



PRICE LIST

Effective : 1st April 2016



BCH ELECTRIC LIMITED

Modern facilities at Faridabad & Rudrapur



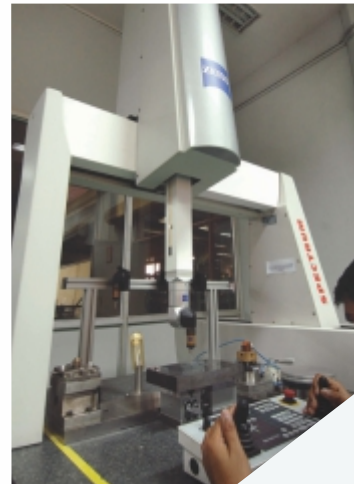
BCH ELECTRIC LIMITED

Our Strengths:

- ◆ State-of-the-art product development and R&D
- ◆ Modern manufacturing facilities
- ◆ Tool room with latest facilities
- ◆ Serving customers for five decades
- ◆ Presence in ~50 locations
- ◆ 650 channel partners
- ◆ ISO 9001:2008 certified company

Core Values:

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



Quality Policy

We are committed to provide products and services meeting or exceeding customers needs and expectations.

Continual improvement and learning aimed at customer satisfaction through involvement of people shall be the guiding principle.

Health & Safety Policy

It is our policy to comply with applicable statutory and regulatory requirements related to health and safety.

We shall endeavor to achieve this by providing safe working conditions and promoting awareness through training.

www.bchindia.com



Our Products



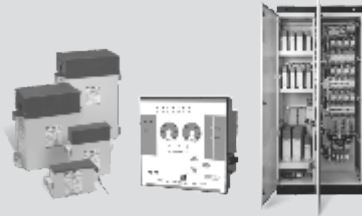
Switchgear & Controlgear



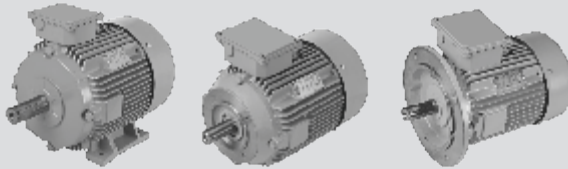
Boxes & Enclosures



Wires & Cables



Power Factor Control Product



Motors



Motor Control Centres (MCCs) & Power Control Centres (PCCs)



Automation Product



Custom Built Products

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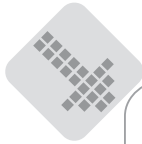
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Tough Rugged & Reliable

Reilient
BCH ELECTRIC LIMITED

Miniature Circuit Breaker

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



BCH ELECTRIC LIMITED

Corporate Office : 1105, New Delhi House, 27, Barakhamba Road, New Delhi - 110 001 Tel. : 91-11-23316029/3610/6539/43673100 Fax : 91-11-23715247

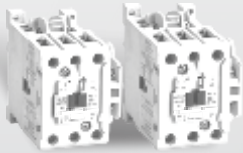
E-mail : marketing@bchindia.com • www.bchindia.com

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

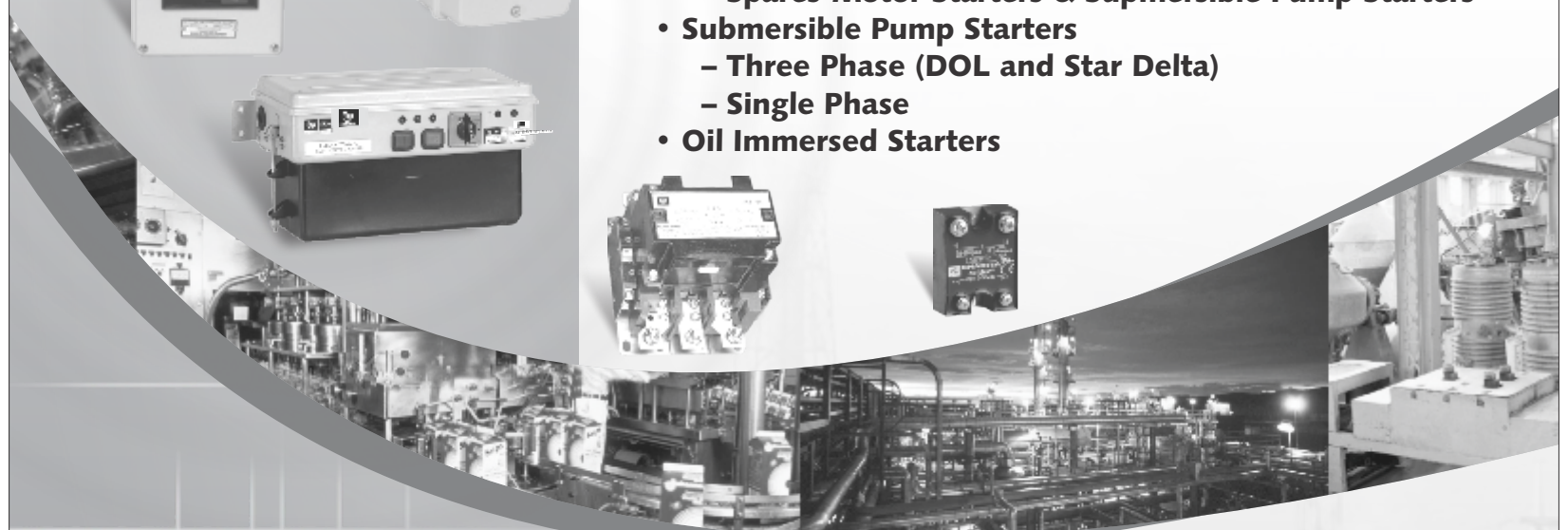
Works 1 : 20/4, Mathura Road, Faridabad - 121 006 (Haryana) Tel. : 0129-4063000/4293000 Fax : 0129-2304024

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

Low Voltage Switch Gear & Control Gear Products

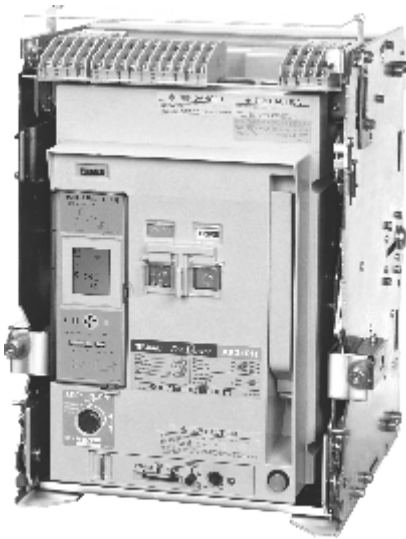


- Air Circuit Breakers
- MCCBs
 - Resilient, Tembreak 2
- Resilient MCB **New**
- FSU, SDFU
- AC Contactors
- DC Contactors
- Solid State Relays
- Overload Relays
- Vacuum Contactors **New**
- Electronic Overcurrent Relays (BOCR)
- Motor Protection Circuit Breakers (MPCB)
- Limit Switches
- Push Buttons, Indicating Lights, LEDs
- Foot Switches
- AC Solenoids & Brakes
- DC Brakes
- Plugs & Sockets
- Plug & Socket Boxes
- Rewireable Fuse Switches
- Pneumatic Timers
- Motor Starters
 - DOL
 - Mini Manual
 - Star Delta
 - Spares-Motor Starters & Supersensible Pump Starters
- Submersible Pump Starters
 - Three Phase (DOL and Star Delta)
 - Single Phase
- Oil Immersed Starters



Air Circuit Breakers..... BCH

TemPower - 2 Range of Air Circuit Breakers



@ ACBs with higher breaking capacity and higher current ratings are also available On Request
 MF: Manual Fixed Breaker, EF: Electrical Fixed Breaker
 MDO: Manual Draw out, EDO: Electrical Draw out

Releases

TemPower2 provides positive protection for electric power systems.

The TemPower2 Series is equipped with an RMS sensing over-current release (OCR) having a wide range of protection function and capabilities.

Frame	Current rating (A)	Poles	Breaking capacity (I _{cu} =I _{cs} =I _{cw} for 1 sec)	Standard MRP [₹]*			
				Fixed Breaker		Draw out breaker	
				MF	EF	MDO	EDO
AR208S	800A	3 4	65kA	On request			
AR212S	1250A	3 4	65kA				
AR216S	1600A	3 4	65kA				
AR220S	2000A	3 4	65kA				
AR325S	2500A	3 4	85kA				
AR332S	3200A	3 4	85kA				
AR440S	4000A	3 4	100kA				
AR650S	5000A	3 4	100kA				
AR663S	6300A	3 4	100kA				

*Standard MRP, means a standard breaker with

- A) Auxiliary Switch (4 change over)
- B) Closing coil (In case of Motorised ACBs)
- C) 1 No Draw out handle (in case of draw out ACB)
- D) Terminations are standard as per : Horizontal : Upto (AR216S)
 Vertical : (AR220S, AR325S, AR332S, AR440S, AR650S and AR663S)

E) Calibration : 40° C

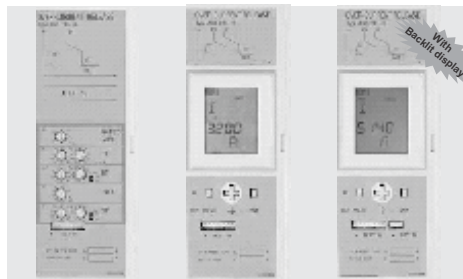
F) Neutral CT is required to be ordered when Ground Fault option is required in the release (example AGR11BL-GL)

Note : Above price is with over current release (OCR) Type AGR-11BL-AL

with standard Functions LSI

Long Time (L), Short Time (S) and Instantaneous (I)

Please note that the price of the ACBs mentioned above is only indicative, to get an actual quote please fill in the ACB Ordering form provided overleaf



Standard OCR with adjustment dial Type AGR-11B. Standard OCR with LCD- 'Ammeter' Type AGR-21B,22B. Enhanced OCR with LCD- 'Analyser' Type AGR-31B.

- For General Feeder circuits (L Characteristics)
- For General Feeder circuits (R Characteristics)
- For Generator protection (S Characteristics)

Protection features

Standard

- Long time delay
- Short time delay
- Instantaneous

Optional

- Ground fault
- Reverse Power trip

- N-phase protection
- Earth leakage
- Two channel pre trip
- Advance LCD display
- Contact temperature monitoring
- Communication protocol
- Phase rotation protection

For prices contact our nearest sales office.

Over current releases (OCR)	Functions	Additional Price [₹]
AGR-11BL-GL	LSIG*	On Request
AGR-21BL-PS	LSI with LCD display	On Request
AGR-21BL-PG	LSIG with LCD & Communication	On Request
AGR-31BL-PS	LSI with LCD display with energy metering, earth leakage and PTA	On Request
AGR-31BL-PG	LSIG with LCD display with energy metering, earth leakage and PTA	On Request
AGR-21BR-PS	LSI with LCD display with current metering and PTA	On Request
AGR-21BR-PG	LSIG with LCD display with current metering and PTA	On Request

* When using a 3 Pole ACB in a 3 phase 4 wire system, additional Neutral CT is required for OCR type AGR-11BL-GL

All accessories and spares like SHUNT, CLOSING, UNDER VOLTAGE release, castle lock, safety shutter, door interlock, motor charging units, etc. are available on request



BCH ELECTRIC LIMITED

TEMPOWER -2 ACB ORDERING FORM

For general feeder circuits (L/R-characteristic)

Please check boxes and fill in underlined spaces appropriate .

Your company name :

Order Number :

Quantity : PCS

Delivery required : / /

Specification Summary :

1 Type P14,15 P14,15
2 Number of poles
3 Circuit voltage and frequency
4 Applicable standard and ambient temperature
5 Type of mounting
6 Type of spring charged operation
7 Over-current release (OCR)
8 Electrical tripping devices
9 Other accessories
10 Special environment specification
11 Spare parts
12 Documents
13 Other

*1 : One handle come standard with every five ACB's. Specify the number of additional handles if needed.
*2 : Fixed type Undervoltage Trip can not be fitted with shunt trip device. However, Instantaneously rated shunt trip can be used together with fixed type undervoltage trip (except DC rating) with special specification. Contact terasaki for details.

