

Motor Starters BCH

Direct On Line Starters



- DOL upto 30 HP
- Heavy duty 4 Pole Contactor
- Wide Band Coil Voltages (190-400V, 220-240V, 380-415V)
- Encapsulated & Hermetically sealed coil
- Easy inspection & maintenance

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

Auto Start Direct on line Starters



Star Delta Starters



- Semi Automatic upto 25 HP
- Fully Automatic upto 375 HP
- Wide Band Coil Voltages (230-360V, 260-400V, 380-415V)
- Single Phase & Overload Protection

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

Mini Manual Starters



Mini Manual with UVT coil



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

Manual Star Delta Starters

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



Citation Motor Starter



- Range upto 30 HP
- Encapsulated and hermetically sealed coil : Moisture proof and shock resistant
- Easy inspection and maintenance
- 10 tank processed, Powder coated enclosure for excellent finish and durability

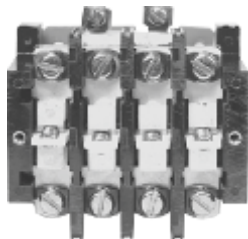


Citation DOL Motor Starters (with 380/415 V coil)

HP / KW	Overload Relay Range (A)	Cat. No. SS ENCLOSURE	MRP [₹]	Cat. No. OPEN EXECUTION	MRP [₹]	Lot Size
0.5 / 0.37	0.72 - 1.14	NADLEN	2710	NADLENI	2640	1
0.75 / 0.55	1.07 - 1.70	NAELEN		NAELENI		
1 / 0.75	1.58 - 2.50	NAFLEN		NAFLENI		
2 / 1.5	2.4 - 3.8	NAGLEN		NAGLENI		
3 / 2.2	3.8 - 6.0	NAHLEN		NAHLENI		
5 / 3.7	6.0 - 9.3	NAJLEN		NAJLENI		
7.5 / 5.5	8.9 - 13.5	NAKLEN	NAKLENI			
10 / 7.5	13.2 - 20.0	NALLEN	2870	NALLENI	2770	

For 220 / 240 V coil replace suffix 'N' with 'H' in the Cat. Code

Direct on line (Shakti) Starter in SS Enclosure with 190-400 V coil voltage



**Easy Inspection
Easy maintenance**

Overload Relay Range (A)	Shakti	MRP [₹]	Shakti WP	MRP [₹]	Back Up Fuse (A)	Lot Size
2.4 - 3.8	SAGZ	2030	SAWPGZ	1900	16	1
3.8 - 6.0	SAHZ		SAWPHZ		20	
6.0 - 9.3	SAJZ		SAWPJZ		25	
8.9 - 13.5	SAKZ		SAWPKZ		36	
13.2 - 20.0	SALZ	2175	SAWPLZ	1990	50	
17.4 - 24.0	SAMZ	2310	SAWPMZ	2090	63	

For 380 / 415 V replace 'Z' with 'N' and for 220 / 240 V replace 'Z' with 'H' in the Cat. Code

Direct on line (Shakti) Starter in Open Execution with 190-400 V coil voltage



Heavy duty, encapsulated Coil



Overload Relay Range (A)	Shakti	MRP [₹]	Shakti	MRP [₹]	Back Up Fuse (A)	Lot Size
2.4 - 3.8	SAGZI	1970	SAWPGZI	1850	16	1
3.8 - 6.0	SAHZI		SAWPHZI		20	
6.0 - 9.3	SAJZI		SAWPJZI		25	
8.9 - 13.5	SAKZI		SAWPKZI		36	
13.2 - 20.0	SALZI	2120	SAWPLZI	1940	50	
17.4 - 24.0	SAMZI	2240	SAWPMZI	2030	63	

For 380 / 415 V replace 'Z' with 'N' and for 220 / 240 V replace 'Z' with 'H' in the Cat. Code

Motor Starters BCH

Citation DOL Motor Starters in SS Enclosure (with 380-415 V coil) (A) With NHD Contactor

Cat. No.	Overload Relay Range (A)	Contactor Type	Contactor Rating	HP / KW	MRP [₹]
NAMLEN	17.4 - 24.0	N0N	25A	15 / 11	4325
NANLEN	22.0 - 30.0	N1N	40A	20 / 15	7610
NAPLEN	23.0 - 32.0	N01N	32A	20 / 15	6875
NACT1LEN	24.0 - 39.0	N1N	40A	25 / 18.5	11675

(B) With Citation D Contactor

NACT2LEDM	37.6 - 60.0	Citation D	40A	30 / 22	12500
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Auto Start Direct on Line Starter in SS Enclosure with 230-400 V coil

Overload Relay Range (A)	Standard Model Cat. No.	MRP [₹] Standard Model	Premium Model Cat. No.	MRP [₹] Premium Model	Lot Size
2.4-3.8	ASAGZ	2760	ASXGZ	3140	1
3.8-6.0	ASAHZ		ASXHZ		
6.0-9.3	ASAJZ		ASXJZ		
8.9-13.5	ASAKZ		ASXKZ		
13.2-20	ASALZ	2885	ASXLZ	3255	1
17.4-24	ASAMZ	3070	ASXMZ	3450	1

For 380/415V replace 'Z' with 'N' in the Cat Code

Mini Manual Motor Starter upto 4HP-1 Phase

(Surface Mtg.)

Cat. No.	Overload Relay Range (A)	1 Phase/240V Recommended HP	MRP [₹]
AMLE-10-SP	0.23 - 0.47	-	865
AMLE-20-SP	0.46 - 0.80	-	
AMLE-30-SP	0.85 - 1.55	1 / 8	
AMLE-40-SP	1.60 - 3.20	1 / 6	
AMLE-50-SP	3.50 - 6.50	0.5 / 0.75	
AMLE-60-SP	6.80 - 11.7	1 / 2	
AMLE-70-SP	11.0 - 20.0	2 / 4	

For Flush mounting replace 'E' by 'C' and reduce price by Rs. 50

Mini Manual Motor Starter (20A) upto 4HP-1 Phase

(Surface Mtg.) with UV coil

Cat. No.	Overload Relay Range (A)	1 Phase/240V Recommended HP	MRP [₹]
AMLEH-10-SP	0.23 - 0.47	-	1150
AMLEH-20-SP	0.46 - 0.80	-	
AMLEH-30-SP	0.85 - 1.55	1 / 8	
AMLEH-40-SP	1.60 - 3.20	1 / 6	
AMLEH-50-SP	3.50 - 6.50	0.5 / 0.75	
AMLEH-60-SP	6.80 - 11.7	1 / 2	
AMLEH-70-SP	11.0 - 20.0	2 / 4	

Mini Manual Motor Starter upto 10HP-3 Phase

(Surface Mtg.)

Cat. No.	Overload Relay Range (A)	3 Phase/415V Recommended HP	MRP [₹]
AMLE-10	0.23 - 0.47	-	1160
AMLE-20	0.46 - 0.80	-	
AMLE-30	0.85 - 1.55	0.50 / 0.75	
AMLE-40	1.60 - 3.20	1.00 / 1.50	
AMLE-50	3.50 - 6.50	3.00	
AMLE-60	6.80 - 11.7	5.00	
AMLE-70	11.0 - 20.0	10.00	

For Flush mounting replace 'E' by 'C' and reduce price by Rs. 50

Mini Manual Motor Starter (20A) upto 10HP-3 Phase

(Surface Mtg.) with UV coil

Cat. No.	Overload Relay Range (A)	3 Phase/415V Recommended HP	MRP [₹]
AMLEN-10	0.23 - 0.47	-	1320
AMLEN-20	0.46 - 0.80	-	
AMLEN-30	0.85 - 1.55	0.50 / 0.75	
AMLEN-40	1.60 - 3.20	1.00 / 1.50	
AMLEN-50	3.50 - 6.50	3.00	
AMLEN-60	6.80 - 11.7	5.00	
AMLEN-70	11.0 - 20.0	10.00	

Motor Starters BCH

Citation Star Delta Starter



- Range upto 375 HP
- Semi Automatic & Fully Automatic Version
- High accuracy pneumatic timer in Fully Automatic Version



Fully Automatic Citation Star Delta Starter in Sheet Steel Enclosure with NHD Contactor & Pneumatic Timers

Cat. No.	Overload Relay Range (A)	Contactor Type	Contactor Rating	HP/KW	MRP [₹]
NASAGLEN	2.4 - 3.8	C00N	16A	3 / 2.2	9960
NASAHLEN	3.8 - 6.0	C00N	16A	5 / 3.7	
NASAJLEN	6.0 - 9.3	C00N	16A	10 / 7.5	
NASAKLEN	8.9 - 13.5	C00N	16A	15 / 11	
NASAKLEN / LOR	13.2 - 20.0	C00N	16A	15 / 11	10100
NASALLEN	13.2 - 20.0	N0N	25A	20 / 15	11500
NASAMLEN	17.4 - 24.0	N0N	25A	25 / 18.5	11500
NASANLEN	22.0 - 30.0	N1N	40A	35 / 26	20240
NASACT1LEN	24.4 - 39.0	N1N	40A	40 / 30	25000

Note : For other Coil Voltages refer table on page 31

Fully Automatic Citation Star Delta Starter in Sheet Steel Enclosure with Citation M Contactor & Pneumatic Timers

Cat. No.	Overload Relay Range (A)	Contactor Type(Citation)	Contactor Rating	HP/KW	MRP [₹]
NASACT1LEDM	24.0 - 39.0	D	40A	40 / 30	29000
NASACT2LEDM	37.6 - 60.0	D	40A	50 / 37	30000
NASACT2LEEM	37.6 - 60.0	E	70A	75 / 55	52000
NASACT3LEEM	56.4 - 90.0	E	70A	85 / 65	55300
NASACT3LEC5M	56.4 - 90.0	M-5	110A	100 / 75	71300
NASACT4LEC5M	84.6 - 135.0	M-5	110A	135 / 100	72900
NASACT4LENM	84.6 - 135.0	N	140A	150 / 110	78000
NASACT5LEC6M	131.6 - 210.0	S	300A	250 / 185	136000
NASACT6LEC6M	188.0 - 300.0	S	300A	375 / 280	153000

Note : For other Coil Voltages refer table on page 31

Single Phase DOL with 2-P CPG Contactor & 2-P OLR (160-220V)

Cat. No.	Overload Relay Range (A)	HP/KW	MRP [₹]
NAHBW-SP	3.8 - 6.0	0.75/ 0.55	1590
NAJBW-SP	6.0 - 9.3	1 / 0.75	
NAKBW-SP	8.9 - 13.5	1.5 / 1.10	
NALBW-SP	13.2 - 20.0	2 / 1.5	

Semi Automatic Citation Star Delta Starter in SS Enclosure with NHD Contactor

Cat. No.	Overload Relay Range (A)	Contactor Type	Contactor Rating	HP/KW	MRP [₹]
NASSGLEN	2.4 - 3.8	C00N	16A	3 / 2.2	6630
NASSHLEN	3.8 - 6.0	C00N	16A	5 / 3.7	
NASSJLEN	6.0 - 9.3	C00N	16A	10 / 7.5	
NASSKLEN	8.9 - 13.5	C00N	16A	15 / 11	
NASSKLEN / LOR	13.2 - 20.0	C00N	16A	15 / 11	6800
NASSLLEN	13.2 - 20.0	N0N	25A	20 / 15	10000
NASSMLEN	17.4 - 24.0	N0N	25A	25 / 18.5	10000
NASSPLEN	23.0 - 32.0	N01N	32A	35 / 26	10300
NASSNLEN	22.0 - 30.0	N1N	40A	35 / 26	18000
NASS01CT1LEN	24.0 - 39.0	N01N	32A	40 / 30	18800

Note : For other Coil Voltages refer table on page 31

Semi Automatic Shakti Star Delta Starter in SS Enclosure with 260-400 V coil

Cat. No.	Overload Relay Range (A)	HP/KW	MRP [₹]
SASSGLEG	2.4 - 3.8	3 / 2.2	6230
SASSHLEG	3.8 - 6.0	5 / 3.7	
SASSJLEG	6.0 - 9.3	10 / 7.5	
SASSKLEG	8.9 - 13.5	15 / 11	
SASSKLEG/LOR	13.2 - 20.0	15 / 11	6370

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

Fully Automatic Shakti Star Delta Starter in SS Enclosure with 260-400 V coil & Electronic Timer

Cat. No.	Overload Relay Range (A)	HP/KW	MRP [₹]
SASAGLEG	2.4 - 3.8	3 / 2.2	7200
SASAHLEG	3.8 - 6.0	5 / 3.7	
SASAJLEG	6.0 - 9.3	10 / 7.5	
SASAKLEG	8.9 - 13.5	15 / 11	
SASAKLEG/LOR	13.2 - 20.0	15 / 11	7300

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

DOL Reversing Starter in SS Enclosure (with 380-415V Coil)

Cat. No.	Overload Relay Range (A)	Contactor Type	Contactor Rating	HP / KW	MRP [₹]
NARFLEN	1.58 - 2.50	C00N	16A	1.00 / 0.75	7525
NARGLEN	2.40 - 3.80	C00N	16A	2.00 / 1.50	
NARHLEN	3.80 - 6.00	C00N	16A	3.00 / 2.20	
NARJLEN	6.00 - 9.30	C00N	16A	5.00 / 3.70	
NARKLEN	8.90 - 13.50	C00N	16A	7.50 / 5.50	
NARLLEN	13.20 - 20.0	N0N	25A	10.0 / 7.50	9175
NARMLLEN	17.40 - 24.0	N1N	40A	15.0 / 11.0	10200
NARNLEN	22.0 - 30.0	N1N	40A	20.0 / 15.0	15245

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

Catalogue No.	HP	MRP [₹]
HASSGLEG	3 HP	3600
HASSHLEG	5 HP	3600
HASSJLEG	10 HP	3950
HASSKLEG	15 HP	3950
HASSW15	Selector Switch for MSD Starter	1900

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

Spares for Starter and Submersible Pump Starter

Spares for Shakti Starters

Description	Cat. No.	MRP [₹]
Contact Kit	SHA	720
Coil 190- 400 V	SHZ	270
Contact Carrier	SHCC	160
Start & Stop Push Button Assembly	SHPB	190
Contactor for DOL	SHCO	1515
Contactor for Star Delta	SHACO	1515
Autounit (for ASX & OISDY) 6 Wire	CPNYAU*-5S	1000
Autounit (for ASX & OISDY) 6 Wire	CPNYAU*-5M	1000
Terminal Block 30A 6 way (Auto DOL)	CPTB630	160
Auto Manual Switch 3 position (Auto DOL)	CPAMS-3P/ASX	320

Spares for 3 phase Submersible Pump Starter

Description	Cat. No.	MRP [₹]
Autounit (2 Position) 3 Wire	CPAU* - 5S or 5M	935
Autounit (3 Position) 5 Wire	CPYAU* - 5S or 5M	935
Ammeter 25A	CPAM25	380
Ammeter 50A	CPAM50	380
Ammeter 100A	CPAM100	390
Voltmeter 500V	CPVM500	380
Electronic Timer (Star Delta)	SPSATG	1810
Terminal Block 15A 2 way	CPTB215	40
Terminal Block 60A 3 way	CPTB360	120
Terminal Block 60A 6 way	CPTB660	210
Terminal Block 100A 3 way	CPTB3100	450
Mounting Bracket Set	CPMB	85
Auto Manual Switch 2 position	CPAMS-2P	240
Auto Manual Switch 3 position	CPAMS-3P	260
Voltmeter Selector Switch	CPVSS	275
Start PB (Green)	HEA11GM	70
Start PB (Red)	HEA11RM	70
Aux Block (1NO)	HCB10	60
Aux Block (1NC)	HCB01	60
LED-Amber (R-Y-B)(220-240 VAC)	HFB2PAH	250
LED-Amber (Motor Trip)(415 VAC)	HFB2XAM	165
LED-RED (415VAC)	HFB2XRM	165

Spares for Citation M Starters

Description	Cat. No.	MRP [₹]
Start & Stop push button assembly for DOL & SD (upto150 HP)	SP100PB3	225
Start actuator Block for DOL	SP100CB	190
Start actuator Block for SD	SP100CBS	190
Terminal Block for Star/ Delta Starters	SP100TB	175
Terminal Block for Star/ Delta Starters (40-50 HP)	CPTB975	500
Electronic Timer (Star Delta)	SPSATG	1810
For 250-375 HP SD Starter		
Push Button (Red)	TSFB-R	180
Push Button (Green)	TSFB-G	180
Aux Contact Block (1NO+1NC)	050N1	225

Spares for 1 phase Submersible Pump Starter

Description	Cat. No.	MRP [₹]
"ON" Indication Lamp	ILR-B	60
Ammeter 10A	SPAM-10	380
Ammeter 15A	SPAM-15	380
Ammeter 25A	SPAM-25	390
Ammeter 50A	SPAM-50	On request
Voltmeter 300V	SPVM-300	390
Terminal Block 30A 5 way (Mini version)	CPTB530	80
Terminal Block 30A 5 way (Contactor version)	CPTB530H	150
Terminal Block 30A 3 way	CPTB330	60
"ON" Push Button GREEN upto 24A relay range	SPGC	190
"ON" Push Button GREEN For 32A relay range	SPGB	190
"OFF" Push Button RED	SPRC	150
Add-on Terminal Block for 23-32A relay (outgoing side)	MC305TB4	85



- Starter can be operated from anywhere with the help of mobile
- ON – OFF Status of the water pump can be known
- Availability of power supply at pump end can be known

BCH GSM Controller (Compatible With The Complete BCH Starter Family)

Cat. No.	Description	MRP [₹]
BCH-GSM	BCH GSM Controller	5200



- Range 50, 75 & 100 HP
- 50 & 75 HP models are with EOCR
- 100 HP Model is with EOCR & 100/5 A CT

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

Cat. No.	EOCR Range (A)	Contactor Type (Citation)	Contactor Rating (A)	HP / KW	MRP [₹]
NASASS60LEDM	5-60 Amp	D	40A	50 / 37	On request
NASASS60LEEM	5-60 Amp	E	70A	75 / 55	
NASA3CTH1100CLEM5M	0.5-6 Amp	M-5	110A	100 / 75	



- Fully Automatic Star Delta Starter
- Overload range from 13A to 32A

Oil Immersed Fully Automatic Star Delta Starter with Ammeter & Voltmeter

Cat. No.	Overload Relay Range (A)	HRC Fuse Rating (EE Type) (max)	MRP [₹]
OISDPYWPLY	13.2 - 20A	35A	On request
OISDPYWPLN		35A	
OISDPYWPMY	17.4 - 24A	50A	
OISDPYWPMN		50A	
OISDPYWPPY	23 - 32A	63A	
OISDPYWPPN		63A	

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



- As per IS/IEC 60347-4-1
- Consists of Freedom Contactor & Over Load Relay
- Upto 10 HP DOL.
- Inbuilt Single phase protection
- Auto manual reset option
- High mechanical & electrical life

Industrial DOL Starters with Freedom Contactor & Overload Relay

Cat Code	KW / HP	Overload Relay Range (A)	MRP [₹]
CEBF*	0.37/0.5	1.0-1.4	Price On Request
CEBG*	0.55/0.75	1.3-1.8	
CEBH*	0.75/1.0	1.7-2.4	
CEBJ*	1.1/1.5	2.2-3.1	
CEBK*	1.5/2.0	2.8-4.0	
CEBM**	2.2/3.0	4.5-6.5	
CEBP*	3.7/5.0	7.5-11	
CECQ*	5.5/7.5	10-14	
CEDR*	7.5/10	13-19	

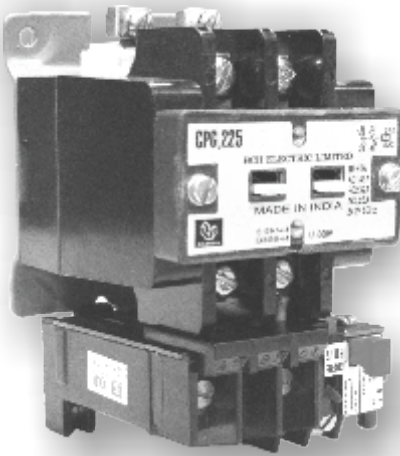
* Add suffix for coil voltage

Coil voltage	220V	240V	380V	415V
Suffix	B	K	L	M



Auto Switch & Single Phase Preventer

Cat Code	Product Description	MRP [₹]
ACPAUN-5S	Auto Unit WITH 5-10 SCONDS DELAY 380-415V	770
ACPAUZ-5S	Auto Unit WITH 5-10 SCONDS SELAY 230-400V	770
ACPAUZ-5M	Auto Unit WITH 5 MINUTES DELAY 230-400V	770
ACPAUN-5M	Auto Unit WITH 5 MINUTES DELAY 380-415V	770



CPG+OLR Combination (Interior)

