
HSN Code : 8536



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 ▣	7100	C4NE11 ▣	6640	C4NE00 ▣	5890
D	40	30	22	MC10DN22 ▣	11240	MC10DN11 ▣	9890	MC10DN00 ▣	9820
D1	50	33.5	25	MC10D1N22 ▣	POR	MC10D1N11 ▣	POR	MC10D1N00 ▣	POR
E	70	50	37	MC10EN22 ▣	20120	MC10EN11 ▣	19710	MC10EN00 ▣	19330

- 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	18330	1
M	150	95	62	47	1NO+1NC	MCE15M0N3 ▣ 5	21990	
M-5	150	110	80	60	1NO+1NC	MCE15MN3 ▣ 5	26900	
N	300	140	100	75	1NO+1NC	MCE15NN3 ▣ 7	40120	1
Q	300	185	120	90	1NO+1NC	MCE15QN3 ▣ 7	45420	

## 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	2080	1
					-	CE15DN3 ▣ -N	1720	
	32	18	10	7.5	1NO+1NC	CE15D1N3 ▣ B-N	2090	
					-	CE15D1N3 ▣ -N	1730	
E	40	25	15	11	1NO+1NC	CE15EN3 ▣ B-N	2820	
					-	CE15EN3 ▣ -N	2400	
F	40	32	20	15	1NO+1NC	CE15FN3 ▣ B-N	5360	
					-	CE15FN3 ▣ -N	4860	

- 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

{	D ~ F @ ₹40
	C4 ~ E @ ₹50
	L ~ Q @ ₹110

## 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	270
	1NO+1NC	C320KGSR11		640
	1NC	C320KGSR01		270
	2NO	C320KGSR20		640
	1NO+1NC	BCH15S11	BCH15	770
	1NO+1NC	MC320KB11	MCE15R	1010
	1NO+1NC (Late break type)	MC320KAS11	MCE15S0 & MCE15S	980
	2NO+2NC	EF22	BCH54 to BCH64	7820
	1NO+1NC	EB11	BCH76 to BCH78	12150
	New	1NO+1NC (1st left)^	BCH4A04041SL11	BCH4040
1NO+1NC (1st right)^		BCH4A04041SR11	BCH4040	910
1NO+1NC (1st left)^		BCH4A06131SL11	BCH4063-130	990
1NO+1NC (1st right)^		BCH4A06131SR11	BCH4063-130	990
4th Neutral Switching Pole	800A	NP800/5	BCH54 to 57	40130
	1000A	NP1000/6	BCH62 to 64	47720
	1000A	NP1000/7	BCH76 to 78	54320
Aux. Contact Block (Front Mounting)	1NO	C320KGTC10	CE15, CR	270
	1NC	C320KGTC01		380
	2NO	C320KGT*20		
	2NC	C320KGT*02		
	1NO+1NC	C320KGT*11		
	2NO+2NC	C320KGT*22		
	3NO+1NC	C320KGT*31		
	4NO	C320KGT*40		
	1NO+3NC	C320KGT*13	BCH15	1480
	4NC	C320KGT*04		1180
	4NO	BCH15T40		
	3NO+1NC	BCH15T31		
	2NO+2NC	BCH15T22		
1NO+1NC	BCH15T11			
1NO	BCH15T10	410		
1NC	BCH15T01	580		
New	1NO+1NC^		BCH4A0413T11	
Pneumatic Timer Block "ON/OFF" Delay site selectable	1NO+1NC (0.1 to 30 sec)	C320TP1	CE15 & CR	1800
	1NO+1NC (10 to 180 sec)	C320TP2		
Mechanical Interlocks	-	C321KM60	CE15 & CR	590
	-	MC321KM3	MCE15R to MCE15S	1720
	Horizontal	BM5H	BCH54 to 57	10320
		BM6H	BCH62 to 64	18040
		BM7H	BCH76 to 78	47770
	Vertical	BM5V	BCH54 to 57	10320
		BM6V	BCH62 to 64	18040
		BM7V	BCH76 to 78	42400
	Horizontal	BM0H	BCH15KT/LT/MT	580
		BM3H	BCH15NT/PT/MN/NN/PN	630
		BCH4M0404	BCH4040	630
		BCH4M0608	BCH4063-080	1270
BCH4M1013		BCH4100-130#	5900	
New	BCH4M4040	BCH4400	10040	

^ 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

\*Add suffix C for power contactors, R for control relays. The suffix C/R denote terminal marking as per standard EN5001 on BS5583 on add on aux. contact blocks used with contactors / control relays

## 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 [₹]
Coil Surge Suppressors	24-48V (50/60Hz)	MC320LR11	CE15, CR	570
	110-240V (50/60Hz)	MC320LR12		
Mechanical latch #	§ to complete the cat no. suffix code given	AM5- §	BCH54 to BCH57	28620
		Am6 §	BCH62 to BCH64	40480

# 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	870
	1NO+1NC	MC320KB11	N & Q	1010
Aux. block add-on (Late break type)	1NO+1NC	MC320KAS11	L, M, M-5, N & Q	980
	1NO+1NC	AC34EA11	C4, D & E	710
Mechanical Interlock		MC321KM1	C4 & D	720
		MC321KM2	L, M, M-5 & E	780
		MC321KM3	N & Q	1720
Base block	1NO+1NC	MC320KB2	C4 & D	790
	1NO+1NC	AC35EB11	E	770

## 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	1190
		SBANC3	
		SBAN4	
		SBBNS3	
B		SBBNC3	1260
		SBBN4	
		SBCNS3	
C		SBCNC3	1370
		SBCN4	
		SBDN3	
D			1670
E			1960
F		3840	
G	6 Fixed contacts 3 Moving Contacts	6-65-4	3370
H	3 springs	6-65-6	4160
J	6 Arc Bonnets	6-65-15	5660
K	3 Spring Retainer	6-65-17	5850
BCH15KT	Complete set of 6 fixed & 3 moving contacts with hardware, contact springs, spring retainers and arc runners	CP-BCH15KT-3	5950
BCH15LT		CP-BCH15LT-3	6830
BCH15MT		CP-BCH15MT-3	7350
BCH15NT		CP-BCH15NT-3	12130
BCH15PT		CP-BCH15PT-3	12130
BCH15MN0		CP-BCH15MN0-4	14160
BCH15MN		CP-BCH15MN-4	15640
BCH15NN		CP-BCH15NN-4	17150
BCH15PN		CP-BCH15PN-4	17920
R		6 Fixed contacts 3 Moving contacts 12 CSK screws & washers	6-288
S0	3 Springs Spring retainers	6-286-S0	27750
S	Self tapping screws & washers 6 Arc Chute assly & screws	6-286	28000
BCH54	Complete set of 6 fixed & 3 moving contacts with hardware, contact springs, spring retainers and arc runners	CP-BCH54-3	34940
BCH55		CP-BCH55-3	40280
BCH57		CP-BCH57-3	56750
BCH62		CP-BCH62-3	103700
BCH64		CP-BCH64-3	139060
BCH76		CP-BCH76-3	303230
BCH78		CP-BCH78-3	340760

## 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	1285
		SP90B1	2470
		SP90D1	2900
		SP90C1	3420
C00N N0N N01N N1N	<b>(1 - Pole contact kit)</b> 2 Fixed main contacts 1 Moving main contacts 1 Spring & 1 retainers	SP90A01	345
		SP90B01	630
		SP90D01	750
		SP90C01	870
CPG216 CPG225 CPG240	4 Fixed contacts 2 Main contacts 2 Spring retainers	CPG162PSP CPG252PSP CPG402PSP	670 1715 2100
C4	6 Fixed main contacts 6 Pan head screws 6 Helical lock washers	SP34K	3230
MC10D	6 Fixed Main Contacts 3 Compression springs 3 Retainers	6-334	4450
MC10E	Same as above plus 6 Blow outs 6 M5/M4 self tapping screws	6-335	8390
L	6 Fixed Contacts 6 Pan Head Screws	6-385-L0	6450
M	6 Helical Lock Washers 3 Moving contacts	6-385-M	7260
M-5	3 Springs, 3 Retainers 6 Blowouts 6 self tapping screws	6-385	7340
N	6 Fixed contacts 12 CSK screws & washers	6-293	17850
Q	3 Moving contacts 3 Springs, Spring Retainers, Self tapping screws & Washers	6-288-Q	21360
<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	- 3790 5290 6570 8030 41170

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

HSN Code : 8538

Contactors	Cat. No.	MRP [₹]
BCH15KT	PF-BCH15KT	880
BCH15LT	PF-BCH15LT	
BCH15MT	PF-BCH15MT	
BCH15NT	PF-BCH15NT	
BCH15PT	PF-BCH15PT	1530
BCH54/BCH55/BCH57 (for all 3 poles)	PF-BCH5	10510
BCH62/BCH64 (for all 3 poles)	PF-BCH6	29110
BCH76/78 (for single pole)	3PF-BCH78	59830

## 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 ■	660
	CE16, D16 (Pure DC)	MC16FW ■	1060
	D, E, F	MC15FW ■	740
	G, H, J, K	MC15KW ■	1900
	BCH15KT/LT	B02. ■	1780
	BCH15MT	B022. ■	3040
	BCH15NT / PT / MN / NN / PN	B031. ■	6060
	R, S0, S	9-2412- ■	5500
	BCH4040	BCH4C0404 ■	610
	<b>New</b> BCH4063-080	BCH4C0608 ■	670
	BCH4100-130	BCH4C1013 ■	1890
	BCH4400	BCH4C4040 ■	11650
	Magnetic coil (set of two)	BCH54/ BCH55/ BCH57	B51. ■
Feeder group	FG51. ■		12680
Magnetic coil (set of two)	BCH62/ BCH64	B61. ■	36490
Feeder group		FG61. ■	42640
Magnetic coil (set of two)	BCH76/ BCH78	B8- ■	96670
Feeder group		FG78- ■	97960

- To specify coil voltage please refer page no.36
- 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*	480	10
Magnetic coil for MCE15L, MCE15M0, MCE15M	9-2268- ■	2500	1
Magnetic coil for MCE15N & MCE15Q	9-2412- ■	5500	1
Magnetic coil for C4 & MC10D	9-2267- ■	1560	1
Magnetic coil for MC10E type	9-2268- ■	2500	1

- To specify coil voltage please refer page no. 36
- 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



## COIL VOLTAGE: MASTER TABLE

CR RELAY	COIL BAND	24V		48V		110V		160-220V		170-240V		220V		220-240V		230-360V		240V		190-400V		230-420V		260-400V		275-420V		310-400V		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	AC	DC	AC	DC	AC	DC					
#CR Relay	#CE15A-F, CN14	U	U3	W	W3	AC	A3	-	-	B	B3	-	-	K	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	#CE15G-K	U	U3	W	W3	AC	A3	-	-	B	B3	-	-	K	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	BCH15KT-LT	U	-	W	-	A	-	-	-	-	B	-	-	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FREEDOM	BCH15MT	24	-	48	-	110	-	-	-	B	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NHD	MCE15R-S	U	U3	-	-	A	A3	-	-	B	-	-	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BCH54-64	-	-	-	-	110	110	-	-	220	220	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BCH76&78	-	-	-	-	A7	-	-	-	B7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CP12N,CO0N, CP20N, NON	U	-	-	-	A	-	-	-	-	-	H	LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Shakti	NO1N & N1N	U	-	-	-	A	-	-	-	-	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Shakti DOL	-	-	-	-	-	-	-	-	-	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2P	Shakti Star Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CPG - All range	U	-	-	-	A	-	-	-	-	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CPGN 16,20,25	-	-	-	-	-	-	-	-	BW	BBW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CITATION	C4 & D	-	-	-	-	A	-	-	-	-	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MCE10EN	U	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MCE15L-M5	U	-	W	-	A	-	-	-	-	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MCE15N-Q	U	U3	-	-	A	A3	-	-	-	-	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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.

## 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
- Contacting mounting & separate mounting
- Successfully tested for Type-2 Coordination
- Suitable for almost all makes of Contactors
- Proven and tested

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

HSN Code : 8536

HSN Code : 8538

Relay Range	Cat. No.	MRP [₹]	Terminal Block for individual mounting	MRP [₹]
0.195 - 0.31	MC305ANA3A	1860	(Incoming) MC305TB1 (Outgoing) MC305TB3	270
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	2060	(Incoming) MC305TB2 (Outgoing) MC305TB3	
17.40 - 24.00	MC305ANA3M	2270		
22.00 - 30.00	MC305ANA3N*	2930		
23.00 - 32.00	MC305ANA3P*	2960	(Incoming) MC305TB2 (Outgoing) MC305TB3	
26.00 - 40.00	MC305ANA3Q*	3210		

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

## DIN rail mounting kit with incoming terminal block

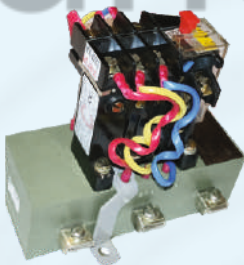
HSN Code : 8538

Relay Range (A)	Cat. No.	MRP [₹]
A to K	MC305DM1	320
L to N	MC305DM2	330

## CT Operated Overload Relays-Individual Mounting

HSN Code : 8536

### CT Operated Overload Relay



Relay Range (A)	Cat. No.	MRP [₹]
24.4-39.0	CT1MC305ANA3C	5550
37.6-60.0	CT2MC305ANA3C	7160
56.4-90.0	CT3MC305ANA3C	8040
84.6-135.0	CT4MC305ANA3C	8160
131.6-210.0	CT5MC305ANA3C	12340
188.0-300.0	CT6MC305ANA3C	14140
263.2-420.0	CT7MC305ANA3C	14620
376.0-600.0	CT8MC305ANA3C	16970

## 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
28.00-40.00	MC307ANA2Q <b>New</b>	1550

## WP Overload Relay



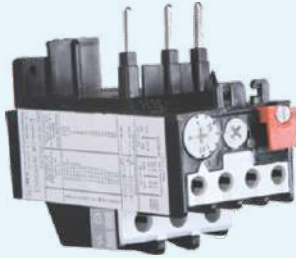
- Designed to withstand wide fluctuations in agricultural applications
- Appropriately sensitive relay for increased pump performance

## 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
17.40 - 24.00	MC307ANA3M / MC307ANA3M-OS	2065
22.00 - 30.00	MC307ANA3N	2480
23.00 - 32.00	MC307ANA3P (Spare for Oil Starter)	2555

## 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	1740	Adaptor for Individual mounting Cat. No. <b>C318F1</b>  MRP Rs. 490
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		
18.0-25.0	MC318ANA3S			
24.0-32.0	MC318ANA3T		2730	
22.0-32.0	MC318GNA3B		2960	
29.0-42.0	MC318GNA3C		2970	
36.0-52.0	MC318GNA3D		4010	
45.0-63.0	MC318GNA3E		4470	
60.0-80.0	MC318GNA3F		5500	

# Electronic Overcurrent Relay



## 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

## BOCR PFZ



- Phase Reversal
- Locked Rotor
- Ground Fault
- 4-20mA analog output
- RS-485 Comm.