Resilient MCCB..... BCH

- High Performance Compact Size
- Suitability for Isolation
- Tested and rated for 50° C ambient condition
- Line Load Interchangeability
- Double Insulation



RS

Frame -1 :
 $I_{cu} / I_{cs} = 10 / 7.5, 15 / 15, 30 / 15 \text{ kA}$



RH

Frame -1 :
 $I_{cu} / I_{cs} = 25 / 25, 36 / 30, 50 / 25 \text{ kA}$

I_{cu}	Variant	Rated Current	Overload Setting	Ordering Code	MRP [₹]
15kA ~	RS	100	Fixed	XFN100P#	3600
		80		XFN080P#	3600
		63		XFN063P	3600
		50		XFN050P	3600
		40		XFN040P	3600
		32		XFN032P	3600
		25		XFN025P	3600
		20		XFN020P	3600
		16		XFN016P	3600
10kA @	RS	100	Fixed	XFE100G#	1750
		80		XFE080G#	1750
		63		XFE063G	1600
		50		XFE050G	1600
		40		XFE040G	1600
		32		XFE032G	1600
		25		XFE025G	1600
		20		XFE020G	1600
		16		XFE016G	1600
30kA ^	RS	100	Adjustable	XFH100NV#	4110
		80		XFH080NV#	4110
		63		XFH063NV	4110
		50		XFH050NV	4110
		40		XFH040NV	4110
		32		XFH032NV	4110
		25		XFH025NV	4110
		20		XFH020NV	4110
		16		XFH016NV	4110
36kA ^	RH	100	Adjustable	XFL100NV#	4740
		80		XFL080NV#	4740
		63		XFL063NV	4740
		50		XFL050NV	4740
		40		XFL040NV	4740
		32		XFL032NV	4740
		25		XFL025NV	4740
		20		XFL020NV	4740
		16		XFL016NV	4740

~ means $I_{cs} = 100\% I_{cu}$
 @ means $I_{cs} = 75\% I_{cu}$
 ^ means $I_{cs} = 50\% I_{cu}$

Spreader Link available as standard (for MCCB without spreader , please contact our sales team)

All above MCCBs have fixed (non adjustable) Magnetic setting

MCCBs with different I_{cu} / I_{cs} combination can be made available On Request

MCCBs are available in unit pack as standard for bulk packing option please contact our sales team

All needed accessories are mentioned on page no 6
 (Extended terminals for all ratings is also available as accessory)

* For more details refer product catalogue

Resilient MCCB..... BCH



RS

Frame -2 :
 $I_{cu} / I_{cs} = 25/25, 36/18 \text{ kA}$



RH

Frame -2 :
 $I_{cu} / I_{cs} = 36/27, 36/36, 50/50 \text{ kA}$

- High Performance Compact Size
- Suitability for Isolation
- Rated at 50° C
- Line Load Interchangeability
- Double Insulation

I_{cu}	Variant	Rated Current	Overload Setting	Ordering Code	MRP [₹]
25kA ~	RH	100	Adjustable	XF2H100PV	5410
		80		XF2H080PV	5410
		63		XF2H063PV	5410
		50		XF2H050PV	5410
		40		XF2H040PV	5410
		32		XF2H032PV	5410
		25		XF2H025PV	5410
		20		XF2H020PV	5410
		16		XF2H016PV	5410
50kA ^	RH	100	Adjustable	XF2V100NV	8580
		80		XF2V080NV	8580
		63		XF2V063NV	8580
		50		XF2V050NV	8580
		40		XF2V040NV	8580
		32		XF2V032NV	8580
		25		XF2V025NV	8580
		20		XF2V020NV	8580
		16		XF2V016NV	8580
25kA ~	RS	250	Adjustable	XF2E250PV#	18000
		200		XF2E200PV#	11000
		160		XF2E160PV	9450
		125		XF2E125PV	6800
36kA ^	RS	250	Adjustable	XF2N250NV#	11780
		200		XF2N200NV#	10100
		160		XF2N160NV	7650
36kA @	RH	250	Adjustable	XF2N125NV	6500
		200		XF2N250GV#	18200
		160		XF2N200GV#	16800
36kA ~	RH	125	Adjustable	XF2N160GV	12000
		250		XF2N125GV	9200
		200		XF2N250PV#	18500
		160		XF2N200PV#	17000
50kA ^	RH	125	Adjustable	XF2N160PV	12200
		250		XF2N125PV	9300
		200		XF2H250NV#	18700
		160		XF2H200NV#	17200
50kA ~	RH	125	Adjustable	XF2H160NV	12400
		250		XF2H125NV	9500
		200		XF2H250PV#	20900
		160		XF2H200PV#	19550
	RH	125	Adjustable	XF2H160PV	15150
		125		XF2H125PV	12200

~ means $I_{cs} = 100\% I_{cu}$
 @ means $I_{cs} = 75\% I_{cu}$
 ^ means $I_{cs} = 50\% I_{cu}$

Spreader Link available as standard (for MCCB without spreader , please contact our sales team)
 All above MCCBs have fixed (non adjustable) Magnetic setting
 MCCBs with different I_{cu} / I_{cs} combination can be made available On Request
 MCCBs are available in unit pack as standard for bulk packing option please contact our sales team

All needed accessories are mentioned on page no 6
 (Extended terminals for all ratings is also available as accessory)

* For more details refer product catalogue

Resilient MCCB..... BCH



- High Performance Compact Size
- Suitability for Isolation
- Rated at 50° C
- Line Load Interchangeability
- Double Insulation

I _{cu}	Variant	Rated Current	Overload Setting	Ordering Code	MRP [₹]
36kA ~	-	630	Adjustable	XF3N630PV	On request
		500		XF3N500PV	
		400		XF3N400PV	
		320		XF3N320PV	
50kA ~	-	630	Adjustable	XF3H630PV	On request
		500		XF3H500PV	
		400		XF3H400PV	
		320		XF3H320PV	

Frame -3 :
 $I_{cu} / I_{cs} = 36/36, 50/50 \text{ kA}$
 (Spreader terminal available by default)

Spreader Link available as standard (for MCCB without spreader , please contact our sales team)
 MCCBs with different I_{cu} / I_{cs} combination can be made available On Request
 MCCBs are available in unit pack as standard for bulk packing option please contact our sales team

~ means I_{cs} = 100% I_{cu}
 @ means I_{cs} = 75% I_{cu}
 ^ means I_{cs} = 50% I_{cu}

* For more details refer product catalogue

ACCESSORIES FOR Resilient RANGE OF MCCBs

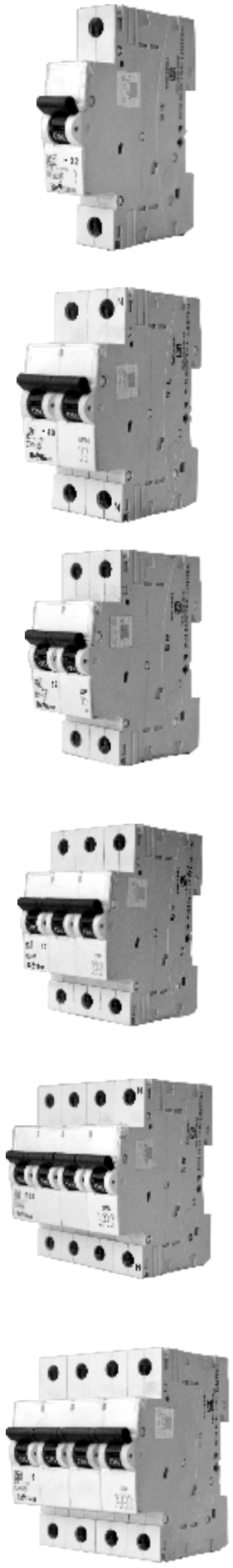


Type	Product	Rating	Cat Code	
Internal Accessories	Shunt Release	220V - 415V F1	XFSHT220V	990
		220V - 415V F2	XF2SHT220V	990
		220V - 415V F3	XF3SHT220V	1700
	Under Voltage Release	240V F1	XFUV240VA	1330
		240V F2	XF2UV240VA	1330
		240V F3	XF3UV240VA	On request
		415V F1	XFUV415VA	1500
		415V F2	XF2UV415VA	1500
		415V F3	XF3UV415VA	On request
	Auxiliary Contacts	1 C/O + 1 C/O	XFALAX11	1180
2 C/O		XFAX2	1180	
External Accessories	Din Rail	F1	F1DIN	150
	Extended Rotary Handle	F1	F1ROHE	1410
		F2	F2ROHE	1450
		F3	F3ROHE	On request
	Extended Terminals	F1	ACMF1TP100	300
		F2	ACMF2TP250	1000
	Phase Barriers	F1	F1PB	50
		F2	F2PB	150
		F3	F3PB	On request
	MCCB Enclosure	F1	F1EU3P	700
F2		F2EU3P	1370	

Resilient MCB..... BCH



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

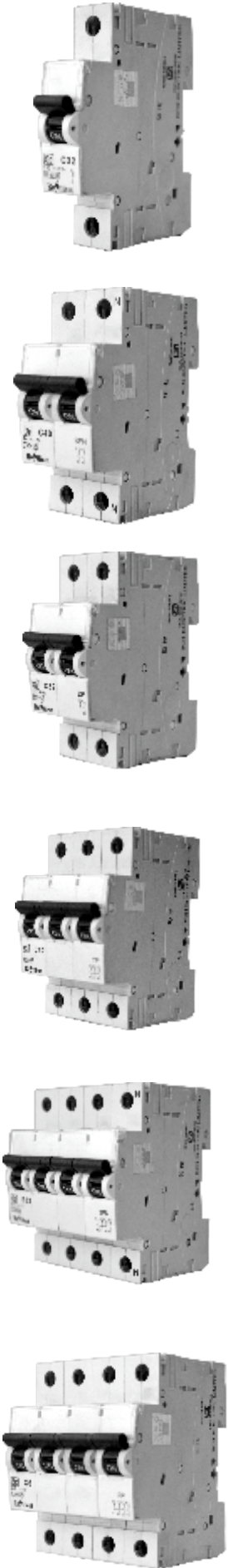


Curve	Pole	RATING	CATCODE	Standard pack of	MRP (per unit) [₹]
B Curve	1P	6A	BCHM10SPB06	12 units	190
		10A	BCHM10SPB10		190
		16A	BCHM10SPB16		190
		20A	BCHM10SPB20		190
		25A	BCHM10SPB25		190
		32A	BCHM10SPB32		190
		40A	BCHM10SPB40		420
		50A	BCHM10SPB50		420
B Curve	1P + N	6A	BCHM10SNB06	6 units	495
		10A	BCHM10SNB10		495
		16A	BCHM10SNB16		495
		20A	BCHM10SNB20		495
		25A	BCHM10SNB25		495
		32A	BCHM10SNB32		495
		40A	BCHM10SNB40		730
		50A	BCHM10SNB50		730
B Curve	2P	6A	BCHM10DPB06	6 units	610
		10A	BCHM10DPB10		610
		16A	BCHM10DPB16		610
		20A	BCHM10DPB20		610
		25A	BCHM10DPB25		610
		32A	BCHM10DPB32		610
		40A	BCHM10DPB40		930
		50A	BCHM10DPB50		930
B Curve	3P	6A	BCHM10TPB06	4 units	955
		10A	BCHM10TPB10		955
		16A	BCHM10TPB16		955
		20A	BCHM10TPB20		955
		25A	BCHM10TPB25		955
		32A	BCHM10TPB32		955
		40A	BCHM10TPB40		1410
		50A	BCHM10TPB50		1410
B Curve	3P + N	6A	BCHM10TNB06	3 units	1125
		10A	BCHM10TNB10		1125
		16A	BCHM10TNB16		1125
		20A	BCHM10TNB20		1125
		25A	BCHM10TNB25		1125
		32A	BCHM10TNB32		1125
		40A	BCHM10TNB40		1520
		50A	BCHM10TNB50		1520
B Curve	4P	6A	BCHM10FPB06	3 units	1355
		10A	BCHM10FPB10		1355
		16A	BCHM10FPB16		1355
		20A	BCHM10FPB20		1355
		25A	BCHM10FPB25		1355
		32A	BCHM10FPB32		1355
		40A	BCHM10FPB40		1880
		50A	BCHM10FPB50		1880
		63A	BCHM10FPB63		1880

Resilient MCB..... BCH

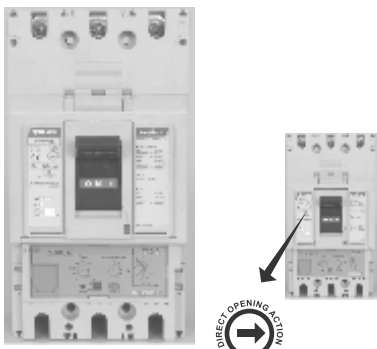


- Line load interchangeability
- Suitable for isolation
- Suitable for IT systems
- Current limiting design
- Possibility of bus bar termination at both ends
- 45mm panel cutout, suitable for standard MCB distribution boards



Curve	Pole	RATING	CATCODE	Standard pack of	MRP (per unit) [₹]
C Curve	1P	6A	BCHM10SPC06	12 units	200
		10A	BCHM10SPC10		200
		16A	BCHM10SPC16		200
		20A	BCHM10SPC20		200
		25A	BCHM10SPC25		200
		32A	BCHM10SPC32		200
		40A	BCHM10SPC40		430
		50A	BCHM10SPC50		430
C Curve	1P + N	6A	BCHM10SNC06	6 units	570
		10A	BCHM10SNC10		570
		16A	BCHM10SNC16		570
		20A	BCHM10SNC20		570
		25A	BCHM10SNC25		570
		32A	BCHM10SNC32		570
		40A	BCHM10SNC40		750
		50A	BCHM10SNC50		750
C Curve	2P	6A	BCHM10DPC06	6 units	620
		10A	BCHM10DPC10		620
		16A	BCHM10DPC16		620
		20A	BCHM10DPC20		620
		25A	BCHM10DPC25		620
		32A	BCHM10DPC32		620
		40A	BCHM10DPC40		940
		50A	BCHM10DPC50		940
C Curve	3P	6A	BCHM10TPC06	4 units	975
		10A	BCHM10TPC10		975
		16A	BCHM10TPC16		975
		20A	BCHM10TPC20		975
		25A	BCHM10TPC25		975
		32A	BCHM10TPC32		975
		40A	BCHM10TPC40		1420
		50A	BCHM10TPC50		1420
C Curve	3P + N	6A	BCHM10TNC06	3 units	1140
		10A	BCHM10TNC10		1140
		16A	BCHM10TNC16		1140
		20A	BCHM10TNC20		1140
		25A	BCHM10TNC25		1140
		32A	BCHM10TNC32		1140
		40A	BCHM10TNC40		1600
		50A	BCHM10TNC50		1600
C Curve	4P	6A	BCHM10FPC06	3 units	1365
		10A	BCHM10FPC10		1365
		16A	BCHM10FPC16		1365
		20A	BCHM10FPC20		1365
		25A	BCHM10FPC25		1365
		32A	BCHM10FPC32		1365
		40A	BCHM10FPC40		1900
		50A	BCHM10FPC50		1900
63A	BCHM10FPC63	1900			