Cat Code CPG216*OLR#	Product Description	MRP [₹]
CPG216HOLRJ	2P 16A 220-240V CONTR WITH 6-9.3A O/L	1485
CPG216HOLRK	2P 16A 220-240V CONTR WITH 8.9-13.5A O/L	1485
CPG216HOLRL	2P 16A 220-240V CONTR WITH 13.2-20 O/L	1585
CPG216BWOLRJ	2P 16A 160-220V CONTR WITH 6-9.3A O/L	1485
CPG216BWOLRK	2P 16A 160-220V CONTR WITH 8.9-13.5A O/L	1485
CPG216BWOLRL	2P 16A 160-220V CONTR WITH 13.2-20 O/L	1585
CPG216NOLRJ	2P 16A 380-415V CONTR WITH 6-9.3A O/L	1485
CPG216NOLRK	2P 16A 380-415V CONTR WITH 8.9-13.5A O/L	1485
CPG216NOLRL	2P 16A 380-415V CONTR WITH 13.2-20 O/L	1585

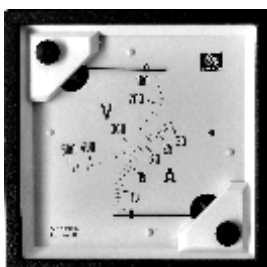
- Consists of 2P CPG Contactor & 2P Overload relay
- Available with 16 & 25 Amp contactor

Cat Code CPG225*OLR#	Product Description	MRP [₹]
CPG225HOLRL	2P 25A 220-240V CONTR WITH 13.2-20A O/L	1930
CPG225HOLRM	2P 25A 220-240V CONTR WITH 17.4-24A O/L	1930
CPG225HOLRP	2P 25A 220-240V CONTR WITH 23-32A O/L	2085
CPG225BWOLRL	2P 25A 160-220V CONTR WITH 13.2-20A O/L	1930
CPG225BWOLRM	2P 25A 160-220V CONTR WITH 17.4-24A O/L	1930
CPG225BWOLRP	2P 25A 160-220V CONTR WITH 23-32A O/L	2085
CPG225NOLRL	2P 25A 380-415V CONTR WITH 13.2-20A O/L	1930
CPG225NOLRM	2P 25A 380-415V CONTR WITH 17.4-20A O/L	1930
CPG225NOLRP	2P 25A 380-415V CONTR WITH 23-32A O/L	2085

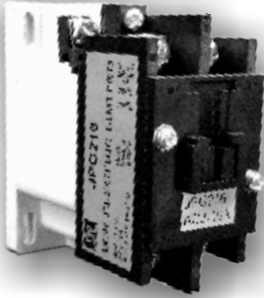


Dual Meter (Combination of Ammeter & Voltmeter)

Cat. No.	Product Description	MRP [₹]
CPAM10VM300	COMBINED AM 0-10-60A & VM 0-300V,S-72	550
CPAM15VM300	COMBINED AM 0-15-90A & VM 0-300V,S-72	550
CPAM25VM300	COMBINED AM 0-25-150A & VM 0-300V,S-72	565
CPAM30VM300	COMBINED AM 0-30-180A & VM 0-300V,S-72	565
CPAM50VM300	COMBINED AM 0-50-300A & VM 0-300V,S-72	580
CPAM10VM500	COMBINED AM 0-10-60A & VM 0-500V,S-72 EN	550
CPAM15VM500	COMBINED AM 0-15-90A & VM 0-500V,S-72 EN	550
CPAM30VM500	COMBINED AM 0-30-180A & VM 0-500V,S-72 EN	565
CPAM60VM500	COMBINED AM 0-60-360A & VM 0-500V,S-72 EN	585
CPAM30-60VM500S72	Combined AM 0-30-60A & VM 0-500V,S-72	565
CPAM60-120VM500S72	Combined AM 0-60-120A & VM 0-500V,S-72	585
CPAM30-60VM500S96	Combined AM 0-30-60A & VM 0-500V,S-96	650
CPAM60-120VM500S96	Combined AM 0-60-120A & VM 0-500V,S-96	780



2 Pole JPG Contactor - 16, 20 & 25 Amp



- Complies with IS/IEC 60947-4-1
- Wide band coil 154 - 264* V AC
- Weld resistant Silver Alloy contacts
- High Mechanical Endurance

Ith (A)	AC 3 (A) at 415V AC	Orientation	Cat. No.	MRP [₹]
35	16	-	JPG216*	760
40	20	-	JPG220*	920
45	25	-	JPG225*	On request
Auxiliary Contact Blocks - JPG		1NO+1NC	JPGCB11	180
		2NO	JPGCB20	180
		2NC	JPGCB02	180
Spare Coil		-	JPGMC*	On request

* N = 380 - 415V, H = 220 - 240V, BA=170 - 225V

1-Ph SPS with 2 Pole JPG Contactor & Single Pole MCB (with Dual meter) with 154-264* V AC Coil



Cat. No.	HP Rating	SP MCB "C" curve	Contactor Rating (A)	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP [₹]
CPJPMCB10H100	0.75 HP	10 Amp	20 Amp	25	80/100	3235
CPJPMCB16H120	1 HP	16 Amp	20 Amp	36	100/120	3310
CPJPMCB25H150	1.5 HP	25 Amp	20 Amp	50	120/150	3500
CPJPMCB25H2R36S250	1.5 HP	25 Amp	20 Amp	2x36	200/250	4050
CPJPMCB32H200	2 HP	32 Amp	20 Amp	72	150/200	3880
CPJPMCB40H250	3 HP	40 Amp	25 Amp	100	200/250	4460

1-Ph SPS with 2 Pole JPG Contactor & 2 Pole Overload Relay (with Dual meter) with 154-264* V AC Coil



Cat. No.	HP Rating	Relay Range	Contactor Rating (A)	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP[₹]
CPJPHH-SP	0.5/0.75 HP	3.8 - 6 A	20 Amp	25	80-100	On Request
CPJPHH-RC36SC100	0.5/0.75 HP	3.8 - 6 A	20 Amp	36	80-100	On Request
CPJPJH-SP	1 HP	6 - 9.3 A	20 Amp	36	100-120	On Request
CPJPJH-RC50SC120	1 HP	6 - 9.3 A	20 Amp	50	100-120	On Request
CPJPKH-SP	1.5 HP	8.9 - 13.5 A	20 Amp	50	120-150	On Request
CPJPKH-RC60SC150	1.5 HP	8.9 - 13.5 A	20 Amp	60	120-150	On Request
CPJPKH-RC72SC150	1.5 HP	8.9 - 13.5 A	20 Amp	72	120-150	On Request
CPJPLH-SP	2 HP	13.2 - 20 A	20 Amp	72	150-200	On Request
CPJPMH-SP	3 HP	17.4 - 20 A	25 Amp	100	200-250	On Request

Motor Starters BCH

Submersible Pump Starters



Three Phase

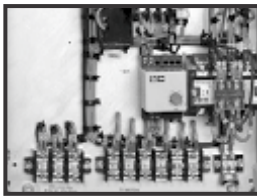
- Direct on line : upto 24 A relay rating
- Star Delta : upto 90 A relay rating
- Protections :
 - Phase failure
 - Phase imbalance
 - Phase reversal
- Short Circuit Protection Thru MCB : In case of Premium models
- Ammeter and Voltmeter
- On/Off and Trip indications
- Powder coated enclosure with PU gasket ensuring excellent finish and reliability
- Provision for connecting Dry run preventor



On/Trip Indicators



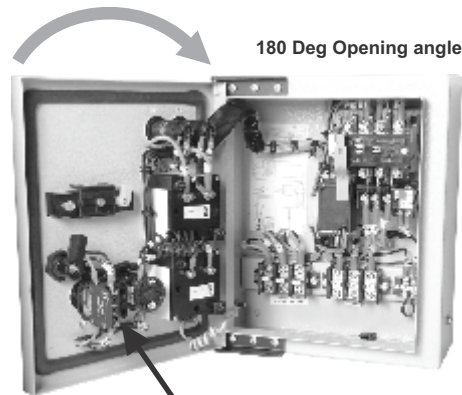
Isolated Terminal blocks for better termination



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

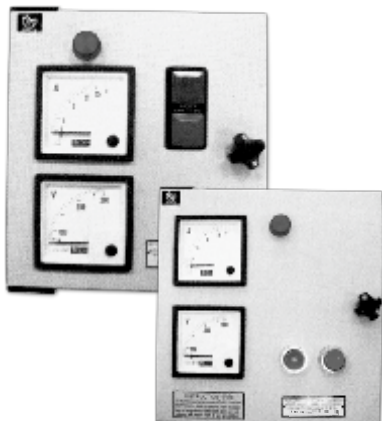


Phase indicators (For std & Premium models)



180 Deg Opening angle

PU Gasket for excellent sealing against dust & water



Single Phase

With Mini DOL (up to 11.0 - 20. A Relay)

- Economy Model (Without Ammeter)
- Standard Model (With Ammeter)
- Premium Model (With Ammeter & Voltmeter)

With 2 Pole Contactor + 2 Pole Relay (up to 23.0 - 32.0 A Relay)

- Economy Model (With Ammeter)
- Standard Model (With Ammeter & Voltmeter)
- Provision for connecting dry run preventor

Motor Starters BCH

Citation Submersible Pump Starters with 2 Position Selection (with Auto Switch)

Range	Contactor Type	Contactor Rating	DOL			
			Economy (without Short Circuit Protection)		Premium (with Short Circuit Protection)	
			Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
2.4 - 3.8 Amp	C00N	16 A	CPEANAGN*	5850	CPPANAGN*	On request
3.8 - 6.0 Amp	C00N	16 A	CPEANAHN*	5850	CPPANAHN*	8130
6.0 - 9.3 Amp	C00N	16 A	CPEANAJN*	5850	CPPANAJN*	8130
8.9 - 13.5 Amp	C00N	16 A	CPEANAKN*	5850	CPPANAKN*	8130
13.2 - 20 Amp	C00N	16 A	CPEANALN*	6080	CPPANALN*	8470
17.4 - 24 Amp	N0N	25 A	CPEANAMN*	6320	CPPANAMN*	8870

Range	Contactor Type	Contactor Rating	Star Delta			
			Economy (without Short Circuit Protection)		Premium (with Short Circuit Protection)	
			Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
6.0 - 9.3 Amp	C00N	16 A	CPSDEAJN*	11350	CPSPAJN*	13600
8.9 - 13.5 Amp	C00N	16 A	CPSDEAKN*	11350	CPSPAKN*	13600
13.2 - 20 Amp	N0N	25 A	CPSDEALN*	11740	CPSPALN*	14100
17.4 - 24 Amp	N0N	25 A	CPSDEAMN*	12065	CPSPAMN*	14500
22 - 30 Amp	N1N	40 A	CPSDEANN	22335	-	-
24.4 - 39 Amp	N1N	40 A	CPSDEACT1N	22355	-	-

*For 260-400 V coil voltage replace suffix "N" with "G" in the Cat. Code (for Starter with C00N & N0N contactors only)

N=380-415 V

For LV- 230-360V coil voltage, kindly contact nearest sales office

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

Citation Submersible Pump Starters with Meters & indicators (without Auto Switch)

Range	Contactor Type	Contactor Rating	DOL	
			Economy (without Short Circuit Protection)	
			Cat. No.	MRP [₹]
3.8 - 6.0 Amp	C00N	16 A	CPEANH*	5550
2.4 - 3.8 Amp	C00N	16 A	CPEANG*	5550
6.0 - 9.3 Amp	C00N	16 A	CPEANJ*	5550
8.9 - 13.5 Amp	C00N	16 A	CPEANK*	5550
13.2 - 20 Amp	C00N	16 A	CPEANLN*	5780
17.4 - 24 Amp	N0N	25 A	CPEANMN*	6020

Range	Contactor Type	Contactor Rating	Star Delta	
			Economy (without Short Circuit Protection)	
			Cat. No.	MRP [₹]
6.0 - 9.3 Amp	C00N	16 A	CPSDEJ*	11175
8.9 - 13.5 Amp	C00N	16 A	CPSDEK*	11175
13.2 - 20 Amp	N0N	25 A	CPSDEL*	11510
17.4 - 24 Amp	N0N	25 A	CPSDEM*	11785
22 - 30 Amp	N1N	40 A	CPSDEN	22070
24.4 - 39 Amp	N1N	40 A	CPSDECT1N	22100

* For 260-400 V coil voltage replace suffix "N" with "G" in the Cat. Code (for Starter with C00N & N0N contactors only)

N=380-415 V

For LV- 230-360V coil voltage, kindly contact nearest sales office

Motor Starters BCH

Citation Submersible Pump Starters with 3 Position Selection (with Auto Switch)

Range	Contactor Type	Contactor Rating	DOL			
			Economy (without Short Circuit Protection)		Premium (with Short Circuit Protection)	
			Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
1.58 - 2.50 Amp	C00N	16 A	CPEYNAFN*	6100	--	
2.4 - 3.8 Amp	C00N	16 A	CPEYNAGN*	6100	--	
3.8 - 6.0 Amp	C00N	16 A	CPEYNAHN*	6100	--	
6.0 - 9.3 Amp	C00N	16 A	CPEYNAJN*	6100	CPPYNAJN*	8480
8.9 - 13.5 Amp	C00N	16 A	CPEYNAKN*	6100	CPPYNAKN*	8480
13.2 - 20 Amp	C00N	16 A	CPEYNALN*	6325	CPPYNALN*	8830
17.4 - 24 Amp	N0N	25 A	CPEYNAMN*	6580	CPPYNAMN*	9235

Range	Contactor Type	Contactor Rating	Star Delta			
			Economy (without Short Circuit Protection)		Premium (with Short Circuit Protection)	
			Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
3.8 - 6.0 Amp	C00N	16 A	CPSDEYHN*	11335	--	
6.0 - 9.3 Amp	C00N	16 A	CPSDEYJN*	11335	CPSDPYJN*	13650
8.9 - 13.5 Amp	C00N	16 A	CPSDEYKN*	11335	CPSDPYKN*	13650
13.2 - 20 Amp	N0N	25 A	CPSDEYLN*	11660	CPSDPYLN*	14200
17.4 - 24 Amp	N0N	25 A	CPSDEYMN*	11935	CPSDPYMN*	14600
22 - 30 Amp	N1N	40 A	CPSDEYNN	21945	--	
24.4 - 39 Amp	N1N	40 A	CPSDEYCT1N	23500	--	
37.6 - 60 Amp	Citation E	70 A	CPSDEYCT2M	39090	--	
56.4 - 90 Amp	Citation M-5	110 A	CPSDEYCT3M	54700	--	

*For 260-400 V coil voltage replace suffix "N" with "G" in the Cat. Code (for Starter with C00N & N0N contactors only)

N=380-415 V

For LV- 230-360V coil voltage, kindly contact nearest sales office

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

Shakti DOL Submersible Pump Starters (with Auto Switch)

		Cat. No.	Range	MRP [₹]
Economy Version (Without Short Circuit Protection)	2 Position Selection (Auto/ Bypass)	CPEASAFZ	1.58 - 2.5 Amp	5300
		CPEASAGZ	2.4 - 3.8 Amp	5300
		CPEASAHZ	3.8 - 6.0 Amp	5300
		CPEASAJZ	6.0 - 9.3 Amp	5300
		CPEASAKZ	8.9 - 13.5 Amp	5300
		CPEASALZ	13.2 - 20 Amp	5755
		CPEASAMZ	17.4 - 24 Amp	6055
	3 Position Selection (Manual - Manual SPP-Auto)	CPEYSAGZ	2.4 - 3.8 Amp	5470
		CPEYSAHZ	3.8 - 6.0 Amp	5470
		CPEYSAJZ	6.0 - 9.3 Amp	5470
		CPEYSAKZ	8.9 - 13.5 Amp	5470
		CPEYSALZ	13.2 - 20 Amp	5900
		CPEYSAMZ	17.4 - 24 Amp	6200

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

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

Motor Starters

BCH

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

Cat.	HP	Relay Range (Amp.)	Run Capacitor (mfd)	MRP [₹]
CPPM50-25-SP	0.5 HP/ 0.75 HP	3.5 - 6.5 Amp	25	2330
CPPM50-20-SP	0.5 HP/ 0.75 HP	3.5 - 6.5 Amp	20	2330
CPPM50H-25-SP	0.5 HP/ 0.75 HP	3.5 - 6.5 Amp	25	2660
CPPM60-36-SP	1 HP	6.8 - 11.7 Amp	36	2350
CPPM60-25-SP			25	2350
CPPM60H-36-SP			36	2680
CPPM60-50-SP	1.5 HP	6.8 - 11.7 Amp	50	2480
CPPM60H-50-SP			50	2820
CPPM70-50-SP	2 HP	11.0 - 20.0 Amp	50	2520
CPPM70-36-SP			36	2520
CPPM70H-50-SP			50	2680

1-Phase SPS With 2 Pole Contactor + Relay (With Ammeter) with 160-220 V Coil

Cat.	HP	Relay Range (Amp.)	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP [₹]
CPNEHBW-SP	0.5 HP/ 0.75 HP	3.8 - 6.0 Amp	25	80/100	3200
CPNEJBW-SP	1 HP	6.0 - 9.3 Amp	36	100/120	3340
CPNEKBW-SP	1.5 HP	8.9 - 13.5 Amp	50	120/150	3550
CPNELBW-SP	2 HP	13.2 - 20.0 Amp	36+36	150/200	3865
CPNEMBW-SP	3 HP	17.4 - 24.0 Amp	50+50	200/250	4530
CPNEPBW-SP	5 HP	23.0 - 32 Amp	50+50+50	200/250	6830

For Dry Run Protection (Extra Terminal shall be provided) Kindly add Rs. 155/- for up to 1.5 HP & add Rs. 250/- for 2 & 3 HP in above Prices & suffix "D" in the cat code (i.e. CPNEHBW-SPD)

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

Cat.	HP	Relay Range (Amp.)	Contactor Rating	Run Capacitor (mfd)	Start Capacitor (mfd)	MRP [₹]
CPNSHBW-SP	0.5 HP/ 0.75 HP	3.8 - 6.0 Amp	16 Amp	25	80/100	3485
CPNSHBW-SP(RC36)				36	80/100	On request
CPNSJBW-SP	1 HP	6.0 - 9.3 Amp	16 Amp	36	100/120	3560
CPNSJBW-RC20SC100				20	80/100	3560
CPNSJBW-RC25SC100				25	80/100	3590
CPNSJBW-RC50SC100				50	80/100	3660
CPNSJBW-RC60SC150				60	120/150	On request
CPNSJBW-RC72SC150				36+36	120/150	3950
CPNSJBW-SP(RC30)				30	100/120	3590
CPNSJBW-SP(RC50)				50	100/120	3660
CPNSJBW-SP(SC100)				36	80/100	3690
CPNSKBW-SP				1.5 HP	8.9 - 13.5 Amp	16 Amp
CPNSKBW-RC30SC120	30	100/120	3690			
CPNSKBW-RC36SC120	36	100/120	3730			
CPNSKBW-SP(RC36)	36	120/150	3830			
CPNSKBW-SP(RC72)	36+36	120/150	3870			
CPNSLBW-SP	2 HP	13.2 - 20.0 Amp	16 Amp	36+36	150/200	4190
CPNSLBW-RC100SC150				50+50	120/150	4220
CPNSLBW-RC90SC150				45+45	120/150	4220
CPNSLBW-SP(SC150)				36+36	120/150	4300
CPNSMBW-SP	3 HP	17.4 - 24.0 Amp	25 Amp	50+50	200/250	4820
CPNSPBW-SP	5 HP	23.0 - 32 Amp	40 A & 16 A	50+50+50	200/250	6980

For Dry Run Protection (Extra Terminal shall be provided) Kindly add Rs. 155/- for up to 1.5 HP & add Rs. 250/- for 2 & 3 HP in above Prices & suffix "D" in the cat code (i.e. CPNSHBW-SPD)

Oil Immersed Starters BCH

Direct on Line

Cat No.	Relay Range	HRC Fuse Rating (EE Type) (max)	MRP [₹]
OISWPGN OISWPGT	2.4-3.8A	16A	2080
OISWPHN OISWPHT	3.8-6.0A	20A	2080
OISWP JN OISWP JT	6.0-9.3A	25A	2080
OISWPKN OISWPKT	8.9-13.5A	36A	2080
OISWPLN OISWPLT	13.2-20A	50A	2080
OISWPMN OISWPMT	17.4-24A	63A	2300

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

Star Delta - Semi Automatic

Cat No.	Relay Range	HRC Fuse Rating (EE Type) (max)	MRP [₹]
OISDSWPJN OISDSWPJT	6.0-9.3A	20A	5655
OISDSWPKN OISDSWPKT	8.9-13.5A	32A	5655
OISDSWPLN OISDSWPLT	13.2-20A	35A	5655
OISDSWPMY	17.4-24A	50A	6070
OISDSWPPN OISDSWPPY	23-32A	63A	6150

Fully Automatic Star Delta Starter

Cat No.	Relay Range	HRC Fuse Rating (EE Type) (max)	MRP [₹]
OISDAWPJ*	6 - 9.3A	20A	6300
OISDAWPK*	8.9 - 13.5A	32A	6300
OISDAWPL*	13.2 - 20A	35A	6300
OISDAWPM*	17.4 - 24A	56A	6730
OISDAWPP*	23 - 32A	63A	6800

Fully Automatic Star Delta Starter

with SPP & 3 positions Auto Manual Switch

Cat No.	Relay Range	HRC Fuse Rating (EE Type) (max)	MRP [₹]
OISDYWPJ*	6 - 9.3A	20A	7370
OISDYWPK*	8.9 - 13.5A	32A	7370
OISDYWPL*	13.2 - 20A	35A	7370
OISDYWPM*	17.4 - 24A	56A	7830
OISDYWPP*	23 - 32A	63A	7900