## BOCR IFDM/IFDZ



- Over Current
- Under Current
- Phase Loss
- Phase Unbalance
- Phase Reversal
- Locked Rotor
- Ground Fault (in IFDZ model)
- RS-485 communication

## Bhartia Electronic Overcurrent Relay

HSN Code : 8536

Model	Current Range	Cat. No.	Type	MRP [₹]
BOCR SS 05	0.5-6A	MP21SS005 ■	Analog model	5030
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	9110
BOCR SSD 30	3.0 -30A	MP22SSD030 ■		
BOCR SSD 60	10-60A	MP22SSD060 ■		
BOCR DS3 05	0.5-6A	MP34DS3005 ■	Analog model (Definite time)	7440
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)	25390
BOCR DS1 30	3.0-30A	MP32DS1030 ■		
BOCR 3DE 05	0.5-7.0A	MP353DE05D ■H		
BOCR 3DE 80	5.0-80A	MP353DE80D ■H	Flush mounted display #, bottom hole	28750
BOCR FDE 05	0.5-7.0A	MP35FDE05D ■H		
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	27640
BOCR 3EZ 80	5.0-80A	MP363EZ80A ■H		
BOCR FEZ 05	0.5-7.0A	MP36FEZ05A ■H		
BOCR FEZ 80	5.0-80A	MP36FEZ80A ■H	Flush mounted display #, bottom hole, G/F protection	31300
BOCR PMZ	0.5-100A	MP37PMZWDRD ■H		
BOCR PFZ	0.5-100A	MP37PFZWDRD ■H		
BOCR IFDM	0.5-60A	MP39-IFDM400H ■	RS-485 comm./ Flush mounted display#	34320
BOCR IFDZ	0.5-60A	MP39-IFMZ400H ■	RS-485 comm./Earth fault/ Flush mounted display#	43520

### ■ 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	3360
2CT-DH-150-C	2CT EP 150/5	
2CT-D2-200-C	2CT EP 200/5	
2CT-D3-300-C	2CT EP 300/5	3630
2CT-D4-400-C	2CT EP 400/5	5110
3CT-H1-100-C	3CT version 100/5	5170
3CT-HH-150-C	3CT version 150/5	5370
3CT-H2-200-C	3CT version 200/5	5660
3CT-H3-300-C	3CT version 300/5	6010
3CT-H4-400-C	3CT version 400/5	6370
ZCT-035	ZCT version 35mm hole	6130
ZCT-080	ZCT version 80mm hole	7990
ZCT-120	ZCT version 120mm hole	14150

ZCT must be used for ground Fault protection alongwith BOCR

### # Cable for separate display Models

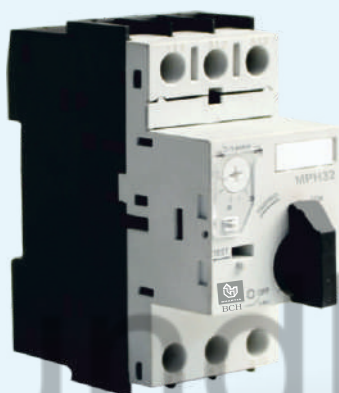
HSN Code : 8536

Cat No.	For model	Range	MRP [₹]
CABLE-RJ45-003	BOCR-FDEFEZ/PFZ BOCR-IFDM/IFDZ	CABLE-RJ45 3m EOCR-IFD model	1900

Note : Cable must be ordered separately along with the EOCR

## MPH range (0.1 to 63A)

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



Cat code	Description	MRP [₹]
<b>(A) Thermal-Magnetic release</b>		
MPH32-0.16	MPCB 3P TM 0.1- 0.16A	3890
MPH32-0.25	MPCB 3P TM 0.16-0.25A	3940
MPH32-0.4	MPCB 3P TM 0.25-0.4A	3940
MPH32-0.63	MPCB 3P TM 0.4-0.63A	4090
MPH32-1.0	MPCB 3P TM 0.63-1.0A	4330
MPH32-1.6	MPCB 3P TM 1.0-1.6A	4330
MPH32-2.5	MPCB 3P TM 1.6-2.5A	4330
MPH32-4.0	MPCB 3P TM 2.5-4.0A	4400
MPH32-6.3	MPCB 3P TM 4.0-6.3A	4520
MPH32-10	MPCB 3P TM 6.3-10.0A	4580
MPH32-16	MPCB 3P TM 10.0-16.0A	5070
MPH32-20	MPCB 3P TM 16.0-20.0A	6050
MPH32-25	MPCB 3P TM 20.0-25.0A	6480
MPH32-32	MPCB 3P TM 25.0-32.0A	10180
MPH63-16	MPCB 3P TM 11.0-16.0A F2	11030
MPH63-20	MPCB 3P TM 14.0-20.0A F2	11030
MPH63-25	MPCB 3P TM 18.0-25.0A F2	11030
MPH63-32	MPCB 3P TM 22.0-32.0A F2	18900
MPH63-40	MPCB 3P TM 28.0-40.0A F2	18900
MPH63-45	MPCB 3P TM 36.0-45.0A F2	18900
MPH63-50	MPCB 3P TM 40.0-50.0A F2	20070
MPH63-63	MPCB 3P TM 45.0-63.0A F2	20070
<b>(B) With magnetic trip only (no Thermal release)</b>		
MPH32M-0.16	MPCB 3P Mag only 0.16 A	3800
MPH32M-0.25	MPCB 3P Mag only 0.25 A	3850
MPH32M-0.4	MPCB 3P Mag only 0.4 A	3850
MPH32M-0.63	MPCB 3P Mag only 0.63 A	3990
MPH32M-1.0	MPCB 3P Mag only 1.0 A	3990
MPH32M-1.6	MPCB 3P Mag only 1.6 A	3910
MPH32M-2.5	MPCB 3P Mag only 2.5 A	3910
MPH32M-4.0	MPCB 3P Mag only 4.0 A	4140
MPH32M-6.3	MPCB 3P Mag only 6.3 A	4250
MPH32M-10	MPCB 3P Mag only 10 A	4320
MPH32M-16	MPCB 3P Mag only 16 A	4580
MPH32M-20	MPCB 3P Mag only 20 A	4920
MPH32M-25	MPCB 3P Mag only 25 A	4880
MPH32M-32	MPCB 3P Mag only 32 A	8530
MPH63M-16	MPCB 3P Mag only 16 A F2	10810
MPH63M-20	MPCB 3P Mag only 20 A F2	10810
MPH63M-25	MPCB 3P Mag only 25 A F2	10810
MPH63M-32	MPCB 3P Mag only 32 A F2	18680
MPH63M-40	MPCB 3P Mag only 40 A F2	18680
MPH63M-45	MPCB 3P Mag only 45 A F2	18680
MPH63M-50	MPCB 3P Mag only 50 A F2	19810
MPH63M-63	MPCB 3P Mag only 63 A F2	19810

## Accessories MPH range MPCB



## Accessories for MPH MPCB

HSN Code : 8538

Cat code	Description	MRP [₹]
MPHF11	Front aux contact 1NO+1 NC MPCB	750
MPHS11	Side aux contact 1NO+1 NC MPCB	970
MPHT11	MPCB Trip Indicator	1140
MPH024UR	UV Rel. 24V 50HZ MPCB	1860
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	
MPH127SR	Shunt Rel. 100-127V 50/60HZ MPCB	
MPH34	Extn rotary handle for 32A	1530
B31SMA1	Plastic enclosure for MPH32 MPCB	2030
MPH64	Extn Rotary Handle for MPH 63A MPCB	1580
MPHT11F2	LHS Trip Indicator for 63A F2 MPCB	2120

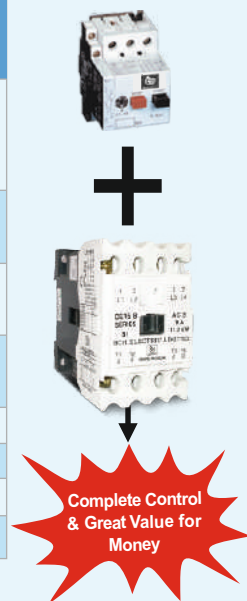
## MPE Range (0.1 - 25A)



- 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	-	3450
MPE-02	0.16...0.25	0.06	
MPE-03	0.25...0.4	0.12	
MPE-04	0.4...0.63	0.18	3810
MPE-05	0.63...1	0.25, 0.37	
MPE-06	1...1.6	0.55	3870
MPE-07	1.6...2.5	0.75, 1.1	
MPE-08	2.5...4	1.5	3930
MPE-10	4...6.3	2.2, 3	
MPE-14	6.3...10	4, 5	4120
MPE-16	10...16	5.5, 9	4790
MPE-20	16...20	11	5110
MPE-22	20...25	12.5	5510



### Accessories of MPE Range

HSN Code : 8538

Reference	Contacts	MRP [₹]
Auxiliary	Switch	650
MPA-0010	1NO	
MPA-0001	1NC	
MPA-0011	1NO + 1NC	
MPA-0020	2NO	830
Enclosures (IP55)		
MPA-EF	Flush mounted	1140
MPA-ES	Surface mounted	1260
Voltage Releases		
MPA-U ■	Under Voltage Release	1750
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)	830
MPA-BB345	3 Tap-o (45mm)	1050
MPA-BB445	4 Tap-o (45mm)	1260
MPA-BB545	5 Tap-o (45mm)	1390
MPA-BB263	2 Tap-o (63mm)	830
MPA-BB463	4 Tap-o (63mm)	1250
MPA-BB1	Incoming Block	770

\*centre to centre distance.



## 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	-	3510
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	3750
MS32-1.0	0.63-1.0	0.18 to 0.25	
MS32-1.6	1.0-1.6	0.37 to 0.55	3940
MS32-2.5	1.6-2.5	0.75	4020
MS32-4.0	2.5-4	1.1 to 1.5	4130
MS32-6.3	4-6.3	2.2	
MS32-10	6.3-10	3 to 4	4690
MS32-14.0	9-14	5.5	
MS32-18	13-18	7.5	4880
MS32-23	17-23	9 to 11	5480
MS32-27	20-27	11	5780
MS32-32	25-32	15	8690



## Accessories - MS32 range

HSN Code : 8538

Cat ref	type	Contacts	MRP[₹]
HS11	Aux contact side mounting	1NO+1NC	910
HSV10	Aux contact top mounting	1NO	740
HSV01		1NC	
HRS10	Trip indicating block top mounting	1NO	1010
HRS01		1NC	
MS32-UR	Under voltage release	-	1860
MS32-AR	Shunt release	-	

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



## 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	$I^2t$ (A <sup>2</sup> S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SC941110L	5	12A	72	600V AC	12-280V AC	4-30V DC	2230
SC942110L	5	25A	288	600V AC	12-280V AC	4-30V DC	2610
SC944110L	5	40A	612	600V AC	12-280V AC	4-30V DC	3850

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	$I^2t$ (A <sup>2</sup> S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SC941160L	5	12A	72	600V AC	12-280V AC	4-30V DC	2250
SC942160L	5	25A	288	600V AC	12-280V AC	4-30V DC	2640
SC944160L	5	40A	612	600V AC	12-280V AC	4-30V DC	3910
SC945160L	5	50A	1500	600V AC	12-280V AC	4-30V DC	6970
SC947160L	5	75A	5000	600V AC	12-280V AC	4-30V DC	7740

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	$I^2t$ (A <sup>2</sup> S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SO942560*	2	25A	600	600V AC	12-280V AC	7-30V DC	5940
SO963460*	2	35A	1250	1200V AC	24-600V AC	3.5-32V DC	7690
SO945460*	2	50A	2500	600V AC	12-280V AC	3-32V DC	8180
SO965460*	2	50A	2800	1200V AC	24-600V AC	3.5-32V DC	8570
SO967460*	2	90A	7200	1200V AC	24-600V AC	3.5-32V DC	9890

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

## 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	5580
SU963460*	44	35A	1200V AC	24-600V AC	3.5-32V DC	6930
SU965460*	44	50A	1200V AC	24-600V AC	3.5-32V DC	7400
SU967460*	44	75A	1200V AC	24-600V AC	3.5-32V DC	9200

### 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

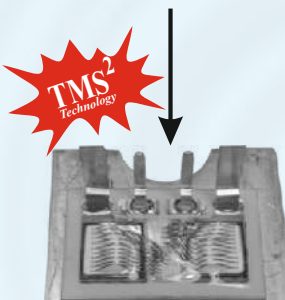
HSN Code : 8536



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	7230
SO863070*	2	35A	1250	1200V AC	24-510V AC	3.5-32V DC	7970
SO845070*	2	50A	2500	600V AC	12-275V AC	3-32V DC	8550
SO848070*	2	95A	14400	600V AC	12-275V AC	3-32V DC	12870
SO889060*	2	125A	24000	1600V AC	24-600V AC	3.5-32V DC	34150

MOQ - Minimum Order Qty.

### Direct Copper Bonding Technology



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

## Three Phase SSR's

### SGT Series 3-Phase With LED (ZERO CROSS) IP20 Protection

HSN Code : 8536



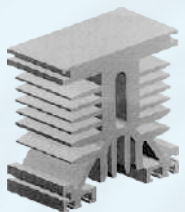
- IP20-RC and VDR Protection
- Designed for all types of load
- Thyristor technology

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	35350
SGT8670500	2	75A	16A	7200	1600VAC	24-520VAC	4-30VDC	38880
SGT8690500	2	125A	32A	22000	1600VAC	24-520VAC	4-30VDC	47710
<b>AC/DC CONTROL</b>								
SGT8658500	2	50A	12A	2800	1600VAC	24-520VAC	24-255VAC/DC	37080
SGT8678500	2	75A	16A	7600	1600VAC	24-520VAC	24-255VAC/DC	40740
SGT8698500	2	125A	32A	22000	1600VAC	24-520VAC	24-255VAC/DC	49550

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*	90
SCHS6 DIN	20	Din Clip	240
SCHS2200	5	Heat Sink 2.2K/W	1290
SCHS1100	5	Heat Sink 1.1 K/W	4080
SCHS0900	5	Heat Sink 0.9 K/W	4810
SCHS0300	5	Heat Sink 0.3K/W	7850

\*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.



### 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

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

HSN Code : 8536

Type	Description	Cat. No.	MRP [₹]	HSN Code	Lot Size
Actuator	<b>Standard flush Button</b>				
	Red	TSFB-R	305	8536	20
	Green	TSFB-G			
	Black	TSFB-B			
	Yellow	TSFB-Y			
	Blue	TSFB-BL			
	Orange	TSFB-O			
	White	TSFB-W			
	<b>Long Button</b>				
	Red	TLB-R	330	8536	10
Green	TLB-G				
Black	TLB-B				
Yellow	TLB-Y				
Blue	TLB-BL				
Orange	TLB-O				
White	TLB-W				
<b>Mushroom Head</b>					
-Spring return Red	TMH-R	390	8536	10	
-Spring return Green	TMH-G	390			
-Turn to release Red	TMHL-R	420			
-Turn to release Green	TMHL-G	420			
<b>Selector Actuator</b>					
-2 or 3 position	TSSA ***	770	8536	10	
<b>Cylindrical Lock</b>					
-2 or 3 positions	TCL ***	1115	8536	10	
Station	Start/Stop Pushbutton	E20EA	1195	8536	1
Contact Block	1NO +1NC	050N1	390	8536	20
	2NO	050N2			
	2NC	050N3			
Aluminium Diecast Enclosure	One button	TEN-1	1260	8536	1
	Two buttons	TEN-2	1450		
	Three buttons	TEN-3	1960		
				<b>HSN Code : 8538</b>	
Accessories	Wrench for retaining ring	TWN	385	8538	1
	Plug for hole	TPL	175		
	Legend plate	050L^	80		

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

## 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	550	8536	1
Transformer type	AC	TILT•10	695	8536	1
<b>HSN Code : 8538</b>					
Polycarbonate Lens	-	LENS*	90	8538	10
Spare Bulb	AC & DC	SP61L#	100	8538	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■	400	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	-

New

# Control & Signalling Devices 22.5mm



## Control & Signalling Devices 22.5 mm – BML Metal Series ( Non- illuminated)

HSN Code : 8536

Product	Description	Colour	Cat. No.	Unit MRP [₹]	Lot Size
	Flush Actuator	Red	BML22FA - R	130	30
		Green	BML22FA - G	130	
		Yellow	BML22FA - Y	130	
		Blue	BML22FA - BL	130	
		Black	BML22FA - BK	130	
		White	BML22FA - W	130	
	Projecting Actuator	Red	BML22PA - R	145	15
		Green	BML22PA - G	145	
		Yellow	BML22PA - Y	145	
		Blue	BML22PA - B	145	
		Black	BML22PA - BL	145	
		White	BML22PA - W	145	
	Mushroom Actuator (Momentary) Head – $\phi$ 40mm	Red	BML22MM4 - R	190	20
		Green	BML22MM4 - G	190	
		Yellow	BML22MM4 - Y	190	
		Blue	BML22MM4 - BL	190	
		Black	BML22MM4 - BK	190	
		White	BML22MM4 - W	190	
	Mushroom Actuator (Twist to Release) Head – $\phi$ 40mm	Red	BML22MT4 - R	265	20
		Black	BML22MT4 - BK	265	
	Mushroom Actuator (Key to Release) Head – $\phi$ 40mm	Red	BML22MK4 - R	595	20
	Mushroom Actuator (Momentary) Head – $\phi$ 60mm	Red	BML22MM6 - R	315	6
		Green	BML22MM6 - G	315	
		Yellow	BML22MM6 - Y	315	
		Blue	BML22MM6 - BL	315	
		Black	BML22MM6 - BK	315	
		White	BML22MM6 - W	315	
	Mushroom Actuator (Twist to Release) Head – $\phi$ 60mm	Red	BML22MT6 - R	340	6
		Black	BML22MT6 - BK	340	






# Control & Signalling Devices 22.5mm





## Control & Signalling Devices 22.5 mm – BML Metal Series ( Non- illuminated)

HSN Code : 8536

Product	Description	Colour		Cat. No.	Unit MRP [₹]	Lot Size
	<b>Selector Knob Actuator</b>					
	2 Position - Maintained	Black	●	BML22SM2P - BK	370	15
	3 Position – Maintained (both side)	Black	●	BML22SM3P - BK	370	
	2 Position Spring Return	Black	●	BML22SS2P - BK	405	
3 Position Spring Return (Both Side)	Black	●	BML22SS3P - BK	415		
	<b>Selector Key Actuator</b>					
	2 Position - Maintained	Black	●	BML22SK2P - BK	520	15
3 Position - Maintained (both side)	Black	●	BML22SK3P - BK	540		
	<b>Twin Actuator</b> (Spring Return with Green Knob "I" marked & Red Knob "O" marked)	Green & Red	● & ●	BML22TA - RG	230	15

## Control & Signalling Devices 22.5 mm - BML Metal Series (illuminated)

	<b>LED Luminous Twin Actuator</b> AC/DC : 12V, 24V, 48V, 60V DC :110V, 220V AC : 110V, 240V, 440V	Red & Green Marked ( I/O ) & Amber LED	●	BML22LTA□ - A	440	10
	<b>LED Luminous Actuator</b> AC/DC: 12V, 24V, 48V, 60V DC:110V, 220V AC: 110V, 240V, 440V	Red	●	BML22LA□ - R	380	15
		Green	●	BML22LA□ - G	380	
		Yellow	●	BML22LA□ - Y	380	
		Clear	●	BML22LA□ - C	380	
		Amber	●	BML22LA□ - A	380	
		White	●	BML22LA□ - W	610	
		Blue	●	BML22LA□ - BL	610	

□ : Please mention voltage code from Table 2 (page no.52)