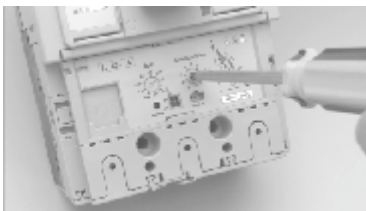
Total Protection Complete Control



TemBreak



User friendly adjustment



Clear Trip Indication



OFF



ON



TRIP

Tembreak 2 MCCB with 10kA* breaking capacity

Frame	Pole	Current (A)	Type	Code	CATCODE	MRP [₹]
E100SF	3	10-40	Fix-Thermal	■	XT2E100SF3F■U0	On Request
	3	50-75	Fix-Thermal	■	XT2E100SF3F■U0	On Request
	3	100	Fix-Thermal	A0	XT2E100SF3FA0U0	On Request

* Ics = 50%

Tembreak 2 MCCB with 25kA* breaking capacity

Frame	Pole	Current (A)	Type	Code	CATCODE	MRP [₹]	
S160SCF	3	15-40	Fix-Thermal	■	XT2S160SCF3F■U0	On Request	
	4		Fix-Thermal	■	XT2S160SCF4F■U0	On Request	
	3	50-75	Fix-Thermal	■	XT2S160SCF3F■U0	On Request	
	4		Fix-Thermal	■	XT2S160SCF4F■U0	On Request	
	3	100	Fix-Thermal	A0	XT2S160SCF3FA0U0	On Request	
	4		Fix-Thermal	A0	XT2S160SCF4FA0U0	On Request	
	3	125	Fix-Thermal	AB	XT2S160SCF3FABU0	On Request	
	4		Fix-Thermal	AB	XT2S160SCF4FABU0	On Request	
	3	160	Fix-Thermal	AF	XT2S160SCF3FAFU0	On Request	
	4		Fix-Thermal	AF	XT2S160SCF4FAFU0	On Request	
	S160SCJ	3	25-40	Adj-Thermal	■	XT2S160SCJ3F■U0	On Request
		4		Adj-Thermal	■	XT2S160SCJ4F■U0	On Request
3		63-80	Adj-Thermal	■	XT2S160SCJ3F■U0	On Request	
4			Adj-Thermal	■	XT2S160SCJ4F■U0	On Request	
3		100	Adj-Thermal	A0	XT2S160SCJ3FA0U0	On Request	
4			Adj-Thermal	A0	XT2S160SCJ4FA0U0	On Request	
3		125	Adj-Thermal	AB	XT2S160SCJ3FABU0	On Request	
4			Adj-Thermal	AB	XT2S160SCJ4FABU0	On Request	
3		160	Adj-Thermal	AF	XT2S160SCJ3FAFU0	On Request	
4			Adj-Thermal	AF	XT2S160SCJ4FAFU0	On Request	

* Ics = 50%

Code - Current Rating

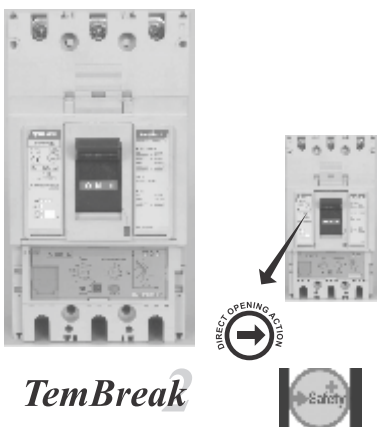
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■Code	15	20	30	32	40	50	60	63	75	A0	AB	AE	AF	AG	B0	BB	BE	D0	630	800	1000	1250	1600	2000

Plugin versions Available on request

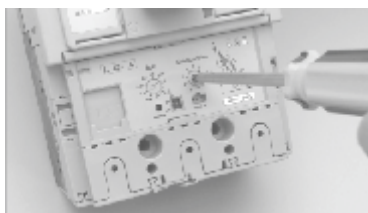
Accessories are mentioned on page no 19

* For more details refer product catalogue

Total Protection Complete Control



User friendly adjustment



Clear Trip Indication



OFF



ON



TRIP

Tembreak 2 MCCB with 25kA breaking capacity

Frame	Pole	Current (A)	Type	Code	CATCODE	MRP [₹]
E250SF	3	125	Fix-Thermal	AB	XT2E250SF3FABU0	On Request
	4		Fix-Thermal	AB	XT2E250SF4FABU0	
	3	175	Fix-Thermal	AG	XT2E250SF3FAGU0	
	4		Fix-Thermal	AG	XT2E250SF4FAGU0	
	3	200	Fix-Thermal	B0	XT2E250SF3FB0U0	
	4		Fix-Thermal	B0	XT2E250SF4FB0U0	
	3	250	Fix-Thermal	BE	XT2E250SF3FBEU0	
	4		Fix-Thermal	BE	XT2E250SF4FBEU0	
E125NJ	3	20-80	Adj-Thermal	■	XT2E125NJ3F■U0	On Request
	4		Adj-Thermal	■	XT2E125NJ4F■U0	
	3	100	Adj-Thermal	A0	XT2E125NJ3FA0U0	
	4		Adj-Thermal	A0	XT2E125NJ4FA0U0	
	3	125	Adj-Thermal	AB	XT2E125NJ3FABU0	
	4		Adj-Thermal	AB	XT2E125NJ4FABU0	
E250SJ	3	160	Adj-Thermal	AF	XT2E250SJ3FAFU0	On Request
	4		Adj-Thermal	AF	XT2E250SJ4FAFU0	
	3	200	Adj-Thermal	B0	XT2E250SJ3FB0U0	
	4		Adj-Thermal	B0	XT2E250SJ4FB0U0	
	3	250	Adj-Thermal	BE	XT2E250SJ3FBEU0	
	4		Adj-Thermal	BE	XT2E250SJ4FBEU0	

*Ics = 75%

Tembreak 2 MCCB with 25kA* breaking capacity

Frame	Pole	Current (A)	Type	Code	CATCODE	MRP [₹]
E400NJ	3	250	Adj-Thermal	BE	XT2E400NJ3FBEU0	On Request
	4		Adj-Thermal	BE	XT2E400NJ4FBEU0	
	3	400	Adj-Thermal	D0	XT2E400NJ3FD0U0	32150
	4		Adj-Thermal	D0	XT2E400NJ4FD0U0	42830

*Ics = 100%

Code - Current Rating

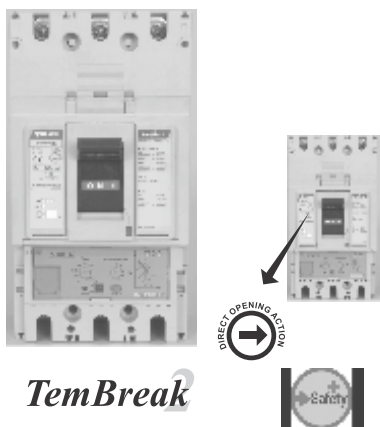
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■Code	15	20	30	32	40	50	60	63	75	A0	AB	AE	AF	AG	B0	BB	BE	D0	630	800	1000	1250	1600	2000

Plugin versions Available on request

* For more details refer product catalogue

Accessories are mentioned on page no 19

Total Protection Complete Control



Tembreak 2 MCCB with 36kA* breaking capacity

Frame	Pole	Current (A)	Type	Code	CATCODE	MRP [₹]
S125NJ	3	20-80	Adj-Thermal	■	XT2S125NJ3F■U0	On request
S125NJ	4		Adj-Thermal	■	XT2S125NJ4F■U0	On request
S125NJ	3	100	Adj-Thermal	A0	XT2S125NJ3FA0U0	On request
S125NJ	4		Adj-Thermal	A0	XT2S125NJ4FA0U0	On request
S125NJ	3	125	Adj-Thermal	AB	XT2S125NJ3FABU0	On request
S125NJ	4		Adj-Thermal	AB	XT2S125NJ4FABU0	On request

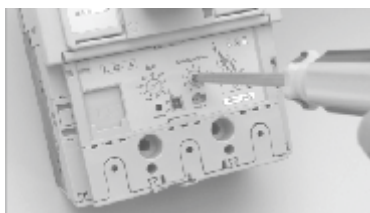
*Ics = 84%

Tembreak 2 MCCB with 36kA* breaking capacity

Frame	Pole	Current(A)	Type	Code	CATCODE	MRP [₹]
S250NJ	3	160	Adj-Thermal	AF	XT2S250NJ3FAFU0	On Request
	4		Adj-Thermal	AF	XT2S250NJ4FAFU0	
	3	200	Adj-Thermal	B0	XT2S250NJ3FB0U0	
	4		Adj-Thermal	B0	XT2S250NJ4FB0U0	
	3	250	Adj-Thermal	BE	XT2S250NJ3FBEU0	
	4		Adj-Thermal	BE	XT2S250NJ4FBEU0	
S400CJ	3	400	Adj-Thermal	D0	XT2S400CJ3FD0U0	On Request
	4		Adj-Thermal	D0	XT2S400CJ4FD0U0	
S800CJ	3	630	Adj-Thermal	630	XT2S800CJ3F630U0	On Request
	4		Adj-Thermal	630	XT2S800CJ4F630U0	
	3	800	Adj-Thermal	800	XT2S800CJ3F800U0	
	4		Adj-Thermal	800	XT2S800CJ4F800U0	
S250NE	3	125	Electronic	AB	XT2S250NE3FABU0	On Request
	4		Electronic	AB	XT2S250NE4FABU0	
	3	250	Electronic	BE	XT2S250NE3FBEU0	
	4		Electronic	BE	XT2S250NE4FBEU0	
E630NE	3	630	Electronic	630	XT2E630NE3F630U0	On Request
	4		Electronic	630	XT2E630NE4F630U0	

*Ics = 100%

User friendly adjustment



Clear Trip Indication



OFF



ON



TRIP

Code - Current Rating

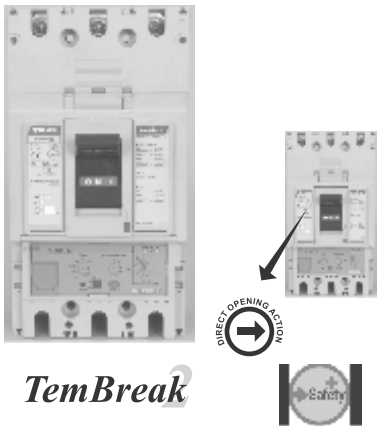
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■Code	15	20	30	32	40	50	60	63	75	A0	AB	AE	AF	AG	B0	BB	BE	D0	630	800	1000	1250	1600	2000

Plugin versions Available on request

* For more details refer product catalogue

Accessories are mentioned on page no 19

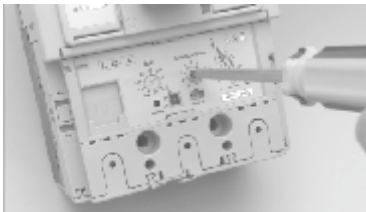
Total Protection Complete Control



TemBreak



User friendly adjustment



Clear Trip Indication



OFF



ON



TRIP

Tembreak 2 MCCB with 40kA* breaking capacity

Frame	Pole	Current (A)	Type	Code	CATCODE	MRP[₹]		
S160SF	3	15-40	Fix-Thermal	■	XT2S160SF3F■U0	On request		
	4		Fix-Thermal	■	XT2S160SF4F■U0			
	3	50-75	Fix-Thermal	■	XT2S160SF3F■U0			
	4		Fix-Thermal	■	XT2S160SF4F■U0			
	3	100	Fix-Thermal	A0	XT2S160SF3FA0U0			
	4		Fix-Thermal	A0	XT2S160SF4FA0U0			
	3	125	Fix-Thermal	AB	XT2S160SF3FABU0			
	4		Fix-Thermal	AB	XT2S160SF4FABU0			
	3	160	Fix-Thermal	AF	XT2S160SF3FAFU0			
	4		Fix-Thermal	AF	XT2S160SF4FAFU0			
S250SF	3	200	Fix-Thermal	B0	XT2S250SF3FB0U0	On request		
	4		Fix-Thermal	B0	XT2S250SF4FB0U0			
	3	225	Fix-Thermal	BB	XT2S250SF3FBBU0			
	4		Fix-Thermal	BB	XT2S250SF4FBBU0			
	3	250	Fix-Thermal	BE	XT2S250SF3FBEU0			
	4		Fix-Thermal	BE	XT2S250SF4FBEU0			
S160SJ	3	15-40	Adj-Thermal	■	XT2S160SJ3F■U0	On request		
	4		Adj-Thermal	■	XT2S160SJ4F■U0			
	3	50-75	Adj-Thermal	■	XT2S160SJ3F■U0			
	4		Adj-Thermal	■	XT2S160SJ4F■U0			
	3	100	Adj-Thermal	A0	XT2S160SJ3FA0U0			
	4		Adj-Thermal	A0	XT2S160SJ4FA0U0			
	3	125	Adj-Thermal	AB	XT2S160SJ3FABU0			
	4		Adj-Thermal	AB	XT2S160SJ4FABU0			
	3	160	Adj-Thermal	AF	XT2S160SJ3FAFU0			
	4		Adj-Thermal	AF	XT2S160SJ4FAFU0			
	S250SJ	3	200	Adj-Thermal	B0		XT2S250SJ3FB0U0	On request
		4		Adj-Thermal	B0		XT2S250SJ4FB0U0	
3		250	Adj-Thermal	BE	XT2S250SJ3FBEU0			
4			Adj-Thermal	BE	XT2S250SJ4FBEU0			