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

Oil Immersed Starters Spares for Oil Starter

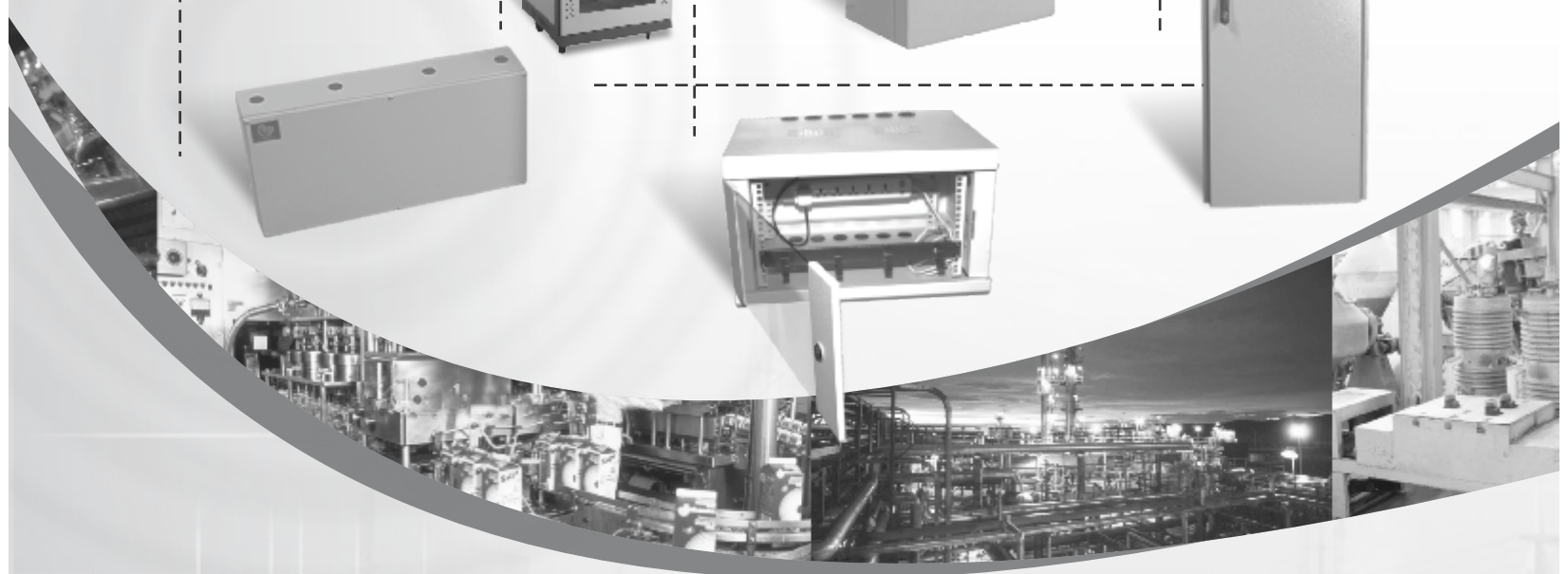
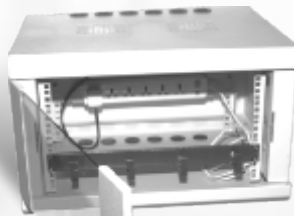
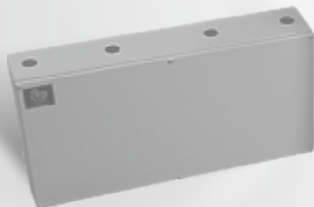


Description	Cat No.	MRP [₹]
Contact Kit without coil for DOL - Power & Auxiliary Contacts (set of fix contact, moving contact, hex screw, spring washer, spring clip, spring cap, contact spring)	OCK	325
Power Kit without coil set for all 3 contactor of Star Delta Starter (fix contact, moving contact, hex screw, spring washer, spring clip, spring cap, contact spring)	Upto L Relay - OCKSD20 M, P Relay - OCKSD30	790 900
Auxiliary Contact Kit set for Star Delta Starter	Upto L Relay - OCKSDAUX20 M, P Relay - OCKSDAUX30	175 175
Coil - Main & Delta Contactor (220-400V) (240-400V) (380/415V)	OCT OCY OCN	340
Coil - Star Contactor (220-400V) (240-400V) (380/415V)	OCT - STAR OCY - STAR OCN - STAR	230
ON Push Button OFF Push Button	OPB-ON OPB-OFF	On request
Overload Relay for Oil Starter - Pls refer along with all other Overload Relay Page 32		

Enclosure Systems



- **Bhartia Boxes IP: 55, IP: 66**
- **'BCH-SS' (Stainless Steel) Boxes**
- **Terminal Boxes IP:55 & IP:66**
- **Techno - Modular Enclosures**
- **Smartline - Modular Enclosures**
- **IT Racks - 19" and ETSI Racks**
- **MCC, PCC & PMCC Enclosures**
- **Control desks**



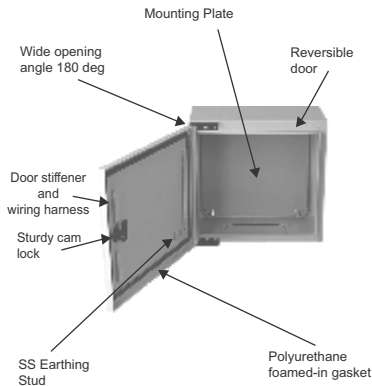
Enclosure Systems BCH

Bhartia Boxes



- 51 Different Versions
- Single/Double door versions
- Min. Size : 200 X 200 X 150
- Max Size : 1000 X 1200 X 300
- IP 55/IP66

Double door version



Type	Size (WxHxD) mm	IP-55 Range			IP-66 Range	
		MOQ Nos.	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]
SINGLE DOOR BOX	200x200x150	1	BIL-50000	1500	BIL-60000	1550
SINGLE DOOR BOX	200x300x150	1	BIL-50010	1805	BIL-60010	1905
SINGLE DOOR BOX	250x300x150	1	BIL-50020	1885	BIL-60020	2000
SINGLE DOOR BOX	300x300x150	1	BIL-50030	1990	BIL-60030	2050
SINGLE DOOR BOX	300x300x200	1	BIL-50050	2160	BIL-60050	2375
SINGLE DOOR BOX	300x400x150	1	BIL-50060	2250	BIL-60060	2475
SINGLE DOOR BOX	300x400x200	1	BIL-50080	2550	BIL-60080	2670
SINGLE DOOR BOX	400x300x150	1	BIL-50090	2210	BIL-60090	2500
SINGLE DOOR BOX	400x300x200	1	BIL-50110	2510	BIL-60110	2620
SINGLE DOOR BOX	400x400x150	1	BIL-50120	2530	BIL-60120	2720
SINGLE DOOR BOX	400x400x200	1	BIL-50140	2680	BIL-60140	2945
SINGLE DOOR BOX	400x500x150	1	BIL-50150	2840	BIL-60150	3315
SINGLE DOOR BOX	400x500x200	1	BIL-50170	3010	BIL-60170	3320
SINGLE DOOR BOX	400x600x200	1	BIL-50190	3680	BIL-60190	3595
SINGLE DOOR BOX	500x600x200	1	BIL-50210	4180	BIL-60210	4120
SINGLE DOOR BOX	500x700x200	1	BIL-50220	4755		
SINGLE DOOR BOX	500x700x300	1	BIL-50230	5440		
SINGLE DOOR BOX	600x400x200	1	BIL-50240	3780	BIL-60240	4015
SINGLE DOOR BOX	600x400x300	1	BIL-50250	4800		
SINGLE DOOR BOX	600x500x200	1	BIL-50260	4425	BIL-60260	4800
SINGLE DOOR BOX	600x600x200	1	BIL-50270	4650		
SINGLE DOOR BOX	600x600x300	1	BIL-50280	5350		
SINGLE DOOR BOX	600x700x200	1	BIL-50290	5365		
SINGLE DOOR BOX	600x800x200	1	BIL-50300	5650		
SINGLE DOOR BOX	600x800x300	1	BIL-50320	6170		
SINGLE DOOR BOX	600x1000x200	1	BIL-50330	6850		
SINGLE DOOR BOX	600x1000x300	1	BIL-50340	7690		
SINGLE DOOR BOX	800x800x300	1	BIL-50310	7415		
SINGLE DOOR BOX	800x1000x200	1	BIL-50350	8300		
SINGLE DOOR BOX	800x1000x250	1	BIL-50360	8600		
SINGLE DOOR BOX	800x1000x300	1	BIL-50390	8700		
SINGLE DOOR BOX	800x1200x300	1	BIL-50395	11000		
DOUBLE DOOR BOX	1000x800x200	1	BIL-50500	9115		
DOUBLE DOOR BOX	1000x800x300	1	BIL-50520	10430		
DOUBLE DOOR BOX	1000x1000x300	1	BIL-50540	11535		
DOUBLE DOOR BOX	1000x1200x300	1	BIL-50550	13210		

MOQ. Minimum order quantity in nos.

Type	Cat. No.	MOQ	List Price [₹]
Set of Wall Mounting bracket (small)	BIL-WM-S	1	90
Set of Wall Mounting bracket (big)	BIL-WM-B	1	115

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.

Technical Particulars (BHARTIA BOXES)

- Fabricated from 1.2mm / 1.6mm CRCA sheet steel (Sizes upto BIL-50170 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.
- IP-55 & 66 Degree of protection
- 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)

* List Prices are Ex-works Faridabad. For detail Refer Enclosure Selling Terms & Conditions on page no 129.

Enclosure Systems BCH



- Fabricated from 1.2/1.6 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 1.6 MM SS.
- 120 deg door open-able concealed hinge door with cam locking arrangement.

'BCH - SS' (Stainless Steel)

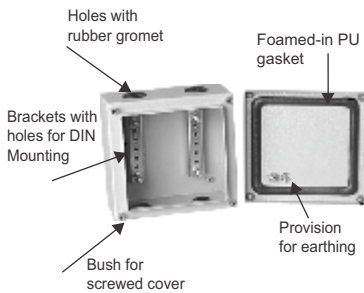
Type	Size (WxHxD) mm	MOQ Nos.	Cat No.	List Price [₹]
SINGLE DOOR BOX	200X300X150	3	BIL-90203015	4150
SINGLE DOOR BOX	300X300X200	3	BIL-90303020	5750
SINGLE DOOR BOX	400X400X200	3	BIL-90404020	7750
SINGLE DOOR BOX	400X500X200	3	BIL-90405020	8770
SINGLE DOOR BOX	400X600X200	3	BIL-90406020	10700
SINGLE DOOR BOX	500X600X200	3	BIL-90506020	12800
SINGLE DOOR BOX	600X600X200	3	BIL-90606020	13500
SINGLE DOOR BOX	600X800X200	3	BIL-90608020	15800
SINGLE DOOR BOX	500X700X300	3	BIL-90507030	16400
SINGLE DOOR BOX	800X800X300	3	BIL-90808030	23500

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

Terminal Boxes



- 43 Different Versions
- Min. Size : 150 X 150 X 80
- Max Size : 800 X 400 X 120
- IP 55/IP66



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
- IP-55 & 66 Degree of protection
- 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

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	815	BIL-80000	845
200x150x80	-			BIL-80100	935
300x150x80	5	BIL-70010	970	BIL-80010	1080
200x200x80	5	BIL-70020	970	BIL-80020	1050
300x200x80	5	BIL-70030	1010	BIL-80030	1100
400x200x80	-			BIL-80110	1125
600x200x80	-			BIL-80130	1525
150x150x120	5	BIL-70040	900	BIL-80040	965
200x150x120	-			BIL-80150	985
300x150x120	5	BIL-70050	1050	BIL-80050	1080
200x200x120	5	BIL-70060	1055	BIL-80060	1130
300x200x120	5	BIL-70070	1170	BIL-80070	1250
400x200x120	5	BIL-70080	1320	BIL-80080	1425
300x300x120	5	BIL-70090	1400	BIL-80090	1480
400x150x120	-			BIL-80170	1330
400x300x120	5	BIL-70180	1725	BIL-80180	1860
400x400x120	5	BIL-70190	2000	BIL-80190	2155
500x200x120	5	BIL-70200	1640	BIL-80200	1790
500x300x120	5	BIL-70210	1985	BIL-80210	2100
600x200x120	5	BIL-70220	1760	BIL-80220	1850
600x300x120	5	BIL-70230	2140	BIL-80230	2270
600x400x120	5	BIL-70240	2460	BIL-80240	2530
800x200x120	5	BIL-70250	2485	BIL-80250	2530
800x400x120	5	BIL-70260	3125	BIL-80260	3050

MOQ-Minimum order quantity in nos.

* List Prices are Ex-works Faridabad. For detail Refer Enclosure Selling Terms & Conditions on page no 129.

Enclosure Systems

BCH

Techno Modular Enclosures

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	15540	17300	12390	14250	TPL 061804	1540	TSC 061804	3075
800 x 1800 x 400	TME 081804	18690	20475	14385	16535	TPL 081804	1750	TSC 081804	3075
1000 x 1800 x 400	TME 101804	25575	27715	19795	21720	TPL 101804	1960	TSC 101804	3075
1200 x 1800 x 400	TME 121804	29575	32755	22255	24700	TPL 121804	2120	TSC 121804	3075
600 x 1800 x 500	TME 061805	16590	18270	13440	15120	TPL 061805	1650	TSC 061805	3700
800 x 1800 x 500	TME 081805	19320	21735	15435	17220	TPL 081805	1855	TSC 081805	3700
1000 x 1800 x 500	TME 101805	26710	28410	21095	23215	TPL 101805	2015	TSC 101805	3700
1200 x 1800 x 500	TME 121805	29960	33920	23955	26290	TPL 121805	2175	TSC 121805	3700
800 x 1800 x 600	TME 081806	20580	22500	16750	18795	TPL 081806	1910	TSC 081806	3900
600 x 2000 x 400	TME 062004	16800	18850	13180	15595	TPL 062004	1540	TSC 062004	3285
800 x 2000 x 400	TME 082004	19900	21420	15175	17275	TPL 082004	1750	TSC 082004	3285
1000 x 2000 x 400	TME 102004	28515	30105	22155	23745	TPL 102004	1960	TSC 102004	3285
1200 x 2000 x 400	TME 122004	29950	33155	24505	27765	TPL 122004	2120	TSC 122004	3285
600 x 2000 x 500	TME 062005	18150	19655	15195	16485	TPL 062005	1650	TSC 062005	4000
800 x 2000 x 500	TME 082005	19950	22000	15645	17720	TPL 082005	1855	TSC 082005	4000
1000 x 2000 x 500	TME 102005	29150	30925	22470	24555	TPL 102005	2015	TSC 102005	4000
1200 x 2000 x 500	TME 122005	31695	33815	24220	27400	TPL 122005	2175	TSC 122005	4000
600 x 2000 x 600	TME 062006	18460	20240	16065	17405	TPL 062006	1750	TSC 062006	4255
800 x 2000 x 600	TME 082006	21250	22470	16905	18430	TPL 082006	1910	TSC 082006	4255
1000 x 2000 x 600	TME 102006	29500	32860	22790	26670	TPL 102006	2120	TSC 102006	4255
1200 x 2000 x 600	TME 122006	32000	34875	25390	28565	TPL 122006	2280	TSC 122006	4255
600 x 2000 x 800	TME 062008	18955	20370	15805	17800	TPL 062008	1910	TSC 062008	5250
800 x 2000 x 800	TME 082008	21895	23575	17900	19635	TPL 082008	2120	TSC 082008	5250
1000 x 2000 x 800	TME 102008	31450	33550	23490	26670	TPL 102008	2280	TSC 102008	5250
1200 x 2000 x 800	TME 122008	32400	36645	27090	29875	TPL 122008	2490	TSC 122008	5250
600 x 2200 x 600	TME 062206	20750	22725	16455	19545	TPL 062206	1750	TSC 062206	5000
800 x 2200 x 600	TME 082206	23500	25000	18875	20845	TPL 082206	1910	TSC 082206	5000
1000 x 2200 x 600	TME 102206	32525	35070	26725	29245	TPL 102206	2120	TSC 102206	5000
1200 x 2200 x 600	TME 122206	33810	37695	25830	28770	TPL 122206	2280	TSC 122206	5000
600 x 2200 x 800	TME 062208	22635	24565	17355	20035	TPL 062208	1910	TSC 062208	6500
800 x 2200 x 800	TME 082208	27275	28875	20975	22890	TPL 082208	2120	TSC 082208	6500
1000 x 2200 x 800	TME 102208	34600	36700	28090	30185	TPL 102208	2280	TSC 102208	6500
1200 x 2200 x 800	TME 122208	37495	39550	30695	32755	TPL 122208	2490	TSC 122208	6500

*Baying kit (BIL-14280) Rs. 1050/- 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

Smartline Modular Enclosure BCH

SmartLine TME

Size of Enclosure (W x H x D in mm)	Cat. No.	Enclosure Version*				Plinth		Side Covers (Pair)	
		Ver 001 LP [₹]	Ver 002 LP [₹]	Ver 003 LP [₹]	Ver 004 LP [₹]	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]
600 x 1800 x 500	SLE 061805	14510	16710	12495	14300	TPL 061805	1650	SLSC 061805	2800
800 x 1800 x 600	SLE 081806	18235	20725	14830	17310	TPL 081806	1910	SLSC 081806	3200
600 x 2000 x 600	SLE 062006	15840	18390	13785	15555	TPL 062006	1750	SLSC 062006	3480
800 x 2000 x 600	SLE 082006	18300	21195	15350	17460	TPL 082006	1910	SLSC 082006	3480
1200 x 2000 x 600	SLE 122006	26135	29785	22470	25015	TPL122006	2280	SLSC 122006	3480
600 x 2000 x 800	SLE 062008	16180	19375	14650	16510	TPL 062008	1910	SLSC 062008	4350
800 x 2000 x 800	SLE 082008	19040	21895	16120	18730	TPL 082008	2120	SLSC 082008	4350
1200 x 2000 x 800	SLE 122008	27550	32210	23050	25835	TPL 122008	2490	SLSC 122008	4350

Note : Cutout / customization charges will be extra.

*Baying kit (**BIL-14280**) Rs. 1050/- is also available for Enclosure Version. For extra accessories, please contact nearest branch office.

Enclosure Versions

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

To Order and Calculate List Price

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

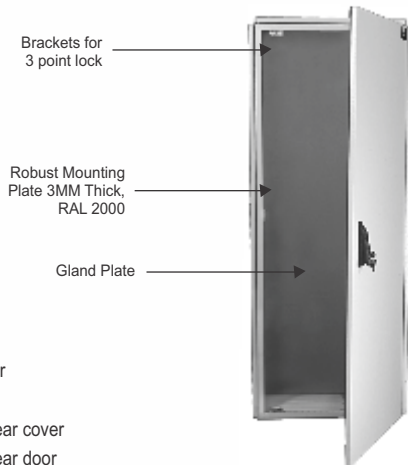
General Technical Particulars

- IP-54 degree of protection
- Fabricated from CRCA/GPSP (frame made up of GPSP, doors & covers made up of CRCA sheet).
- Modular construction
- Mounting plate and cable entry plate made up of Galvanized steel [Unpainted]
- Plinth (optional) 100mm high fabricated from CRCA sheet.
- Cable entry provision is given from Bottom as standard
- Foamed-in PU gasket
- Powder coated to RAL : 7035 structure finish
- Hinge design allows 120 deg. Door opening
- 3 point lock provided as standard
- Door stiffener with provision of drilling holes for wiring harness.
- Side Covers - Pair: consisting of 1no. LHS and 1no. RHS cover
- To calculate limiting dimension of the enclosure, add 44mm to the width to account for 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 on page no 129.