# Control & Signalling Devices 22.5mm



## Control & Signalling Devices 22.5 mm – BML Metal Series (illuminated)

HSN Code : 8536

Product	Description	Colour	Cat. No.	Unit MRP [₹]	Lot Size
	<b>LED Luminous 2 Position Selector Actuator (Maintained)</b> AC/DC: 12V, 24V, 48V, 60V DC:110V, 220V AC: 110V, 240V, 440V	Red	● BML22LSM2□-R	580	15
		Green	● BML22LSM2□-G	580	
		Yellow	● BML22LSM2□-Y	580	
		Clear	● BML22LSM2□-C	580	
		Amber	● BML22LSM2□-A	580	
		White	● BML22LSM2□-W	810	
		Blue	● BML22LSM2□-BL	810	
	<b>LED Luminous 3 Position Selector Actuator (Maintained)</b> AC/DC: 12V, 24V, 48V, 60V DC:110V, 220V AC: 110V, 240V, 440V	Red	● BML22LSM3□-R	580	15
		Green	● BML22LSM3□-G	580	
		Yellow	● BML22LSM3□-Y	580	
		Clear	● BML22LSM3□-C	580	
		Amber	● BML22LSM3□-A	580	
		White	● BML22LSM3□-W	810	
		Blue	● BML22LSM3□-BL	810	

## Control & Signalling Devices 22mm – BIL/BML LED Indicating Light

	<b>LED Indicating Light - Standard (Barrel Type)</b> AC/DC : 12V, 24V, 48V, 60V DC :110V, 220V AC : 110V, 240V, 440V	Red	● BIL22BRS□-R	190	30
		Green	● BIL22BRS□-G	190	
		Yellow	● BIL22BRS□-Y	190	
		Clear	● BIL22BRS□-C	190	
		Amber	● BIL22BRS□-A	190	
		White	● BIL22BRS□-W	345	
		Blue	● BIL22BRS□-BL	345	
	<b>LED Indicating Light - with LVGP (Barrel Type)</b> AC/DC : 12V, 24V, 48V, 60V DC :110V, 220V AC : 110V, 240V, 440V	Red	● BIL22BRP□-R	230	30
		Green	● BIL22BRP□-G	230	
		Yellow	● BIL22BRP□-Y	230	
		Clear	● BIL22BRP□-C	230	
		Amber	● BIL22BRP□-A	230	
		White	● BIL22BRP□-W	385	
		Blue	● BIL22BRP□-BL	385	
	<b>LED Indicating Light - Universal Voltage (Barrel Type)</b> 12-230V AC/DC	Red	● BIL22BRUH4-R	290	30
		Green	● BIL22BRUH4-G	290	
		Yellow	● BIL22BRUH4-Y	290	
		Clear	● BIL22BRUH4-C	290	
		Amber	● BIL22BRUH4-A	290	
		White	● BIL22BRUH4-W	450	
		Blue	● BIL22BRUH4-BL	450	
	<b>Pilot LED Indicating Light</b> AC/DC : 12V, 24V, 48V, 60V DC :110V, 220V AC : 110V, 240V, 440V	Red	● BML22PL□-R	340	15
		Green	● BML22PL□-G	340	
		Yellow	● BML22PL□-Y	340	
		Clear	● BML22PL□-C	340	
		Amber	● BML22PL□-A	340	
		White	● BML22PL□-W	570	
		Blue	● BML22PL□-BL	570	

□ : Please mention voltage code from Table 2 (page no.52)



# Control & Signalling Devices 22.5mm



## Control & Signalling Devices 22.5 mm - Accessories for BML Series

HSN Code : 8536

Product	Description	Type	Cat. No.	Unit MRP [₹]	Lot Size
	<b>Contact Element</b> 	1 NO	BML22CB10	91	50
		1 NC	BML22CB01	91	
	<b>Legend Plate Metal</b>	Aluminium	BML22LPM-□	30	20
	<b>Legend Plate Plastic Yellow Colour</b>	Emergency / Stop	BML22LPP - 23	30	20
	<b>Hole Closer</b>	Plastic	BML22HC	60	50
	<b>Rubber Boot for Flush Actuator</b>	Transparent	BML22RB	70	20
	<b>Rubber boot for Illuminated Push Button</b>	Clear	BML22LRB	80	20

□: Please mention legend plate code from Table 1

### Suffix Code Table

legend Plate	Code	legend Plate	Code
Start	1	OFF	12
Stop	2	Right	13
Forward	3	Left	14
Reverse	4	TRIP	15
UP	5	Local	16
DOWN	6	Remote	17
Open	7	Test	18
Close	8	Run	19
Auto	9	R Phase	20
Reset	10	Y Phase	21
ON	11	B Phase	22

Voltage	Code
12V AC/DC	S4
24V AC/DC	U4
48V AC/DC	W4
60V AC/DC	Y4
110V DC	E1
220V DC	H1
110V AC	E
240V AC	H
415V AC	M



## Shakti DOL & Star Delta Starters

- DOL & Star Delta upto 24 A relay range
- Heavy duty Shakti Contactor
- Wide Band coil voltages (190-400V, 230-420V, 220-240V, 380-415V)
- Encapsulated & Hermetically sealed coil
- Automatic star delta with electronic timer for reliable changeover from star to delta
- Selection of manual & auto resetting of overload relay



## Citation DOL & Star Delta Starters

- DOL upto 40 HP
- Semi Automatic upto 40 HP
- Fully Automatic upto 375 HP
- Heavy Duty NHD & Citation Contactor
- Wide Band Coil Voltage (230-360V, 260-400V, 380-415V)
- Automatic Star Delta with Pneumatic Time for Reliable Changeover from Star to Delta
- Selection of Manual & Auto Resetting of Overload Relay



## Shakti & Citation P Auto DOL Starters

- Shakti range available upto 24 A overload relay
- Citation P range available upto 40 A overload relay
- Auto start with on delay options:- 5 sec or 5 min or 0.5 sec to 5 min
- Mode of operation:- Auto/ Manual/ Manual SPP with selector on enclosure switch or SPP with inbuilt selector switch
- Protection against phase reversal, phase imbalance & single phasing



## BK1 DOL & Semi Automatic Star Delta Starters

- Range: DOL upto 7.5 H.P
- Range: Star Delta upto 15 H.P
- Wide Band Coil 250-400 V AC & 200-400 VAC



## 1-Phase DOL Starter

- Starter With 2 Pole CPGN Contactor and 2 Pole Overload Relay
- Encapsulated & Hermetically Sealed Coil
- Selection of Manual & Auto Resetting of Overload Relay
- Power Coated Deep Drwan Sheet Steel Enclosure for Excellent Finish & Durability



## Mini Manual Starters

- Range Available upto 10 HP (3PH) & upto 3HP (1PH)
- Flush & Base Mounting Version Available
- Trips Automatically in Low Voltage Conditions (with UV Coil)
- Prevents Motor From Restarting When Powder Comes Back

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

HSN CODE : 8536



Cat. No.	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]	Cat. No. (Open Execution)	MRP [₹]		
SAWPGZA	2.4 - 3.8	Shakti	12 A	3155	-	-		
SAWPHZA	3.8 - 6.0							
SAWPJZA	6.0 - 9.3							
SAWPGZ	2.4 - 3.8		20 A	3195	3145	SAWPGZI	3145	
SAWPHZ	3.8 - 6.0					SAWPHZI		
SAWPJZ	6.0 - 9.3					SAWPJZI		
SAWPKZ	8.9 - 13.5					SAWPKZI		
SAWPLZ	13.2 - 20.0					SAWPLZI		3345
SAWPMZ	17.4 - 24.0					SAWPMZI		3515
			3365					
			3530					



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

HSN CODE : 8536

Cat. No.	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
SAWPKZ-BT	8.9 - 13.5	Shakti	20 A	4240
SAWPLZ-BT	13.2 - 20.0			4425
SAWPMZ-BT	17.4 - 24.0			4660

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

HSN CODE : 8536



Cat. No.	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]	Cat. No. (Open Execution)	MRP [₹]
SAGZ	2.4 - 3.8	Shakti	20 A	3410	SAGZI	3355
SAHZ	3.8 - 6.0				SAHZI	
SAJZ	6.0 - 9.3				SAJZI	
SAKZ	8.9 - 13.5			SAKZI	3665	
SALZ	13.2 - 20.0			SALZI	3810	
SAMZ	17.4 - 24.0			SAMZI	3715	
			3865			

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

### 3 Position Selection (Manual - Manual SPP - Auto)

HSN CODE : 8536



Cat. No.	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
ASXGZ	2.4 - 3.8	Shakti	20 A	5775
ASXHZ	3.8 - 6.0			
ASXJZ	6.0 - 9.3			
ASXKZ	8.9 - 13.5			6060
ASXLZ	13.2 - 20.0			6410
ASXMZ	17.4 - 24.0			

For other Coil Voltages, kindly refer "Coil Voltage Master Table" at page 36

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

HSN CODE : 8536



Cat. No.	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
SASSGLEG	2.4 - 3.8	Shakti	16 A	11520
SASSHLEG	3.8 - 6.0			
SASSJLEG	6.0 - 9.3			
SASSKLEG	8.9 - 13.5			
SASSKLEG/LOR	13.2 - 20.0			11750
SASSKLEG-M	17.4 - 24.0			12140

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

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

HSN CODE : 8536



Cat. No.	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
SASAGLEG	2.4 - 3.8	Shakti	16 A	12740
SASAHLEG	3.8 - 6.0			
SASAJLEG	6.0 - 9.3			
SASAKLEG	8.9 - 13.5			
SASAKLEG/LOR	13.2 - 20.0			12955
SASAKLEG/MOR	17.4 - 24.0			13325

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

For other Coil Voltages, kindly refer "Coil Voltage Master Table" at page 36

## Citation DOL Motor Starter

HSN CODE : 8536



Cat. No.	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]	Cat. No. (Open Execution)	MRP [₹]
NADLEN	0.5 / 0.37	0.72 - 1.14	C00N	16 A	4570	NADLENI	4455
NAELEN	0.75 / 0.55	1.07 - 1.70	C00N	16 A	4570	NAELENI	4455
NAFLEN	1 / 0.75	1.58 - 2.50	C00N	16 A	4570	NAFLENI	4455
NAGLEN	2 / 1.5	2.4 - 3.8	C00N	16 A	4570	NAGLENI	4455
NAHLEN	3 / 2.2	3.8 - 6.0	C00N	16 A	4570	NAHLENI	4455
NAJLEN	5 / 3.7	6.0 - 9.3	C00N	16 A	4570	NAJLENI	4455
NAKLEN	7.5 / 5.5	8.9 - 13.5	C00N	16 A	4570	NAKLENI	4455
NALLEN	10 / 7.5	13.2 - 20.0	C00N	16 A	4845	NALLENI	4725
NALLEN/MOR	12.5 / 10	17.4 - 24.0	CP20	20 A	5645	NALLEN/MOR	5675

## Citation DOL Motor Starter (A) with NHD Contactor

HSN CODE : 8536



Cat. No.	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
NAMLEN	15 / 11	17.4 - 24.0	N0N	25A	7710
NAMLEN/NOR	15 / 11	22.0 - 30.0	N0N	25A	8400
NAPLEN/MOR	15 / 11	17.4 - 24.0	N01N	32A	10065
NAPLEN	20 / 15	23.0 - 32.0	N01N	32A	10480
NANLEN	20 / 15	22.0 - 30.0	N1N	40A	11595
NAQLEN	25 / 18.5	26.0 - 40.0	N1N	40A	11765

## (B) 30 & 40 HP DOL Starter



Cat. No.	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
CEHFRGDM*	30 / 22	36.0 - 52.0 (FR OLR)	Freedom	50A	20275
NACT2LEDM	30 / 22	37.6 - 60.0	Citation D	40A	25130
NACT2LEEM	40 / 30	37.6 - 60.0	Citation E	70A	32260

## Citation P DOL Motor Starter New

HSN CODE : 8536



Type	Cat. No.	Coil	HP/ KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Rating (AC-3)	MRP [₹]
P2	NBMLEN/LOR	N & G	10 / 7.5	13.2 - 20	25A	5735
P2	NBMLEN	N & G	15 / 11	17.4 - 24	25A	5865
P2	NBMLEN/POR	N & G	15 / 11	23 - 32	25A	6140
P3	NBPLEN	N & WB	20 / 15	23 - 32	32A	6975
P3	NBPLEN/QOR	N & WB	20 / 15	26 - 40	32A	7240
P3H	NBQLEN	N & WB	25 / 18.5	26 - 40	40A	8425

## Citation P Auto DOL Motor Starter New

HSN CODE : 8536



Type	Cat. No.	Coil	HP/ KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Rating (AC-3)	MRP [₹]
P1A	ANBKLEN	N & G	7.5 / 5.5	8.9 - 13.5	16A	6555
P1A	ANBLLLEN	N & G	10 / 7.5	13.2 - 20	16A	6665
P1HA	ANBLLLEN/MOR	N & G	12.5 / 10	17.4 - 24	20A	6965
P2A	ANBMLEN	N & G	12.5 / 10	17.4 - 24	25A	7890
P2A	ANBMLEN/POR	N & G	15 / 11	23 - 32	25A	8210
P3A	ANBPLEN	N & WB	20 / 15	26 - 40	32A	8970
P3HA	ANBQLEN	N & WB	22.5 / 16.8	26 - 40	40A	10240

For other Coil Voltages, kindly refer 'Coil Voltage Master Table' at page 36



## Citation Semi Automatic Star Delta Starter with NHD Contactor

HSN CODE : 8536



Cat. No.	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
NASSHLEN	10 / 7.5	6.0 - 9.3	C00N	16A	12415
NASSJLEN	10 / 7.5	6.0 - 9.3	C00N	16A	12415
NASSKLEN	15 / 11	8.9 - 13.5	C00N	16A	12415
NASSKLEN/LOR	15 / 11	13.2 - 20.0	C00N	16A	12805
NASSLLEN	20 / 15	13.2 - 20.0	N0N	25A	19765
NASSMLEN	25 / 18.5	17.4 - 24.0	N0N	25A	19890
NASSPLEN	25 / 18.5	23.0 - 32.0	N0N	25A	21480
NASS01PLEN	35 / 26	23.0 - 32.0	N01N	32A	23380
NASS01QLEN	40 / 30	26.0 - 40.0	N01N	32A	23585
NASSNLEN	35 / 26	22.0 - 30.0	N1N	40A	33445
NASS01CT1LEN	40 / 30	24.4 - 39.0	N01N	32A	35100
NASSFRGCLEC4M	40 / 30	29-42 (FR OLR)	C4	32A	37160



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

HSN CODE : 8536



Cat. No.	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
NASAGLEN	3 / 2.2	2.4 - 3.8	C00N	16A	17090
NASAHLEN	5 / 3.7	3.8 - 6.0	C00N	16A	17090
NASAJLEN	10 / 7.5	6.0 - 9.3	C00N	16A	17090
NASAKLEN	15 / 11	8.9 - 13.5	C00N	16A	17090
NASAKLEN/LOR	15 / 11	13.2 - 20.0	C00N	16A	17915
NASALLEN	20 / 15	13.2 - 20.0	N0N	25A	22635
NASAMLEN	25 / 18.5	17.4 - 24.0	N0N	25A	22755
NASAPLEN	30 / 22	23.0 - 32.0	N0N	25A	23700
NASA01PLEN	35 / 26	23.0 - 32.0	N01N	32A	27045
NASANLEN	35 / 26	22.0 - 30.0	N1N	40A	38105
NASAQLEN	40 / 30	26.0 - 40.0	N1N	40A	38330
NASACT1LEN	40 / 30	24.4 - 39.0	N1N	40A	44435

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

HSN CODE : 8536



Cat. No.	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
NASACT1LEDM	40 / 30	24.4 - 39.0	D	40A	51800
NASACT2LEDM	50 / 37	37.6 - 60.0	D	40A	52625
NASACT2LEEM	75 / 55	37.6 - 60.0	E	70A	90840
NASACT3LEEM	85 / 65	56.4 - 90.0	E	70A	96610
NASACT3LECM5M	100 / 75	56.4 - 90.0	M-5	110A	123370
NASACT4LECM5M	135 / 100	84.6 - 135.0	M-5	110A	126130
NASACT4LENM	150 / 110	84.6 - 135.0	N	140A	170730
NASACT5LECM6M	250 / 185	131.6 - 210.0	S	300A	239720
NASACT6LECM6M	375 / 280	188.0 - 300.0	S	300A	289515

For other Coil Voltages, kindly refer 'Coil Voltage Master Table' at page 36



## BK1 DOL Motor Starter

HSN CODE : 8536

Type	Cat. No.	HP/ KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Rating (AC-3)	MRP [₹]
BK1 DOL	BK1DBFWB1	1 HP	1.5-2.5	16A	2655
BK1 DOL	BK1DBGWB1	2 HP	2.5-4	16A	2655
BK1 DOL	BK1DBHWB1	4 HP	4-6.5	16A	2655
BK1 DOL	BK1DBJWB1	6 HP	6-10	16A	2655
BK1 DOL	BK1DBKWB1	7.5 HP	9-14	16A	2655
BK1 DOL	BK1DBKLWB1	7.5 HP	11-18	16A	2710
BK1 DOL	BK1DBLWB1	7.5 HP	13-22	16A	2775
BK2 DOL	BK2DBLWB1	7.5 HP	13-22	25A	3105
BK2 DOL	BK2DBPWB1	7.5 HP	20-32	25A	3105

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

## BK1 Semi-Automatic Motor Starter

HSN CODE : 8536

Type	Cat. No.	HP/ KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Rating (AC-3)	MRP [₹]
BK1 SASD	BK1SSBHWB1	6 HP	4-6.5	16A	9405
BK1 SASD	BK1SSBJWB1	10 HP	6-10	16A	9405
BK1 SASD	BK1SSBKWB1	12.5 HP	9-14	16A	9405
BK1 SASD	BK1SSBKLBW1	15 HP	11-18	16A	9480
BK1 SASD	BK1SSBLWB1	15 HP	13-22	16A	9595
BK2 SASD	BK2SSBLWB1	15 HP	13-22	25A	10535
BK2 SASD	BK2SSBPWB1	15 HP	20-32	25A	10535