*Ics = 50%

Code - Current Rating

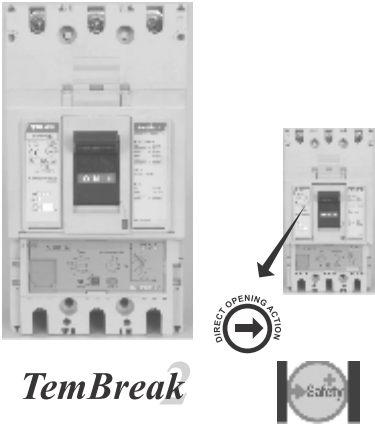
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■Code	15	20	30	32	40	50	60	63	75	A0	AB	AE	AF	AG	B0	BB	BE	D0	630	800	1000	1250	1600	2000

Plugin versions Available on request

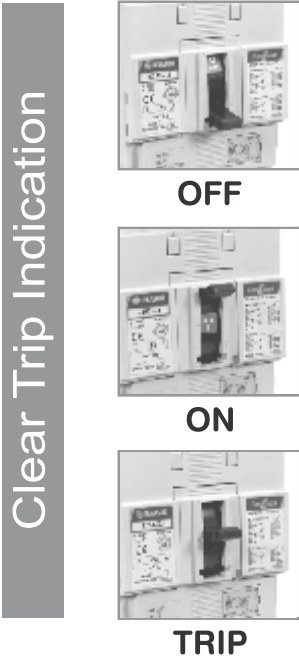
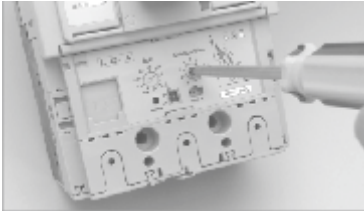
* For more details refer product catalogue

Accessories are mentioned on page no 19

Total Protection Complete Control



User friendly adjustment



Tembreak 2 MCCB with 50kA* breaking capacity

Frame	Pole	Current (A)	Type	Code	CATCODE	MRP[₹]
S1250SE	3	1250	Electronic	1250	XT2S1250SE3F1250U0	On request
	4	1250	Electronic	1250	XT2S1250SE4F1250U0	

*Ics = 75%

Tembreak 2 MCCB with 50kA* breaking capacity

Frame	Pole	Current (A)	Type	Code	CATCODE	MRP[₹]
S400NF	3	125	Fix-Thermal	AB	XT2S400NF3FABU0	On request
	4		Fix-Thermal	AB	XT2S400NF4FABU0	
	3	160	Fix-Thermal	AF	XT2S400NF3FAFU0	
	4		Fix-Thermal	AF	XT2S400NF4FAFU0	
	3	200	Fix-Thermal	B0	XT2S400NF3FB0U0	
	4		Fix-Thermal	B0	XT2S400NF4FB0U0	
	3	225	Fix-Thermal	BB	XT2S400NF3FBBU0	
	4		Fix-Thermal	BB	XT2S400NF4FBBU0	
	3	250	Fix-Thermal	BE	XT2S400NF3FBEU0	
	4		Fix-Thermal	BE	XT2S400NF4FBEU0	
	3	320	Fix-Thermal	BF	XT2S400NF3FBFU0	
	4		Fix-Thermal	BF	XT2S400NF4FBFU0	
3	400	Fix-Thermal	D0	XT2S400NF3FD0U0		
4		Fix-Thermal	D0	XT2S400NF4FD0U0		
S800NF	3	630	Fix-Thermal	630	XT2S800NF3F630U0	On request
	4		Fix-Thermal	630	XT2S800NF4F630U0	
	3	800	Fix-Thermal	800	XT2S800NF3F800U0	
	4		Fix-Thermal	800	XT2S800NF4F800U0	
S400NJ	3	250	Adj-Thermal	BE	XT2S400NJ3FBEU0	On request
	4		Adj-Thermal	BE	XT2S400NJ4FBEU0	
	3	400	Adj-Thermal	D0	XT2S400NJ3FD0U0	
	4		Adj-Thermal	D0	XT2S400NJ4FD0U0	
S800NJ	3	630	Adj-Thermal	630	XT2S800NJ3F630U0	On request
	4		Adj-Thermal	630	XT2S800NJ4F630U0	
	3	800	Adj-Thermal	800	XT2S800NJ3F800U0	
	4		Adj-Thermal	800	XT2S800NJ4F800U0	
S400NE	3	250	Electronic	BE	XT2S400NE3FBEU0	On request
	4		Electronic	BE	XT2S400NE4FBEU0	
	3	400	Electronic	D0	XT2S400NE3FD0U0	
	4		Electronic	D0	XT2S400NE4FD0U0	
S630CE	3	630	Electronic	630	XT2S630CE3F630U0	On request
	4	630	Electronic	630	XT2S630CE4F630U0	
S800NE	3	800	Electronic	800	XT2S800NE3F800U0	On request
	4	800	Electronic	800	XT2S800NE4F800U0	
S1000SE	3	1000	Electronic	1000	XT2S1000SE3F1000U0	On request
	4	1000	Electronic	1000	XT2S1000SE4F1000U0	
S1600SE	3	1600	Electronic	1600	XT2S1600SE3F1600U0	On request
	4	1600	Electronic	1600	XT2S1600SE4F1600U0	

Code - Current Rating

*Ics = 100%

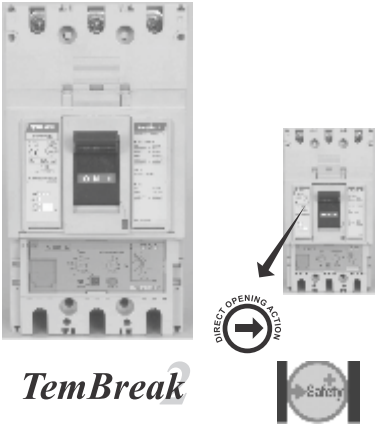
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Code	15	20	30	32	40	50	60	63	75	A0	AB	AE	AF	AG	B0	BB	BE	D0	630	800	1000	1250	1600	2000

Plugin versions Available on request
Accessories are mentioned on page no 19

* For more details refer product catalogue

Tembreak 2 MCCB with 65kA* breaking capacity

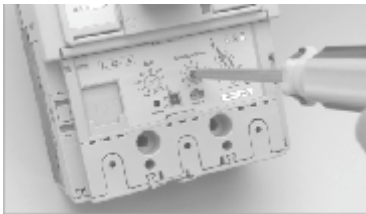
Total Protection Complete Control



TemBreak



User friendly adjustment



Clear Trip Indication



OFF



ON



TRIP

Frame	Pole	Current(A)	Type	Code	CATCODE	MRP [₹]
S100GF	3	15-40A	Fix-Thermal	■	XT2S100GF3F■U0	On request
	4		Fix-Thermal	■	XT2S100GF4F■U0	
	3	50-75A	Fix-Thermal	■	XT2S100GF3F■U0	
	4		Fix-Thermal	■	XT2S100GF4F■U0	
	3	100	Fix-Thermal	A0	XT2S100GF3FA0U0	
	4		Fix-Thermal	AB	XT2S100GF4FABU0	
S125GF	3	125	Fix-Thermal	AB	XT2S125GF3FABU0	On request
	4		Fix-Thermal	AB	XT2S125GF4FABU0	
S225GF	3	125	Fix-Thermal	AB	XT2S225GF3FABU0	On request
	4		Fix-Thermal	AB	XT2S225GF4FABU0	
	3	160	Fix-Thermal	AF	XT2S225GF3FAFU0	
	4		Fix-Thermal	AF	XT2S225GF4FAFU0	
	3	200	Fix-Thermal	B0	XT2S225GF3FB0U0	
	4		Fix-Thermal	B0	XT2S225GF4FB0U0	
	3	225	Fix-Thermal	BB	XT2S225GF3FBBU0	
	4		Fix-Thermal	BB	XT2S225GF4FBBU0	
S250GF	3	250	Fix-Thermal	BE	XT2S250GF3FBEU0	On request
	4		Fix-Thermal	BE	XT2S250GF4FBEU0	
S125GJ	3	20-32A	Adj-Thermal	■	XT2S125GJ3F■U0	On request
	4		Adj-Thermal	■	XT2S125GJ4F■U0	
	3	40-80A	Adj-Thermal	■	XT2S125GJ3F■U0	
	4		Adj-Thermal	■	XT2S125GJ4F■U0	
	3	100	Adj-Thermal	A0	XT2S125GJ3FA0U0	
	4		Adj-Thermal	A0	XT2S125GJ4FA0U0	
	3	125	Adj-Thermal	AB	XT2S125GJ3FABU0	
	4		Adj-Thermal	AB	XT2S125GJ4FABU0	
S160NJ	3	160	Adj-Thermal	AF	XT2S160NJ3FAFU0	On request
	4		Adj-Thermal	AF	XT2S160NJ4FAFU0	

*Ics = 50%

Tembreak 2 MCCB with 70kA* breaking capacity

Frame	Pole	Current (A)	Type	Code	CATCODE	MRP [₹]
S250PE	3	125	Electronic	AB	XT2S250PE3FABU0	On request
	4		Electronic	AB	XT2S250PE4FABU0	
	3	250	Electronic	BE	XT2S250PE3FBEU0	
	4		Electronic	BE	XT2S250PE4FBEU0	
S800RE	3	630	Electronic	630	XT2S800RE3F630U0	On request
	4		Electronic	630	XT2S800RE4F630U0	
	3	800	Electronic	800	XT2S800RE3F800U0	
	4		Electronic	800	XT2S800RE4F800U0	
S800RJ	3	630	Adj-Thermal	630	XT2S800RJ3F630U0	On request
	4		Adj-Thermal	630	XT2S800RJ4F630U0	
	3	800	Adj-Thermal	800	XT2S800RJ3F800U0	
	4		Adj-Thermal	800	XT2S800RJ4F800U0	

*Ics = 100%

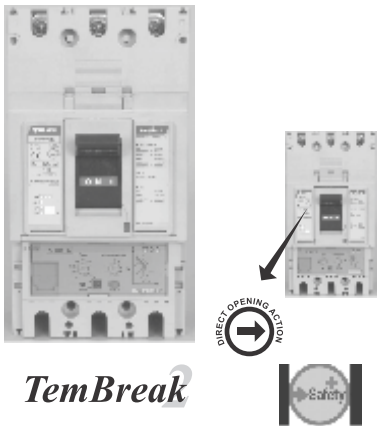
Code - Current Rating

Rating	15A	20A	30A	32A	40A	50A	60A	63A	75A	100A	125A	150A	160A	175A	200A	225A	250A	400A	630A	800A	1000A	1250A	1600A	2000A
■Code	15	20	30	32	40	50	60	63	75	A0	AB	AE	AF	AG	B0	BB	BE	D0	630	800	1000	1250	1600	2000

Plugin versions Available on request
Accessories are mentioned on page no 19

* For more details refer product catalogue

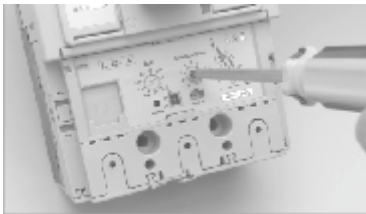
Total Protection Complete Control



TemBreak²



User friendly adjustment



Tembreak 2 MCCB with 65kA* breaking capacity

Frame	Pole	Current (A)	Type	Code	CATCODE	MRP [₹]
S160GJ	3	50-63	Adj-Thermal	■	XT2S160GJ3F■U0	On request
	4		Adj-Thermal	■	XT2S160GJ4F■U0	
	3	100	Adj-Thermal	A0	XT2S160GJ3FA0U0	
	4		Adj-Thermal	A0	XT2S160GJ4FA0U0	
	3	125	Adj-Thermal	AB	XT2S160GJ3FABU0	
	4		Adj-Thermal	AB	XT2S160GJ4FABU0	
3	160	Adj-Thermal	AF	XT2S160GJ3FAFU0		
4		Adj-Thermal	AF	XT2S160GJ4FAFU0		
S250GJ	3	160	Adj-Thermal	AF	XT2S250GJ3FAFU0	On request
	4		Adj-Thermal	AF	XT2S250GJ4FAFU0	
	3	200	Adj-Thermal	B0	XT2S250GJ3FB0U0	
	4		Adj-Thermal	B0	XT2S250GJ4FB0U0	
	3	250	Adj-Thermal	BE	XT2S250GJ3FBEU0	
	4		Adj-Thermal	BE	XT2S250GJ4FBEU0	
S250GE	3	125	Electronic	AB	XT2S250GE3FABU0	On request
	4		Electronic	AB	XT2S250GE4FABU0	
	3	250	Electronic	BE	XT2S250GE3FBEU0	
	4		Electronic	BE	XT2S250GE4FBEU0	