Enclosure Systems BCH



Modular Enclosures

- Enclosures
 - Minimum size in mm :
600 x 1800 x 400 (W x H x D)
 - Maximum size in mm :
1200 x 2200 x 800 (W x H x D)
- IP 54 / IP 55 degree of protection
- 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

- IP54/55 degree of protection
- 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 3mm thick - standard & Powder Coated to RAL-2000
- Plinth (optional) 100mm high fabricated from 2mm
- Cable entry provision is given from Bottom as standard
- Foamed-in PU gasket
- Powder coated to RAL : 7035 structure finish
- Hinge design allows 120 deg. Door opening
- 3 point lock provided as standard
- Door stiffener with provision of drilling holes for wiring harness.
- Side Covers - Pair : consisting of 1no. LHS and 1no. RHS cover
- To calculate limiting dimension of the enclosure, add 44mm to the width to account for 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 door

Highlights of **BCH** Compartmentalized **MCC / PCC / PMCC** Solution



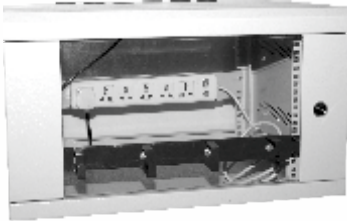
- 100% Modular Structure; can be dispatched into flat pack.
- Flexible Horizontal/Vertical busbar and Cable Compartment Configuration.
- Compartmentalised - upto Form 4.
- IP 54 with polyurethane foam gasketing.
- Doors available in height of 200mm & multiples of 100mm.
- Horizontal Busbar chambers, Vertical cable chambers are provided with Individual bolted covers.
- Rear bolted covers.
- Plinth (modular) & Side cover (Optional).
- Wide Variety of Standard MCC range.
- Additional accessories like Cable support, Busbar Support and Baying kit are available.
- Double front execution can also be provided.
- Lifting Channel provided as standard (instead of Eye-bolts) for higher load-carrying capacity.
- Adjustable (Depth wise at the pitch of 25mm) mounting plates.
- Bus Bar chamber (Top / Bot) and Feeder doors (Left / Right) are interchangeable.
- Doors are open able with hinges for 120 degree opening and Metal locks.
- Panel can be expanded in all 3 dimensions and bayed together by using Baying Kit.
- All cornerbars and crossbars can be placed at 25mm intervals horizontal, vertical, longitudinal.
- Horizontal & vertical separation plates are provided between all feeder compartments.
- Colours: RAL-7035 (structure finish) for structure, covers & doors. RAL-2000 (smooth finish) for Mtg. Plate, RAL-9000 (smooth finish) for Plinth and lifting channel.
- Sheet thickness 2.0mm GPSP for Structure, 2.0mm CRCA for mtg plate & mtg rail, 1.6mm CRCA for Covers & Doors, 1.2mm CRCA for Separation Plates.

BCH Control Desk



Enclosure Systems **technoRACKS** BCH

19" Wall Mount Racks



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.

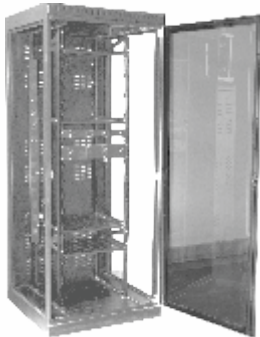
Dimensions (H x W x D) mm	MOQ Nos.	Cat. No.	List Price [₹]
6UX550X400	1	BIL-W-6-5504	3230
9UX550X400	1	BIL-W-9-5504	3705
6UX550X500	1	BIL-W-6-5505	3565
9UX550X500	1	BIL-W-9-5505	4145
12UX550X500	1	BIL-W-12-5505	4610
15UX550X500	1	BIL-W-15-5505	5420

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



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.

Dimensions (H x W x D) mm	MOQ Nos.	Cat. No.	List Price [₹]
24U X 600 X 600	1	BIL-N-062406	18060
24U X 600 X 800	1	BIL-N-062408	19960
24U X 800 X 600	1	BIL-N-082406	22625
24U X 800 X 800	1	BIL-N-082408	24715
30U X 600 X 600	1	BIL-N-063006	19960
30U X 600 X 800	1	BIL-N-063008	21860
30U X 800 X 600	1	BIL-N-083006	24715
30U X 800 X 800	1	BIL-N-083008	27090
36U X 600 X 600	1	BIL-N-063606	21860
36U X 600 X 800	1	BIL-N-063608	24235
36U X 800 X 600	1	BIL-N-083606	27090
36U X 800 X 800	1	BIL-N-083608	29465
42U X 600 X 600	1	BIL-N-064206	25190
42U X 600 X 800	1	BIL-N-064208	26990
42U X 800 X 600	1	BIL-N-084206	29750
42U X 800 X 800	1	BIL-N-084208	32790
45U X 600 X 600	1	BIL-N-064506	28990
45U X 600 X 800	1	BIL-N-064508	30415
45U X 800 X 600	1	BIL-N-084506	31840
45U X 800 X 800	1	BIL-N-084508	34695

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

* List Prices are Ex-works Faridabad. For detail Refer Enclosure Selling Terms & Conditions on page no 129.

19" Server Racks

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	20390
24U X 600 X 1000	1	BIL-S-062410	21670
30U X 600 X 900	1	BIL-S-063009	23050
30U X 600 X 1000	1	BIL-S-063010	23950
36U X 600 X 900	1	BIL-S-063609	25285
36U X 600 X 1000	1	BIL-S-063610	26615
42U X 600 X 900	1	BIL-S-064209	28420
42U X 600 X 1000	1	BIL-S-064210	30225
42U X 800 X 1000	1	BIL-S-084210	34785
45U X 600 X 900	1	BIL-S-064509	32855
45U X 600 X 1000	1	BIL-S-064510	34760

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

Dimensions (H x W x D) mm	MOQ Nos.	Cat. No.	List Price [₹]
2200 X 600 x 300	1	ITE-062203	7320
2200 X 600 x 600	1	ITE-062206	11790

MOQ - Minimum order quantity in nos.

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

All other accessories will be extra & will be furnished on request.

The prices mentioned above do not include freight.



Key Attributes:

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

19" Open Racks

Dimensions (H x W) mm	MOQ Nos.	Cat. No.	List Price [₹]
36U X 600	1	ITE-OF-0636	4750
45U X 600	1	ITE-OF-0645	5610

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

Accessories for 19" Racks

Fixed Shelf/Stationary Shelf

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

Key-Board Tray

- Sliding & rotatory type.

Canteliver Shelf

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

Equipment Support Angle

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

Sliding Shelf

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

Fans/Fan Tray

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

Shelves

Description	Cat No.	List Price [₹]
Fixed Shelf (600mmD)	BIL-A-FS-L-06	825
Fixed Shelf (800mmD)	BIL-A-FS-L-08	1265
Fixed Shelf (900mmD)	BIL-A-FS-L-09	1410
Fixed Shelf (1000mmD)	BIL-A-FS-L-10	1510
Modem Tray	BIL-A-MD	780
Key board tray (Sliding & Rotatory)	BIL-A-KB-06	2430
Canteliver Shelf (1U)	BIL-A-CS-1	485
Canteliver Shelf (2U)	BIL-A-CS-2	730
Equipment Support Angle (600mmD)	BIL-A-ESA-06	290
Equipment Support Angle (800mmD)	BIL-A-ESA-08	340
Equipment Support Angle (900mmD)	BIL-A-ESA-09	425
Equipment Support Angle (1000mmD)	BIL-A-ESA-10	490
Sliding Shelf (900mmD)	BIL-A-SS-09	2430
Sliding Shelf (1000mmD)	BIL-A-SS-10	2525

Thermal Management

Description	Cat No.	List Price [₹]
1-Fan (Direct mounted)	BIL-A-SF	825
Fan-tray with 2-Fans (FHU)	BIL-A-FHU-2FANS	1750
Fan-tray with 4-Fans (FHU)	BIL-A-FHU-4FANS	3060

Cable Management

Description	Cat No.	List Price [₹]
Horizontal Cable Manager (1U)	BIL-A-HCM-1U	195
Horizontal Cable Manager (2U)	BIL-A-HCM-2U	245
Vertical Cable Manager (24U)	BIL-A-VCM-24U	290
Vertical Cable Manager (30U)	BIL-A-VCM-30U	390
Vertical Cable Manager (36U)	BIL-A-VCM-36U	435
Vertical Cable Manager (42U)	BIL-A-VCM-42U	485
Vertical Cable Manager (45U)	BIL-A-VCM-45U	535

Power Management

Description	Cat No.	List Price [₹]
6-Point 5Amp Horizontal Power Strip (19")	BIL-A-HPS-5AMP	795
5-Point 5/15Amp Horizontal Power Strip (19")	BIL-A-HPS-15AMP	1070
12-Point 5Amp Vertical Power Strip	BIL-A-12VPS-5AMP	1555
10-Point 5/15Amp Vertical Power Strip	BIL-A-10VPS-15AMP	1800
Earth continuity Kit (Earthing Kit)	BIL-A-ECT	605

Stability Management

Description	Cat No.	List Price [₹]
Castors (1-Set) Heavy Duty	BIL-A-CAS-HD	2870
Castors (1-Set) Light Duty	BIL-A-CAS	1700
Levelling Feet (1-Set)	BIL-A-LF	245
Stability Plate	BIL-A-SP	1460

Miscellaneous

Description	Cat No.	List Price [₹]
BAYING KIT	BIL-A-BK	275
BLANKING PANEL (1U)	BIL-A-BP-1U	105
BLANKING PANEL (2U)	BIL-A-BP-2U	135
BLANKING PANEL (3U)	BIL-A-BP-3U	185
BLANKING PANEL (4U)	BIL-A-BP-4U	270
BLANKING PANEL (5U)	BIL-A-BP-5U	320
Captive H/w (set of 10)	BIL-A-Captive-M6	135
Wallmounting H/w (set of 4)	BIL-A-wallmounting W	145

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

* List Prices are Ex-works Faridabad. For detail Refer Enclosure Selling Terms & Conditions on page no 129.

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.

Wires & Cables

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



Wires & Cables BCH

BCH Three Core Flat Cables with annealed bare & bunched copper conductor insulated & sheathed with PVC for submersible pump motors for voltage grade 1100 V as per I.S. 694 / 1990 upto 4.0 sqmm, conforming to & marked with I.S. 694 / 1990 upto 4.0 sqmm & generally conforming to I.S. 694 / 1990 above 3 core 4.0 sqmm.

3 Core Flat Cable PVC Insulated Type CS- 500 Mtrs

BCH Code	Flat Cable	LP Per 500 Mtrs in [₹]
CS0010BM	1.0 Sqmm x 3 core Flat cable	On Request
CS0015BM	1.5 Sqmm x 3 core Flat cable	
CS0025BM	2.5 Sqmm x 3 core Flat cable	
CS0040BM	4.0 Sqmm x 3 core Flat cable	
CS0060BM	6.0 Sqmm x 3 core Flat cable	
CS0080BM	8.0 Sqmm x 3 core Flat cable	
CS0100BM	10 Sqmm x 3 core Flat cable	
CS0160BM	16 Sqmm x 3 core Flat cable	
CS0250BM	25 Sqmm x 3 core Flat cable	
CS0350BM	35 Sqmm x 3 core Flat cable	

BCH Three Core Flat Cables with annealed bare & bunched copper conductor insulated & thick sheathed with PVC for submersible pump motors for voltage grade 1100 V as per I.S. 694 / 1990 upto 4.0 sqmm, conforming to & marked with I.S. 694 / 1990 upto 4.0 sqmm & generally conforming to I.S. 694 / 1990 above 3 core 4.0 sqmm. with higher insulation & sheath thicknesses

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

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

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.

3 Core Flat Cable XLPE Insulated Type CFTX- 500 Mtrs

BCH Code	Flat Cable	LP Per 500 Mtrs in [₹]
CFTX-03-0015BM	1.5 Sqmm x 3 core Flat cable XLPE insulated Thick	On Request
CFTX-03-0025BM	2.5 Sqmm x 3 core Flat cable XLPE insulated Thick	
CFTX-03-0040BM	4.0 Sqmm x 3 core Flat cable XLPE insulated Thick	
CFTX-03-0060BM	6.0 Sqmm x 3 core Flat cable XLPE insulated Thick	
CFTX-03-0100BM	10 Sqmm x 3 core Flat cable XLPE insulated Thick	
CFTX-03-0160BM	16 Sqmm x 3 core Flat cable XLPE insulated Thick	

Note : For price, please contact our nearest sales office.

Single & Multi Core PVC Flexible Cables As Per IS 694: 1990 - With ISI Marking

- Individual conductors drawn from 99.98% bright electrolytic grade copper with more than 100% conductivity
- Special formulation of PVC compounds as per IS 5831:1984 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.

Cat. No.	Conductor Area (nominal)	Safe Current Carrying Capacity 2 wires, Single Phase		Price Per 100 mtrs
		In conduit / Trunking	Unenclosed clipped directly to a surface or on cable tray	
Single Core	(Sq. mm)	(Amp.)	(Amp.)	in [₹]
CR01-0005A-AAA	0.5	4	4.5	On Request
CR01-0008A-AAA	0.75	7	8	
CR01-0010A-AAA	1	11	12	
CR01-0015A-AAA	1.5	13	16	
CR01-0025A-AAA	2.5	18	22	
CR01-0040A-AAA	4	24	29	
CR01-0060A-AAA	6	31	37	
CR01-0100A-AAA	10	42	51	
CR01-0160A-AAA	16	57	68	
CR01-0250A-AAA	25	71	86	
CR01-0350A-AAA	35	91	100	
CR01-0500A-AAA	50	120	145	
Generally Conforming to IS 694:1990				
CR01-0700A-AAA	70	-	214	On Request
CR01-0950A-AAA	95	-	260	
CR01-1200A-AAA	120	-	305	
CR01-1500A-AAA	150	-	355	
CR01-1850A-AAA	185	-	415	
CR01-2400A-AAA	240	-	500	
CR01-3000A-AAA	300	-	560	

Note : Standard packing of 100m, 500m & 1000m available. For price of 500m & 1000m , please contact nearest sales office.

Single Core FR Cables As Per IS 694: 1990 - With ISI Marking

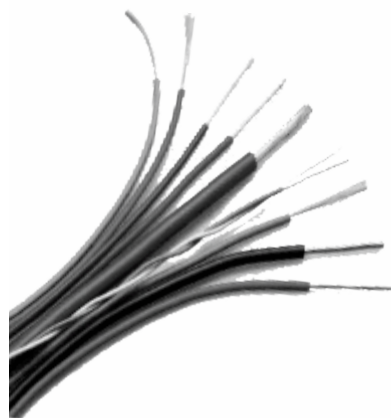
Cat. No.	Conductor Area (nominal)	Safe Current Carrying Capacity 2 wires, Single Phase		Price Per 100 mtrs
		In conduit / Trunking	Unenclosed clipped directly to a surface or on cable tray	
Single Core	(Sq. mm)	(Amp.)	(Amp.)	in [₹]
CRFR01-0005A-AAA	0.5	4	4.5	
CRFR01-0008A-AAA	0.75	7	8	
CRFR01-0010A-AAA	1	11	12	
CRFR01-0015A-AAA	1.5	13	16	
CRFR01-0025A-AAA	2.5	18	22	
CRFR01-0040A-AAA	4	24	29	
CRFR01-0060A-AAA	6	31	37	
CRFR01-0100A-AAA	10	42	51	
CRFR01-0160A-AAA	16	57	68	
CRFR01-0250A-AAA	25	71	86	
CRFR01-0350A-AAA	35	91	100	
CRFR01-0500A-AAA	50	120	145	

Note: Standard packing of 100m, 90m & 180m available. For prices of 90m & 180m, please contact nearest sales office.

Single Core FRLS Cables As Per IS 694: 1990 - With ISI Marking

Cat. No.	Conductor Area (nominal)	Safe Current Carrying Capacity 2 wires		Price Per 100 mtrs
		In conduit / Trunking	Unenclosed clipped directly to a surface or on cable tray	
Single Core	(Sq. mm)	(Amp.)	(Amp.)	in [₹]
CRLS01-0005A-AAA	0.5	4	4.5	
CRLS01-0008A-AAA	0.75	7	8	
CRLS01-0010A-AAA	1	11	12	
CRLS01-0015A-AAA	1.5	13	16	
CRLS01-0025A-AAA	2.5	18	22	
CRLS01-0040A-AAA	4	24	29	
CRLS01-0060A-AAA	6	31	37	
CRLS01-0100A-AAA	10	42	51	
CRLS01-0160A-AAA	16	57	68	
CRLS01-0250A-AAA	25	71	86	
CRLS01-0350A-AAA	35	91	100	
CRLS01-0500A-AAA	50	120	145	

Note: Standard packing of 100m, 90m & 180m available. For prices of 90m & 180m, please contact nearest sales office.



Multi Core PVC Flexible Cables

Cat. No. 2 Core	Cat. No. 3 Core	Cat. No. 4 Core	Conductor area (Normal)	Current Rating (Amps)
CR02-0005A-AAA	CR03-0005A-AAA	CR04-0005A-AAA	0.5	4
CR02-0008A-AAA	CR03-0008A-AAA	CR04-0008A-AAA	0.75	7
CR02-0010A-AAA	CR03-0010A-AAA	CR04-0010A-AAA	1	12
CR02-0015A-AAA	CR03-0015A-AAA	CR04-0015A-AAA	1.5	15
CR02-0025A-AAA	CR03-0025A-AAA	CR04-0025A-AAA	2.5	20
CR02-0040A-AAA	CR03-0040A-AAA	CR04-0040A-AAA	4	27
CR02-0060A-AAA	CR03-0060A-AAA	CR04-0060A-AAA	6	35
CR02-0100A-AAA	CR03-0100A-AAA	CR04-0100A-AAA	10	46
CR02-0160A-AAA	CR03-0160A-AAA	CR04-0160A-AAA	16	62
CR02-0250A-AAA	CR03-0250A-AAA	CR04-0250A-AAA	25	80
CR02-0350A-AAA	CR03-0350A-AAA	CR04-0350A-AAA	35	102
CR02-0500A-AAA	CR03-0500A-AAA	CR04-0500A-AAA	50	138

Cat. No. 5 Core	Cat. No. 6 Core	Cat. No. 7 Core	Conductor area (Normal)	Current Rating (Amps)
CR05-0005A-AAA	CR06-0005A-AAA	CR07-0005A-AAA	0.5	4
CR05-0008A-AAA	CR06-0008A-AAA	CR07-0008A-AAA	0.75	7
CR05-0010A-AAA	CR06-0010A-AAA	CR07-0010A-AAA	1	12
CR05-0015A-AAA	CR06-0015A-AAA	CR07-0015A-AAA	1.5	15
CR05-0025A-AAA	CR06-0025A-AAA	CR07-0025A-AAA	2.5	20
CR05-0040A-AAA	CR06-0040A-AAA	CR07-0040A-AAA	4	27
CR05-0060A-AAA			6	35

Cat. No. 8 Core	Cat. No. 10 Core	Cat. No. 12 Core	Conductor area (Normal)	Current Rating (Amps)
CR08-0005A-AAA	CR10-0005A-AAA	CR12-0005A-AAA	0.5	4
CR08-0008A-AAA	CR10-0008A-AAA	CR12-0008A-AAA	0.75	7
CR08-0010A-AAA	CR10-0010A-AAA	CR12-0010A-AAA	1	12
CR08-0015A-AAA	CR10-0015A-AAA	CR12-0015A-AAA	1.5	15
CR08-0025A-AAA	CR10-0025A-AAA	CR12-0025A-AAA	2.5	20
CR08-0040A-AAA	CR10-0040A-AAA	CR12-0040A-AAA	4	27

Cat. No. 14 Core	Cat. No. 16 Core	Cat. No. 18 Core	Conductor area (Normal)	Current Rating (Amps)
CR14-0005A-AAA	CR16-0005A-AAA	CR18-0005A-AAA	0.5	4
CR14-0008A-AAA	CR16-0008A-AAA	CR18-0008A-AAA	0.75	7
CR14-0010A-AAA	CR16-0010A-AAA	CR18-0010A-AAA	1	12
CR14-0015A-AAA	CR16-0015A-AAA	CR18-0015A-AAA	1.5	15
CR14-0025A-AAA	CR16-0025A-AAA	CR18-0025A-AAA	2.5	20
CR14-0040A-AAA	CR16-0040A-AAA	CR18-0040A-AAA	4	27

Cat. No. 19 Core	Cat. No. 24 Core	Cat. No. 25 Core	Conductor area (Normal)	Current Rating (Amps)
CR19-0005A-AAA	CR24-0005A-AAA	CR25-0005A-AAA	0.5	4
CR19-0008A-AAA	CR24-0008A-AAA	CR25-0008A-AAA	0.75	7
CR19-0010A-AAA	CR24-0010A-AAA	CR25-0010A-AAA	1	12
CR19-0015A-AAA	CR24-0015A-AAA	CR25-0015A-AAA	1.5	15
CR19-0025A-AAA	CR24-0025A-AAA	CR25-0025A-AAA	2.5	20
CR19-0040A-AAA	CR24-0040A-AAA	CR25-0040A-AAA	4	27

Cat. No. 30 Core	Cat. No. 36 Core	Conductor area (Normal)	Current Rating (Amps)
CR30-0005A-AAA	CR36-0005A-AAA	0.5	4
CR30-0008A-AAA	CR36-0008A-AAA	0.75	7
CR30-0010A-AAA	CR36-0010A-AAA	1	12
CR30-0015A-AAA	CR36-0015A-AAA	1.5	15
CR30-0025A-AAA	CR36-0025A-AAA	2.5	20
CR30-0040A-AAA	CR36-0040A-AAA	4	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 694:1990 and IS 8130:1984 are met.

Sizes 0.5 to 4 Sq. mm from 2 to 5 cores 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 - Box Type**



• **LT Power Capacitors - Cylindrical Type**

• **Automatic Power Factor Controllers (APFC Relays & Intelligent Power Factor Controllers (IPFC Relays**

• **Network Analysers**

• **APFC Panels**



LT Power Capacitors.....