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

## BK Contactors

HSN CODE : 8536

Cat. No.	Description	MRP [₹]
BK1C16WB1	BK1 Contactor, 4P, 16A, 250-450V AC	1840
BK2C25WB1	BK2 Contactor, 4P, 25A, 250-450V AC	2030

## BK Overload Relay

HSN CODE : 8536

Cat. No.	Description	MRP [₹]
BK1OLRBF	Overload Relay, 3P, BK, 1.5-2.5A	1065
BK1OLRBG	Overload Relay, 3P, BK, 2.5-4.0A	1065
BK1OLRBH	Overload Relay, 3P, BK, 4-6A	1065
BK1OLRBJ	Overload Relay, 3P, BK, 6-10A	1065
BK1OLRBK	Overload Relay, 3P, BK, 9-14A	1065
BK1OLRBKL	Overload Relay, 3P, BK, 11-18A	1095
BK1OLRBL	Overload Relay, 3P, BK, 13-22A	1210
BK2OLRBP	Overload Relay, 3P, BK, 20-32A	1335

## Spares for BK1 Starters

HSN CODE : 8538

Cat. No.	Description	MRP [₹]
BK1-AS16	Housing (Arc Shield) for BK1 Contactor	140
BK2-AS25	Housing (Arc Shield) for BK2 Contactor	145
BK1-CB16	Contact Bridge for BK1 Contactor	125
BK2-CB25	Contact Bridge for BK2 Contactor	130
BK1-CK16	Contact Kit for BK1 Contactor	785
BK2-CK25	Contact Kit for BK2 Contactor	1110
BKCWB1	Coil 250-450V AC for BK Contactors	275
BKCWB2	Coil 200-400V AC for BK Contactors	275
BK-PB	Twin Push Button for BK Starters	135
BKCB11	Auxiliary contact 1NO+1NC for BK Starter	300
BK1-MC16	Single moving contact for BK1 Contactor	75
BK2-MC25	Single moving contact for BK2 Contactor	105

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

HSN CODE : 8536



Cat. No.	HP / KW at 3Ø, 415V, 50Hz	EOCR Range (A)	Contactor Type (Citation)	Contactor Rating (AC-3)	MRP [₹]
NASASS60LED-M-P	50 / 37	5-60 Amp	D	40A	63695
NASASS60LEEM-P	75 / 55	5-60 Amp	E	70A	99635
NASA2CTD1CLEM5M-P	100/ 75	0.5-6 Amp (with CT 100/5) (2CT model)	M-5	110A	141110
NASA2CT150LEM5M-P	135/ 100	0.5-6 Amp (with CT 150/5) (2CT model)	M-5	110A	146185

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

HSN CODE : 8536

Cat. No.	HP / KW at 3Ø, 415V, 50Hz	EOCR Range (A)	Contactor Type (NHD)	Contactor Rating (AC-3)	MCB Rating	MRP [₹]
NASASS30LEN-P-MCB	25 / 18.5	3-30 Amp	NA25M	25A	40A (TP)	39410

## Motor Starters- Freedom



## Industrial DOL Starters with Freedom Contactor & Overload Relay

HSN CODE : 8536

Cat. No.	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Type	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
CEBFM	0.5/0.37	Freedom	1.0-1.4	Freedom	9 A	3370
CEBGM	0.75/0.55	Freedom	1.3-1.8	Freedom	9 A	3370
CEBHM	1.0/0.75	Freedom	1.7-2.4	Freedom	9 A	3370
CEBJM	1.5/1.1	Freedom	2.2-3.1	Freedom	9 A	3370
CEBKM	2.0/1.5	Freedom	2.8-4.0	Freedom	9 A	3370
CEBMM	3.0/2.2	Freedom	4.5-6.5	Freedom	9 A	3370
CEBPM	5.0/3.7	Freedom	7.5-11	Freedom	9 A	3370
CECPM	5.0/3.7	Freedom	7.5-11	Freedom	12 A	3460
CECQM	7.5/5.5	Freedom	10-14	Freedom	12 A	3460
CEDQM	7.5/5.5	Freedom	10-14	Freedom	18 A	4375
CEDRM	10/7.5	Freedom	13-19	Freedom	18 A	4375
CECBHM	3.0/2.2	Citation	3.8-6	Freedom	9 A	3370
CECBJM	5.0/3.7	Citation	6-9.3	Freedom	9 A	3370
CECCKM	7.5/5.5	Citation	8.9-13.5	Freedom	12 A	3460
CECDLM	10/7.5	Citation	13.2-20	Freedom	18 A	4375

## DOL Reversing Starter

HSN CODE : 8536



Cat. No.	HP / KW at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
NARFLEN	1/0.75	1.58 - 2.50	C00N	16 A	11315
NARGLEN	2/1.5	2.4 - 3.8	C00N	16 A	11315
NARHLEN	3/2.2	3.8 - 6.0	C00N	16 A	11315
NARJLEN	5/3.7	6.0 - 9.3	C00N	16 A	11315
NARKLEN	7.5/5.5	8.9 - 13.5	C00N	16 A	11315
NARLLEN	10/7.5	13.2 - 20.0	N0N	25 A	15350
NARMLLEN	15/11	17.4 - 24.0	N1N	40 A	18760
NARNLEN	20/15	22.0 - 30.0	N1N	40 A	19810

For other Coil Voltages, kindly refer 'Coil Voltage Master Table' at page 36

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

HSN CODE : 8536



Cat. No.	Recommended HP 1Ø, 240V	Overload Relay Range (A)	MRP [₹]	Cat. No. (with UV Coil)	MRP [₹]
AMLE-10-SP	-	0.23 - 0.47	1665	AMLEH-10-SP	2230
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. No.	Recommended HP 3Ø, 415V	Overload Relay Range (A)	MRP [₹]	Cat. No. (with UV Coil)	MRP [₹]
AMLE-10	-	0.23 - 0.47	2245	AMLEN-10	2585
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	3.00	3.50 - 6.50		AMLEN-50	
AMLE-60	5.00	6.80 - 11.7		AMLEN-60	
AMLE-70	10.00	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. No.	HP/ KW at 1Ø, 220V, 50Hz	Overload Relay Range (A)	Contactor Rating (AC-3)	MRP [₹]
1P10	NAHLEBW-SP	0.75 / 0.55	3.8 - 6.0	16A	2430
1P10	NAJLEBW-SP	1 / 0.75	6.0 - 9.3	16A	2430
1P10	NAKLEBW-SP	1.5 / 1.10	8.9 - 13.5	16A	2430
1P10H	NALLEBW-SP	2 / 1.5	13.2 - 20	25A	2475
1P10H	NAMLEBW-SP	3 / 2.2	17.4 - 24	25A	2550

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

HSN CODE : 8536



Cat. No.	HP at 3Ø, 415V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
HASSGLEG	3 HP	2.4 - 3.8	C00N	16 A	6955
HASSHLEG	5 HP	3.8 - 6.0	C00N	16 A	6955
HASSJLEG	10 HP	6.0 - 9.3	C00N	16 A	6955
HASSKLEG	15 HP	8.9 - 13.5	N0N	25 A	7905

HSN CODE : 8538

HASSW15	Spare switch for 15 HP MSD Starter	2895
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For other Coil Voltages, kindly refer 'Coil Voltage Master Table' at page 36



## 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
- Auto Start with on delay options:
  - 0.5Sec to 5Min (Field adjustable) SPP Pro
  - 5Sec
  - 5Min
- 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



Better esthetic look & easy to maintenance to use of Bus-bar



180 Deg Opening angle

PU Gasket for excellent sealing against dust & water



## Single Phase

With Mini DOL (up to 11 - 20 A Relay)

- Premium Model (With Ammeter & Voltmeter)

With 2 Pole Contactor + 2 Pole Relay (up to 40 A Relay)

- Economy Model (With Ammeter)
- Standard Model (With Ammeter & Voltmeter)
- Alfa Model up to 30 A Relay (With Ammeter & Voltmeter)
- With Dry Run Protection Model (Digital Meter)
- CPD Model with MCB (Digital VA Meter)

## 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 (AC-3)	DOL (without Short Circuit Protection)		Premium DOL (with Short Circuit Protection) MCB	
			Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
1.58 - 2.50	C00N	16 A	CPEYNAFN	10155	--	--
2.4 - 3.8	C00N	16 A	CPEYNAGN	10155	--	--
3.8 - 6.0	C00N	16 A	CPEYNAHN	10155	--	--
6.0 - 9.3	C00N	16 A	CPEYNAJN	10155	CPPYNAJN	14695
8.9 - 13.5	C00N	16 A	CPEYNAKN	10155	CPPYNAKN	14695
13.2 - 20.0	C00N	16 A	CPEYNALN	10880	CPPYNALN	15720
17.4 - 24.0	NON	25 A	CPEYNAMN	12100	CPPYNAMN	17890
23.0 - 32.0	N01N	32 A	CPEYNA01PN	13460	--	--

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

STAR DELTA (3-Ph)

HSN CODE : 8536



Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	Star Delta (without Short Circuit Protection)		Premium Star Delta (with Short Circuit Protection) MCB or MCCB	
			Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
3.8 - 6.0	C00N	16 A	CPSDEYHN	19865	--	--
6.0 - 9.3	C00N	16 A	CPSDEYJN	19865	CPSPYJN	24020
8.9 - 13.5	C00N	16 A	CPSDEYKN	19865	CPSPYKN	24020
13.2 - 20.0	C00N	16 A	CPSDEYLN-C00	20215	CPSPYLN-C00	24935
17.4 - 24.0	CP20	20 A	CPSDEYMN-CP20	22110	--	--
13.2 - 20.0	NON	25 A	CPSDEYLN	24235	CPSPYLN	29505
17.4 - 24.0	NON	25 A	CPSDEYMN	25530	CPSPYMN	31885
23.0 - 32.0	N01N	32 A	CPSDEY01PN	31425	CPSPY01N	36390
22.0 - 30.0	N1N	40 A	CPSDEYNN	39150	CPSPYNN	43635
26.0 - 40.0	N1N	40 A	CPSDEYQN	39725	CPSPYQN	44240
24.4 - 39.0	N1N	40 A	CPSDEYCT1N	43645	CPSPYCT1N	51025
37.6 - 60.0	Citation E	70 A	CPSDEYCT2M	69945	CPSPYCT2M	79475
56.4 - 90.0	Citation E	70 A	CPSDEYECT3M	76105	--	--
56.4 - 90.0	Citation M-5	110 A	CPSDEYCT3M	99835	CPSPYCT3M	106275
84.6 - 135.0	Citation M-5	110 A	CPSDEYCT4M	102990	CPSPYCT4M	113045

## Shakti DOL Submersible Pump Starter (with Auto Switch) 3-Ph

HSN CODE : 8536



Overload Relay Range (A)	Description	Contactor Rating (AC-3)	3 Position Selection (Manual - Manual SPP - Auto)	
	Contactor Type		Cat. No.	MRP [₹]
2.4 - 3.8	Shakti	20 A	CPEYSAGZ	9515
3.8 - 6.0	Shakti	20 A	CPEYSAHZ	9515
6.0 - 9.3	Shakti	20 A	CPEYSAJZ	9515
8.9 - 13.5	Shakti	20 A	CPEYSAKZ	9515
13.2 - 20.0	Shakti	20 A	CPEYSALZ	10525
17.4 - 24.0	Shakti	20 A	CPEYSAMZ	11075

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

For other Coil Voltages, kindly refer 'Coil Voltage Master Table' at page 36

# Motor Starters-Citation P & Shakti P



## Citation P Submersible Pump Starter - Standard and Premium versions

### DOL (3-Ph)

HSN CODE : 8536



Type	Overload Relay Range (A)	Contactor Rating (AC-3)	Coil	Standard (without Short Circuit Protection)		Premium (with Short Circuit Protection with MCB) <sup>New</sup>	
				Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
CITATION P10	1.58 - 2.5	16 A	N & G	CPEYNBFN	9810	CPPYNBFN	11855
CITATION P10	2.4 - 3.8	16 A	N & G	CPEYNBGN	9810	CPPYNBGN	11855
CITATION P10	3.8 - 6	16 A	N & G	CPEYNBHN	9810	CPPYNBHN	11855
CITATION P10	6 - 9.3	16 A	N & G	CPEYNBJN	9810	CPPYNBJN	11900
CITATION P10	8.9 - 13.5	16 A	N & G	CPEYNBKN	9810	CPPYNBKN	11900
CITATION P10	13.2 - 20	16 A	N & G	CPEYNBLN	10100	CPPYNBLN	12445
CITATION P10B	13.2 - 20	20 A	N & G	CPEYNBL2N	10250	CPPYNBL2N	12825
CITATION P10H	17.4 - 24	25 A	N & G	CPEYNBMN	10690	CPPYNBMN	13350
CITATION P11	23 - 32	32A	N & WB	CPEYNBP01N	11955	CPPYNBP01N	14925
CITATION P11	26 - 40	32A	N & WB	CPEYNBQ01N	12115	CPPYNBQ01N	15070
CITATION P12	26 - 40	40A	N & WB	CPEYNBQN	12470	CPPYNBQN	15350

## Citation P Submersible Pump Starter - Standard and Premium versions

### STAR DELTA (3-Ph)

HSN CODE : 8536



Type	Overload Relay Range (A)	Contactor Rating (AC-3)	Coil	Standard (without Short Circuit Protection)		Premium (with Short Circuit Protection with MCB/MCCB) <sup>New</sup>	
				Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
CITATION P20	6 - 9.3	16 A	N & G	CPSDEYNBJN	18745	CPSDPYNBJN	20090
CITATION P20	8.9 - 13.5	16 A	N & G	CPSDEYNBKN	18745	CPSDPYNBKN	20215
CITATION P20	13 - 20	16 A	N & G	CPSDEYNBLN	18925	CPSDPYNBLN	20755
CITATION P20A	13.2 - 20	20 A	N, LV & G	CPSDEYNBL2N	19960	CPSDPYNBL2N	22300
CITATION P20A	17.4 - 24	20 A	N, LV & G	CPSDEYNBM2N	20070	CPSDPYNBM2N	22425
CITATION P20B	23 - 32A	25 A	N, LV & G	CPSDEYNBPN	23145	CPSDPYNBPN	26335
CITATION P20H	22 - 30A	32 A	N & WB	CPSDEYNB01NN	23770	CPSDPYNB01NN	26925
CITATION P20H	23 - 32A	32 A	N & WB	CPSDEYNB01PN	23785	CPSDPYNB01PN	26940
CITATION P20H	26 - 40A	32 A	N & WB	CPSDEYNB01QN	24030	CPSDPYNB01QN	29825
CITATION P21	26 - 40A	40 A	N & WB	CPSDEYNBQN	29600	CPSDPYNBQN	36035
CITATION P21	36 - 52A (FR OLR)	40 A	N & WB	CPSDEYNBFRGDN	34440	-	-

### Range Extension



Type	Overload Relay Range (A) (Freedom OLR)	Contactor Rating (AC-3) (Citation 3P)	Cat. No.	Coil	MRP [₹]
Citation P32	22 - 32	32 Amp	CPSDEYNBC4FRGBM	M	35325
Citation P40	36 - 52	40 Amp	CPSDEYNBDFRGDM	M	36145
Citation P50	45 - 63	50 Amp	CPSDEYNBD1FRGEM	M	44155
Citation P70	36 - 52	70 Amp	CPSDEYNBEFRGDM	M & LA	57995
Citation P70	45 - 63	70 Amp	CPSDEYNBEFRGEM	M & LA	59735
Citation P70	60 - 80	70 Amp	CPSDEYNBEFRGFM	M & LA	61215
Citation P100	60 - 80	110 Amp	CPSDEYNBM5FRGFM	M & LA	82900

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

HSN CODE : 8536



Type	Overload Relay Range (A)	Contactor Rating (AC-3)	Cat. No.	Coil	MRP [₹]
SHAKTI P6	1.58 - 2.5	12 A	CPEYSBFZ	Z & N & MB	8805
SHAKTI P6	2.4 - 3.8		CPEYSBGZ		
SHAKTI P6	3.8 - 6		CPEYSBHZ		
SHAKTI P6	6 - 9.3		CPEYSBJZ		
SHAKTI P10	8.9 - 13.5	20 A	CPEYSBKZ		8935
SHAKTI P10	13.2 - 20		CPEYSBLZ		9810
SHAKTI P10	17.4 - 24		CPEYSBMZ		10320

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

HSN CODE : 8536



Cat. No.	HP / KW at 1Ø, 220V, 50Hz	Overload Relay Range (A)	Contactor Type	Contactor Rating (AC-3)	MRP [₹]
NAAEBW-SP	-	1.07 - 1.70	2P CPG	12A	3285
NAAHBW-SP	0.75 / 0.55	3.8 - 6.0	2P CPG	12A	3285
NAHBW-SP	0.75 / 0.55	3.8 - 6.0	2P CPG	16A	3325
NAAJBW-SP	1 / 0.75	6.0 - 9.3	2P CPG	12A	3285
NAJBW-SP	1 / 0.75	6.0 - 9.3	2P CPG	16A	3325
NAKBW-SP	1.5 / 1.10	8.9 - 13.5	2P CPG	16A	3325
NAALBW-SP	2 / 1.5	13.2 - 20.0	2P CPG	20A	3410
NALBW-SP	2 / 1.5	13.2 - 20.0	2P CPG	25A	3720
NAMBW-SP	3 / 2.2	17.4 - 24.0	2P CPG	25A	3895

## Auto Switch Cum SPP (SPP pro)

- Two type of versions : 6-wire and 7-wire
- Microcontroller based design for advanced functionality
- Protection against single phasing, reverse phasing and unbalance voltage
- Settable ON delay time - 5 Sec to 5 Min
- Integrated Auto/ Manual SPP/ Bypass switch
- LED indication :
  - Healthy Supply Conditions: Green LED is continuous ON
  - Unhealthy Supply Conditions: Green LED is blinking