*Ics = 55%

Tembreak 2 MCCB with 85kA* breaking capacity

Frame	Pole	Current(A)	Type	Code	CATCODE	MRP [₹]
S400PF	3	250	Fix-Thermal	BE	XT2S400PF3FBUEU0	On request
	4		Fix-Thermal	BE	XT2S400PF4FBUEU0	
	3	320	Fix-Thermal	BF	XT2S400PF3FBFU0	
	4		Fix-Thermal	BF	XT2S400PF4FBFU0	
S400PJ	3	400	Fix-Thermal	D0	XT2S400PF3FD0U0	On request
	4		Fix-Thermal	D0	XT2S400PF4FD0U0	
	3	250	Adj-Thermal	BE	XT2S400PJ3FBEU0	
	4		Adj-Thermal	BE	XT2S400PJ4FBEU0	
	3	400	Adj-Thermal	D0	XT2S400PJ3FD0U0	
	4		Adj-Thermal	D0	XT2S400PJ4FD0U0	
S1250GE	3	1250	Electronic	1250	XT2S1250GE3F1250U0	On request
	4		Electronic	1250	XT2S1250GE4F1250U0	
S1600NE	3	1600	Electronic	1600	XT2S1600NE3F1600U0	On request
	4		Electronic	1600	XT2S1600NE4F1600U0	
XS2000NE	3	2000	Electronic	2000	XT2XS2000NE3F2000U0	On request
	4		Electronic	2000	XT2XS2000NE4F2000U0	

*Ics = 100%

Clear Trip Indication



OFF



ON



TRIP

Code - Current Rating

Rating	15A	20A	30A	32A	40A	50A	60A	63A	75A	100A	125A	150A	160A	175A	200A	225A	250A	400A	630A	800A	1000A	1250A	1600A	2000A
■Code	15	20	30	32	40	50	60	63	75	A0	AB	AE	AF	AG	B0	BB	BE	D0	630	800	1000	1250	1600	2000

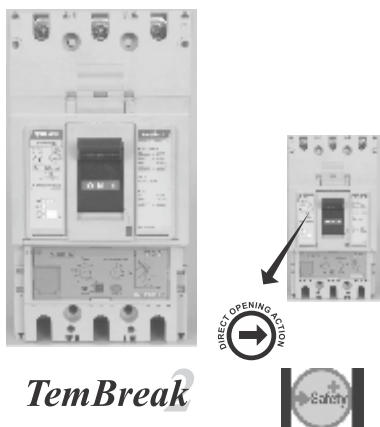
Plugin versions Available on request

Accessories are mentioned on page no 19

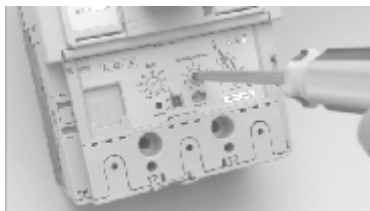
* For more details refer product catalogue

Tembreak 2 MCCB with 70kA* breaking capacity

Total Protection Complete Control



User friendly adjustment



Clear Trip Indication



OFF



ON



TRIP

Frame	Pole	Current(A)	Type	Code	CATCODE	MRP [₹]
S400GF	3	125	Fix-Thermal	AB	XT2S400GF3FABU0	On request
	4		Fix-Thermal	AB	XT2S400GF4FABU0	
	3	160	Fix-Thermal	AF	XT2S400GF3FAFU0	
	4		Fix-Thermal	AF	XT2S400GF4FAFU0	
	3	200	Fix-Thermal	B0	XT2S400GF3FB0U0	
	4		Fix-Thermal	B0	XT2S400GF4FB0U0	
	3	225	Fix-Thermal	BB	XT2S400GF3FBBU0	
	4		Fix-Thermal	BB	XT2S400GF4FBBU0	
	3	250	Fix-Thermal	BE	XT2S400GF3FBEU0	
	4		Fix-Thermal	BE	XT2S400GF4FBEU0	
	3	320	Fix-Thermal	BF	XT2S400GF3FBFU0	
	4		Fix-Thermal	BF	XT2S400GF4FBFU0	
3	400	Fix-Thermal	D0	XT2S400GF3FD0U0		
4		Fix-Thermal	D0	XT2S400GF4FD0U0		
S630RF	3	500	Fix-Thermal	500	XT2S630RF3F500U0	On request
	4		Fix-Thermal	500	XT2S630RF4F500U0	
	3	630	Fix-Thermal	630	XT2S630RF3F630U0	
	4		Fix-Thermal	630	XT2S630RF4F630U0	
S800RF	3	630	Fix-Thermal	630	XT2S800RF3F630U0	On request
	4		Fix-Thermal	630	XT2S800RF4F630U0	
	3	800	Fix-Thermal	800	XT2S800RF3F800U0	
	4		Fix-Thermal	800	XT2S800RF4F800U0	
S400GJ	3	250	Adj-Thermal	BE	XT2S400GJ3FBEU0	On request
	4		Adj-Thermal	BE	XT2S400GJ4FBEU0	
	3	400	Adj-Thermal	D0	XT2S400GJ3FD0U0	
	4		Adj-Thermal	D0	XT2S400GJ4FD0U0	
S400GE	3	250	Electronic	BE	XT2S400GE3FBEU0	On request
	4		Electronic	BE	XT2S400GE4FBEU0	
	3	400	Electronic	D0	XT2S400GE3FD0U0	
	4		Electronic	D0	XT2S400GE4FD0U0	
S630GE	3	630	Electronic	630	XT2S630GE3F630U0	On request
	4		Electronic	630	XT2S630GE4F630U0	
S1000NE	3	1000	Electronic	1000	XT2S1000NE3F1000U0	On request
	4		Electronic	1000	XT2S1000NE4F1000U0	
S1250NE	3	1250	Electronic	1250	XT2S1250NE3F1250U0	On request
	4		Electronic	1250	XT2S1250NE4F1250U0	

Code - Current Rating *Ics = 72%

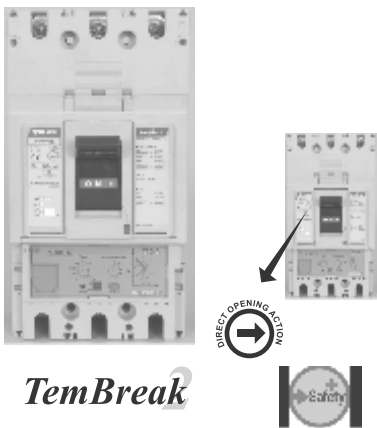
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Code	15	20	30	32	40	50	60	63	75	A0	AB	AE	AF	AG	B0	BB	BE	D0	630	800	1000	1250	1600	2000

Plugin versions Available on request

* For more details refer product catalogue

Accessories are mentioned on page no 19

Total Protection Complete Control



Tembreak 2 MCCB with 120kA* breaking capacity

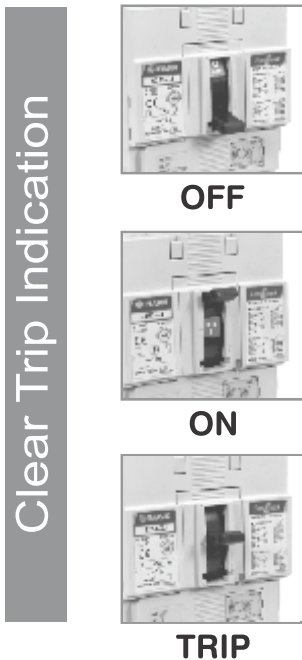
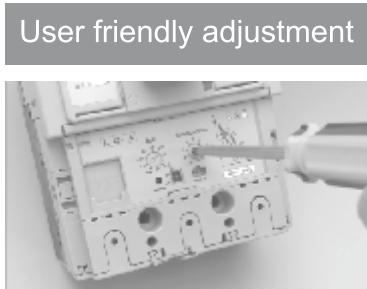
Frame	Pole	Current(A)	Type	Code	CATCODE	MRP [₹]
H225NF	3	125	Fix-Thermal	AB	XT2H225NF3FABU0	On request
	4		Fix-Thermal	AB	XT2H225NF4FABU0	
	3	160	Fix-Thermal	AF	XT2H225NF3FAFU0	
	4		Fix-Thermal	AF	XT2H225NF4FAFU0	
	3	200	Fix-Thermal	B0	XT2H225NF3FB0U0	
	4		Fix-Thermal	B0	XT2H225NF4FB0U0	
	3	225	Fix-Thermal	BB	XT2H225NF3FBBU0	
	4		Fix-Thermal	BB	XT2H225NF4FBBU0	

*Ics = 70%

Tembreak 2 MCCB with 125kA* breaking capacity

Frame	Pole	Current(A)	Type	Code	CATCODE	MRP [₹]
H100NF	3	10-40A	Fix-Thermal	■	XT2H100NF3F■U0	On request
	3	50-75A	Fix-Thermal	■	XT2H100NF3F■U0	
	3	100	Fix-Thermal	A0	XT2H100NF3FA0U0	
H125NJ	3	20-32A	Adj-Thermal	■	XT2H125NJ3F■U0	On request
	4		Adj-Thermal	■	XT2H125NJ4F■U0	
	3	40-80A	Adj-Thermal	■	XT2H125NJ3F■U0	
	4		Adj-Thermal	■	XT2H125NJ4F■U0	
	3	100	Adj-Thermal	A0	XT2H125NJ3FA0U0	
	4		Adj-Thermal	A0	XT2H125NJ4FA0U0	
	3	125	Adj-Thermal	AB	XT2H125NJ3FABU0	
	4		Adj-Thermal	AB	XT2H125NJ4FABU0	
H160NJ	3	160	Adj-Thermal	AF	XT2H160NJ3FAFU0	On request
	4		Adj-Thermal	AF	XT2H160NJ4FAFU0	
H250NJ	3	160	Adj-Thermal	AF	XT2H250NJ3FAFU0	On request
	4		Adj-Thermal	AF	XT2H250NJ4FAFU0	
	3	250	Adj-Thermal	BE	XT2H250NJ3FBEU0	
	4		Adj-Thermal	BE	XT2H250NJ4FBEU0	
H400NE	3	250	Electronic	BE	XT2H400NE3FBEU0	On request
	4		Electronic	BE	XT2H400NE4FBEU0	
	3	400	Electronic	D0	XT2H400NE3FD0U0	
	4		Electronic	D0	XT2H400NE4FD0U0	

*Ics = 70%



Code - Current Rating

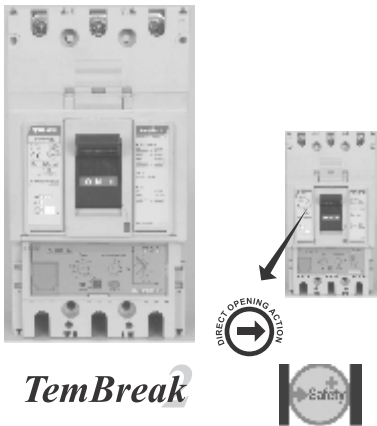
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■Code	15	20	30	32	40	50	60	63	75	A0	AB	AE	AF	AG	B0	BB	BE	D0	630	800	1000	1250	1600	2000

Plugin versions Available on request

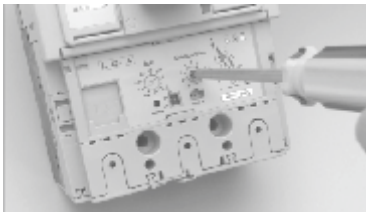
* For more details refer product catalogue

Accessories are mentioned on page no 19

Total Protection Complete Control



User friendly adjustment



Clear Trip Indication



OFF



ON



TRIP

Tembreak 2 MCCB with 120kA* breaking capacity

Frame	Pole	Current(A)	Type	Code	CATCODE	MRP [₹]
H800NE	3	630	Electronic	630	XT2H800NE3F630U0	On request
	4		Electronic	630	XT2H800NE4F630U0	
	3	800	Electronic	800	XT2H800NE3F800U0	
	4		Electronic	800	XT2H800NE4F800U0	