BCH

MPP Can type capacitors



Heavy edge Zn Al Alloy MPP film

MPP Capacitors (IS13340)
MPP capacitors are manufactured using Zn-Al metallized polypropylene film. These modules are provided with pressure interrupter arrangement for safety against bursting due to internal pressure arised due to prolonged high voltage / current. The modules are assembled in a aluminium case or CRCA container

MPP Can type Heavy Duty Capacitors

KVAR	Type	Rated Voltage (V)	BCH CAT Code	LP [₹]
1	MPP - CYL-HD	440	BCHMCH001B	On request
2	MPP - CYL-HD	440	BCHMCH002B	
3	MPP - CYL-HD	440	BCHMCH003B	
4	MPP - CYL-HD	440	BCHMCH004B	
5	MPP - CYL-HD	440	BCHMCH005B	
7.5	MPP - CYL-HD	440	BCHMCH007B	
9	MPP - CYL-HD	440	BCHMCH009B	
10	MPP - CYL-HD	440	BCHMCH010B	
12.5	MPP - CYL-HD	440	BCHMCH012B	
15	MPP - CYL-HD	440	BCHMCH015B	
20	MPP - CYL-HD	440	BCHMCH020B	
25	MPP - CYL-HD	440	BCHMCH025B	
30	MPP - CYL-HD	440	BCHMCH030B	

MPP Can type Normal Duty Capacitors(440V)

KVAR	Type	Rated Voltage (V)	BCH CAT Code	LP [₹]
1	MPP - CYL-ND	440	BCHMCN001B	On request
2	MPP - CYL-ND	440	BCHMCN002B	
3	MPP - CYL-ND	440	BCHMCN003B	
4	MPP - CYL-ND	440	BCHMCN004B	
5	MPP - CYL-ND	440	BCHMCN005B	
7.5	MPP - CYL-ND	440	BCHMCN007B	
9	MPP - CYL-ND	440	BCHMCN009B	
10	MPP - CYL-ND	440	BCHMCN010B	
12.5	MPP - CYL-ND	440	BCHMCN012B	
15	MPP - CYL-ND	440	BCHMCN015B	
20	MPP - CYL-ND	440	BCHMCN020B	
25	MPP - CYL-ND	440	BCHMCN025B	
30	MPP - CYL-ND	440	BCHMCN030B	

MPP Can type Normal Duty Capacitors(480V)

KVAR	Type	Rated Voltage (V)	BCH CAT Code	LP [₹]
11.2	MPP - CYL-HD	480	BCHMCH011C	On request
12.4	MPP - CYL-HD	480	BCHMCH012C	
14	MPP - CYL-HD	480	BCHMCH014C	
16.8	MPP - CYL-HD	480	BCHMCH016C	
18.6	MPP - CYL-HD	480	BCHMCH018C	
22.4	MPP - CYL-HD	480	BCHMCH022C	
24.8	MPP - CYL-HD	480	BCHMCH024C	
28.1	MPP - CYL-HD	480	BCHMCH028C	

MPP Can type Normal Duty Capacitors(525V)

KVAR	Type	Rated Voltage (V)	BCH CAT Code	LP [₹]
6.6	MPP - CYL-HD	525	BCHMCH006D	On request
7.5	MPP - CYL-HD	525	BCHMCH007D	
11.2	MPP - CYL-HD	525	BCHMCH011D	
13.8	MPP - CYL-HD	525	BCHMCH013D	
19.8	MPP - CYL-HD	525	BCHMCH019D	
20	MPP - CYL-HD	525	BCHMCH020D	
25	MPP - CYL-HD	525	BCHMCH025D	
30	MPP - CYL-HD	525	BCHMCH030D	
33.1	MPP - CYL-HD	525	BCHMCH033D	

LT Power Capacitors..... BCH

MPP Box type capacitors



MPP Box type Normal Duty Capacitors

KVAR	Type	Rated Voltage (V)	BCH CAT Code	LP [₹]
5	MPP-BOX-ND	440	BCHMBN005B	On request
7.5	MPP-BOX-ND	440	BCHMBN007B	
10	MPP-BOX-ND	440	BCHMBN010B	
12.5	MPP-BOX-ND	440	BCHMBN012B	
15	MPP-BOX-ND	440	BCHMBN015B	
20	MPP-BOX-ND	440	BCHMBN020B	
25	MPP-BOX-ND	440	BCHMBN025B	

MPP Box type Heavy Duty Capacitors

KVAR	Type	Rated Voltage (V)	BCH CAT Code	LP [₹]
5	MPP-BOX-HD	440	BCHMBH005B	On request
7.5	MPP-BOX-HD	440	BCHMBH007B	
10	MPP-BOX-HD	440	BCHMBH010B	
12.5	MPP-BOX-HD	440	BCHMBH012B	
15	MPP-BOX-HD	440	BCHMBH015B	
20	MPP-BOX-HD	440	BCHMBH020B	
25	MPP-BOX-HD	440	BCHMBH025B	

Heavy edge Zn-Al Alloy MPP film

MPP Capacitors (IS13340)

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

.02 - .03 micron metallised layer

Capacitor Switching



- Ideal solution for Switching single and multiple Capacitor banks upto 25 KVAR
- IP 20

Duros Freedom Series Capacitor Duty AC Control

Size	Capacitor KVAR at 415 V, 3 Ph, 50 Hz	Cat. No.	MRP [₹]
B	5	CCE 15BN3■	1850
D	10	CCE 15DN3■	1970
F	15	CCE 15FN3■	2880
H	25	CCE 15HN3■	3810

- For Coil Voltage Codes refer Table on page 22

LT Power Capacitors..... BCH

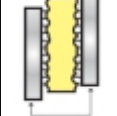


APP Box type Single Layer Capacitors(440V)

KVAR	Type	Rated Voltage (V)	BCH CAT Code	LP[₹]
1	APP-BOX	440	BCHAPS001B	On request
2	APP-BOX	440	BCHAPS002B	
3	APP-BOX	440	BCHAPS003B	
4	APP-BOX	440	BCHAPS004B	
5	APP-BOX	440	BCHAPS005B	
7.5	APP-BOX	440	BCHAPS007B	
9	APP-BOX	440	BCHAPS009B	
10	APP-BOX	440	BCHAPS010B	
12.5	APP-BOX	440	BCHAPS012B	
15	APP-BOX	440	BCHAPS015B	
20	APP-BOX	440	BCHAPS020B	
25	APP-BOX	440	BCHAPS025B	
30	APP-BOX	440	BCHAPS030B	
50	APP-BOX	440	BCHAPS050B	



APP Capacitors



Double thick double hazy pp film

Aluminium foil

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

APP Box type Single Layer Capacitors(480V)

KVAR	Type	Rated Voltage (V)	BCH CAT Code	LP[₹]
5.6	APP-BOX	480	BCHAPS005C	On request
6.7	APP-BOX	480	BCHAPS006C	
11.3	APP-BOX	480	BCHAPS011C	
12.5	APP-BOX	480	BCHAPS012C	
14.4	APP-BOX	480	BCHAPS014C	
15.5	APP-BOX	480	BCHAPS015C	
17	APP-BOX	480	BCHAPS017C	
19	APP-BOX	480	BCHAPS019C	
22.4	APP-BOX	480	BCHAPS022C	
25	APP-BOX	480	BCHAPS025C	
28.1	APP-BOX	480	BCHAPS028C	
31.5	APP-BOX	480	BCHAPS031C	
33.9	APP-BOX	480	BCHAPS033C	

APP Box type Single Layer Capacitors(525V)

KVAR	Type	Rated Voltage (V)	BCH CAT Code	LP[₹]
6.9	APP-BOX	525	BCHAPS006D	On request
9.2	APP-BOX	525	BCHAPS009D	
12.5	APP-BOX	525	BCHAPS012D	
13.8	APP-BOX	525	BCHAPS013D	
15.4	APP-BOX	525	BCHAPS015D	
17.2	APP-BOX	525	BCHAPS017D	
18.5	APP-BOX	525	BCHAPS018D	
20.6	APP-BOX	525	BCHAPS020D	
22.6	APP-BOX	525	BCHAPS022D	
25	APP-BOX	525	BCHAPS025D	
27.5	APP-BOX	525	BCHAPS027D	
30.6	APP-BOX	525	BCHAPS030D	
33.1	APP-BOX	525	BCHAPS033D	
37.5	APP-BOX	525	BCHAPS037D	

'LT Capacitor of any other rating or specification can be made on request'

'For Shunt reactors, Detuned filters and Thyristor switches (TSM) please contact our sales office'

LT Power Capacitors..... BCH



CAN TYPE Heavy Duty MA/C/CE/TER Series

KVAR rating	Cat. No.	MRP [₹]
440V, 3-Ph., 50HZ-With Connectors		
2.5	MACCETER-2.5-440V	On Request
5.0	MACCETER-5-440V	On Request
7.5	MACCETER7-5-440V	On Request
10.0	MACCETER-10-0-440V	On Request
12.5	MACCETER-12-5-440V	On Request
15	MACCETER-15- 440V	On Request
20	MACCETER-20-440V	On Request
25	MACCETER-25-440V	On Request
30	MACCETER-30-440V	On Request

Prices for other Voltages (230 / 400 / 415 / 480 / 525 / 690 V) & any other variant is available on request

Heavy Duty Re-inforced MA/C/CE/RTF Series

KVAR Rating	Cat. No.	MRP [₹]
440V, 3-Ph., 50HZ. Specially designed for Harmonic Filter Application		
2.5	MACCERTF-2.5- 440V	On Request
5.0	MACCERTF-5-440V	On Request
7.5	MACCERTF-7.5- 440V	On Request
10.0	MACCERTF-10- 440V	On Request
12.5	MACCERTF-12.5- 440V	On Request
15	MACCERTF-15- 440V	On Request
20	MACCERTF-20- 440V	On Request
25	MACCERTF-25- 440V	On Request
30	MACCERTF-30- 440V	On Request

APFC Relays

Intelligent Power Factor Controllers (IPFC)

Steps	CAT code	Voltage	Brief description	MRP [₹]
12 STEP - 3φ	RG3-12C	415V	12 Step intelligent PFC	34110
12 STEP - 3φ	RG3-12CS	415V	12 Step intelligent PFC with RS 485 communication	37580
15 STEP - 3φ	RG3-15C	230V	15 Step , Intelligent PFC relay	35750
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	43250
15 STEP - 3φ	RG3-15CLS	230V	15 Step , Intelligent PFC relay with 3 steps for reactor and RS485 communication	On request

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



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

Automatic Power Factor Controllers (APFC)

Steps	CAT code	Voltage	Brief description	MRP [₹]
6 STEP - 1 φ	RG-6T-230-96	230V	PFC (96X96) WITH 6 STEPS , 230 V	13000
6 STEP - 1 φ	RG-6T-415-96	415V	PFC (96X96) WITH 6 STEPS , 415 V	13000
6 STEP - 1 φ	RG-6T-230	230V	PFC (144X144) WITH 6 STEPS, 230 V	13675
6 STEP - 1 φ	RG-6T-415	415V	PFC (144X144) WITH 6 STEPS, 415 V	13675
8 STEP - 1 φ	RG-8T-230	230V	PFC (144X144) WITH 8 STEPS, 230 V	14320
8 STEP - 1 φ	RG-8T-415	415V	PFC (144X144) WITH 8 STEPS, 415 V	14320
8 STEP - 3 φ	RG3-8T-230	230V	PFC 144X144, 8 STEPS,230V UNABALANCELOAD	20860
12 STEP - 1 φ	RG-12T-230	230V	PFC (144X144) WITH 12 STEPS, 230 V	19650
12 STEP - 1 φ	RG-12T-415	415V	PFC (144X144) WITH 12 STEPS, 415 V	19650
12 STEP - 3 φ	RG3-12T-230	230V	PFC 144X144,12 STEPS,230V UNABALANCELOAD	23290

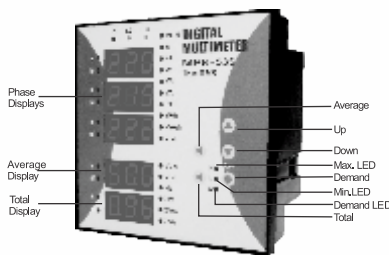
Note : **RG3-8/12/15 and RG3-12/15CS available in 230V only

Digital Network Analysers BCH

Sl. No.	Description	Cat. No	MRP [₹]
MPR-53 Series			
1	With Pulse Output, LED Display (96x96 mm)	MPR-53-96	14705
2	With Pulse Output, LED Display (144x144 mm)	MPR-53-144	On Request
3	With Pulse Output, LED Display (DIN)	MPR-53-DIN	15300
MPR-53S Series			
4	With RS-485 PC Communication (MODBUS-RTU Protocol) and Pulse Output, LED Display (96x96 mm)	MPR-53S-96	19975
5	With RS-485 PC Communication (MODBUS-RTU Protocol) and Pulse Output, LED Display (144x144 mm)	MPR-53S-96	On Request
6	With RS-485 PC Communication (MODBUS-RTU Protocol) and Pulse Output, LED Display (DIN)	MPR-53S-DIN	20765
MPR-60S Series			
7	With Total Harmonic Measurement, LCD Display (THD V%, THD I%) (96x96 mm)	MPR-60S	27985
8	With Total Harmonic Measurement, LCD Display + Digital Input and Digital Output (THD V%, THDI%) (96x96mm)	MPR-60S-10	On Request
MPR-63 Series			
9	With Harmonic Measurement, LCD Display (THD V%, THD I%, up to 31th harmonic for Current & Voltage separately) (96x96mm)	MPR-63	35020
10	With Harmonic Measurement, LCD Display + Digital Input and Digital Output (THD V%, THD I%, up to 31th harmonic for Current & Voltage separately) (96x96mm)	MPR63-10	On Request
MPR-SW - SOFTWARE FOR MONITORING & SAVING PARAMETERS FOR MPR SERIES			
11	For 1 MPR Series	MPR-SW-1	On Request
12	For 5 MPR Series	MPR-SW-5	On Request
13	For 10 MPR Series	MPR-SW-10	On Request
14	For 15 MPR Series	MPR-SW-15	On Request
15	For 20 MPR Series	MPR-SW-20	On Request
ACCESSORIES FOR MPR SERIES			
16	RS232 TO RS485 Converter with Serial Cable & Power Adaptor	RS-C1	On Request
17	RS-485 / USB Converter for communicating PC with USB Cable	RS-USB2	On Request
18	Amplifies the Communication Data Signal* 1	RPT-1	On Request

Note : *RPT-1 must be used for each 20 devices.
For any other variants please contact sales office

MPR 53 S-144 (144x144 mm)



MPR-53S-144



MPR-53S-DIN

Measured Parameters

- Phase - Neutral Voltages (V_{LN})
- Phase - Phase Voltages (V_{LL})
- Average Phase - Neutral Voltage Average
- Phase - Phase Voltage Phase Currents (I)
- Total Current (\hat{I})
- Power Factor (P.F) Frequency (Hz)
- Active Power (P)
- Max. And Min. Demand Values
- Reactive Power (Q)
- Apparent Power (S)
- Total Active Power (\hat{A} P)
- Total Reactive Power (\hat{A} Q)
- Total Apparent Power (\hat{A} S)
- Active Energy - Import (kWh)
- Active Energy - Export (kWh)
- Reactive Energy - Capacitive (kVAh)
- Reactive Energy - Inductive (kVAh)

MPR 63/MPR63-10



MPR-63 / MPR63- 10 :
THD V%, THD I%, up to 31th harmonic for current and voltage separately.
• Digital Output
• Digital Input (only for MPR63-10)

MPR-60S / MPR60S-10 :
THD V%, THD I%
• Digital Output
• Digital Input (only for MPR60S-10)



Measured Parameters

- 2nd, 3rd, 4th ... 31th Harmonic for I and V.
- Phase - Neutral Voltages (V_{LN})
- Phase - Phase Voltages (V_{LL})
- Average Phase - Neutral Voltage
- Average Phase - Phase Voltage
- Phase Currents (I)
- Neutral Current
- Total Current (\hat{I})
- Power Factor (P.F)
- Cos ϕ
- Frequency (Hz)
- Max., Min. and Demand Values

- Active Power (P)
- Reactive Power (Q)
- Apparent Power (S)
- Total Active Power (\hat{A} P)
- Total Reactive Power (\hat{A} Q)
- Total Apparent Power (\hat{A} S)
- Active Energy - Import (kWh)
- Active Energy - Export (kWh)
- Reactive Energy - Capacitive (kVAh)
- Reactive Energy - Inductive (kVAh)
- Total Harmonic Distortion for Voltage (THD V %)
- Total Harmonic Distortion for Current (THD I %)

3Phase Automatic Power Factor Correction (APFC) Panels NEW

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 Bhartia-Celduc's world class Solid State Relay (SSR) with TMS² technology 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 7032
- 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.

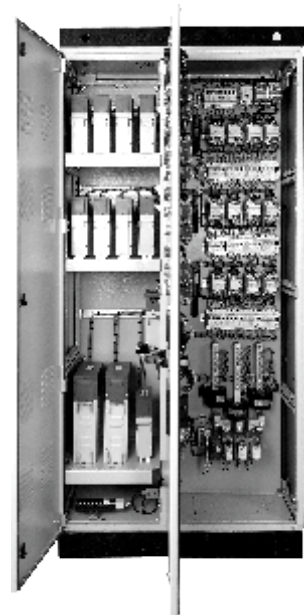
VERSION 2 - With BCH MPP Heavy Duty Reinforced Cylindrical Capacitors & **WITHOUT** Manual option.

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

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

VERSION 5 - With BCH MPP-BH Heavy Duty Long Life, Box Type Capacitors & **WITH** Manual option.

(Other tailor made versions on request)



Common Features

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

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

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

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

CONTACTORS - BCH Capacitor Duty Contactors as standard (BCH-Celduc SSR's on request).

R-Y-B INDICATIONS - BCH Flexi-22 LED's.

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

For prices contact our nearest sales office.

APFC Panels BCH

Version 1 & Version 2 - Cylindrical Type Capacitors & WITHOUT Manual Option

Version 1 & 2	KVA _r	Output Steps	Cat No. Vesion1/2	Incomer MCCB	Switching Sequence												Aprox Dimension W x H x D (mm)
					1	2	3	4	5	6	7	8	9	10	11	12	
					40	16x2.5	APFC40-1/2	100A(10KA)	2.5	2.5	5	10	20				
50	20x2.5	APFC50-1/2	100A(10KA)	2.5	5	7.5	10	25								800x1000x300	
60	12x5	APFC60-1/2	125A(15KA)	5	10	10	15	20								800x1000x300	
75	15x5	APFC75-1/2	150A(15KA)	5	10	15	20	25								800x1000x300	
100	20x5	APFC100-1/2	200A(15KA)	5	10	15	20	25	25							600x1800x500	
125	25x5	APFC125-1/2	225A(15KA)	5	10	10	25	25	25	25						600x1800x500	
150	30x5	APFC150-1/2	250A(25KA)	5	10	10	25	25	25	25	25					900x1600x500	
175	35x5	APFC175-1/2	400A(35KA)	5	10	10	25	25	25	25	25	25				900x1600x500	
200	40x5	APFC200-1/2	400A(35KA)	5	10	10	25	25	25	25	25	25	25			1000x1600x500	

Version 3 & Version 4 - Cylindrical Type Capacitors & WITH Manual Option

Version 3 & 4	KVA _r	Output Steps	Cat No. Vesion3/4	Incomer MCCB	Switching Sequence												Aprox Dimension W x H x D (mm)
					1	2	3	4	5	6	7	8	9	10	11	12	
					40	16x2.5	APFC40-3/4	100A(10KA)	2.5	2.5	5	10	20				
50	20x2.5	APFC50-3/4	100A(10KA)	2.5	5	7.5	10	25								800x1000x300	
60	12x5	APFC60-3/4	125A(15KA)	5	10	10	15	20								800x1000x300	
75	15x5	APFC75-3/4	150A(15KA)	5	10	15	20	25								800x1000x300	
100	20x5	APFC100-3/4	200A(15KA)	5	10	15	20	25	25							600x1800x500	
125	25x5	APFC125-3/4	225A(15KA)	5	10	10	25	25	25	25						600x1800x500	
150	30x5	APFC150-3/4	250A(25KA)	5	10	10	25	25	25	25	25					900x1600x500	
175	35x5	APFC175-3/4	400A(35KA)	5	10	10	25	25	25	25	25	25				900x1600x500	
200	40x5	APFC200-3/4	400A(35KA)	5	10	10	25	25	25	25	25	25	25			1000x1600x500	

Version 5 - Box Type Capacitors & WITH Manual Option

Version 5	KVA _r	Output Steps	Cat No. Vesion 5	Incomer MCCB	Switching Sequence												Aprox Dimension WxHxD(mm)
					1	2	3	4	5	6	7	8	9	10	11	12	
					40	8x5	APFC40-5	100A(10KA)	5	10	10	15					
50	10x5	APFC505	100A(10KA)	5	10	15	20									900x1200x600	
60	12x5	APFC605	125A(15KA)	5	10	20	25									900x1200x600	
75	15x5	APFC755	150A(15KA)	5	10	10	25	25								900x1200x600	
100	20x5	APFC100-5	200A(15KA)	5	10	10	25	25	25							900x1200x600	
125	25x5	APFC125-5	225A(15KA)	5	10	10	25	25	25	25						1000x1800x600	
150	30x5	APFC150-5	250A(25KA)	5	10	10	25	25	25	25	25					1000x1800x600	
175	35x5	APFC175-5	400A(35KA)	5	10	10	25	25	25	25	25	25				1000x1800x600	
200	40x5	APFC200-5	400A(35KA)	5	10	10	25	25	25	25	25	25	25			1200x1800x600	