HSN CODE : 8538



Cat. No.	Description	MRP [₹]
BCHSPP2Z	SPP Pro (6 wire), 230-400V AC	930
BCHSPP2N	SPP Pro (6 wire), 380-415V AC	930
BCHSPP2CW	SPP Pro (6 wire), 260-440V AC	930
BCHSPP2Z-7W	SPP Pro (7 wire), 230-400V AC	930
BCHSPP2N-7W	SPP Pro (7 wire), 380-415V AC	930
BCHSPP2CW-7W	SPP Pro (7 wire), 260-440V AC	930

# Motor Starters-1-Ph SPS



## 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 (AC-3)	Cat. No.	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP [₹]
0.5 /0.75 HP	3.8 - 6.0	12 Amp	CPNSHBW-SPE	25	80/100	5480
0.5 /0.75 HP	3.8 - 6.0	16 Amp	CPNSHBW-SP	25	80/100	5595
			CPNSHBW-SP(RC36)	36	80/100	5640
			CPNSHBW-RC25-SC120	25	100/120	5775
			CPNSHBW-RC30-SC200	30	150/200	6535
1 HP	6.0 - 9.3	12 Amp	CPNSJBW-SPE	36	100/120	5700
1 HP	6.0 - 9.3	16 Amp	CPNSJBW-SP	36	100/120	5780
			CPNSJBW-RC20SC100	20	80/100	5745
			CPNSJBW-RC25SC100	25	80/100	5825
			CPNSJBW-RC50SC100	50	80/100	5995
			CPNSJBW-RC60SC150	60	120/150	6275
			CPNSJBW-RC72SC150	72	120/150	6410
			CPNSJBW-SP(RC30)	30	100/120	5825
			CPNSJBW-SP(RC50)	50	100/120	5825
			CPNSJBW-SP(SC100)	36	80/100	6225
			CPNSJBW-RC36-SC200	36	150/200	6655
1.5 HP	8.9 - 13.5	12 Amp	CPNSKBW-SPE	50	120/150	6270
1.5 HP	8.9 - 13.5	16 Amp	CPNSKBW-SP	50	120/150	6305
			CPNSKBW-RC30SC120	30	100/120	6215
			CPNSKBW-RC36SC120	36	100/120	6235
			CPNSKBW-SP(RC36)	36	120/150	6275
			CPNSKBW-SP(RC72)	36+36	120/150	6470
CPNSKBW-RC50-SC200	50	150/200	6900			
2 HP	13.2 - 20.0	16 Amp	CPNSLBW-SP	72	150/200	6750
			CPNSLBW-SP(2RC36)	36+36	150/200	6920
			CPNSLBW-RC100SC150	100	120/150	6800
			CPNSLBW-RC90SC150	45+45	120/150	6930
			CPNSLBW-SP(SC150)	72	120/150	6930
CPNSLBW-RC72SC250	72	200/250	7310			
3 HP	17.4 - 24.0	20 Amp	CPNSMBW-SPE	100	200/250	7200
3 HP	17.4 - 24.0	25 Amp	CPNSMBW-SP	100	200/250	7505
			CPNSMBW-SP(2RC50)	50+50	200/250	7795
3 HP	22.0 - 30.0	25 Amp	CPNSNBW-SP	100	200/250	8025
			CPNSNBW-SP(2RC50)	50+50	200/250	8255
5 HP	23.0 - 32.0	32 A & 12 A	CPNSPBW-SPE	100+50	200/250	10450
5 HP	23.0 - 32.0	40 A & 16 A	CPNSPBW-SP	100+50	200/250	10715
			CPNSPBW-SP(3RC50)	50+50+50	200/250	10970
5 HP	23.0 - 32.0	40 Amp	CPNSPBW-SPH	100+50	200/250	9165
			CPNSPBBW-SPH	100+50	200/250	9165
			CPNSPBW-SPH(3R50)	50+50+50	200/250	9165
			CPNSPBBW-SPH(3R50)	50+50+50	200/250	9165
5 HP	28.0 - 40.0	40 Amp	CPNSQBBW-SPH	100+50	200/250	9625
			CPNSQBW-SPH	100+50	200/250	9625
			CPNSQBBW-SPH(3R50)	50+50+50	200/250	9625
			CPNSQBW-SPH(3R50)	50+50+50	200/250	9625

\*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 code with "BBW"

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

HSN CODE : 8536

**New**

HP at 1Ø, 220V, 50Hz	Overload Relay Range (A)	Contactor Rating (AC-3)	Cat. No.	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP [₹]
0.75 HP	3.8 - 6	16 Amp	CPGNSHBW-SP	25	80-100	4680
1 HP	6 - 9.3	16 Amp	CPGNSJBW-SP	36	100-120	5040
1 HP	6 - 9.3	16 Amp	CPGNSJBBW-SP	36	100-120	5040
1 HP	6 - 9.3	16 Amp	CPGNSJBW-SP(RC50)	50	100-120	5040
1 HP	6 - 9.3	16 Amp	CPGNSJBBW-SP(RC50)	50	100-120	5040
1 HP	6 - 9.3	16 Amp	CPGNSJBW-RC50SC100	50	80-100	5040
1.5 HP	8.9 - 13.5	16 Amp	CPGNSKBW-SP	50	120-150	5425
1.5 HP	8.9 - 13.5	16 Amp	CPGNSKBBW-SP	50	120-150	5425
1.5 HP	8.9 - 13.5	16 Amp	CPGNSKBW-SP(RC72)	72	120-150	5425
1.5 HP	8.9 - 13.5	16 Amp	CPGNSKBBW-SP(RC72)	72	120-150	5425
2 HP	13.2 - 20	16 Amp	CPGNSLBW-SP	72	150-200	5770
2 HP	13.2 - 20	16 Amp	CPGNSLBBW-SP	72	150-200	5770
2 HP	13.2 - 20	16 Amp	CPGNSLBW-SP(2RC36)	36x2	150-200	5770
2 HP	13.2 - 20	16 Amp	CPGNSLBBW-SP(2R36)	36x2	150-200	5770
2 HP	13.2 - 20	16 Amp	CPGNSLBW-RC90SC150	45X2	120-150	5770
2 HP	13.2 - 20	16 Amp	CPGNSLBW-R100SC150	100	120-150	5770
3 HP	17.4 - 24	25 Amp	CPGNSMBW-SP	100	200-250	6300
3 HP	17.4 - 24	25 Amp	CPGNSMBBW-SP	100	200-250	6300
3 HP	17.4 - 24	25 Amp	CPGNSMBW-SP(2RC50)	50x2	200-250	6300
3 HP	17.4-24	25 Amp	CPGNSMBBW-SP(2R50)	50x2	200-250	6300
3 HP	22 - 30	25 Amp	CPGNSNBW-SP(2RC50)	50x2	200-250	6615



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

HSN CODE : 8536

**New**

HP at 1Ø, 220V, 50Hz	Overload Relay Range (A)	Contactor Rating (AC-3)	Cat. No.	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	CPGND1MBBW-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



## 1-Phase SPS with 2P DPC Contactor + MCB

HSN CODE : 8536



HP at 1Ø, 220V, 50Hz	SP MCB "C" Curve	Contactor Rating (AC-3)	Cat. No.	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP [₹]
0.5 HP	6A	20A	CPD2A05CJ06	25	80-100	3570
0.75 HP	10A	20A	CPD2A07AK10	36	40-60	3570
1 HP	10A	20A	CPD2A10BM10	50	60-80	3595
1 HP	10A	20A	CPD2A10CK10	36	80-100	3595
1 HP	10A	20A	CPD2A10DK10	36	100-120	3625
1 HP	10A	20A	CPD2A10DM10	50	100-120	3665
1.5 HP	16A	20A	CPD2A15DL16	72	100-120	3730
1.5 HP	16A	20A	CPD2A15GM16	50	120-150	3730
1.5 HP	16A	20A	CPD2A15GL16	72	120-150	3795



## Spares for 1-Phase Submersible Pump Starter (CPD)

Cat. No.	Description	MRP[₹]
SPA1A30V300	Digital VA Meter A1, AM30A, VM300V, S-72	650
SPA1VM-CT	CT for Digital VA Meter A1	125
SPARC	Off Push Button Red for 1Ph CPD SPS	250
SPAGC	On Push Button Green for 1Ph CPD SPS	305
SPATB530	Terminal Block 30A 5W for 1Ph CPD SPS	150
CPDN202KL	20A, 2P DP Contactor	1030
SP402MCKL	Coil 170-240V 2P DP Contactor (Bulk Pack of 12 nos.)	POR

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

HSN CODE : 8536



Cat. No.	HP at 1Ø, 220V, 50Hz	Overload Relay Range (A)	Contactor Rating (AC-3)	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP[₹]
CPNEHBW-SP	0.5 / 0.75 HP	3.8 - 6.0	16 Amp	25	80/100	5225
CPNEJBW-SP	1 HP	6.0 - 9.3	16 Amp	36	100/120	5515
CPNEKBW-SP	1.5 HP	8.9 - 13.5	16 Amp	50	120/150	6025
CPNELBW-SP	2 HP	13.2 - 20.0	16 Amp	36+36	150/200	6425
CPNEMBW-SP	3 HP	17.4 - 24.0	25 Amp	50+50	200/250	7325
CPNEPBW-SP	5 HP	23.0 - 32.0	40 Amp	50+50+50	200/250	10515

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. No.	HP at 1Ø, 220V, 50Hz	Overload Relay Range (A)	Run Capacitor (mfd)	MRP[₹]
CPPM50-25-SP	0.5 / 0.75 HP	3.5 - 6.5	20	3935
CPPM50-25-SP	0.5 / 0.75 HP	3.5 - 6.5	25	3935
CPPM50H-25-SP	0.5 / 0.75 HP	3.5 - 6.5	25	4480
CPPM60-25-SP	1 HP	6.8 - 11	25	3965
CPPM60-36-SP	1 HP	6.8 - 11	36	3965
CPPM60H-36-SP	1 HP	6.8 - 11	36	4505
CPPM60-50-SP	1.5 HP	6.8 - 11	50	4170
CPPM60H-50-SP	1.5 HP	6.8 - 11	50	4740
CPPM70-36-SP	2 HP	11.0 - 20.0	36	4230
CPPM70-50-SP	2 HP	11.0 - 20.0	50	4230
CPPM70H-50-SP	2 HP	11.0 - 20.0	50	4815

## DOL Starter - 3 Phase

HSN CODE : 8536

Cat. No.	Overload Relay Range (A)	HRC Fuse Rating (EE Type) (max)	MRP [₹]
OISWPGT	2.4 - 3.8	16A	4325
OISWPHT	3.8 - 6.0	20A	4325
OISWPJT	6.0 - 9.3	25A	4325
OISWPKT	8.9 - 13.5	36A	4325
OISWPLT	13.2 - 20.0	50A	4405
OISWPMT	17.4 - 24.0	63A	4770

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. No.	Overload Relay Range (A)	HRC Fuse Rating (EE Type) (max)	MRP [₹]
OISDAWPJ*	6.0 - 9.3	20A	12945
OISDAWPK*	8.9 - 13.5	32A	12945
OISDAWPL*	13.2 - 20.0	35A	12945
OISDAWPM*	17.4 - 24.0	50A	13845
OISDAWPP*	23.0 - 32.0	63A	14500



## Star Delta Starter - Semi Automatic

HSN CODE : 8536

Cat. No.	Overload Relay Range (A)	HRC Fuse Rating (EE Type) (max)	MRP [₹]
OISDSWPJ*	6.0 - 9.3	20A	11625
OISDSWPK*	8.9 - 13.5	32A	11625
OISDSWPL*	13.2 - 20.0	35A	11625
OISDSWPM*	17.4 - 24.0	50A	12500
OISDSWPP*	23.0 - 32.0	63A	13115

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

HSN CODE : 8536

Cat. No.	Overload Relay Range (A)	HRC Fuse Rating (EE Type) (max)	MRP [₹]
OISDYWPJ*	6.0 - 9.3	20A	15155
OISDYWPK*	8.9 - 13.5	32A	15155
OISDYWPL*	13.2 - 20.0	35A	15155
OISDYWPM*	17.4 - 24.0	50A	16115
OISDYWPP*	23.0 - 32.0	63A	16860

## 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	18630
OISDPYWPM*	17.4 - 24.0	50 A	19600
OISDPYWPP*	23.0 - 32.0	63 A	20500

'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	360	
Coil -Main & Delta Contactor	220-400V	OCT	630
	240-400V	OCY	630
	380-415V	OCN	630
Coil -Star Contactor	220-400V	OCT-STAR	405
	240-400V	OCY-STAR	405
	380-415V	OCN-STAR	405
ON-Push Button	OPB-ON	170	
OFF-Push Button	OPB-OFF	170	
Incoming Mounting KIT for 20A	OCTKSD20	185	
Incoming Mounting KIT for 30A	OCTKSD30	255	

## 'NHD' Series 2 Pole Contactor

HSN CODE : 8536



AC# Rating at 240 V AC		Cat. No.	MRP [₹]
AC-1 (A)	AC-3 (A)		
20	12	CPG212*	1540
25	16	CPG216*	1750
35	20	CPG220*	2295
40	25	CPG225*	2640
40	32	CPG232*	2810
50	40	CPG240*	3220

## 'NHD' Series 4 Pole Contactor

HSN CODE : 8536



Size	AC1 (A)	AC3 Rating at 415 V AC			Cat. No.	MRP [₹]
		(A)	HP	KW		
CP12	20	12	7.5	5.5	CP12N*	2775
00	20	16	10	7.5	C00N*	3190
CP20	30	20	12.5	9.3	CP20N*	4070
0	32	25	15	11	N0N*	5825
01	40	32	20	15	N01N*	7075
1	50	40	25	18.5	N1N*	8855

HSN CODE : 8538

Auxiliary Contact Blocks - NHD/CPG	1 NO	001CB10	340
Auxiliary Contact Blocks - NHD/CPG	1 NO+1NC	001CB11	400
Auxiliary Contact Blocks - NHD/CPG	2NO	001CB20	400
Auxiliary Contact Blocks - NHD/CPG	2NC	001CB02	400

## '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 ■	2465
CA16	20	16	10	7.5	CA16N ■	2855
CA20	30	20	12.5	9.3	CA20N ■	3600
NA25	32	25	15	11	NA25N ■	5160
NA32	40	32	20	15	NA32N ■	6265
NA40	50	40	25	18.5	NA40N ■	7690

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

## Citation Series 3 Pole Contactor

HSN CODE : 8536



Contactor Size	AC# Rating at 415 V		Cat Code	MRP [₹]	Cat. No.	MRP [₹]
	AC-3 (A)	HP / KW				
C4	32	20 / 15	C4NE22M	7100	C4NE11M	6640
D	40	30 / 22	MC10DN22M	11240	MC10DN11M	9890
D1	50	33.5 / 25	MC10D1N22M	13220	MC10D1N11M	12440
E	70	50 / 37	MC10EN22M	20120	MC10EN11M	19710

**New**

HSN CODE : 8536



Contactor Size	AC# Rating at 415 V			Aux. Contact	Cat. No.	MRP [₹]
	AC-1 (A)	AC-3 (A)	HP / KW			
M-5	150	110	80 / 60	1 NO + 1 NC	MCE15MN3M5	26900
N	300	140	100 / 75	1 NO + 1 NC	MCE15NN3M7	40120
S	315	300	220 / 160	1 NO + 1 NC	MCE15SN3M7	59060

For other Coil Voltages, kindly refer 'Coil Voltage Master Table' at page 36

## Spares for Shakti Starters

HSN CODE : 8538

Cat. No.	Description	MRP [₹]
SHA	Contact Kit*	1115
SHAA	Contact Kit 12A (1 Aux + 3P)**	960
SHZ	Coil 190- 400 V	470
SHCC	Contact carrier	105
SHPB	Extended Button Assembly	310
SHCO	Shakti Contactor for DOL 20A	2815
SHACO	Shakti Contactor for Star Delta 16A	3170
SHCOA	Shakti Contactor for DOL 12A	2405
NCPNYAU*-5S or 5M	SPP (for ASX & OISDY)-6 Wire	930
CPTB630	Terminal Block 30A 6-way (Auto DOL)	1200
CPAMS-3P/ASX	Auto Manual Switch 3-pos (Auto DOL)	525

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

\*\* Shakti 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

HSN CODE : 8538

Cat No.	Description	MRP[₹]
SPSRW8	Power Terminal Screw - 4p NHD Contactor	120
SPSRWSD4	Screw (4nos.) for Star Delta Starter	45
SPSRWDOL2	Screw (2nos.) for DOL Starter-Citation/Shakti	30
SPGR2	Gromet (2nos.) for DOL Starter-Citation/Shakti	25

## Spares for 3-Phase Submersible Pump Starter

HSN CODE : 8538

Cat. No.	Description	MRP [₹]
NCPYAU*-5S or 5M	SPP (3 Position SPS)-6 wire	930
BCHSPP1*-5S or 5M	SPP 6-wire	930
BCHSPP2*	SPP Pro 6-wire	930
SPSATG	Electronic Timer (Star Delta)	1420
SPSATWB-30S	Electronic Timer (Star Delta)	1420
CPAM25	Ammeter 25A	650
CPAM50	Ammeter 50A	650
CPAM100	Ammeter 100A	685
CPVM500	Voltmeter 500V	650
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)	125
HCB01	Aux Block (1 NC)	125
HFB2PAH	LED-Amber (R-Y-B)	385
HFB2XAM	LED-Amber (Motor Trip)	260
HFB2XRM	LED-RED (415 VAC)	260