*Ics = 100%

Tembreak 2 MCCB with 200kA* breaking capacity

Frame	Pole	Current(A)	Type	Code	CATCODE	MRP [₹]
L100NF	3	10-40A	Fix-Thermal	■	XT2L100NF3F■U0	On request
	3	50-75A	Fix-Thermal	■	XT2L100NF3F■U0	
	3	100	Fix-Thermal	A0	XT2L100NF3FA0U0	
L125NJ	3	20-32A	Adj-Thermal	■	XT2L125NJ3F■U0	On request
	4		Adj-Thermal	■	XT2L125NJ4F■U0	
	3	40-80A	Adj-Thermal	■	XT2L125NJ3F■U0	
	4		Adj-Thermal	■	XT2L125NJ4F■U0	
	3	100	Adj-Thermal	A0	XT2L125NJ3FA0U0	
	4		Adj-Thermal	A0	XT2L125NJ4FA0U0	
	3	125	Adj-Thermal	AB	XT2L125NJ3FABU0	
	4		Adj-Thermal	AB	XT2L125NJ4FABU0	
L250NJ	3	160	Adj-Thermal	AF	XT2L250NJ3FAFU0	On request
	4		Adj-Thermal	AF	XT2L250NJ4FAFU0	
	3	250	Adj-Thermal	BE	XT2L250NJ3FBEU0	
	4		Adj-Thermal	BE	XT2L250NJ4FBEU0	
L400NE	3	250	Electronic	BE	XT2L400NE3FBEU0	On request
	4		Electronic	BE	XT2L400NE4FBEU0	
	3	400	Electronic	D0	XT2L400NE3FD0U0	
	4		Electronic	D0	XT2L400NE4FD0U0	

*Ics = 75%

Tembreak 2 MCCB with 200kA* breaking capacity

Frame	Pole	Current(A)	Type	Code	CATCODE	MRP [₹]
L160NJ	3	160	Adj-Thermal	AF	XT2L160NJ3FAFU0	On request
	4		Adj-Thermal	AF	XT2L160NJ4FAFU0	
L800NE	3	630	Electronic	630	XT2L800NE3F630U0	On request
	4		Electronic	630	XT2L800NE4F630U0	
	3	800	Electronic	800	XT2L800NE3F800U0	
	4		Electronic	800	XT2L800NE4F800U0	

*Ics = 100%

Code - Current Rating

Rating	15A	20A	30A	32A	40A	50A	60A	63A	75A	100A	125A	150A	160A	175A	200A	225A	250A	400A	630A	800A	1000A	1250A	1600A	2000A
Code	15	20	30	32	40	50	60	63	75	A0	AB	AE	AF	AG	B0	BB	BE	D0	630	800	1000	1250	1600	2000

Plugin versions Available on request

Accessories are mentioned on page no 19

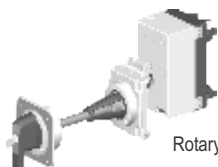
* For more details refer product catalogue

ACCESSORIES *TemBreak* MCCB..... BCH

ACCESSORIES FOR TEMBREAK-2 RANGE OF MCCB



Motor Operator



Rotary Handle

Type	Description	up to 125A	250A	400A & 630A	MRP [₹]
Aux Switch	1 Change over		T2AX00M3SWA		1490
Alarm Switch	1 Change over		T2AL00M3SWA		1490
Shunt Release	100-120VAC		T2SH00A10WA		3450
Shunt Release	200-240VAC		T2SH00A20WA		3450
Shunt Release	380-450VAC		T2SH00A40WA		3450
UV Release	200-240VAC		T2UV00A20NWA		5000
UV Release	380-450VAC		T2UV00A40NWA		5000
Motor Operator	110VAC	T2MC12A10NA	T2MC25A10NA		On Request
Motor Operator	220VAC	T2MC12A20NA	T2MC25A20NA		On Request
Motor Operator	240VAC	T2MC12A24NA	T2MC25A24NA		On Request
Motor Operator	100-240VAC			T2MC40A10NA	On Request
Rotary Handle	Panel Mounted (Ip54)	T2HP12R5BNA			6785
Rotary Handle	Panel Mounted (Ip54)				9430
Rotary Handle	Panel Mounted (IP54)		T2HP25R5BNA	T2HP40R5BNA	11200

Extended Terminals for All TEMBREAK-2 MCCBs

Frame	For	Cat Code	MRP [₹]
100A FRAME	3 Pole	ACMTP100	700
125A FRAME	3 Pole	ACMTP1253	670
	4 Pole	ACMTP1254	855
160A/250A FRAME	3 Pole	ACMTP2503	1000
	4 Pole	ACMTP2504	1560
400A FRAME	3 Pole	ACMTP4003	2350
	4 Pole	ACMTP4004	2470

One set = 6 Nos. Links for 3 Pole MCCBs
 One set = 8 Nos. Links for 4 Pole MCCBs

** For more details refer product catalogue*

Switch Disconnecter Fuse Units

Suitable for DIN / BOLTED fuses in open execution

Rating (A) AC-23A	Cat No.	Fuse Type	Type	MRP [₹]
32A	PSFS323ND00	DIN	TPN	1640
32A	PSFS323ND000	DIN	TPN	1640
32A	PSFS323NB	Bolted	TPN	1640
32A	PSFS323B	Bolted	TP	1605
63A	PSFS633ND00	DIN	TPN	2275
63A	PSFS633ND000	DIN	TPN	2275
63A	PSFS633NB	Bolted	TPN	2275
63A	PSFS633B	Bolted	TP	2205
100	PSFS1003*	DIN/Bolted	TP	4470
100	PSFS1003N*	DIN/Bolted	TPN	4680
125	PSFS1253*	DIN/Bolted	TP	5905
125	PSFS1253N*	DIN/Bolted	TPN	6335
160	PSFS160*	DIN/Bolted	TP	6490
160	PSFS1603N*	DIN/Bolted	TPN	7050
200	PSFS2003B	DIN/Bolted	TP	8100
200	PSFS2003NB	DIN/Bolted	TPN	8315

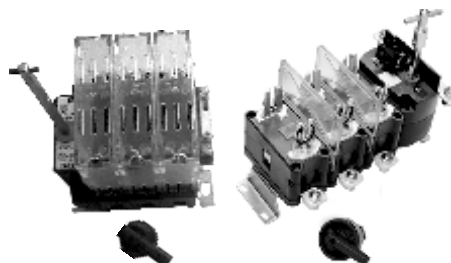
* Use suffix 'D' for DIN type, 'B' for bolted type

Switch Disconnecter

Rating (A) AC-23A	Cat No.	Fuse Type	Type	MRP [₹]
32A	PSSD323N	-	TPN	1585
63A	PSSD633N	-	TPN	2185
100A	PSSD1003N	-	TPN	4305
125A	PSSD1253N	-	TPN	5345
160A	PSSD1603N	-	TPN	6025
200A	PSSD2003N	-	TPN	6805

Fuse Switch Units Type FS

Rating (A) AC-23A	Cat No.	Fuse Type	Type	MRP [₹]
32A	FS0N	BOLTED	TP	1670
63A	FS1N	BOLTED	TP	2285
SHROUD	AC21TS			145
1NO+1NC	AC21EB11	for FS0 / FS1N		430
NEUTRAL	AC21L	for FS0 / FS1N-		195



Switch Disconnecter Fuse

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

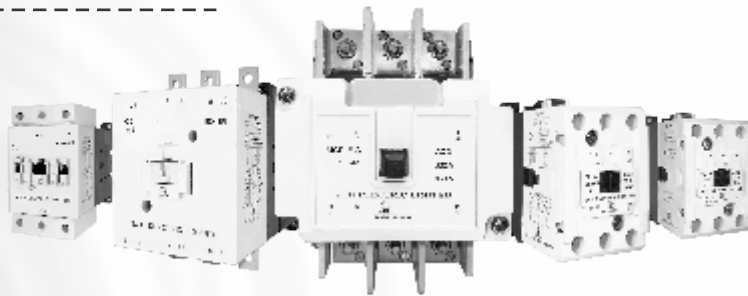
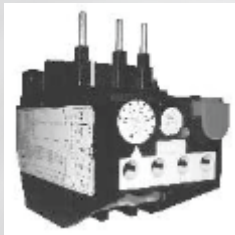
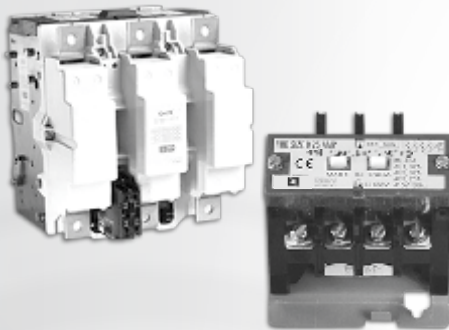


Controlgear

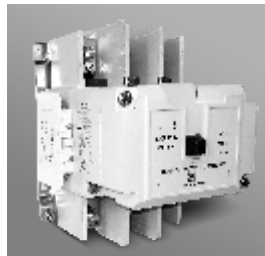
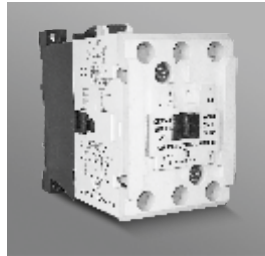
- DUROS FREEDOM CONTACTORS
6A -1200A, AC3
- DEFINITE PURPOSE CONTACTORS
- CAP DUTY CONTACTORS
- AGRI CONTACTORS
 - 2 POLE
 - NHD SERIES
- CITATION SERIES 3 POLE
- VACUUM CONTACTORS

New

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

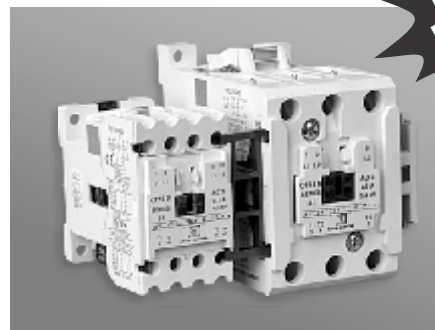


DUROS FREEDOM RANGE



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

- Interlocking 2 Different frames using a common Mechanical Interlock (Upto 73A)



Design Flexibility



BCH Series : From 400A to 1200A

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

Duros Freedom Series 3 Pole AC Control

Size	AC1 Rating	AC3 Rating 415 V			Aux. Contact	Cat. No.	MRP [₹]	Lot Size
		A	HP	KW				
A	20	6	3	2.2	1NO	CE15ANS3 ■ B	715	1
					1NC	CE15ANC3 ■ B		
B	20	9.1	5.5	4	1NO	CE15BNS3 ■ B	810	
					1NC	CE15BNC3 ■ B		
C	20	12	7.5	5.5	1NO	CE15CNS3 ■ B	920	
					1NC	CE15CNC3 ■ B		
D	32	16	10	7.5	1NO+1NC	CE15DN3 ■ B	1015	
					-	CE15DN3 ■	930	
	32	18	10	7.5	1NO+1NC	CE15D1N3 ■ B	1015	
					-	CE15D1N3 ■	930	
E	40	25	15	11	1NO+1NC	CE15EN3 ■ B	1525	
					-	CE15EN3 ■	1380	
F	40	32	20	15	1NO+1NC	CE15FN3 ■ B	2950	
					-	CE15FN3 ■	2830	
G	60	40	30	22	1NO+1NC	CE15GN3 ■	4400	
					-	CE15GN3 ■ NB	4295	
H	75	50	33.5	25	1NO+1NC	CE15HN3 ■	5495	
					-	CE15HN3 ■ NB	5350	
J	80	65	50	37	1NO+1NC	CE15JN3 ■	7715	
					-	CE15JN3 ■ NB	7510	
K	80	73	50	37	1NO+1NC	CE15KN3 ■	7805	
					-	CE15KN3 ■ NB	7695	
	80	75	50	37	1NO+1NC	CE15K1N3 ■	7805	
					-	CE15K1N3 ■ NB	7695	
K-1	115	80	53	40	1NO+1NC	BCH15KT.3.11. ■	9655	
L	125	95	62	47	1NO+1NC	BCH15LT.3.11. ■	11475	
M	135	110	80	60	1NO+1NC	BCH15MT.3.11. ■	13665	
N	230	150	100	75	1NO+1NC	BCH15NT.3.11. ■	18235	
P	250	175	125	95	1NO+1NC	BCH15PT.3.11. ■	23515	
R	300	200	150	100	1NO+1NC	MCE15RN3 ■ 7	25935	
S0	315	265	186	140	1NO+1NC	MCE15S0N3 ■ 7	31540	
S	315	300	220	160	1NO+1NC	MCE15SN3 ■ 7	36655	

■ For Coil Voltage Codes refer Table on page 31

Duros Freedom Series 3 Pole AC/DC Control

Size	AC1 Rating(A)	AC3 Rating 415 V			Aux. Contact	Cat. No.	MRP [₹]
		A	HP	KW			
BCH54	600	400	320	240	2NO+2NC	BCH54.3.22. ■	47115
BCH55	600	450	320	240	2NO+2NC	BCH55.3.22. ■	59995
BCH57	760	550	420	315	2NO+2NC	BCH57.3.22. ■	69055
BCH62	1000	700	533	400	2NO+2NC	BCH62.3.22. ■	135300
BCH64	1000	860	666	500	2NO+2NC	BCH64.3.22. ■	218115
BCH76	1200	1000	800	600	1NO+2NC	BCH76.3.12. ■	408200
BCH78	1350	1200	933	700	1NO+2NC	BCH78.3.12. ■	436300