Note: The Dimensions indicated above are without foundation frame and lifting angle/lifting hooks

Motors

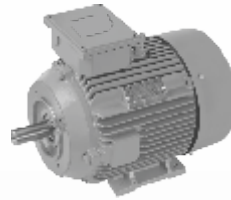
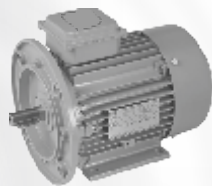
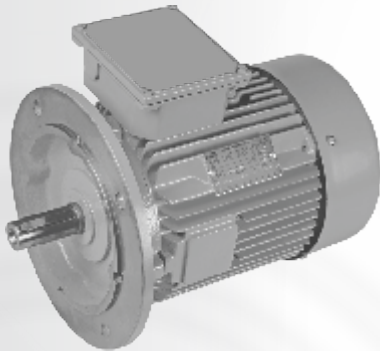
ENDURA

Low Voltage AC TEFC Squirrel
Cage Induction Motors

**EFF I
EFF2**

50°C
ambient temperature

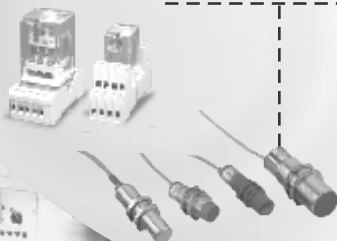
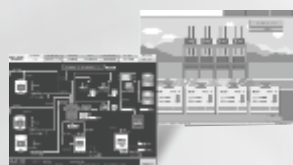
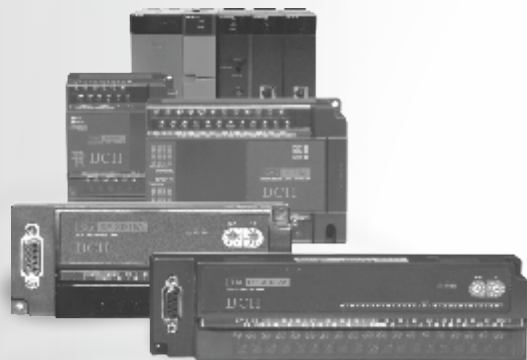
Class F



- **0.12 HP to 425 HP**
- **2 to 8 Poles**
- **Vector Plus 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**
- **CE marking**

Automation Products

- Programmable Logic Controllers
- Xpanel - Operator Interface
- SCADA
- Programmable Logic Relays
- AC Drives
- Soft Starters
- Digital DC Drives
- e-prox Sensors
- Plug-in Relays
- Electronic Timers
- Digital Timer / Programmable Counter



PLC Range of Automation Product

Series BP

- I/O capacity upto 128
- Suitable for Small size control system
- Easy expansion of Digital I/O, Analog I/O (Max 3 Block)
- Integrated Power module, CPU and I/O module
- High-speed operation : 200 nSec / Step
- Built in functions - High Speed Counter, PID function
- Self diagnostic functions : Operation delay, Memory error, I/O error, Battery error
- Large Instruction set : 55 Basic & 289 Application



Series CP

- I/O capacity upto 1024
- Compact and High Performance PLC
- Self diagnostic functions gives easy error detection
- High speed processing (200ns/step) by 16 bit PLC processor
- Max of 16 base expansion
- Large Instruction Set - More than 350 instructions
- Separate communication port available
- CPU embedded PID function



Series XP

- I/O capacity upto 8192
- Supports redundant system configuration
- High Speed Processing (75ns/step) by 32 bit PLC processor
- Provides more than 400 instructions
- CPU Embedded PID function
- Supports Floating Point Instruction (XP CPUs)

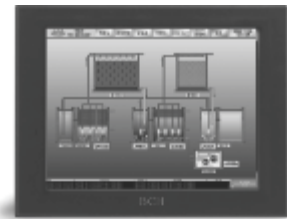


COMPREHENSIVE **HMI** SOLUTION

BCH Xpanel

WINDOWS CE BASED OPERATOR TERMINAL

- 4.3" to 12.1" TFT display
- 64K color TFT display
- External data interface : USB, SD/MMC
- Device communication via Ethernet, RS232/422/485
- Sufficient internal memory for large size application



BCH TOUCH PANEL

PANEL MOUNTED OPERATOR TERMINAL WITH BUILT IN SCADA SOFTWARE

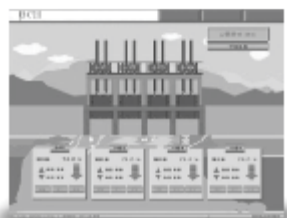
- 12.1" & 19" TFT display
- High color resolution TFT display
- Panel mountable structure
- All in one embedded board
- Connectivity with 4 serial ports and 1 Ethernet port



BCH SCADA

SUPPORT SYSTEM REDUNDANCY AND
CLIENT/SERVER CONFIGURATION

- 75 tags to unlimited tags, development & runtime package
- Web version package for 2 users to unlimited users
- Supports system redundancy & client server architecture
- Connectivity to RDBMS
- Open system architecture
- Tag database compatibility with various application



PLC, Xpanel & SCADA BCH

CP/XP Series Programmable Logic Controller

Block	Model	Description	MRP [₹]
CPU Module	CM1-CP4A/B/C/D/U	16K Steps / 384 I/O Points (B-RTC/C-RS232/D-RS422-485/U-USB)	For prices please contact our nearest sales office
	CM1-CP3A/B/P/U	32K Steps / 1024 I/O Points / Expandable (B-RTC/P-Ext Memo Card/U-USB)	
	CM1-XP1A / R	128Ksteps / 8192 I/O Points / Expandable / RTC / floating point arithmetic / Supports Redundancy	
	CM1-XP2A	64Ksteps / 4096 I/O Points / Expandable / floating point arithmetic	
	CM1-XP3A	64Ksteps / 2048 I/O Points / Expandable / floating point arithmetic	
Power Supply Module	CM1-SPC	Input-AC 110-220V, Output-24V : 0.2A/15V : 0.5A/5V : 3A	
	CM1-SP2B	Input-DC 24V, Output-24V : 0.5A/15V : 0.5A/5V : 3.5A	
Base Rack	CM1-BS03/04/05/08/10/12A	Base rack with 03/04/05/08/10/12 slots	
DC Type Input Module	CM1-XD16A	16 Points / DC 24V Input / SINK & SRC / ON Voltage 19V / OFF Voltage 11V	
	CM1-XD32C	32 Points / DC 24V Input / SINK & SRC / ON Voltage 19V / OFF Voltage 11V	
	CM1-XD16B	16 Points / DC 24V Input / SINK & SRC / ON Voltage 15V / OFF Voltage 12V	
	CM1-XD32B	32 Points / DC 24V Input / SINK & SRC / ON Voltage 15V / OFF Voltage 12V	
AC Type Input Module	CM1-XA08A	08 Points / AC 220-240V / ON Voltage 160V / OFF Voltage 60V	
	CM1-XA08B	08 Points / AC 110V / ON Voltage 80V / OFF Voltage 30V	
I/O Module	CM1-XY16DR	08 Points / DC 24V : 8 Point / Relay Output / 2A	
Relay Output Module	CM1-YR16A	16 Points / Relay Output / 2A	
	CM1-YS08A	08 Points / SSR Output / 1A	
Transistor Output Module	CM1-YT16A/B	16 Points / TR - SINK / Source Output	
	CM1-YT32A/C	32 Points / TR - SINK / Source Output	
Analog Output Module	CM1-AD04VI	04 Channels / 14 bits / Current & Voltage Input	
	CM1-AD08V	08 Channels / 14 bits / Voltage Input	
	CM1-AD08I	08 Channels / 14 bits / Current Input	
Analog Input Module	CM1-DA04/08V	04/08 Channels / 14 bits / Voltage Output	
	CM1-DA04/08I	04/08 Channels / 14 bits / Current Output	
	CM1-DA04/08VA	04/08 Channels / 14 bits / Voltage/Current selectable Output	
RTD	CM1-RD04A	04 Channel, Pt100 / JPt100, 14 bit resolution	
TC	CM1-TC04A	04 Channel / Type K,J,E,TB,R,S / 14 bit resolution	
Thermistor	CM1-TH08A	08 Channel / NTC Type / 0.1 Deg C resolution	
Load Cell	CM1-WG02A	02 Channel / Strain gauge	
High Speed	CM1-HS02B	2 Channel / 1/2 phase inputs / Signal-DC 5/12/24V, 5mA / 200kPPS / Open collector output	
Positioning	CM1-PS02A	2-axis / Linear / Arc interpolation / 1 MPPS / Line Driver Pulse output	
Data logger	CM1-LG32A	Real-time Sampling data / 32Mbytes / RS232C port / Async	
RS232C/ RS422/ RS485	CM1-SC02A	RS232C, RS422/485 / BCH-CIMON portocol / Async / MODBUS RTU	
	CM1-SC01A	RS232C / BCH-CIMON protocol / Async / MODBUS RTU	
	CM1-SC01B	RS422/485 / BCH-CIMON protocol / Async / MODBUS RTU	
Ethernet	CM1-EC01A	10Mbps, Base band / CSMA/CD / TCP/IP, UDP/IP	
Profibus DP	CM1-PD01A	Profibus DP Master / RS485 / I/O Data 512 Byte	

BP Series

Model	Power	Input			Output		Remarks	MRP [₹]
CM2-BP32MDTA*	AC 100-240V	16	DC 24V	16	TR SINK	* Indicates R : RS232C S : RS422/485 E : Ethernet (10M) U : RS422/485 2Ch T : RS232 1 Ch	For prices please contact our nearest sales office	
CM2-BP32MDCA*					TR SOURCE			
CM2-BP32MDRA*					RELAY			
CM2-BP32MDTD*	TR SINK							
CM2-BP32MDCD*	TR SOURCE							
CM2-BP32MDRD*	RELAY							
CM2-BP16MDTA*	AC 100-240V	8	DC 24V	7	TR SINK	* Indicates R : RS232C S : RS422/485		
CM2-BP16MDCA*					TR SOURCE			
CM2-BP16MDRA*					RELAY			
CM2-BP16MDTD*	DC 24V				TR SINK			
CM2-BP16MDCD*					TR SOURCE			
CM2-BP16MDRD*					RELAY			
CM2-BP16EDT	16 CH							
CM2-BP16EDC	16 CH							
CM2-BP16EDR	16 CH							

* Please refer catalogue for details

Human Machine Interface

Xpanel

Model	Specification	MRP [₹]
CM-XT04CD-D	4.3", 480 x 272 Resistive, TFT Colour display 32MB Flash Memory, RS232/Ethernet/USB host port	For prices please contact our nearest sales office
CM-XT07CB-A CM-XT07CB-D	7", 65536 Color, 800 x 480 Resistive, TFT Color display, 32MB Flash memory, RS232/Ethernet/USB host port	
CM-XT10CB-A	10.4", 65536 Color, 800 x 600 Resistive, TFT Color display, 64MB SDRAM, 32MB Flash memory, RS232/Ethernet/USB host port	
CM-XT12CB-A	12.1", 65536 Color, 800 x 600 Resistive, TFT Color display, 64MB SDRAM, 32MB Flash memory, RS232/Ethernet/USB host port	

- * A - AC Power Input - 90 - 240V AC
- * D - DC Power Input - 24V DC

SCADA Software

Development System

Model	No. of Tags	Description	MRP [₹]
CM01-0075/DS	75 Tags	Development + Runtime + Keylock + Manual	For prices please contact our nearest sales office
CM01-0150/DS	150 Tag	Development + Runtime + Keylock + Manual	
CM01-0500/DS	500 Tag	Development + Runtime + Keylock + Manual	
CM01-1500/DS	1500 Tag	Development + Runtime + Keylock + Manual	
CM01-FULL/DS	Unlimited Tag	Development + Runtime + Keylock + Manual	

Runtime System

Model	No. of Tags	Description	MRP [₹]
CM01-0075/RS	75 Tags	Runtime + Keylock	For prices please contact our nearest sales office
CM01-0150/RS	150 Tag	Runtime + Keylock	
CM01-0500/RS	500 Tag	Runtime + Keylock	
CM01-1500/RS	1500 Tag	Runtime + Keylock	
CM01-FULL/RS	Unlimited Tag	Runtime + Keylock	

Web Version

Model	No. of Tags	Description	MRP [₹]
CM01-0002/WS	02 User	2 concurrent users (Including Full/DS)	For prices please contact our nearest sales office
CM01-0005/WS	05 User	5 concurrent users (Including Full/DS)	
CM01-0010/WS	10 User	10 concurrent users (Including Full/DS)	
CM01-FULL/WS	Unlimited User	Unlimited concurrent users (Including Full/DS)	

Hard Key Selection

LPT	For Printer Port
USB	For USB Port

* Please refer catalogue for details

Programmable Logic Relay BCH

Programmable Logic Relay

Compact, Modular, Flexible, Economic and Capable
 Surface mounting & DIN rail mounting
 Controls 82 inputs/outputs including 8 analog inputs.
 Output rating 10Amp for relay and 2Amp for transistor.
 Programming through "SUPER CAD" FBD programming software or LCD programming panel.
 Removable and separately installable LCD display panel.
 Voice module offers auto telephone dialing and pre recorded alarms.
 Industrial wireless remote control module offer 6 wireless remote control input points.
 Three no. extension I/O can be used as distributed I/O up to max. 6 mtrs. in length

Product Description	Cat. Ref. No	MRP [₹]
100~240VAC 8 AC IN/4 R Out Control unit	SR-12MRAC	7425
100~240VAC 14 AC IN/8 R Out Control unit	SR-22MRAC	11700
100~240VAC 12 AC IN/8 R Out Expansion Unit	SR-20ERA	7245
12~24VDC 8 DC IN (A) /4 R Out Control unit	SR-12MRDC	7425
12~24VDC 14 DC IN (A) /8 R Out Control unit	SR-22MRDC	12335
12~24VDC 12 DC IN (A) /8 R Out Expansion Unit	SR-20ERD	7245
12~24VDC 8 DC IN (A) /4 T Out Control unit	SR-12MTDC	7690
12~24VDC 14 DC IN (A) /8 T Out Control unit	SR-22MTDC	13680
12~24VDC 12 DC IN (A) /8 T Out Expansion Unit	SR-20ETD	7245
100~240VAC type receiver module	SR-RCA	10815
12~24VDC type receiver module	SR-RCD	10815
DC3V Transmitter module	SR-TC	4305
100~240VAC AC voice module	SR-VPA	9765
12~24 VDC DC voice module	SR-VPD	9765
Human Machine Interface (LCD panel)	SR-HMI-B	2150
Progammig cable - RS232-9 PIN D	SR-CP	1750
Progammig cable - USB	SR-DUSB	2150
AC Type remote Connecting bridge	SR-ECBA	785
DC Type remote Connecting bridge	SR-ECBD	785
Remote mounting rack for LCD panel	SR-EHC	975
Programming Panel	SR-WRT	2150
Recording cable	SR-AUD	190
Long connecting antenna of SR-RCA/SR-RCD	SR-EANT	3120



AC Drives BCH

SINUS N Drive



Rating (Kw)	Drive Series	Product Code	Supply Details	Remark	Current (A)	MRP [₹]
0.37	SINUS N	SINUS N 2S0001XBK2	Input - 1 phase 200 - 240V AC, Output - 3 phase, 240V AC	With EMC	2.5	14200
0.37	SINUS N	SINUS N 2S0001XIK2		W/o EMC	2.5	13300
0.75 - 1.1	SINUS N	SINUS N 2S0002XBK2		With EMC	5	16100
0.75 - 1.1	SINUS N	SINUS N 2S0002XIK2		W/o EMC	5	15200
1.5 - 1.8	SINUS N	SINUS N 2S0003XBK2		With EMC	8	19800
1.5 - 1.8	SINUS N	SINUS N 2S0003XIK2		W/o EMC	8	18200
2.2 - 3	SINUS N	SINUS N 2S0005XBK2		With EMC	12	24000
2.2 - 3	SINUS N	SINUS N 2S0005XIK2		W/o EMC	12	22300

SINUS M Drive



- 0.4~22Kw 380-480Vac, 3 phase
- Sensorless vector and V/F control
- Integrated braking module
- Build in PID function

Rating (Kw)	Drive Series	Product Code	Supply Details	Remark	Current (A)	MRP [₹]
0.37 - 0.55	SINUS M	SINUS M 4T0001BA2K2	Input - 3 phase 415V AC, Output - 3 phase, 415V AC	With EMC	1.25	21750
0.75 - 0.9	SINUS M	SINUS M 4T0002BA2K2		With EMC	2.50	23700
1.5	SINUS M	SINUS M 4T0003BA2K2		With EMC	4.00	26600
2.2	SINUS M	SINUS M 4T0005BA2K2		With EMC	6.00	28600
3.4	SINUS M	SINUS M 4T0007BA2K2		With EMC	9.00	35200
5.5	SINUS M	SINUS M 4T0011BA2K2		With EMC	12.00	45500
7.5	SINUS M	SINUS M 4T0014BA2K2		With EMC	16.00	53500
11	SINUS M	SINUS M 4T0017BA2K2		With EMC	24.00	93850
15	SINUS M	SINUS M 4T0020BA2K2		With EMC	30.00	108000
18.5	SINUS M	SINUS M 4T0025BA2K2		With EMC	39.00	136950
22	SINUS M	SINUS M 4T0030BA2K2		With EMC	45.00	161100

*SINUS M available in 1 phase to 3 phase version also





Sinus Penta 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

Drive Model				LIGHT			STANDARD			HEAVY			STRONG		
	Inom.	Imax.	Ipeak	Overload up to 120%			Overload up to 140%			Overload up to 175%			Overload up to 200%		
	A	A	A	Motor power 380 - 415 VAC			Motor power 380 - 415 VAC			Motor power 380 - 415 VAC			Motor power 380 - 415 VAC		
				KW	HP	A	KW	HP	A	KW	HP	A	KW	HP	A
SINUS P 0005	10.5	11.5	14	4.5	6	9	4	5.5	8.4	3	4	6.4	2.2	3	4.9
SINUS P 0007	12.5	13.5	16	5.5	7.5	11.2	4.5	6	9.0	4	5.5	8.4	3	4	6.4
SINUS P 0009	16.5	17.5	19	7.5	10	14.5	5.5	7.5	11.2	4.5	6	9	4	5.5	8.4
SINUS P 0011	16.5	21	25	7.5	10	14.8	7.5	10	14.8	5.5	7.5	11.2	4.5	6	9
SINUS P 0014	16.5	25	30	7.5	10	14.8	7.5	10	14.8	7.5	10	14.8	5.5	7.5	11.2
SINUS P 0016	27	30	36	11	15	21	9	12.5	18	9	12.5	18	7.5	10	15
SINUS P 0017	30	32	37	15	20	29	11	15	21	9	12.5	18	7.5	10	15
SINUS P 0020	30	36	43	15	20	29	15	20	29	11	15	21	9.2	12.5	18
SINUS P 0025	41	48	58	22	30	41	18.5	25	35	15	20	29	11	15	21
SINUS P 0030	41	56	67	22	30	41	22	30	41	18.5	25	35	15	20	29
SINUS P 0034	57	63	76	30	40	55	25	35	46	22	30	41	18.5	25	35
SINUS P 0036	60	72	86	30	40	55	30	40	55	25	35	46	22	30	41
SINUS P 0040	72	80	88	37	50	67	30	40	55	25	35	46	22	30	41
SINUS P 0049	80	96	115	45	60	80	37	50	67	30	40	55	25	35	46
SINUS P 0060	88	112	134	50	70	87	45	60	80	37	50	67	30	40	55
SINUS P 0067	103	118	142	55	75	98	55	75	98	45	60	80	32	45	59
SINUS P 0074	120	144	173	65	90	114	65	90	114	50	70	87	37	50	67
SINUS P 0086	135	155	186	75	100	133	75	100	133	55	75	98	45	60	80
SINUS P 0113	180	200	240	100	135	180	90	125	159	75	100	133	55	75	98
SINUS P 0129	195	215	258	110	150	191	100	135	180	80	110	144	65	90	114
SINUS P 0150	215	270	324	120	165	212	110	150	191	90	125	159	75	100	133
SINUS P 0162	240	290	324	132	180	228	132	180	228	110	150	191	90	125	159
SINUS P 0180	300	340	408	160	220	273	150	200	264	132	180	228	110	150	191
SINUS P 0202	345	420	504	200	270	341	160	220	273	160	220	273	132	180	228
SINUS P 0217	375	460	552	220	300	375	220	270	375	185	250	321	150	200	260
SINUS P 0260	425	560	672	250	340	425	250	340	425	220	300	375	185	250	321
SINUS P 0313	480	600	720	280	380	480	280	380	480	250	340	421	200	270	341
SINUS P 0367	550	680	792	315	430	528	315	430	528	280	380	480	220	300	375
SINUS P 0402	680	850	1020	400	550	680	400	550	680	355	485	589	280	380	480

For prices contact our nearest sales office.