## Spares for Citation M Starters

HSN CODE : 8538

Cat. No.	Description	MRP [₹]
SP100PB3	PB assembly for Citation Starters (Manufactured Before Apr'24)	370
SP100PBC1	PB assembly for Citation Starters (Manufactured from Apr'24 onwards)	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)	1420
<b>For 250-375 HP SD Starter</b>		
TSFB-R	Push Button (RED)	305
TSFB-G	Push Button (Green)	305
050N1	Aux Contact Block(1NO+1NC)	390

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	650
SPAM-25	Ammeter 25A	650
SPAM-50	Ammeter 50A	650
SPVM-300	Voltmeter 300V	650
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	Outgoing Side Terminal Block for 23-32A relay	250

## Spares for Freedom DOL

HSN CODE : 8538

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

## KIT for NHD

HSN CODE : 8538

Contactor Rating (AC-3)	4P KIT Cat Code	MRP[₹]	1 Aux + 3P KIT		1P KIT	
			Cat. No.	MRP[₹]	Cat. No.	MRP [₹]
12A	SP90E1	1100	SP90E2	1000	SP90E01	295
16A	SP90A1	1285	SP90A2	1170	SP90A01	345
20A	SP90F1	1705	SP90F2	1550	SP90F01	450
25A	SP90B1	2470	SP90B2	2245	SP90B01	630
32A	SP90D1	2900	SP90D2	2635	SP90D01	750
40A	SP90C1	3420	SP90C2	3105	SP90C01	870

\* 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. No.	MRP [₹]
12A	CPG122PSP	590
16A	CPG162PSP	670
20A	CPG202PSP	1065
25A	CPG252PSP	1715
32A	CPG322PSP	1785
40A	CPG402PSP	2100

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

## 2P Contactor

HSN CODE : 8536

## 2P Contactor Kit

HSN CODE : 8538

Contactor Rating	Cat. No.	MRP [₹]
16A	CPGN216*	1440
20A	CPGN220*	1625
25A	CPGN225*	1810

Rating	Cat. No.	MRP[₹]
16A	CPGN162PSP	290
20A	CPGN202PSP	335
25A	CPGN252PSP	390

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



## Spares for P series SPS

HSN CODE : 8538

Cat. No.	Description	MRP [₹]
CPRS-ON-OFF	ROCKER SWITCH ON-OFF	85
CPTB210	10A, 2 way TB for P series SPS	75
CPLIED-R	LED RED 415V	235
CPLIED-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

## Spare Coil & Carrier

Contactor	Cat. No.	MRP [₹]
Magnet Coil for NHD/ CPG	SP90MC*	480
Carrier for NHD	SP90CC	115
Carrier for CPG	CPG2PCC	75

## 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. No.	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
SPDRPCONNECTOR-S1	CONNECTOR FOR DRY RUN PROTECTOR S1	65

## Spare Freedom Overload Relays for Citation P32 to Citation P100

HSN CODE : 8536

Cat. No.	Overload Relay Range (A)	MRP [₹]
MC318GNA3B	22 - 32	2960
MC318GNA3C	29 - 42	2970
MC318GNA3D	36 - 52	4010
MC318GNA3E	45 - 63	4470
MC318GNA3F	60 - 80	5500

Adaptor for Individual mounting Cat Code- C318F2 (MRP Rs. 540)



# Coil Band Master Table



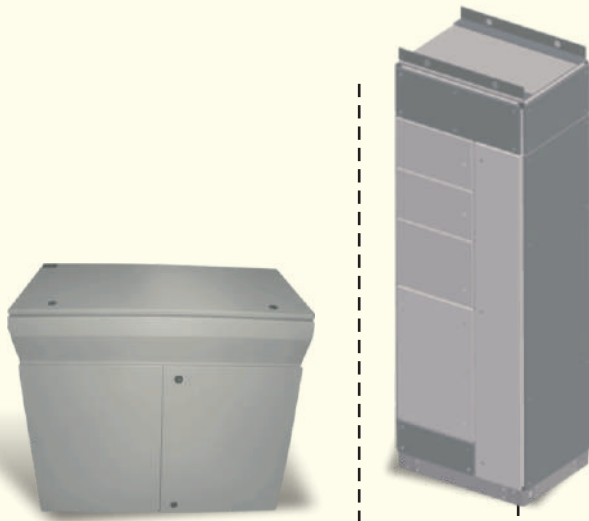
## COIL VOLTAGE : MASTER TABLE

	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	196-396V	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	-	-	-	-	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
- TCE Series Enclosure
- Compartmentalized Enclosure (Fixed & Draw-out)
- IT Racks - 19" and ETSI Racks



Mundhra Brothers



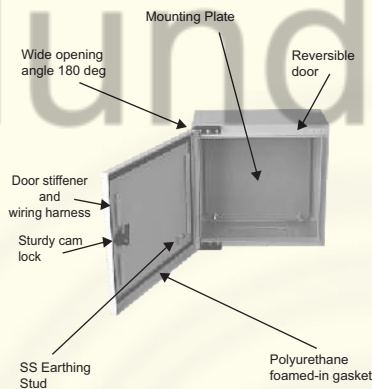
## Bhartia Boxes

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	190
Set of Wall Mounting bracket (big)	BIL-WM-B	1	215
Set of Wall Mounting bracket Kit 20mm	BIL-WM-H20	1	320

Note :

- \* Set of wall mounting bracket (small) is suitable for all range of terminal boxes and Bhartia boxes upto size : 400x500x200mm.
- \* Set of wall mounting bracket (big) is suitable for Bhartia boxes beyond size : 400x500x200mm.

Type	Size (WxHxD) mm	IP-55 Range			IP-66 Range	
		Nos.	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]
SINGLE DOOR BOX	200x200x150	1	BIL-50000	3160	BIL-60000	3320
SINGLE DOOR BOX	200x300x150	1	BIL-50010	3615	BIL-60010	3690
SINGLE DOOR BOX	250x300x150	1	BIL-50020	3755	BIL-60020	3875
SINGLE DOOR BOX	300x300x150	1	BIL-50030	4050	BIL-60030	4210
SINGLE DOOR BOX	300x300x200	1	BIL-50050	4315	BIL-60050	4570
SINGLE DOOR BOX	300x400x150	1	BIL-50060	4500	BIL-60060	4740
SINGLE DOOR BOX	300x400x200	1	BIL-50080	5050	BIL-60080	5080
SINGLE DOOR BOX	400x300x150	1	BIL-50090	4410	BIL-60090	4675
SINGLE DOOR BOX	400x300x200	1	BIL-50110	4945	BIL-60110	5020
SINGLE DOOR BOX	400x400x150	1	BIL-50120	5050	BIL-60120	5145
SINGLE DOOR BOX	400x400x200	1	BIL-50140	5350	BIL-60140	5515
SINGLE DOOR BOX	400x500x150	1	BIL-50150	5700	BIL-60150	6000
SINGLE DOOR BOX	400x500x200	1	BIL-50170	6040	BIL-60170	6210
SINGLE DOOR BOX	500x500x200	1	BIL-50180	7120		
SINGLE DOOR BOX	400x600x200	1	BIL-50190	7120	BIL-60190	7220
SINGLE DOOR BOX	500x600x200	1	BIL-50210	8170	BIL-60210	8415
SINGLE DOOR BOX	500x700x200	1	BIL-50220	9285		
SINGLE DOOR BOX	500x700x300	1	BIL-50230	10685		
SINGLE DOOR BOX	600x400x200	1	BIL-50240	7255	BIL-60240	7525
SINGLE DOOR BOX	600x400x300	1	BIL-50250	9325		
SINGLE DOOR BOX	600x500x200	1	BIL-50260	8415	BIL-60260	9095
SINGLE DOOR BOX	600x600x200	1	BIL-50270	8755		
SINGLE DOOR BOX	600x600x300	1	BIL-50280	10525		
SINGLE DOOR BOX	600x700x200	1	BIL-50290	10550		
SINGLE DOOR BOX	600x800x200	1	BIL-50300	10580		
SINGLE DOOR BOX	600x800x300	1	BIL-50320	12105		
SINGLE DOOR BOX	600x1000x200	1	BIL-50330	13340		
SINGLE DOOR BOX	600x1000x300	1	BIL-50340	15135		
SINGLE DOOR BOX	800x800x300	1	BIL-50310	14120		
SINGLE DOOR BOX	800x1000x200	1	BIL-50350	15720		
SINGLE DOOR BOX	800x1000x250	1	BIL-50360	16050		
SINGLE DOOR BOX	800x1000x300	1	BIL-50390	16240		
SINGLE DOOR BOX	800x1200x300	1	BIL-50395	20235		
DOUBLE DOOR BOX	1000x800x200	1	BIL-50500	16970		
DOUBLE DOOR BOX	1000x800x300	1	BIL-50520	19460		
DOUBLE DOOR BOX	1000x1000x300	1	BIL-50540	22630		
DOUBLE DOOR BOX	1000x1200x300	1	BIL-50550	26015		
DOUBLE DOOR BOX	1000x1400x300	1	BIL-50560	31115		
DOUBLE DOOR BOX	1200x1400x300	1	BIL-50570	34595		
DOUBLE DOOR BOX	1000x1400x400	1	BIL-50580	32810		
DOUBLE DOOR BOX	1200x1400x400	1	BIL-50590	36110		

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	825	600WX200D	BIL-16-CAN-6020	1	1590
250WX150D	BIL-12-CAN-2515	1	940	600WX300D	BIL-16-CAN-6030	1	1950
300WX150D	BIL-12-CAN-3015	1	1005	800WX300D	BIL-16-CAN-8030	1	2380
300WX200D	BIL-12-CAN-3020	1	1095	800WX200D	BIL-16-CAN-8020	1	1930
400WX150D	BIL-12-CAN-4015	1	1140	800WX250D	BIL-16-CAN-8025	1	2085
400WX200D	BIL-12-CAN-4020	1	1260	1000WX200D	BIL-16-CAN-1020	1	2265
500WX200D	BIL-12-CAN-5020	1	1425	1000WX300D	BIL-16-CAN-1030	1	2790
500WX300D	BIL-12-CAN-5030	1	1750				

\*List Prices are Ex-works Faridabad. For detail refer Enclosure Selling Terms & Conditions.

\*GST to be charged extra

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

Effective from 22.05.2024



- 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)

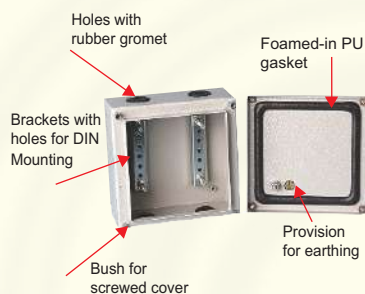
HSN Code : 8538

Type	Size (WxHxD) mm	MOQ Nos.	Cat No.	List Price [₹]
SINGLE DOOR BOX	200X300X150	3	BIL-90203015	7260
SINGLE DOOR BOX	300X300X200	3	BIL-90303020	10055
SINGLE DOOR BOX	400X400X200	3	BIL-90404020	13305
SINGLE DOOR BOX	400X500X200	3	BIL-90405020	14820
SINGLE DOOR BOX	400X600X200	3	BIL-90406020	16990
SINGLE DOOR BOX	500X600X200	3	BIL-90506020	21760
SINGLE DOOR BOX	600X600X200	3	BIL-90606020	23275
SINGLE DOOR BOX	600X800X200	3	BIL-90608020	27665
SINGLE DOOR BOX	500X700X300	3	BIL-90507030	28100
SINGLE DOOR BOX	800X800X300	3	BIL-90808030	38690

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	1570	BIL-80000	1615
200x150x80	-			BIL-80100	1785
300x150x80	5	BIL-70010	1845	BIL-80010	2060
200x200x80	5	BIL-70020	1765	BIL-80020	1875
300x200x80	5	BIL-70030	1930	BIL-80030	2005
400x200x80	-			BIL-80110	2140
600x200x80	-			BIL-80130	2915
150x150x120	5	BIL-70040	1735	BIL-80040	1845
200x150x120	-			BIL-80150	1910
300x150x120	5	BIL-70050	2060	BIL-80050	2100
200x200x120	5	BIL-70060	2005	BIL-80060	2060
300x200x120	5	BIL-70070	2235	BIL-80070	2285
400x200x120	5	BIL-70080	2505	BIL-80080	2595
300x300x120	5	BIL-70090	2670	BIL-80090	2770
400x150x120	-			BIL-80170	2475
400x300x120	5	BIL-70180	2955	BIL-80180	3320
400x400x120	5	BIL-70190	3475	BIL-80190	3755
500x200x120	5	BIL-70200	3045	BIL-80200	3255
500x300x120	5	BIL-70210	3385	BIL-80210	3585
600x200x120	5	BIL-70220	3405	BIL-80220	3595
600x300x120	5	BIL-70230	4165	BIL-80230	4335
600x400x120	5	BIL-70240	4570	BIL-80240	4720
800x200x120	5	BIL-70250	4815	BIL-80250	4975
800x400x120	5	BIL-70260	5860	BIL-80260	5975

MOQ-Minimum order quantity in nos.

\*List Prices are Ex-works Faridabad. For detail refer Enclosure Selling Terms & Conditions.

**\*GST to be charged extra**

## 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	30625	34110	24320	28075	TPL 061804	2970	TSC 061804	5930
800 x 1800 x 400	TME 081804	36585	40145	27810	32150	TPL 081804	3385	TSC 081804	5930
1000 x 1800 x 400	TME 101804	50350	54265	39045	42710	TPL 101804	3795	TSC 101804	5930
1200 x 1800 x 400	TME 121804	56570	63200	43900	48655	TPL 121804	4165	TSC 121804	5930
600 x 1800 x 500	TME 061805	31990	35215	25950	29170	TPL 061805	3180	TSC 061805	6890
800 x 1800 x 500	TME 081805	37250	41940	29780	33340	TPL 081805	3585	TSC 081805	6890
1000 x 1800 x 500	TME 101805	51720	55630	40745	44925	TPL 101805	3990	TSC 101805	6890
1200 x 1800 x 500	TME 121805	57665	65510	46185	51895	TPL 121805	4340	TSC 121805	6890
800 x 1800 x 600	TME 081806	39710	41695	32330	35385	TPL 081806	3740	TSC 081806	7665
600 x 2000 x 400	TME 062004	33010	37090	25350	30125	TPL 062004	2970	TSC 062004	6380
800 x 2000 x 400	TME 082004	38410	42195	29355	33325	TPL 082004	3385	TSC 082004	6380
1000 x 2000 x 400	TME 102004	55025	58095	42790	45755	TPL 102004	3795	TSC 102004	6380
1200 x 2000 x 400	TME 122004	59115	65335	47300	53600	TPL 122004	4165	TSC 122004	6380
600 x 2000 x 500	TME 062005	35040	37935	28750	32500	TPL 062005	3180	TSC 062005	7490
800 x 2000 x 500	TME 082005	39305	43390	30290	34540	TPL 082005	3585	TSC 082005	7490
1000 x 2000 x 500	TME 102005	54440	60910	43390	48145	TPL 102005	3990	TSC 102005	7490
1200 x 2000 x 500	TME 122005	59525	65510	46785	51895	TPL 122005	4340	TSC 122005	7490
600 x 2000 x 600	TME 062006	35545	39045	30450	33950	TPL 062006	3355	TSC 062006	8335
800 x 2000 x 600	TME 082006	40665	44315	32655	36315	TPL 082006	3740	TSC 082006	8335
1000 x 2000 x 600	TME 102006	55295	63450	44060	51365	TPL 102006	4140	TSC 102006	8335
1200 x 2000 x 600	TME 122006	60700	67290	49150	55460	TPL 122006	4520	TSC 122006	8335
600 x 2000 x 800	TME 062008	36585	39305	30540	34355	TPL 062008	3740	TSC 062008	10715
800 x 2000 x 800	TME 082008	42355	45505	34615	37905	TPL 082008	4140	TSC 082008	10715
1000 x 2000 x 800	TME 102008	60700	64735	46785	51895	TPL 102008	4465	TSC 102008	10715
1200 x 2000 x 800	TME 122008	63805	70760	52410	57665	TPL 122008	4920	TSC 122008	10715
600 x 2200 x 600	TME 062206	40065	43900	31820	37760	TPL 062206	3355	TSC 062206	9655
800 x 2200 x 600	TME 082206	45345	48320	36490	40230	TPL 082206	3740	TSC 082206	9655
1000 x 2200 x 600	TME 102206	62780	67615	51585	56425	TPL 102206	4140	TSC 102206	9655
1200 x 2200 x 600	TME 122206	65235	72815	50705	56650	TPL 122206	4520	TSC 122206	9655
600 x 2200 x 800	TME 062208	43695	47395	33520	38705	TPL 062208	3740	TSC 062208	12540
800 x 2200 x 800	TME 082208	52735	55810	40505	44060	TPL 082208	4140	TSC 082208	12540
1000 x 2200 x 800	TME 102208	66850	72030	54265	58360	TPL 102208	4465	TSC 102208	12540
1200 x 2200 x 800	TME 122208	72305	76380	59205	63200	TPL 122208	4920	TSC 122208	12540

\*Baying kit (BIL-14280) Rs. 2005/- is also available for Enclosure Version. For extra accessories, please contact nearest branch office.