■ For Coil Voltage Codes refer Table on page 31

For DC control circuit of contactor size BCH76/BCH78 add Rs.2600

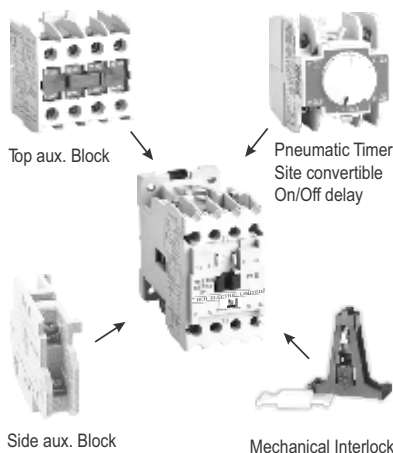


100% Rated
4th Pole

Duros Freedom Series 4 Pole AC Control

AC1 Rating (A)	Cat. No.	MRP [₹]
20	CE15CN4 ■ B	1185
32	CE15DN4 ■	1245
40	CE15EN4 ■	1895
60	CE15GN4 ■	4570
75	CE15HN4 ■	6075
80	CE15JN4 ■	7070

Common Accessories 'upto 73A'



Duros Freedom Series 3 Pole DC Control Type CE16 Pure DC

AC3 (A) at 415VAC	KW	Aux Contact	Cat No.	MRP [₹]
9.1	4	1NO	CE16BNS3*B	1270
		1NC	CE16BNC3*B	1270
12	5.5	1NO	CE16CNS3*B	1335
		1NC	CE16CNC3*B	1335
16	7.5	1NO+1NC	CE16DN3*B	1625
25	11	1NO+1NC	CE16EN3*B	2215
32	15	1NO+1NC	CE16FN3*B	4630

*Coil Codes :
DC control

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

Contactor : 3 Pole DC Control Type CE15

AC3 (A) at 415VAC	KW	Aux Contact	Cat No.	MRP [₹]
40	22	—	CE15GN3 ■	5350
50	25	—	CE15HN3 ■	7010
65	37	—	CE15JN3 ■	8130
73	37	—	CE15KN3 ■	9715

■ For Coil Voltage Codes refer Table on page 31

DC Control

■ Standard voltages 24VDC , 110VDC , 220VDC

Control Relay

Aux Contact	Cat No.	MRP [₹]
2NO+2NC	D16CR22*	1325
3NO+1NC	D16CR31*	1325
4NO	D16CR40*	1325

*Coil Codes :

DC control	
24V	U1
48V	W1
110V	A1
220V	B1
60V	X1

Pure DC



Control Relays Freedom Series

Size	Contact Configuration	Cat No.	MRP [₹]		Lot Size
			AC	DC	
CR	2NO+2NC 3NO+1NC 4NO	D15CR22 ■ D15CR31 ■ D15CR40 ■	905	1325	1

■ For Coil Voltages Codes refer Table on page 31



Control Relays Citation - M Series

Size	Control	Contact Configuration	Cat No.	MRP [₹]	Lot Size
CR	DC	2NO+2NC	DMD20CR22 ■	1705	1
	AC	4NO	MD20CR40 ■	1090	1
		3NO+1NC	MD20CR31 ■		
		2NO+2NC	MD20CR22 ■		

■ For Coil Voltages Codes refer Table on page 31

Capacitor Switching



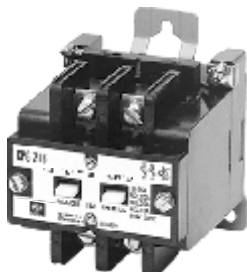
- Ideal solution for Switching single and multiple Capacitor banks upto 25 KVAR
- IP 20

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
G	20	CCE 15GN3 ■	3525
H	25	CCE 15HN3 ■	3810

■ For Coil Voltage Codes refer Table on page 31

2 Pole Contactors



The Real 2 Pole Contactor

- 16, 25 and 40 A rating
- Wide termination space

2 Pole - 16, 25 and 40A

Ith (A)	AC3 (A) 240V AC	Cat. No.	MRP [₹]	Lot Size
25	16	CPG 216 ■	845	1
45	25	CPG 225 ■	1185	
50	40	CPG 240 ■	1585	

■ For Coil Voltage Codes refer Table on page 31

4 Pole Contactors



New

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

'NHD' Series 4 Pole AC Control

Size	AC3 Rating at 415 V				Cat. No.	MRP [₹]	Lot Size
	AC1 (A)	(A)	HP	KW			
CA	20	12	7.5	5	CA12N ■	On Request	1
00	25	16	10	7.5	C00N ■	1590	
0	45	25	15	11	N0N ■	2630	
01	45	32	20	15	N01N ■	3410	
1	50	40	25	18.5	N1N ■	4165	
Auxiliary Contact Blocks - NHD				1NO+1NC	001CB11	190	1
				2NO	001CB20		
				2NC	001CB02		

■ Standard coil voltages are 24, 110, 220/240 & 380/415 V AC, 50 Hz. For voltage codes refer Table on page 31

Definite Purpose Contactors

Coil voltage:240VAC



- Quick connect plugin terminals
- Specially designed low VA coil



AC3 (A)	Type	Cat. No.	MRP [₹]
1 Pole			
25	1 Pole	CPD251CK	560
25	1 Pole with Neutral	CPD251NCK	635
40	1 Pole	CPD401CK	605
40	1 Pole with Neutral	CPD40NCK	730
2 Pole			
25	2P, 220-240VAC	CPD252H	710
25	2P, 415VAC	CPD252M	
40	2P, 220-240VAC	CPD402H	815
40	2P, 415VAC	CPD402M	

*wide band AC coil voltages for definite purpose Contactor

Contactor	Cat No.	Voltage		
		170-240VAC	290-415VAC	140V-200VAC
25A 1P	CPD251*	KL	ML	BL

Proven & time tested

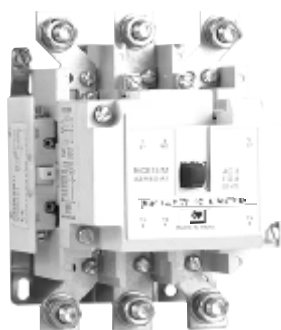


- Wider Terminal space for reliable & durable termination
- Front open design for ease of inspection

Citation Series 3 Pole AC Control

Size	AC3 Rating at 415 V			Cat. No. <small>(with Aux. contact 2NO+2NC)</small>	MRP [₹]	Cat. No. <small>(without Aux. contact)</small>	MRP [₹]
	Amps	HP	KW				
C4	32	20	15	C4NE22 ■	4120	C4NE00 ■	3415
D	40	30	22	MC10DN22 ■	6570	MC10DN00 ■	5745
E	70	50	37	MC10EN22 ■	11780	MC10EN00 ■	11325

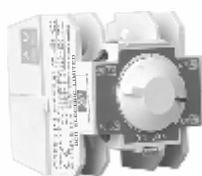
■ Standard coil voltages are 24, 110, 220, 240 & 415 VAC, 50 Hz. For voltage codes refer Table on page 31



Size	AC1 Rating	AC3 Rating 415 V			Aux. Contact	Cat. No.	MRP [₹]	Lot Size
		A	HP	KW				
L	140	80	53	40	1NO+1NC	MCE15LN3 ■ 5	9765	1
M	150	95	62	47	1NO+1NC	MCE15M0N3 ■ 5	11650	
M-5	150	110	80	60	1NO+1NC	MCE15MN3 ■ 5	13935	
N	300	140	100	75	1NO+1NC	MCE15NN3 ■ 7	18545	1
Q	300	185	120	90	1NO+1NC	MCE15QN3 ■ 7	24045	
S	315	300	220	160	1NO+1NC	MCE15SN3 ■ 7	36655	

■ For Coil Voltage Codes refer Table on page 31

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





Horizontal Mechanical Interlocks

Vertical Mechanical Interlocks

Accessories	Configuration	Cat No.	Contactors Type	MRP [₹]
Aux. Contact Block (side Mounting)	1NO	C320KGSR10	CE15 & CR	125
	1NO+1NC	C320KGSR11		310
	1NC	C320KGSR01		125
	2NO	C320KGSR20		310
	1NO+1NC	BCH15S11	BCH15	450
	1NO+1NC	MC320KB11	MCE15R, MCE15S0 & MCE15S	515
	1NO+1NC (Late break type)	MC320KAS11		525
		2NO+2NC	EF22	BCH54 to BCH64
	1NO+1NC	EB11	BCH76 to BCH78	7575
4th Neutral Switching Pole	800A	NP800/5	BCH54 to 57	22000
	1000A	NP1000/6	BCH62 to 64	26400
	1000A	NP1000/7	BCH76 to 78	30100
Aux. Contact Block (Front Mounting)	1NO	C320KGTC10	CE15, CR	125
	1NC	C320KGTC01		
	2NO	C320KGT*20		210
	2NC	C320KGT*02		
	1NO+1NC	C320KGT*11		
	2NO+2NC	C320KGT*22		380
	3NO+1NC	C320KGT*31		
	4NO	C320KGT*40		
	1NO+3NC	C320KGT*13		
	4NC	C320KGT*04	BCH15	850
	4NO	BCH15T40		
	3NO+1NC	BCH15T31		
	2NO+2NC	BCH15T22		
	1NO+1NC	BCH15T11		
	1NO	BCH15T10		
1NC	BCH15T01	250		
2NO+2NC	MC320KE22	MD, DMD control relay	400	
Pneumatic Timer Block "ON/OFF" Delay site selectable	1NO+1NC (0.1 to 30 sec)	C320TP1	CE15 & CR	1105
	1NO+1NC (0.1 to 180 sec)	C320TP2		
Mechanical Interlocks	-	C321KM60	CE15 & CR	355
	-	MC321KM3	MCE15R to MCE15S	1080
	Horizontal	BM5H	BCH54 to 57	6360
		BM6H	BCH62 to 64	11290
		BM7H	BCH76 to 78	29930
	Vertical	BM5V	BCH54 to 57	6390
		BM6V	BCH62 to 64	11290
		BM7V	BCH76 to 78	26550
	Horizontal	BM0H	BCH15KT/LT/MT	350
BM3H		BCH15NT/PT	380	

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

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

Accessories	Configuration	Cat No.	Contactor Type	MRP [₹]
 Coil Surge Suppressors	24-48V (50/60Hz)	MC320LR11	CE15, CR	345
	110-240V (50/60Hz)	MC320LR12		
 Mechanical latch #	§ to complete the cat no. suffix code given	AM5- §	BCH54 to BCH57	16430
		Am6 §	BCH62 to BCH64	On request
Terminal adapter kit	3 links with m10 nut & bolt	SP37TA	MCE15R, MCE15S0 &	820

Mechanical latch are supplied with AC coils only

§ Coil Voltage suffix code for Mechanical latch AM5 & AM6

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

Accessories for Citation contactors size - L, M, M-5, N, Q, C4, D & E type

Accessories	Configuration	Cat No.	Contactor Type	MRP[₹]
Aux. block side mounting	1NO+1NC	C320KGM11	L, M & M-5	490
	1NO+1NC	MC320KB11	N & Q	515
Aux. block add-on (Late break type)	1NO+1NC	MC320KAS11	L, M, M-5, N & Q	525
	1NO+1NC	AC34EA11	C4, D & E	410
Mechanical Interlock		MC321KM1	C4 & D	440
		MC321KM2	L, M, M-5 & E	485
		MC321KM3	N & Q	1080
Terminal adapter kit	3 links with m10 nut & bolt	SP37TA	N & Q	820
Base block	1NO+1NC	MC320KB2	C4 & D	375
	1NO+1NC	AC35EB11	E	440

Spare Contacts set for Duro Freedom Contactors

Size	Consisting of	Cat. No.	MRP [₹]
A	Complete top housing Consisting of fixed & moving contacts	SBANS3 SBANC3 SBAN4	685
B		SBBNS3 SBBNC3 SBBN4	725
C		SBCNS3 SBCNC3 SBCN4	795
D		SBDN3	965
E		SBEN3	1135
F		SBFN3	2235
G		6 Fixed contacts 3 Moving Contacts	6-65-4
H	3 springs	6-65-6	2450
J	6 Arc Bonnets	6-65-15	3330
K	3 Spring Retainer	6-65-17	3440
BCH15KT	Complete set of 6 fixed & 3 moving contacts with hardware, contact springs, spring retainers and arc runners	CP-BCH15KT-3	3400
BCH15LT		CP-BCH15LT-3	3910
BCH15MT		CP-BCH15MT-3	4210
BCH15NT		CP-BCH15NT-3	6955
BCH15PT		CP-BCH15PT-3	6955
R	6 Fixed contacts 3 Moving contacts 12 CSK screws & washers	6-288	12145
S0	3 Springs Spring retainers	6-286-S0	16400
S	Self tapping screws & washers 6 Arc Chute assly & screws	6-286	16555
BCH54	Complete set of 6 fixed & 3 moving contacts with hardware, contact springs, spring retainers and arc runners	CP-BCH54-3	19130
BCH55		CP-BCH55-3	22240
BCH57		CP-BCH57-3	31455
BCH62		CP-BCH62-3	58470
BCH64		CP-BCH64-3	71885
BCH76		CP-BCH76-3	179565
BCH78		CP-BCH78-3	201785