ASAB Series Soft Starter

- 23A - 1600 A, 200V - 525V AC, 380V-690V AC
- Various motor protections builtin
- 3 wire and 6 wire connection
- 5/5 programmable I/Os
- Allowed overload from 300%- 450% of nominal
- Integrated Multimeter

Starting Functions

- Constant current start mode
- Current ramp start mode
- Torque control
- Kick start
- Inbuilt bypass contractor upto 220AMP

Protection Functions

- Thermal motor protection
- Motor thermistor input (PTC)
- Phase imbalance
- Phase sequence
- Electronic shearpin
- Undercurrent
- Shorted SCR
- ...and many more

Modello Model 200-525V	Size	Start per Hour	Bypassed ratings In-line connection				Start per Hour	Bypassed ratings Inside Delta connection			
			300%, 10s Light Dty	350%, 15s	400%, 20s	450%, 30s Hvy Dty		300%, 10s Light Dty	350%, 15s	400%, 20s	450%, 30s Hvy Dty
			N°	Amps	Amps	Amps		N°	Amps	Amps	Amps
ASAB-0023B/5/12/2	G1 no fan	10	23	20	17	15	10	35	30	26	22
ASAB-0043B/5/12/2	G1 no fan	10	43	37	31	26	10	65	59	51	44
ASAB-0053B/5/12/2	G1 no fan	10	53	53	46	37	10	80	80	69	55
ASAB-0076B/5/12/2	G1 no fan	6	76	64	55	47	6	114	96	83	70
ASAB-0097B/5/12/2	G1	6	97	82	69	58	6	146	123	104	87
ASAB-0100B/5/12/2	G1	6	100	88	74	61	6	150	132	112	92
ASAB-0105B/5/12/2	G1	6	105	105	95	78	6	158	158	143	117
ASAB-0145B/5/12/0	G2	6	145	123	106	90	6	218	184	159	136
ASAB-0170B/5/12/0	G2	6	170	145	121	97	6	255	217	181	146
ASAB-0200B/5/12/0	G2	6	200	189	160	134	6	300	283	241	200
ASAB-0220B/5/12/0	G2	6	220	210	178	148	6	330	315	268	223
			Non Bypassed Ratings In-line connection				Non Bypassed ratings Inside delta connection				
ASAB-0255C/5/12/0	G3	6	255	231	201	176	6	383	346	302	264
ASAB-0380C/5/12/0	G4	6	380	380	359	299	6	570	570	539	449
ASAB-0430C/5/12/0	G4	6	430	430	368	309	6	645	645	552	464
ASAB-0620C/5/12/0	G4	6	620	620	540	434	6	930	930	810	651
ASAB-0650C/5/12/0	G4	6	650	650	561	455	6	975	975	842	683
ASAB-0790C/5/12/0	G4	6	790	790	714	579	6	1185	1185	1071	868
ASAB-0930C/5/12/0	G4	6	930	930	829	661	6	1395	1395	1244	992
ASAB-1200C/5/12/0	G5	6	1200	1200	1200	1071	6	1800	1800	1800	1606
ASAB-1410C/5/12/0	G5	6	1410	1410	1319	1114	6	2115	2115	1979	1671
ASAB-1600C/5/12/0	G5	6	1600	1600	1600	1353	6	2400	2400	2400	2030

* To complete cat code suffix : 7 - for 380 - 690V AC. For Price List of suffix 7 pl. contact our sales office.

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



ASAC Series Soft-Starter

- Power supply voltage Range: 200-440VAC
- RS-485 Communication Port
- Compact size & Range 7.5KW - 110KW
- Internal By-pass contactor
- 400% Max allowed overload of nominal current.
- Full Compatibility with teleservice software "Remote Drive" on internet

Protection Functions

- Motor Overload
- Phase loss
- Excess start Time
- Phase Sequence
- Motor thermistor I/P
- Power circuit fault
- Supply Frequency
- Communication Failure

BIL Product Reference	Motor Rating Kw	MRP [₹]	Remark
200 - 440 VAC, IP:20			
ASAC-0/007/4/1	7.5	37250	Without Motor Protection & with Inbuilt Bypass contractor.
ASAC-0/015/4/1	15	37750	
ASAC-0/018/4/1	18.5	38250	
ASAC-0/022/4/1	22	40290	
ASAC-0/030/4/1	30	44370	
ASAC-0/037/4/1	37	53040	
ASAC-0/045/4/1	45	65280	
ASAC-0/055/4/1	55	66810	
ASAC-0/075/4/1	75	101500	
ASAC-0/090/4/1	90	111180	
ASAC-0/110/4/1	110	119850	
200 - 440 VAC, IP:20			
ASAC-1/007/4/1	7.5	52050	With Motor Protections & Inbuilt Bypass contractor.
ASAC-1/015/4/1	15	58150	
ASAC-1/018/4/1	18.5	59700	
ASAC-1/022/4/1	22	63250	
ASAC-1/030/4/1	30	70380	
ASAC-1/037/4/1	37	78550	
ASAC-1/045/4/1	45	95900	
ASAC-1/055/4/1	55	101000	
ASAC-1/075/4/1	75	120400	
ASAC-1/090/4/1	90	158100	
ASAC-1/110/4/1	110	171900	

Soft Starters & DC Drives BCH



Medium Voltage Soft-Starter

- Power supply 2300VAC to 15000VAC, Rated current 200A to 600A
- 3 types of motor starting (Constant Current, Current Ramp, Torque Control)
- Allowed overload 600% of nominal current
- Class A EMC
- Operating temperature 0 to 50 deg
- Protections: Under / Overvoltage, Supply Frequency, Phase sequence,
- Shorted SCR, Motor Overload, Ground Fault, Undercurrent , Current Imbalance etc
- 5 Remote control inputs (3 Fixed & 2 Programmable)
- 6 Relay Outputs
- Analog output (1 Programmable)
- Serial output (RS-485 Modbus -RTU)

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

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

For above 1200 Amp rating details contact our nearest sales office.

For prices contact our nearest sales office.



- 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

@PROX Range

Standard Version of Inductive Proximity Switches

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	980	10
DINE8SN10	8	1.5	NPN-NO	100	980	
DINE12SP10	12	2	PNP-NO	200	775	
DINE12SN10	12	2	NPN-NO	200	775	
DINE18SP10	18	5	PNP-NO	200	825	
DINE18SN10	18	5	NPN-NO	200	805	
DINE30SP10	30	10	PNP-NO	400	1010	
DINE30SN10	30	10	NPN-NO	400	1010	
Non Flush Version Nominal Voltage 12-30V DC 3 Wire Output LED Indication Integrated cable 3C/2M						
DINE8NP10	8	2	PNP-NO	100	980	10
DINE8NN10	8	2	NPN-NO	100	965	
DINE12NP10	12	4	PNP-NO	200	775	
DINE12NN10	12	4	NPN-NO	200	775	
DINE18NP10	18	8	PNP-NO	200	825	
DINE18NN10	18	8	NPN-NO	200	825	
DINE30NP10	30	15	PNP-NO	400	1010	
DINE30NN10	30	15	NPN-NO	400	1010	
Flush Version Nominal Voltage 240V AC* 2 Wire Output LED Indication Integrated cable 3C/2M						
DINE12SA10	12	2	NO	200	965	10
DINE12SA01	12	2	NC	200	965	
DINE18SA10	18	5	NO	400	970	
DINE18SA01	18	5	NC	400	970	
DINE30SA10	30	10	NO	400	1145	
DINE30SA01	30	10	NC	400	1145	
Non Flush Version Nominal Voltage 240V AC* 2 Wire Output LED Indication Integrated cable 3C/2M						
DINE12NA10	12	4	NO	200	965	10
DINE12NA01	12	4	NC	200	965	
DINE18NA10	18	8	NO	400	970	
DINE18NA01	18	8	NC	400	970	
DINE30NA10	30	15	NO	400	1145	
DINE30NA01	30	15	NC	400	1145	

*110V AC input voltage is also available

@PROX Range

Capacitive Proximity Switches



- 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	2010	10
DCAE18SP10	18	1 to 5	PNP-NO	400	2010	
DCAE30SN10	30	1 to 10	NPN-NO	400	2310	
DCAE30SP10	30	1 to 10	PNP-NO	400	2310	
Non Flush Version 12-30V DC 3 Wire Output LED Indication Integrated 3C/2M						
DCAE18NN10	18	2 to 10	NPN-NO	400	2010	10
DCAE18NP10	18	2 to 10	PNP-NO	400	2010	
DCAE30NN10	30	3 to 15	NPN-NO	400	2310	
DCAE30NP10	30	3 to 15	PNP-NO	400	2310	

Photoelectric Sensors



- 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 [₹]
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	3070
DPHE18D2P11	18	200	PNP-NO+NC	200	3070
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	3070
DPHE18RRP11	18	1000	PNP-NO+NC	200	3070
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	3700
DPHE18TBRN11	18	5000	NPN-NO+NC	200	3700

Note :

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



Standard Version of Inductive Proximity Switches

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	1015	10
DINE8SN10K	8	1.5	NPN-NO	M8 Connector	1015	
DINE12SP10K	12	2	PNP-NO	M12 Connector	1005	
DINE12SN10K	12	2	NPN-NO	M12 Connector	1005	
DINE18SP10K	18	5	PNP-NO	M12 Connector	1005	
DINE18SN10K	18	5	NPN-NO	M12 Connector	1005	
DINE30SP10K	30	10	PNP-NO	M12 Connector	1130	
DINE30SN10K	30	10	NPN-NO	M12 Connector	1130	
Non Flush Version Nominal Voltage 12-30V DC 3 Wire Output LED Indication						
DINE8NP10K	8	2	PNP-NO	M8 Connector	1015	10
DINE8NN10K	8	2	NPN-NO	M8 Connector	1015	
DINE12NP10K	12	4	PNP-NO	M12 Connector	1015	
DINE12NN10K	12	4	NPN-NO	M12 Connector	1035	
DINE18NP10K	18	8	PNP-NO	M12 Connector	1005	
DINE18NN10K	18	8	NPN-NO	M12 Connector	1015	
DINE30NP10K	30	15	PNP-NO	M12 Connector	1110	
DINE30NN10K	30	15	NPN-NO	M12 Connector	1145	
Cat. No.	Description Female Connectors				MRP [₹]	
DM8K3	M8 3-Wire straight connector w/o LED & 2 m cable				775	10
DM8K390LE	M8 3-Wire "L" type connector with LED & 2 m cable				780	
DM12K4	M12 4-Wire straight connector w/o LED & 2 m cable				525	
DM12K490	M12 4-Wire "L" type connector w/o LED & 2 m cable				760	
DM12K490LE	M12 4-Wire "L" type connector with LED & 2 m cable				810	
Linear Output Inductive Proximity Sensor - Nominal Voltage 24V DC, 2m Integrated Cable						
DINE18LIN	18	5	0 - 10V	2 m long PVC Cable	1735	10
DINE18LINMA	18	5	4 - 20 mA		1735	

Standard Version DC 2 Wire Proximity Switches

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	1200	10
DINE12SD10	12	2	NO	200	810	
DINE18SD10	18	5	NO	400	855	
DINE30SD10	30	10	NO	400	1110	
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	1200	10
DINE12ND10	12	4	NO	200	820	
DINE18ND10	18	8	NO	400	855	
DINE30ND10	30	15	NO	400	1110	

Note : for NC output, replace suffix 10 by 01



Short Housing Inductive Proximity Switch-45mm length

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	1240	10
DINE8SN10S	8	1.5	NPN-NO	200	1240	
DINE12SP10S	12	2	PNP-NO	200	840	
DINE12SN10S	12	2	NPN-NO	200	840	
DINE18SP10S	18	5	PNP-NO	400	870	
DINE18SN10S	18	5	NPN-NO	400	870	
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	1240	10
DINE8NN10S	8	2	NPN-NO	200	1240	
DINE12NP10S	12	4	PNP-NO	200	840	
DINE12NN10S	12	4	NPN-NO	200	840	
DINE18NP10S	18	8	PNP-NO	400	855	
DINE18NN10S	18	8	NPN-NO	400	855	

Square / Rectangular Proximity Switch

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	870	10
DINE2020SN10P	20x20x38	5	NPN-NO	200	870	
DINE5025SP10P	50x25x10	5	PNP-NO	200	910	
DINE1717SN10P	17x17x30	5	NPN-NO	200	870	
DINE2020SP10P	20x20x38	5	PNP-NO	200	870	
DINE5025SN10P	50x25x10	5	NPN-NO	200	910	

High Ambient Temperature (up to 125°C) Proximity Switch

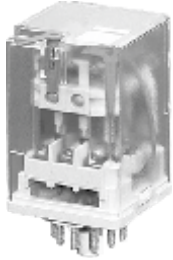
Cat. No.*	Size (mm)	Nominal Sensing Distance (mm)	Output	Max. Load (mA)	MRP [₹]	Lot Size
Flush/Non Flush Version, Nominal Voltage 230V AC, 2 Wire Output, LED Indication, Integrated 3C/2m long Cable, SS Housing						
DINE30SA10HT **	30	4	NO	200	3340	10
DINE30NA10HT **	30	6	NO	200	3325	
DINE18SA10HT **	18	2	NO	200	3175	
DINE18NA10HT **	18	3	NO	200	3175	

* For NC Output, Replace Suffix 10 by 01

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

Plug in Relays BCH

Universal Relays



- Type ARPU
- 10 Amp (Res) Contact rating
- 2 Change over / 3 Change over
- Silver Nickle Contacts
- Built in Mechanical Indicator/ Latching facility
- Wide Coil Voltages
- With and without LED
- 8 Pin / 11 Pin Socket



Socket & Clamp

35 mm DIN rail mounting Rating : 10A, 250V



Plug In Relays - Universal

Cat. No.	Coil Voltage	Contacts	MRP [₹]	Lot Size
8 Pin, Contact rating = 10A (Res.) at 24V DC/250V AC; Mechanical indicator with manual testing/latching lever				
ARPU212D	12 V DC	2 C/O	480	10
ARPU224D	24V DC		475	
ARPU248D	48V DC		480	
ARPU2110D	110V DC		470	
ARPU224A	24V AC		500	
ARPU248A	48V AC		575	
ARPU2110A	110V AC		495	
ARPU2230A	230V AC		520	
8 Pin, Contact rating = 10A (Res.) at 24V DC/250V AC; LED Indication & Mechanical indicator with manual testing/latching lever				
ARPU212DLE	12 V DC	2 C/O	520	10
ARPU224DLE	24V DC		500	
ARPU248DLE	48V DC		640	
ARPU2110DLE	110V DC		520	
ARPU224ALE	24V AC		520	
ARPU248ALE	48V AC		680	
ARPU2110ALE	110V AC		535	
ARPU2230ALE	230V AC		550	
11 Pin, Contact rating = 10A (Res.) at 24V DC/250V AC; Mechanical indicator with manual testing/latching lever				
ARPU312D	12 V DC	3 C/O	520	10
ARPU324D	24V DC		520	
ARPU348D	48V DC		520	
ARPU3110D	110V DC		520	
ARPU324A	24V AC		550	
ARPU348A	48V AC		600	
ARPU3110A	110V AC		535	
ARPU3230A	230V AC		550	
11 Pin, Contact rating = 10A (Res.) at 24V DC/250V AC; LED Indication & Mechanical indicator with manual testing/latching lever				
ARPU312DLE	12 V DC	3 C/O	550	10
ARPU324DLE	24V DC		675	
ARPU348DLE	48V DC		550	
ARPU3110DLE	110V DC		550	
ARPU324ALE	24V AC		580	
ARPU348ALE	48V AC		600	
ARPU3110ALE	110V AC		575	
ARPU3230ALE	230V AC		615	

Sockets

Cat. No.	Type	MRP [₹]	Lot Size
10A, 250V AC, Screw Terminals, 35mm DIN Rail Mounting			
ARSU11	11 Pin Socket	265	10
ARSU8	8 Pin Socket	255	
ARPUCL	Holding Clamp	35	

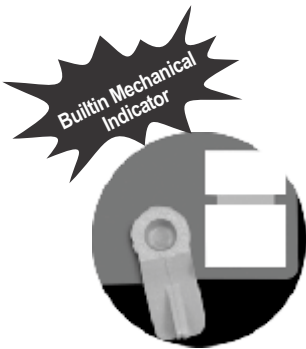
Subject to availability

Plug in Relays BCH

Miniature Plug in Relays



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



Socket & Clamp ARSM

35 mm DIN rail mounting
Rating : 6A, 12A, 300V



Plug in Relays - Miniature

Cat. No.	Coil Voltage	Contacts	MRP [₹]	Lot Size
14 Pin, Contact rating = 6A (Res.) at 24V DC/250V AC; Mechanical indicator with manual testing/latching lever				
ARPM412D	12 V DC	4 C/O	310	10
ARPM424D	24V DC		285	
ARPM448D	48V DC		335	
ARPM4110D	110V DC		330	
ARPM424A	24V AC		330	
ARPM448A	48V AC		335	
ARPM4110A	110V AC		310	
ARPM4230A	230V AC		325	
14 Pin, Contact rating = 6A (Res.) at 24V DC/250V AC; LED Indication & Mechanical indicator with manual testing/latching lever				
ARPM412DLE	12 V DC	4 C/O	340	10
ARPM424DLE	24V DC		320	
ARPM448DLE	48V DC		365	
ARPM4110DLE	110V DC		365	
ARPM424ALE	24V AC		365	
ARPM448ALE	48V AC		365	
ARPM4110ALE	110V AC		345	
ARPM4230ALE	230V AC		360	
8 Pin, Contact rating = 12A (Res.) at 24V DC/250V AC; Mechanical indicator with manual testing/latching lever				
ARPM212D	12 V DC	2 C/O	300	10
ARPM224D	24V DC		255	
ARPM248D	48V DC		360	
ARPM2110D	110V DC		350	
ARPM224A	24V AC		305	
ARPM248A	48V AC		360	
ARPM2110A	110V AC		275	
ARPM2230A	230V AC		305	
8 Pin, Contact rating = 12A (Res.) at 24V DC/250V AC; LED Indication & Mechanical indicator with manual testing/latching lever				
ARPM212DLE	12 V DC	2 C/O	330	10
ARPM224DLE	24V DC		305	
ARPM248DLE	48V DC		360	
ARPM2110DLE	110V DC		350	
ARPM224ALE	24V AC		350	
ARPM248ALE	48V AC		370	
ARPM2110ALE	110V AC		330	
ARPM2230ALE	230V AC		345	

Sockets

Cat. No.	Type	MRP [₹]	Lot Size
Screw Terminals, 35mm DIN Rail Mounting			
ARSM14	14 Pin Socket	255	10
ARSM8	8 Pin Socket	190	
ARPMCL	Holding Clamp	30	

Subject to availability

Electronic Timers



- 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

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-	930
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	930
Chronos Delay on make type BAR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC or 12V DC	SBT00-00	1665
Delay on break type BCR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC or 12V DC	SBT01-00	1825
Recycling type BDR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC	SBT02-00	2425
Multifunction type BLR 0.1 Sec. - 10 Hrs. 240V AC; 24V AC/DC or 110V AC; 24V AC/DC	SBT03-00	1865
Star-Delta Timer Type DQR-0.2-20 Sec./1-100 Sec.; 415/240, 110V:AC	SDT00-0-	1675

- Voltage Code
- Timing Range for Star-Delta Timers & SAS Timer

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
D	240 V AC	1
	415 V/240 V AC	0
	110 V AC	2
SAS	240V AC	1
	110V AC	2
	48V AC/DC	3
	24V AC/DC	4

Timing Code

Type	Timing	Code
DQR (Star Delta Timer)	20 Sec.	0
	40 Sec.	1
	100 Sec.	2
SAS	1 Sec.	0
	10 Sec.	1
	100 Sec.	2
	300 Sec.	3

Electronic Timers BCH

On Delay



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

Multi Function



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



- Selectable Counter, Chronometer or Timer functions.
- Up Counter, Down Counter, Up / Down Counter
- Up Chronometer, Down Chronometer
- Timer with On Delay, Interval, Off Delay, Single Shot and Cyclic Functions.
- Two presets with SPDT relays & solid state open collector
- Selectable Decimal Point
- EEPROM Data back-up
- 7 Segment 6 digit High LCD Display

IBT Electronic Timer Fixed Voltage; Fixed Time Range - IBTA

Cat Ref.	Time Range	Function	Voltage	MRP [₹]
IBT00101	0.6-6 Sec	On Delay	240V AC	905
IBT00201	0.6-6 Sec	On Delay	110V AC	905
IBT00301	0.6-6 Sec	On Delay	24V AC/DC	905
IBT00401	0.6-6 Sec	On Delay	12V DC	905
IBT00102	3-30 Sec	On Delay	240V AC	905
IBT00202	3-30 Sec	On Delay	110V AC	905
IBT00302	3-30 Sec	On Delay	24V AC/DC	905
IBT00402	3-30 Sec	On Delay	12V DC	905
IBT00103	6-60 Sec	On Delay	240V AC	905
IBT00203	6-60 Sec	On Delay	110V AC	905
IBT00303	6-60 Sec	On Delay	24 V AC/DC	905
IBT00403	6-60 Sec	On Delay	12V DC	905
IBT00104	18-180 Sec	On Delay	240V AC	905
IBT00204	18-180 Sec	On Delay	110V AC	905
IBT 00304	18-180 Sec.	On Delay	24 V AC/DC	905
IBT00404	18-180 Sec.	On Delay	12V DC	905