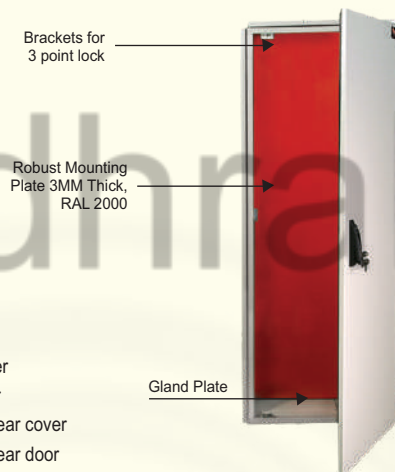
MOQ-Minimum order quantity in nos.

Note : Cutout charges will be extra

Freight charges will be extra at actuals

\*List Prices are Ex-works Faridabad. For detail refer Enclosure Selling Terms & Conditions.

**\*GST to be charged extra**



## 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.

Note : upto 800 mm width single door  
1000 mm & 1200 mm width double leaf door

\*List Prices are Ex-works Faridabad. For detail refer Enclosure Selling Terms & Conditions.

**\*GST to be charged extra**

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

## TCE Series Enclosure Code Selection |

Example:-

TCE	06	18	05	-	001
-----	----	----	----	---	-----



TCE Series of Enclosure

Width

Height

Depth

Version

## 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:	Structure:	Structure:	Structure:	Structure:
Front Door with Hinge	Front Door with Hinge	Front Door with Hinge	Front Door with Hinge	Front Door with Hinge
Rear Bolted Cover	Rear Door with Hinge	Rear Bolted Cover	Rear Door with Hinge	Rear Door with Hinge
STD Gland Plate	STD Gland Plate	STD Gland Plate	STD Gland Plate	STD Gland Plate
Top Cover	Top Cover	Top Cover	Top Cover	Top Cover
Eye Bolt	Eye Bolt	Eye Bolt	Eye Bolt	Eye Bolt
01 Mounting Plate	01 Mounting Plate	No Mounting Plate	No Mounting Plate	2 Mounting Plate

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**\*GST to be charged extra**

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

## 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

**IK10**

**IP66 | IP65**

**CE**



\*List Prices are Ex-works Faridabad. For detail refer Enclosure Selling Terms & Conditions.  
\*GST to be charged extra

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	32805	36545	26055	30090	
800	1800	400	TCE081804	39190	43005	29795	34445	
1000	1800	400	TCE101804	53945	58135	41835	45755	
1200	1800	400	TCE121804	60620	67710	47025	52125	
600	1800	500	TCE061805	34280	37730	27805	31250	
800	1800	500	TCE081805	39910	44935	31900	35720	
1000	1800	500	TCE101805	55400	59615	43645	48120	
1200	1800	500	TCE121805	61775	70185	49480	55595	
800	1800	600	TCE081806	42555	44650	34630	37910	51880
800	1800	800	TCE081808	44405	48855	36935	41370	59265
600	2000	400	TCE062004	35360	39755	27155	32260	
800	2000	400	TCE082004	41165	45200	31450	35705	
1000	2000	400	TCE102004	58945	62245	45835	49020	
1200	2000	400	TCE122004	63320	69990	50670	57430	
600	2000	500	TCE062005	37530	40645	30805	34815	
800	2000	500	TCE082005	42105	46480	32445	36995	
1000	2000	500	TCE102005	58320	65260	46480	51575	
1200	2000	500	TCE122005	63770	70185	50130	55595	
600	2000	600	TCE062006	38090	41835	32620	36370	50340
800	2000	600	TCE082006	43565	47470	34980	38900	56345
1000	2000	600	TCE102006	59250	67980	47190	55020	82425
1200	2000	600	TCE122006	65030	72100	52665	59415	87535
600	2000	800	TCE062008	39190	42105	32730	36815	54845
800	2000	800	TCE082008	45380	48740	37085	40610	59355
1000	2000	800	TCE102008	65030	69340	50130	55595	80990
1200	2000	800	TCE122008	68360	75825	56155	61775	90465
600	2200	600	TCE062206	42925	47025	34080	40455	56345
800	2200	600	TCE082206	48580	51765	39105	43110	60410
1000	2200	600	TCE102206	67260	72445	55270	60450	84670
1200	2200	600	TCE122206	69890	78020	54315	60690	97040
600	2200	800	TCE062208	46805	50775	35910	41460	54030
800	2200	800	TCE082208	56500	59790	43380	47190	65365
1000	2200	800	TCE102208	71630	77180	58135	62525	89940
1200	2200	800	TCE122208	77475	81840	63440	67710	101430

\*List Prices are Ex-works Faridabad. For detail refer Enclosure Selling Terms & Conditions.

\*GST to be charged extra

## TCE Bottom Plinth 100mm Height

HSN Code: 8538

Size in MM		Cat No	LP [₹]
Width (H)	Depth (D)		
600	400	TCEPL0604	2950
800	400	TCEPL0804	3370
1000	400	TCEPL1004	3770
1200	400	TCEPL1204	4130
600	500	TCEPL0605	3160
800	500	TCEPL0805	3545
1000	500	TCEPL1005	3960
1200	500	TCEPL1205	4310
600	600	TCEPL0606	3340
800	600	TCEPL0806	3710
1000	600	TCEPL1006	4100
1200	600	TCEPL1206	4475
600	800	TCEPL0608	3710
800	800	TCEPL0808	4100
1000	800	TCEPL1008	4435
1200	800	TCEPL1208	4870



## TCE Side Panel

HSN Code: 8538

Size in MM		Cat No	LP [₹]
Height (H)	Depth (D)		
1800	400	TCESP0418	5890
1800	500	TCESP0518	6840
1800	600	TCESP0618	7610
1800	800	TCESP0818	10145
2000	400	TCESP0420	6325
2000	500	TCESP0520	7440
2000	600	TCESP0620	8265
2000	800	TCESP0820	10640
2200	600	TCESP0622	9575
2200	800	TCESP0822	12445

MOQ-Minimum order quantity in nos.

Note: Cutout charges will be extra

Freight charges will be extra at actuals

\*List Prices are Ex-works Faridabad. For detail refer Enclosure Selling Terms & Conditions.  
\*GST to be charged extra

## TCE Series Enclosure Accessories

### Baying system

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Baying Kit	TCE-14280	2185
2	Combination Angle (Pack of 2)	TCE-14281	1145

### Mounting plate filler profile

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Filler plate for 1800mm Height	TCE-FP-1800	1660
2	Filler plate for 2000mm Height	TCE-FP-2000	1830
3	Filler plate for 2200mm Height	TCE-FP-2200	2005

### Wiring plan pocket

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	File pocket 500mm Width	TCE-TPKT-500	805
2	File pocket 600mm Width	TCE-TPKT-600	970
3	File pocket 800mm Width	TCE-TPKT-800	1260

### Lamp rail

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Lamp rail 600mm Width	TCE-LAMP-RAIL-600	230
2	Lamp rail 800mm Width	TCE-LAMP-RAIL-800	310
3	Lamp rail 1000mm Width	TCE-LAMP-RAIL-1000	390
4	Lamp rail 1200mm Width	TCE-LAMP-RAIL-1200	475

### Limit switch with fixing arrangement

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	BCH Limit switch	TCE-LC	970

### Punched section for depth

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Punched section 400mm depth	TCE-PSD-400	570
2	Punched section 500mm depth	TCE-PSD-500	805
3	Punched section 600mm depth	TCE-PSD-600	1035
4	Punched section 800mm depth	TCE-PSD-800	1380

### Punched section for width

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Punched section 600mm width	TCE-PSW-600	1145
2	Punched section 800mm width	TCE-PSW-800	1380
3	Punched section 1000mm width	TCE-PSW-1000	1605
4	Punched section 1200mm width	TCE-PSW-1200	1830

### Air Filter Unit

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Snap fit air filter 148x148	BIL-SF-1414	900
2	Snap fit air filter 204x204	BIL-SF-2020	1350
3	Snap fit air filter 255x255	BIL-SF-2525	1500
4	Snap fit air filter 204x204 with mounting adaptor	BIL-SFMA-2020	1580
5	Snap fit air filter 255x255 with mounting adaptor	BIL-SFMA-2525	1980

### Door Stay

HSN Code: 8538

Sl. No	Description	Cat No	LP [₹]
1	Door Stay for TCE Series	TCE-DS	1250

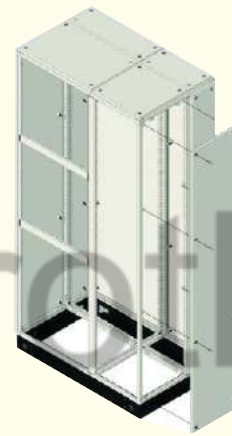
\*GST to be charged extra \*List Prices are Ex-works Faridabad. For detail refer Enclosure Selling Terms & Conditions.



# 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 expended 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**





### 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.



### 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" 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

## 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)

\*List Prices are Ex-works Faridabad. For detail refer Enclosure Selling Terms & Conditions.

**\*GST to be charged extra**

### 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
- Goruting 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.

**\*GST to be charged extra**

## 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 accomodate 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

Notes : Packing & forwarding will be extra if accessories are ordered separately.

\*List Prices are Ex-works Faridabad. For detail refer Enclosure Selling Terms & Conditions.

\*GST to be charged extra

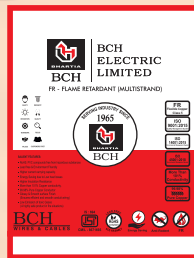
[www.bchindia.com](http://www.bchindia.com)

Effective from 22.05.2024



# Wires & Cables

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



M...aBrothers

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	
CS0500BM	50 Sqmm x 3 core Flat cable	On request	
CS0700BM	70 Sqmm x 3 core Flat cable	On request	
CS0950BM	95 Sqmm x 3 core Flat cable	On request	
CS1200BM	120 Sqmm x 3 core Flat cable	On request	

BCH Three Core Flat Cables standard cable with XLPE insulation & ROHS PVC sheath for continuous conductor temperature upto 90 deg. C.

BCH Code	FLAT CS XLPE CABLE	LP Per 500 Mtrs in	Remark
CFTEX-03-0015BM	1.5 Sq. mm x 3 core Flat CS XLPE CABLE	On request	Also Available in 100 mtrs & 1000 mtrs
CFTEX-03-0025BM	2.5 Sq. mm x 3 core Flat CS XLPE CABLE	On request	
CFTEX-03-0040BM	4.0 Sq. mm x 3 core Flat CS XLPE CABLE	On request	
CFTEX-03-0060BM	6.0 Sq. mm x 3 core Flat CS XLPE CABLE	On request	
CFTEX-03-0080BM	8.0 Sq. mm x 3 core Flat CS XLPE CABLE	On request	
CFTEX-03-0100BM	10 Sq. mm x 3 core Flat CS XLPE CABLE	On request	
CFTEX-03-0160BM	16 Sq. mm x 3 core Flat CS XLPE CABLE	On request	
CFTEX-03-0250BM	25 Sq. mm x 3 core Flat CS XLPE CABLE	On request	
CFTEX-03-0350BM	35 Sq. mm x 3 core Flat CS XLPE CABLE	On request	
CFTEX-03-0500BM	50 Sq. mm x 3 core Flat CS XLPE CABLE	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	

**Note:**

"BM" at the end of every code denotes drum of 500 meters. Please use codes mentioned below for different coil lengths:  
 "A" - Coil of 100 meters, "CM" - Drum of 1000 meters

For price, please contact our nearest sales office.

## 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
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
CRLS01-0350A-AAA	35	91	100	On request
CRLS01-0500A-AAA	50	120	145	On request

Note: Standard packing of 100m, 180m & 270m available. For prices of 100m, 180m & 270m, please contact nearest sales office.  
 All sizes will be in 100 mtrs packing

## 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
2.5 sqmm	CR36-0025A-NAA-M	On request	20
4.0 sqmm	CR36-0040A-NAA-M	On request	27

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 50 Sq. mm from 2 to 4 cores & 0.5 to 2.5 Sq. mm upto 24 Core with ISI mark, rest all generally conforming to the IS Standard. packing available in 100 meter coils, longer lengths on drums (500m to 1000m)

# 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



## 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

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



#### 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

Brothers

### 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

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



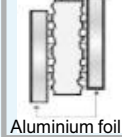
## APP Box Type Single Layer Capacitors & Super Heavy Duty Box Type Capacitors (with ISI Mark) (440V)

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

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

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

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

HSN Code : 8504

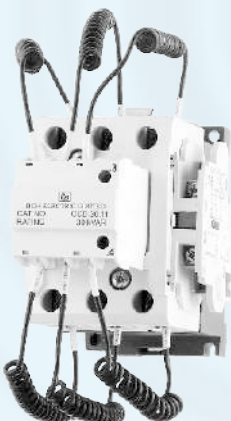
KVAR	Aluminium wound		Copper wound	
	Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
5	BCHRAL005B	On request	BCHRCU005B	On request
10	BCHRAL010B	On request	BCHRCU010B	On request
15	BCHRAL015B	On request	BCHRCU015B	On request
20	BCHRAL020B	On request	BCHRCU020B	On request
25	BCHRAL025B	On request	BCHRCU025B	On request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

Price for 14% Aluminium & Copper bound reactor available 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	2800
10	CCD.10.11.▀	1NO+1NC	3040
15	CCD.15.11.▀	1NO+1NC	4440
20	CCD.20.11.▀	1NO+1NC	5210
26	CCD.26.11.▀	1NO+1NC	6390
30	CCD.30.11.▀	1NO+1NC	10150
40	CCD.40.11.▀	1NO+1NC	15460
50	CCD.50.21.▀	2NO+1NC	16250
60	CCD.60.21.▀	2NO+1NC	18240

▀ Standard coil voltages are 24, 110, 220/240 & 380/415 VAC, 50 Hz. For voltage codes refer Table on page 36  
CCD.05 ~ CCD.40 @ ₹40 CCD.50 ~ CCD.60 @ ₹110

## APFC Relay

### 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-Ø, 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
- RG-15C - Intelligent relay PFC with smart switching with all 15 steps relay connection with communication

### 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

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



### 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

# 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

Munshra Brothers

# Automation Products

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



Mundhra Brothers



## 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



\* For the prices of above mentioned products please contact our nearest sales office.

## 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

MundhraBrothers

### 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

\* For the prices of above mentioned products please contact our nearest sales office.

## @PROX Range

### 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	1270	10
DINE8SN10	8	1.5	NPN-NO	100	1270	
DINE12SP10	12	2	PNP-NO	200	1040	
DINE12SN10	12	2	NPN-NO	200	1040	
DINE18SP10	18	5	PNP-NO	200	1090	
DINE18SN10	18	5	NPN-NO	200	1090	
DINE30SP10	30	10	PNP-NO	400	1470	
DINE30SN10	30	10	NPN-NO	400	1470	
Non Flush Version Nominal Voltage 12-30V DC 3 Wire Output LED Indication Integrated cable 3C/2M						
DINE8NP10	8	2	PNP-NO	100	1270	10
DINE8NN10	8	2	NPN-NO	100	1270	
DINE12NP10	12	4	PNP-NO	200	1040	
DINE12NN10	12	4	NPN-NO	200	1040	
DINE18NP10	18	8	PNP-NO	200	1090	
DINE18NN10	18	8	NPN-NO	200	1090	
DINE30NP10	30	15	PNP-NO	400	1470	
DINE30NN10	30	15	NPN-NO	400	1470	
Flush Version Nominal Voltage 240V AC* 2 Wire Output LED Indication Integrated cable 3C/2M						
DINE12SA10	12	2	NO	200	1350	10
DINE12SA01	12	2	NC	200	1350	
DINE18SA10	18	5	NO	400	1430	
DINE18SA01	18	5	NC	400	1430	
DINE30SA10	30	10	NO	400	1660	
DINE30SA01	30	10	NC	400	1660	
Non Flush Version Nominal Voltage 240V AC* 2 Wire Output LED Indication Integrated cable 3C/2M						
DINE12NA10	12	4	NO	200	1350	10
DINE12NA01	12	4	NC	200	1350	
DINE18NA10	18	8	NO	400	1430	
DINE18NA01	18	8	NC	400	1430	
DINE30NA10	30	15	NO	400	1660	
DINE30NA01	30	15	NC	400	1660	

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

## @PROX 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	2600	10
DCAE18SP10	18	1 to 5	PNP-NO	400	2600	
DCAE30SN10	30	1 to 10	NPN-NO	400	2970	
DCAE30SP10	30	1 to 10	PNP-NO	400	2970	
Non Flush Version 12-30V DC 3 Wire Output LED Indication Integrated 3C/2M						
DCAE18NN10	18	2 to 10	NPN-NO	400	2600	10
DCAE18NP10	18	2 to 10	PNP-NO	400	2600	
DCAE30NN10	30	3 to 15	NPN-NO	400	2970	
DCAE30NP10	30	3 to 15	PNP-NO	400	2970	

### 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	3940	10
DPHE18D2P11	18	200	PNP-NO+NC	200	3940	
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	3950	10
DPHE18RRP11	18	1000	PNP-NO+NC	200	3950	
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	4730	10
DPHE18TBRN11	18	5000	NPN-NO+NC	200	4730	

Note :

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

## @PROX Range

### 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	1310	10
DINE8SN10K	8	1.5	NPN-NO	M8 Connector	1310	
DINE12SP10K	12	2	PNP-NO	M12 Connector	1310	
DINE12SN10K	12	2	NPN-NO	M12 Connector	1310	
DINE18SP10K	18	5	PNP-NO	M12 Connector	1320	
DINE18SN10K	18	5	NPN-NO	M12 Connector	1320	
DINE30SP10K	30	10	PNP-NO	M12 Connector	1640	
DINE30SN10K	30	10	NPN-NO	M12 Connector	1640	
Non Flush Version Nominal Voltage 12-30V DC 3 Wire Output LED Indication						
DINE8NP10K	8	2	PNP-NO	M8 Connector	1310	10
DINE8NN10K	8	2	NPN-NO	M8 Connector	1310	
DINE12NP10K	12	4	PNP-NO	M12 Connector	1310	
DINE12NN10K	12	4	NPN-NO	M12 Connector	1310	
DINE18NP10K	18	8	PNP-NO	M12 Connector	1320	
DINE18NN10K	18	8	NPN-NO	M12 Connector	1320	
DINE30NP10K	30	15	PNP-NO	M12 Connector	1640	
DINE30NN10K	30	15	NPN-NO	M12 Connector	1640	
Description Female Connectors						
DM8K3	M8 3-Wire straight connector w/o LED & 2 m cable				1010	10
DM8K390LE	M8 3-Wire "L" type connector with LED & 2 m cable				1010	
DM12K4	M12 4-Wire straight connector w/o LED & 2 m cable				680	
DM12K490	M12 4-Wire "L" type connector w/o LED & 2 m cable				990	
DM12K490LE	M12 4-Wire "L" type connector with LED & 2 m cable				1070	
Linear Output Inductive Proximity Sensor - Nominal Voltage 24V DC, 2m Integrated Cable						
DINE18LIN	18	5	0 - 10V	2 m long PVC Cable	2230	10
DINE18LINMA	18	5	4 - 20 mA		2230	

### 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	1550	10
DINE12SD10	12	2	NO	200	1080	
DINE18SD10	18	5	NO	400	1110	
DINE30SD10	30	10	NO	400	1440	
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	1550	10
DINE12ND10	12	4	NO	200	1080	
DINE18ND10	18	8	NO	400	1110	
DINE30ND10	30	15	NO	400	1440	

Note : for NC output, replace suffix 10 by 01

## ePROX Range

### 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	1610	10
DINE8SN10S	8	1.5	NPN-NO	200	1610	
DINE12SP10S	12	2	PNP-NO	200	1120	
DINE12SN10S	12	2	NPN-NO	200	1120	
DINE18SP10S	18	5	PNP-NO	400	1130	
DINE18SN10S	18	5	NPN-NO	400	1130	
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	1610	10
DINE8NN10S	8	2	NPN-NO	200	1610	
DINE12NP10S	12	4	PNP-NO	200	1120	
DINE12NN10S	12	4	NPN-NO	200	1120	
DINE18NP10S	18	8	PNP-NO	400	1130	
DINE18NN10S	18	8	NPN-NO	400	1130	

### 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	1120	10
DINE5025SP10P	50x25x10	5	PNP-NO	200	1170	
DINE1717SN10P	17x17x30	5	NPN-NO	200	1120	
DINE5025SN10P	50x25x10	5	NPN-NO	200	1170	

\* For NC Output, Replace Suffix 10 by 01

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

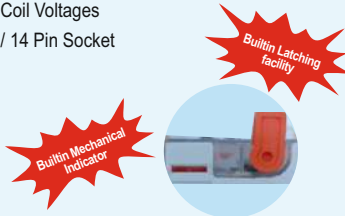
\*\*\* High Ambient Temp upto 125°C Proximity switch are available on request

# Plug in Relays - APA Series

## Miniature Plug in Relays



- Type APAM (Miniature)
- 12/6 Amp. (Res.) Contact rating
- 2 Change over / 4 Change over
- Silver Nickle Contacts
- Built in Mechanical Indicator/Latching facility
- Wide Coil Voltages
- 8 Pin / 14 Pin Socket



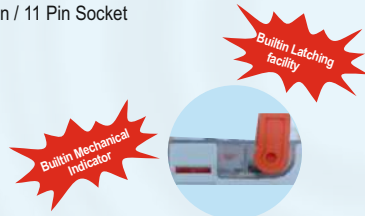
**Socket & Clamp (APSM)**  
35 mm DIN rail mounting  
Rating : 6A, 12A, 300V



## Universal Relays



- Type APAU
- 10 Amp (Res) Contact rating
- 2 Change over / 3 Change over
- Silver Nickle Contacts
- Built in Mechanical Indicator/ Latching facility
- Wide Coil Voltages
- 8 Pin / 11 Pin Socket



**Socket & Clamp (APAU)**  
35 mm DIN rail mounting Rating : 10 A, 250V



## Plug in Relays - Miniature (APAM)

HSN Code - 8536

Coil Voltage	With LED Indication		Contacts	Lot Size
	Cat. No.	MRP [₹]		
14 Pin, Contact rating - 6A (Res.) at 30V DC/250V AC; Mechanical indicator with manual testing/latching lever				
12V DC	APAM412DLE	510	4 C/O	10
24V DC	APAM424DLE	470		
110V DC	APAM4110DLE	590		
24V AC	APAM424ALE	560		
110V AC	APAM4110ALE	560		
230V AC	APAM4230ALE	550		
8 Pin, Contact rating - 6A (Res.) at 30V DC/250V AC; Mechanical indicator with manual testing/latching lever				
12V DC	APAM212DLE	460	2 C/O	10
24V DC	APAM224DLE	440		
110V DC	APAM2110DLE	530		
24V AC	APAM224ALE	520		
110V AC	APAM2110ALE	540		
230V AC	APAM2230ALE	550		
8 Pin, Contact rating - 12A (Res.) at 30V DC/250V AC; Mechanical indicator with manual testing/latching lever				
12V DC	APAN212DLE	490	2 C/O	10
24V DC	APAN224DLE	480		
110V DC	APAN2110DLE	550		
24V AC	APAN224ALE	540		
110V AC	APAN2110ALE	560		
230V AC	APAN2230ALE	580		

## Sockets for APAM Plug in Relay

HSN Code - 8538

Cat. No.	Type	MRP [₹]	Lot Size
Screw Terminals, 35mm DIN Rail Mounting			
APSM14	14 pin socket for APAM plug in relay, 6Amp	300	10
APSM8	8 pin socket for APAM/APAN plug in relay, 12A	240	
APAMCL	Holding Clamp for APAM/APAN Plug in relay	60	

## Plug In Relays - Universal (APAU)

HSN Code - 8536

Coil Voltage	With LED Indication		Contacts	Lot Size
	Cat. No.	MRP [₹]		
8 Pin, Contact rating - 10A (Res.) at 30V DC/250V AC; Mechanical indicator with manual testing/latching lever				
12V DC	APAU212DLE	1220	2 C/O	10
24V DC	APAU224DLE	1180		
110V DC	APAU2110DLE	920		
24V AC	APAU224ALE	860		
110V AC	APAU2110ALE	920		
230V AC	APAU2230ALE	920		
11 Pin, Contact rating - 10A (Res.) at 30V DC/250V AC; Mechanical indicator with manual testing/latching lever				
12V DC	APAU312DLE	940	3 C/O	10
24V DC	APAU324DLE	1130		
110V DC	APAU3110DLE	990		
24V AC	APAU324ALE	970		
110V AC	APAU3110ALE	1230		
230V AC	APAU3230ALE	1270		

## Sockets for APAU Plug in Relay

HSN Code - 8538

Cat. No.	Type	MRP [₹]	Lot Size
10A, 250V AC, Screw Terminals, 35mm DIN Rail Mounting			
APSU11	8 pin socket for APAU plug in relay, 10Amp	390	10
APSU8	11 pin socket for APAU plug in relay, 10Amp	370	
APAUCL	Holding Clamp for APAU Plug in relay	60	

## 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	470	10
24V DC	ASPU224DLE		460	
110V DC	ASPU2110DLE		510	
12V AC	ASPU212ALE		510	
24V AC	ASPU224ALE		550	
110V AC	ASPU2110ALE		540	
240V AC	ASPU2240ALE		590	
11 Pin - contact rating 10A (Res.) at 24V DC/240V AC, LED Indication				
12V DC	ASPU312DLE	3 C/O	560	10
24V DC	ASPU324DLE		550	
110V DC	ASPU3110DLE		600	
24V AC	ASPU324ALE		620	
110V AC	ASPU3110ALE		610	
240V AC	ASPU3240ALE		660	

## 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	420	10
24V DC	ASPS224DLE		420	
48V DC	ASPS248DLE		460	
110V DC	ASPS2110DLE		470	
12V AC	ASPS212ALE		450	
24V AC	ASPS224ALE		460	
110V AC	ASPS2110ALE		450	
240V AC	ASPS2240ALE		510	
11 Pin - contact rating 5A (Res.) at 24V DC/240V AC, LED Indication				
12V DC	ASPS312DLE	3 C/O	510	10
24V DC	ASPS324DLE		510	
48V DC	ASPS348DLE		600	
110V DC	ASPS3110DLE		580	
24V AC	ASPS324ALE		490	
110V AC	ASPS3110ALE		510	
240V AC	ASPS3240ALE		580	

## 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	250	10
ASSU8	SOCKET 8 PIN FOR ASPS/ASPU Relay	190	

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

## 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	370	20
24V DC	ASPM424DLE		370	
48V DC	ASPM448DLE		380	
110V DC	ASPM4110DLE		380	
24V AC	ASPM424ALE		400	
110V AC	ASPM4110ALE		420	
240V AC	ASPM4240ALE		420	
8 Pin - contact rating 5A (Res.) at 24V DC/240V AC, LED Indication				
12V DC	ASPM212DLE	2 C/O	310	20
24V DC	ASPM224DLE		310	
48V DC	ASPM248DLE		370	
110V DC	ASPM2110DLE		370	
24V AC	ASPM224ALE		370	
110V AC	ASPM2110ALE		370	
240V AC	ASPM2240ALE		370	

## 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	290	20
ASSM8	SOCKET 8 PIN FOR ASPM Relay	210	

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

## 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- 230V AC/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	1180

- 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

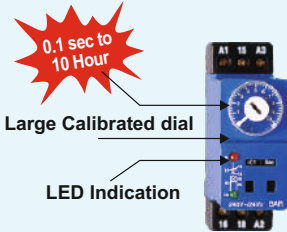
## Timing Code for IBTA On Delay Timer

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	2260



- 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



## **New** Star Delta Timer DQR Plus

### 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-	1250
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	1250
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	SBT00-00N	2190
Delay on break type BCR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC or 12V DC	SBT01-00N	2390
Recycling type BDR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC	SBT02-00N	3150
Multifunction type BLR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC	SBT03-00N	2390

- Voltage Code
- Timing Range for SAS Timer

Description	Cat No.	MRP [₹]
Star-Delta Timer DQR Plus, 3-120 Sec		
240-415VAC	SDTP00000	1060
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

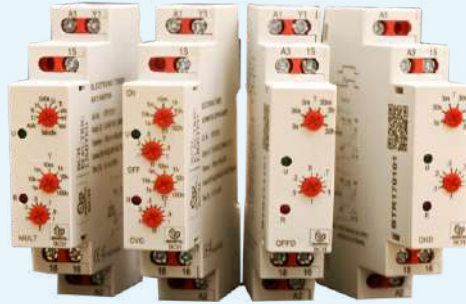
### Timing Code

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

# Electronic Timers-BTR17 Series



- On Delay-Timing Range 0.3 sec to 30Hr
- Off Delay -Timing Range 0.3 sec to 30Hr
- Cyclic -Timing Range 0.1 sec to 100Hr
- Multifunction- Timing Range 0.1 sec to 100Hr,
- LED Indications for Power and Relay status
- Microcontroller based timer
- Compact size 17.5mm Wide
- CE marked & RoHS compliant
- EMC/EMI Compatible
- Flame Retardant UL94-V0 Enclosure



**New**

## Electronic Timer-BTR17 Series

HSN Code - 9107

Product	Cat No.	Description	Time Range	MRP [₹]
	BTR170101	ON delay Timer 240V AC/24V AC/DC	0.3 sec to 30Hr	790
	BTR170201	ON delay Timer 110V AC/24V AC/DC	0.3 sec to 30Hr	1280
	BTR170501	ON delay Timer 12V DC	0.3 sec to 30Hr	1030
	BTR171101	OFF delay Timer 240V AC/24V AC/DC	0.3 sec to 30Hr	950
	BTR171201	OFF delay Timer 110V AC/24V AC/DC	0.3 sec to 30Hr	950
	BTR171501	OFF delay Timer 12V DC	0.3 sec to 30Hr	1030
	BTR172011	Cyclic timer 12-240V AC/DC	0.1 sec to 100Hr	1620
	BTR173011	Multi-function timer 12-240V AC/DC, 12 Function	0.1 sec to 100Hr	1620

# Custom Built Products

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



Mundhra Brothers

## 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

- Clearance >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

#### Gasketing

- Joint-less, seamless self adhesive, PU foam Gasketing to ensure defined IP.

#### 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.
- Bus bar support
  - All bus bars are supported with rigid SMS/DMC supports & are shrouded with FRP from rear side.

## 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 200KVA<sub>r</sub> in Standard Ratings of 40, 50, 60, 75, 100, 125, 150, 175 & 200 KVA<sub>r</sub> with suitable banking arrangement.

MOUNTING - Wall Mounting up-to 75KVA<sub>r</sub> & Floor Mounting above 75 KVA<sub>r</sub> ratings.

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

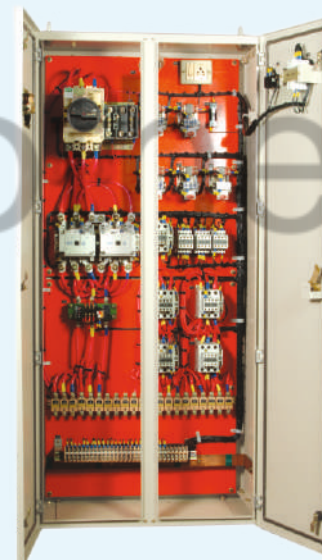
OUTGOING - TP MCB or HRC fuses with fuse base as standard  
(BCH-Resilient 3-P MCCB or SDFU and Compartmentalized outgoing feeders can also be provided depending upon size of panel on request).

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.**





## 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.



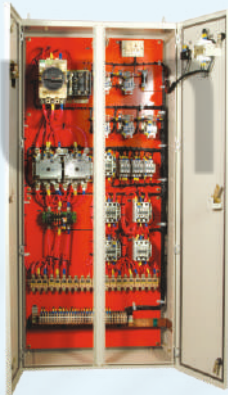
### Design Features

- 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



## 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
- 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

### 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

### 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 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



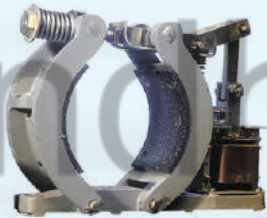
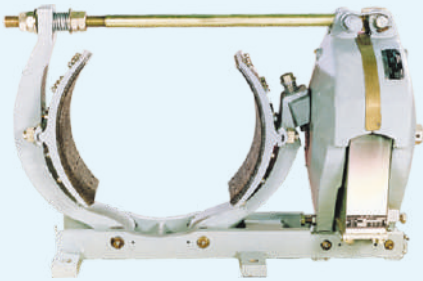
HSN Code - 8537

BIL Auto Transformer Starter - STANDARD RATINGS	MODEL 1 - BASICATS : 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
400	ATEA400	ATEO400	ATPA400	ATPO400

\* Contact nearest sales office for Prices

# Industrial Core Products

- DC Contactors
- Limit Switches
- BSG Foot Switches
- Heavy Duty Foot Switches
- AC Solenoid & Brakes
- DC Brakes
- Polycarbonate Plug & Socket BPX Series
- Plugs & Sockets
- Plug & Socket Boxes
- Pneumatic Timers
- Punched Grid Resistors



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



**BCH**

# Price List

## General Terms & Conditions

Prices are subject to change without any prior notice and will be applicable as prevailing at the time of dispatch.

- The prices are ex-works basis..
- The prices given in this list are effective as on date and are subject to change without notice.
- Maximum Retail Price (MRP) mentioned are inclusive of GST.
- The List Prices (LP) mentioned are exclusive of GST.
- The duties, taxes and other statutory levies are based on rates prevailing at the time of billing. Any subsequent revision of those rates having retrospective effective shall be to customer's account.
- In case where any GST exemption has been claimed, the purchaser is responsible for providing the necessary GST exemption form within the specified period, failing which the purchaser would be liable for the payment of full GST plus applicable interest and penalties
- All Prices are in Indian Rupees (₹).
- Alteration made after receipt of confirmation of order are subject to price & delivery revisions and any other expenses or levies
- The dispute, if any, will be resolved mutually by discussion. However, if no settlement is forthcoming then, the Courts at New Delhi shall only have territorial jurisdiction to hear and decide the dispute.

## Warranty

### Other range of BCH Products :

These products are warranted, against manufacturing defects for a period of 18\* months from the date of invoicing & 24 months from date of manufacturing whichever is later subject to the provision of proper usage and does not cover defects arising out of fire, accident, inefficient maintenance, faulty operation and willful or accidental damage. The manufacturer shall not be liable for any consequential loss, injury or damages attributable to defect or failure of its products.

### BCH Products Ultra Power ACBs, Mega Power ACBs, MCCBs-XA,XB,XG range, X-Line SDF & BCH4-4P Contactors:

These products are warranted, against manufacturing defects for a period of 18\* months from the date of invoice, subject to the provision of proper usage and does not cover defects arising out of fire, accident, inefficient maintenance, faulty operation and willful or accidental damage. It also does not covers damage to power electronic components caused predominantly due to higher temperature or over voltages. The manufacturer shall not be liable for any consequential loss, injury or damages attributable to defect or failure of its products.

\* Proof of purchase to be retained to avail warranty.

a strong commitment  
to serve better  
always ...



Switchgear | Controlgear | Enclosures | Motor Starters & Submersible Pump Starters |  
Brakes and Crane Controls | MCC | PCC | Customised Solutions | Automation |  
Wires & Cables | Motors | Reactive Power Management



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