Universal Voltage, Multi Time, Multi Function - IBTMU

Cat Ref.	Time Range	Function	Voltage	MRP [₹]
IBT04500	0.1S - 10 Hr.	On Delay, Off Delay, Interval, Single Shot	24-240V AC/DC	1750

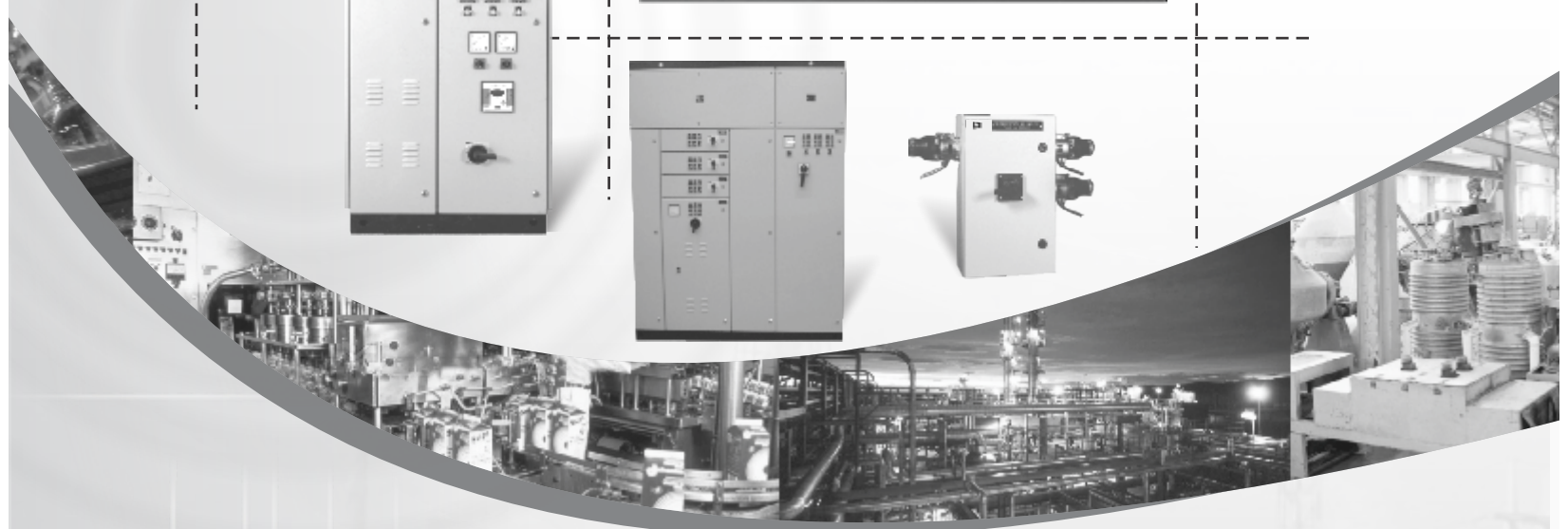


Digital Timer / Programmable Counter - IBC

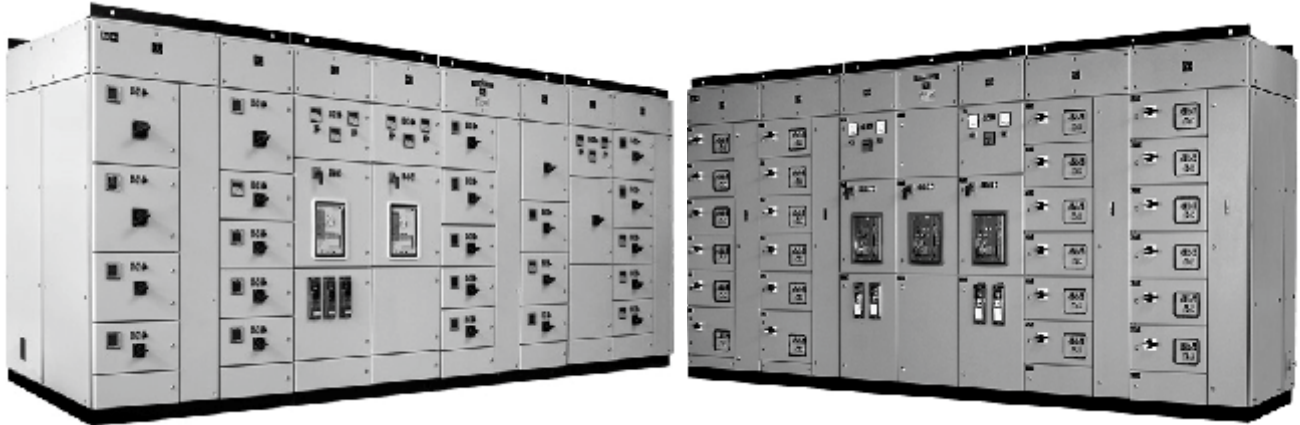
Voltage	Description	Cat No.	MRP [₹]
115/230 VAC	Counting Range:0-999999 Counter: Up,Down,Up/Down Timer : A-On delay,B-Single shot C-Off delay,H-Interval D-Cycling timer Chronometer: Up,Down	IBC00100	4150
12/24 VDC	Counting Range:0-999999 Counter: Up,Down,Up/Down Timer : A-On delay,B-Single shot C-Off delay,H-Interval D-Cycling time Chronometer: Up, Down	IBC00200	4005

Custom Built Products

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



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



BCH MCC & PCC

- Latest Design Concepts & Manufacturing Process.
- Robust Construction and Durable Finish for Rugged Application.
- Techno Modular Design with flexibility in construction / fully bolted with concealed hinges for all doors.
- Suitable for Indoor and Outdoor installations with IP-54 / 55 as per IEC 60529 : 2001
- Fixed & Withdrawable type in Single front & Double Front Execution upto Form-4B.
- Bus Bar Rating upto 6300A with E91E grade Aluminium / Electrolytic grade Copper Bus Bars.
- Type tested for Short Circuit 800A to 4000A for 50 KA rms / 1sec and 105KA peak fault withstand as per IS: 8623 and IEC: 61439.
- Type tested for Temperature Rise 800A to 4000A from CPRI Bhopal as per IS: 8623 and IEC: 61439.
- 10 Tank spray based tricationic phosphating treatment and electrostatic coating with epoxy based powder.
- Standard Paint Shades : RAL-7035, RAL-7032 and 631 as per IS:5 Structure Finish Powder Coating.
- All doors & covers are provided with PU Foam gasket to ensure the Ingress Protection.
- PU Foam gasket temperature withstand capacity -40 Deg C to + 100 Deg C.
- Panel height upto 2500mm (including 100mm High Plinth/Base).
- Panel Width 900mm Withdrawable execution & for Fixed Execution depends on application.
- 600mm for Single Front Withdrawable , 1200mm for Double Front Withdrawable & For Fixed Execution depends on application.

All tailor made solutions on request and based on specific enquiries. Contact nearest branch location for detailed proposal as per exact requirement.



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
- Opotor 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

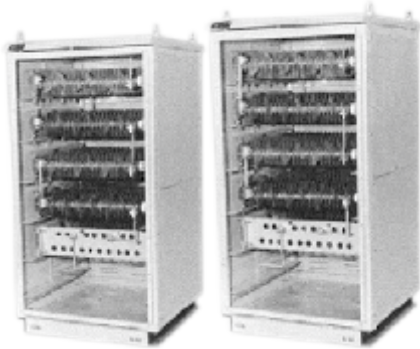
- Simplified reliable circuitary
- Inductive time limit acceleration on hoisting & lowering
- Better speed control on light or heavy loads when hoisting or lowering
- CRCA Sheet steel construction of the panel.
- 7 Tank pretreated panels for extremely long life

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

Resistors & Starters..... BCH

Punched Grid Resistors



Range & Specifications

- Speed Control Resistors
- Starting Resistors for AC and DC Motors
- Dynamic Braking Resistors
- Neutral Grounding Resistors (upto 11KV)

Features

- Special Chromiun Steel Alloy (AISI406) for :
 - a) Higher resistivity (approx 70% higher than others)
This results in overall light and compact unit
 - b) Low temperature coefficient (approx 72% lower than others)
This means negligible change in resistance values despite grid temperature variations (very important parameter in applications like crane controls)



Unbreakable and corrosion free Grids . Suitable for extreme vibration conditions



Drawout type of banks for ease of removal while replacements



Three rod construction for higher mechanical strength

We also manufacture NGRs & DBRs

Special Purpose Starters

- Direct ON Line Starters upto 500 HP
- Star Delta Starters upto 650 HP
- Closed Transition Star Delta Starters upto 650 HP
- Automatic Stator Rotor Starting Panels upto 1000 HP
- DC starter upto 600A

PGRs are 10 minutes rated integrating period :10 minutes temp. rise : 375 deg over ambient

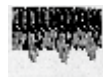
Type	Resistance Per Bank	Continuous Rating	LP
	Ohms	Amps	[₹]
WL10	0.1	225	12255
W12	0.125	200	10840
WL16	0.16	185	12520
WL20	0.2	150	12790
WL25	0.25	134	11285
WL32	0.32	118	10000
WL40	0.4	113	11560
WL50	0.5	100	9760
WL62	0.62	84	12610
WL80	0.8	75	11420
WL100	1	67	10620
WL125	1.25	64	11820
WL160	1.6	57	10200
WL200	2	54	12040
WL250	2.5	48	10020
WL320	3.2	43	8770
WL400	4	40	12230
WL500	5	35	8870
WL625	6.25	33	10135
WL800	8	29	9450
WL1200	12	24	10135
WL1600	16	20	9830



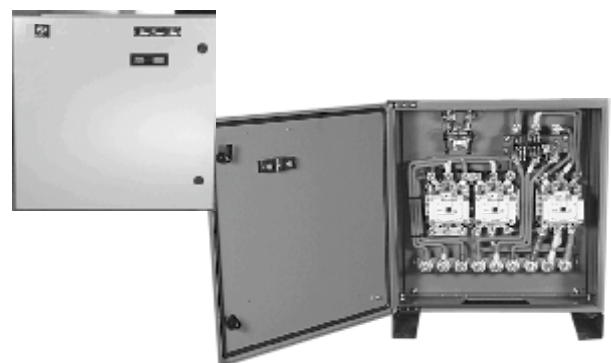
Individual grids are T.I.G. welded for consistent current path



Unique design using staggered grid pattern ensuring maximum air circulation



Terminal designed for 2 types of conductors ensuring flexibility

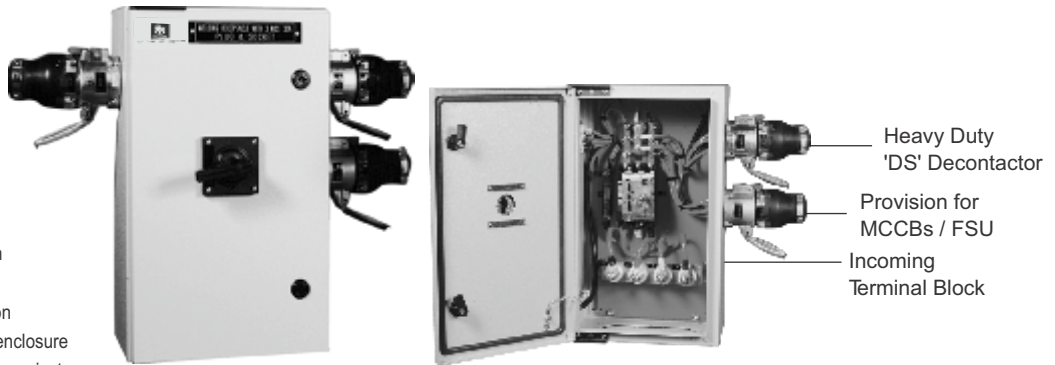


Power Receptacles..... BCH

Power Receptacles

Range

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



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

Single Outlet	Incomer (1 No.)			Standard Version Cat reference	Loop in loop out version Cat reference
	Switch Type	MCCB Type	MCB		
1 No DS1A7A1 and 1 No. DS1B7A1	PSFS323ND000/ PSFS323ND00	-	-	PR16SDF-1	PR16SDF-1-LILO
1 No DS1A7A1 and 1 No. DS1B7A1	-	-	16A,TPN	PR16MCCB-1	PR16MCCB-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	PR32MCCB-1	PR32MCCB-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	PR63MCCB-1	PR63MCCB-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
- Pumps
- Compressors
- Extruders
- Crushers

Range & Specifications

- Available upto 800HP
- Standard Tappings : 50% , 65% and 80%
- Air Cooled design
- 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



BCH advantage over conventional Oil Cooled design

CONVENTIONAL OIL COOLED	BCH AIR COOLED
AT is provided as a separate Unit	Panel Size is compact as AT is a part of the panel
Additional Wiring between AT and panel	Less wiring
Oil to be filled, which adds cost to the panel	No extra cost
Maintenance is costly as oil to be regularly monitored for its level , viscosity. When sludge is formed it needs to be replaced	Practically NO maintenance
Moisture in the oil can burn the Transformer so ATS cannot be installed in moisture prone areas	Suitable for all atmospheric conditions
Less initial cost but high running cost	Slightly high Initial cost but very less running cost

Auto Transformer BCH

BIL Auto Transformer Starter - STANDARD RATINGS	MODEL 1 - BASIC ATS : PU door-gasket Enclosure, 3nos. Power Contactor, Citation OLR, Start/Stop PB, Motor ON LED		MODEL 2 - PREMIUM Version : PU door- gasket Enclosure, MCCB Incomer, 3nos. Power Contactor, Citation OLR, Electronic SPP, Ammeter/voltmeter with selector switches, Start/Stop PB, Phase & Motor ON/Trip LEDs.	
HP	Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
7.5	ATEA10/KOR	Contact Nearest Sales Office for Prices	ATPA10/KOR	Contact Nearest Sales Office for Prices
10	ATEA10		ATPA10	
15	ATEA15		ATPA15	
20	ATEA20		ATPA20	
25	ATEA25		ATPA25	
30	ATEA30		ATPA30	
35	ATEA40		ATPA40	
40	ATEA40		ATPA40	
50	ATEA50		ATPA50	
60	ATEA60		ATPA60	
75	ATEA75		ATPA75	
100	ATEA100		ATPA100	
125			ATPA125	
150			ATPA150	
175			ATPA175	
200			ATPA200	
225			ATPA225	
250			ATPA250	
300			ATPA300	
350			ATPA350	
400		ATPA400		

TERMS & CONDITIONS

Prices ●●●●

The purchase price is the standard price ruling at the date of despatch and is subject to change without notice. All contract prices will be as on the date of contract acceptance.

Jurisdiction ●●●●

The courts at Faridabad will have jurisdiction to settle all the disputes raised.

Order Changes ●●●●

Alterations made after receipt and confirmation of order are subject to price and delivery revisions and any other expenses or levies.

For Enclosures ●●●●

- The purchase price is the standard price ruling at the date of dispatch and is subject to change without notice. All contract prices will be as on the date of contact acceptance.
- Prices are Ex-works Faridabad inclusive of Packing & forwarding.
- List price does not include Excise duty.
- List prices do not include sales tax and other levies such as octroi, these will be charged extra as applicable.
- Freight is inclusive (Within India) for Bhartia Boxes, Stainless Steel Boxes and Terminal Boxes range. For all other product ranges freight will be charged extra.
- 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 sales tax exemption has been claimed, the purchaser is responsible for providing the necessary sales tax exemption from within the specified period, failing which the purchaser would be liable for the payment of full sales tax plus applicable interest and penalties
- **Alteration** made after receipt and confirmation of order are subject to price and delivery revision and any other expenses or levies
- **Jurisdiction** : The courts at Faridabad will have jurisdiction to settle all the dispute raised

Duties and Taxes ●●●●

- Maximum Retail Price (MRP) is inclusive of excise duty and VAT/Sales Tax as may be applicable.
- List Prices do not include sales tax and other levies such as octroi; these will be charged extra as applicable.

In case where any sales tax exemption has been claimed, the purchaser is responsible for providing the necessary sales tax exemption form within the specified period, failing which the purchaser would be liable for the payment of full sales tax plus applicable interest and penalties.

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CIN : U31103WB1965PLC026427, Customercare No. 1800-103-9262, E-mail : marketing@bchindia.com

Registered Office : Block 1E, 216, Acharya Jagadish Chandra Bose Road, Kolkata - 700 017

Works 1 : 20/4, Mathura Road, Faridabad-121 006 (Haryana) Tel. : 0129-4063000/4293000 Fax : 0129-2304016

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

Sales Offices :

Ahmedabad
93, City Centre,
Near Swastik Char Rasta,
C.G. Road, Navrangpura,
Ahmedabad- 380 009
Tel. : 079-26565719/40074482
Fax : 079-26565719
E-mail : ahmedabad@bchindia.com

Bangalore
B.M.H. Complex, 2nd Floor,
No. 22, Kengal Hanumanthiah Road,
Bangalore - 560 027
Tel. : 080-22273478/41144878/41144879
Fax : 080-22236759
E-mail : bangalore@bchindia.com

Chandigarh
SCO 121-22-23, 1st Floor,
Sector 34-A, Chandigarh - 160 022
Tel. : 0172-5078957/2666122
Fax : 0172-5049905
E-mail : chandigarh@bchindia.com

Chennai
Flat No. 3A, 3rd Floor,
Sree Apartments,
No.508, TTK Road,
Alwarpet, Chennai 600 018
Tel. : 044-24337046, 24337047
Fax : 044-24337047
E-mail : chennai@bchindia.com

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

Faridabad
20/4, Mathura Road,
Faridabad - 121 006 (Haryana)
Tel. : 0129-2304016
E-mail : faridabad@bchindia.com

Hyderabad
1-8-303/48/13/102, Arya One,
2nd Floor, P. G. Road,
Secunderabad - 500 003
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Fax : 040-66207273
E-mail : hyderabad@bchindia.com

Indore
330-331, Indraprastha Tower,
3rd Floor, 6, M.G. Road,
Indore - 452 001
Tel. : 0731-2510011
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Jaipur
25, Hathroi, Gopalbari,
Jaipur - 302 001
Tel. : 0141-5104521
Fax : 0141-2363521
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Jamshedpur
3rd Floor, Aastha Trade Centre,
'Q' Road, Bistupur,
Jamshedpur - 831 001
Tel. : 0657-2321097/2321481
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Kolkata
Block 1E, 216,
Acharya Jagadish Chandra Bose Road,
Kolkata - 700 017
Tel. : 033-22871728
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Lucknow
Madan Plaza, 3rd Floor,
14, Station Road,
Lucknow - 226 001
Tel. : 0522-4025597/4025997
Fax : 0522-4025697
E-mail : lucknow@bchindia.com

Ludhiana
S.C.O.- 18, 2nd Floor,
Feroze Gandhi Market,
Ludhiana - 140 001
Tel. : 0161-5021807/5022808
Fax : 0161-5021807
E-mail : ludhiana@bchindia.com

Mumbai
A-151, Mittal Tower,
Nariman Point,
Mumbai - 400 021
Tel. : 022-22822947/22850162
Fax : 022-22822858
E-mail : mumbai@bchindia.com

New Delhi
801, Akash Deep Building,
26A, Barakhamba Road,
New Delhi - 110 001
Tel. : 011-23313878/66307065
Fax : 011-23739230
E-mail : delhi@bchindia.com

Pune
8, Sarosh Bhavan,
16-B1, Dr. Ambedkar Road,
Pune - 411 001
Tel. : 020-26052590
Telefax : 020-26135224
E-mail : pune@bchindia.com

Raipur
2nd Floor, Building No. B-234,
Indira Gandhi Vyasasayik Parisar,
Pandri, Raipur - 492 004
Tel. : 0771-4020213
Fax : 0771-2582680
E-mail : raipur@bchindia.com

Trichy
Kingstone Park, 2nd Floor,
19/1, Puthur High Road,
Ramalinga Nagar,
Trichy - 620 017
Tel. : 0431-4040497
E-mail : trichy@bchindia.com

Vadodara

301, Third Floor, "Florence Classic",
10, Ashapuri Co-Op. Hsg. Soc. Ltd., Opp. VUDA Housing,
Near Cow Circle, Akota, Vadodara - 390 020
Tel. : +91-265-6548444/2345068/2345069
Telefax : 0265-2345068,
E-mail : vadodara@bchindia.com

Other Branch Locations

Bhubaneswar : bhubaneswar@bchindia.com, **Cochin :** cochin@bchindia.com, **Dehradun :** dehradun@bchindia.com, **Gurgaon :** gurgaon@bchindia.com, **Guwahati :** guwahati@bchindia.com,
Hospet : hospet@bchindia.com, **Hubli :** hubli@bchindia.com, **Madurai :** madurai@bchindia.com, **Vishakapatnam :** vizag@bchindia.com, **Nagpur :** nagpur@bchindia.com **Surat :** surat@bchindia.com

Resident Engineer Locations

Baddi	Gurgaon	Madurai	Rajahmundry
Bardhaman	Haridwar	Muzaffarnagar	Salem
Bhilai	Hubli	Nagpur	Surat
Bhubaneswar	Hospet	Nashik	Udaipur
Cochin	Jodhpur	Patna	Vapi
Dehradun	Kakinada	Puducherry	Vishakhapatnam
Durgapur	Kota	Rajkot	Warangal

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