Spare Contacts set for NHD & Citation Contactors

Size	Consisting of	Cat.No.	MRP [₹]
C00N N0N NIN N01N	8 Fixed main contacts 4 Moving main contacts 4 Spring & 4 retainers	SP90A1 SP90B1 SP90C1 SP90D1	790 1920 2200 On request
CPG216 CPG225 CPG240	4 Fixed contacts 2 Main contacts 2 Spring retainers	CPG162PSP CPG252PSP CPG402PSP	400 1020 1125
C4	6 Fixed main contacts 6 Pan head screws 6 Helical lock washers	SP34K	1890
MC10D	6 Fixed Main Contacts 3 Compression springs 3 Retainers	6-334	2620
MC10E	Same as above plus 6 Blow outs 6 M5/M4 self tapping screws	6-335	4950
L	6 Fixed Contacts	6-385-L0	3805
M	6 Pan Head Screws 6 Helical Lock Washers	6-385-M	4030
M-5	3 Moving contacts 3 Springs 3 Retainers 6 Blowouts 6 self tapping screws	6-385	4250
N	6 Fixed contacts 12 CSK screws & washers	6-293	8385
Q	3 Moving contacts 3 Springs Spring Retainers, Self tapping screws & Washers	6-288-Q	12080

Spare ARC chambers - BCH15KT to BHC15PT, BCH54 to BCH78

Contactors	Cat. No.	MRP [₹]
BCH15KT	PF-BCH15KT	490
BCH15LT	PF-BCH15LT	
BCH15MT	PF-BCH15MT	
BCH15NT	PF-BCH15NT	865
BCH15PT	PF-BCH15PT	
BCH54/BCH55/BCH57 (for all 3 poles)	PF-BCH5	6885
BCH62/BCH64 (for all 3 poles)	PF-BCH6	16625
BCH76/78 (for single pole)	3PF-BCH78	35830

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

Size	For Size	Cat. No.	MRP [₹]
Magnetic coil	CR, A,B, C	MC15CW ■	375
	D, E, F	MC15FW ■	435
	G, H, J, K	MC15KW ■	1135
	BCH15KT/LT	B02. ■	1125
	BCH15MT	B022. ■	1675
	BCH15NT/PT	B031. ■	3350
	R, S0, S	9-2412- ■	3105
Magnetic coil (set of two)	BCH54/ BCH55/ BCH57	B51. ■	6450
Feeder group		FG51. ■	7845
Magnetic coil (set of two)	BCH62/ BCH64	B61. ■	20410
Feeder group		FG61. ■	26710
Magnetic coil (set of two)	BCH76/ BCH78	B8- ■	56550
Feeder group		FG78- ■	62515
■ To specify coil voltage please refer page no. 31			
Note : Coil set for BCH54 to BCH78 contactors consists of 2 half coils. Magnetic coil & Feeder group must have the same control voltage. For eg. If coil voltage is changed from 110V to 220V then Feeder group should also be changed to 220V			

Spare Coil - NHD & Citation Contactors

Description	Cat. No.	MRP [₹]	Lot size
Carrier for NHD	SP90CC	185	1
Carrier for CPG	CPG2PCC	110	1
Magnetic coil for NHD	SP90MC*	270	10
Magnetic coil for MCE15L, MCE15M0, MCE15M	9-2268- ■	1410	1
Magnetic coil for MCE15N & MCE15Q	9-2412- ■	3105	1
Magnetic coil for C4 & MC10D	9-2267- ■	880	1
Magnetic coil for MC10E type	9-2268- ■	1410	1
Magnetic coil for DC Citation Control Relay	9-2182-1- ■	505	1
Magnetic coil for AC Citation Control Relay	9-2182- ■	645	1
■ To specify coil voltage please refer page no. 31			

Coil Voltage Table

BCH

COIL VOLTAGE: MASTER TABLE

PRODUCT	24V		48V		55V	110V		160-220V	220V	220-240V	230-360V	240V	250V	275V	190-400V	260-400V	380V	380-415V	415V	440V	550V		
	AC	DC	AC	DC	DC	AC	DC	-	AC	DC	AC	AC	DC	DC	AC	AC	AC	AC	AC	AC	AC	DC	
CR Relay	U	U3	W	W3	-	A	A3	-	B	B3	-	K	-	-	-	-	L	-	M	C	D	-	
CE15A-F	U	U3	W	W3	-	A	A3	-	B	B3	-	K	-	-	-	-	L	-	M	C	D	-	
CE15G-K	U	U3	W	W3	-	A	A3	-	B	B3	-	K	-	-	-	-	L	-	M	C	D	-	
BCH15KT-LT	U	-	W	-	-	A	-	-	B	-	-	K	-	-	-	-	L	-	M	C	D	-	
BCH15MT-PT	24	-	48	-	-	110	-	-	-	220	-	-	-	-	-	-	-	380	-	440	550	-	
MC15R-S	U	U3	-	-	-	A	A3	-	B	-	-	K	-	-	-	-	L	-	M	-	D	-	
BCH54-64	-	-	-	-	-	110	110	-	220	220	-	220	-	-	-	-	380	380	380	440	-	-	
BCH76&78	-	-	-	-	-	A7	A17	-	B7	-	H	-	-	-	-	-	-	-	-	-	-	-	
CPG216	U	-	-	-	-	A	-	BW	-	H	-	-	-	-	-	G	-	N	-	C	-	-	
CPG225&240	U	-	-	-	-	A	-	BW	-	H	-	-	-	-	-	-	-	N	-	C	-	-	
SHAKTI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Z	-	-	-	-	-	-	-	-
C00N & N0N	U	-	-	-	-	A	-	BW	-	H	LV	-	-	-	-	G	-	N	-	C	-	-	
N01N & N1N	U	-	-	-	-	A	-	-	-	H	-	-	-	-	-	-	-	N	-	C	-	-	
C4 & D	-	-	-	-	-	A	-	-	B	-	-	K	-	-	-	-	L	-	M	C	-	-	
MC10EN	U	-	-	-	-	A	-	-	B	-	-	K	-	-	-	-	L	-	M	C	D	-	
MC15L-M5	U	-	W	-	-	A	-	-	B	-	-	K	-	-	-	-	L	-	M	C	D	-	
MC15N-Q	U	U3	-	-	-	A	A3	-	B	-	-	K	-	-	-	-	L	-	M	-	D	-	
MD20CR	U	-	-	-	-	A	-	-	B	-	-	K	-	-	-	-	L	-	M	-	-	-	
912X	-	U1	-	-	Q1	A1R	A1	-	-	B1	-	K1R	F1	-	-	-	-	-	-	-	-	D1	
914;934X	-	U1	-	W1	Q1	A1R	A1	-	-	B1	-	K1R	F1	J1	-	-	-	-	-	-	-	D1	
935X;924;915	-	U1	-	W1	Q1	A1R	A1	-	-	B1	-	K1R	F1	J1	-	-	-	-	-	-	-	D1	
925	-	-	-	-	-	-	A1	-	-	B1	-	K1R	F1	-	-	-	-	-	-	-	-	D1	
916&936	-	U1	-	W1	Q1	A1R	A1	-	-	B1	-	K1R	F1	-	-	-	-	-	-	-	-	D1	
D912-D916	-	-	-	W1	-	A1R	A1	-	-	B1	-	K1R	F1	-	-	-	-	-	-	-	-	-	

1. For other coil voltages & wide band coil option please contact nearest sales office
 2. AC control is not available for 934, 935, 936 versions.
 3. For ordering spare coils for D912, D914, D915 and D916 Contactors, please order coils with 50% voltage rating as that of control voltage.
 Example to order coils for D914 X 22B1 (which is a 220V DC DP Contactor), please order spare coils with 110V DC rating.

Overload Relay BCH

with BCH relays choose the best protection for your motors

Citation Overload Relay



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

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

Relay Range	Cat. No.	MRP [₹]	Terminal Block for individual mounting	MRP [₹]
0.195 - 0.31	MC305ANA3A	1250	(Incoming) MC305TB1 (Outgoing) MC305TB3	85
0.30 - 0.48	MC305ANA3B			
0.47 - 0.75	MC305ANA3C			
0.72 - 1.14	MC305ANA3D			
1.07 - 1.70	MC305ANA3E			
1.58 - 2.50	MC305ANA3F			
2.40 - 3.80	MC305ANA3G			
3.80 - 6.00	MC305ANA3H			
6.00 - 9.30	MC305ANA3J			
8.90 - 13.50	MC305ANA3K			
13.20 - 20.00	MC305ANA3L	1350	(Incoming) MC305TB2 (Outgoing) MC305TB3	
17.40 - 24.00	MC305ANA3M	1350		
22.00 - 30.00	MC305ANA3N*	1880		
23.00 - 32.00	MC305ANA3	On request	(Incoming) MC305TB2 (Outgoing) MC305TB4	

* Overload relay type 'N' must be used with terminal block MC305TB3, # Overload relay type 'P' must be used with terminal block MC305TB4

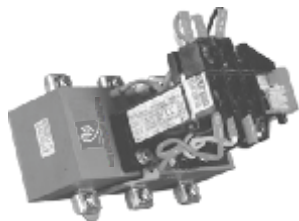
DIN rail mounting kit with incoming terminal block

Relay Range (A)	Cat. No.	MRP [₹]
A to K	MC305DM1	175
L to N	MC305DM2	175

CT Operated Overload Relays-Individual Mounting

Relay Range (A)	Cat. No.	MRP [₹]
24.4-39.0	CT1MC305ANA3C	1960
37.6-60.0	CT2MC305ANA3C	2520
56.4-90.0	CT3MC305ANA3C	3520
84.6-135.0	CT4MC305ANA3C	
131.6-210.0	CT5MC305ANA3C	6955
188.0-300.0	CT6MC305ANA3C	7900
263.2-420.0	CT7MC305ANA3C	8770
376.0-600.0	CT8MC305ANA3C	9465

CT Operated Overload Relay



WP 2 Pole Overload Relay



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

2 Pole Overload Relays (Direct Mounting)

Relay Range (A)	Cat. No.	MRP [₹]
1.58-2.50	MC307ANA2F	615
2.40-3.80	MC307ANA2G	
3.80-6.00	MC307ANA2H	
6.00-9.30	MC307ANA2J	
8.90-13.50	MC307ANA2K	
13.20-20.00	MC307ANA2L	710
17.40-24.00	MC307ANA2M	
23.00-32.00	MC307ANA2P	900

WP Overload Relay



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

WP Overload Relays for WP & Oil Starter

Relay Range (A)	Cat. No. (WP Starter / Oil Starter)	MRP [₹]
6.00 - 9.30	MC307ANA3J / MC307ANA3J-OS	1110
8.90 - 13.50	MC307ANA3K / MC307ANA3K-OS	
13.20 - 20.00	MC307ANA3L / MC307ANA3L-OS	1230
17.40 - 24.00	MC307ANA3M / MC307ANA3M-OS	
22.00 - 30.00	MC307ANA3N	1610
23.00 - 32.00	MC307ANA3P (Spare for Oil Starter)	1630

Overload Relay BCH

Duros Freedom Overload Relay



- Range : From 0.1A to 32A
- IEC:60947-4-1
- Relay class-10
- Built in Single Phasing Protection
- Ambient temperature compensated
- Test button for checking tripping mechanism
- Field convertible auto manual reset
- Contactor mounting

Freedom Overload Relays

Relay Range (A)	Cat. No.	MRP [₹]	Accessories
0.1-0.16	MC318ANA3A	1290	Adaptor for Individual mounting Cat. No. C318F1 MRP Rs. 265
0.16-0.25	MC318ANA3B		
0.25-0.40	MC318ANA3C		
0.40-0.63	MC318ANA3D		
0.63-1.00	MC318ANA3E		
1.0-1.40	MC318ANA3F		
1.3-1.80	MC318ANA3G		
1.7-2.4	MC318ANA3H		
2.2-3.1	MC318ANA3J		
2.8-4.0	MC318ANA3K		
3.5-5.0	MC318ANA3L		
4.5-6.5	MC318ANA3M		
6.0-8.5	MC318ANA3N		
7.5-11	MC318ANA3P		
10.0-14.0	MC318ANA3Q		
13.0-19.0	MC318ANA3R	1450	
18.0-25.0	MC318ANA3S		
24.0-32.0	MC318ANA3T	1930	

Vacuum Contactors..... BCH

Range: 225A to 600A 3P 1500V



Features

- Suitable for worldwide applications and for use with all types of motors including high efficiency IEC motors & NEMA design E motors.
- Front accessible
- Compact & rugged design
- Light weight
- Fully phase insulated
- Long Electrical & Mechanical life
- Mounts in any plane
- Quiet in operation



1140V 300A

- Designed to Standards IEC 60947- 4, CSA22.2 & UL508
- Heavy Duty Mining Design
- Visual ON/OFF indicator
- Visual wear indicator
- Mounts in any plane
- 2NO+ 2NC aux. contacts as a standard
- Compact construction
- Front accessible



1500V 400A

- NEMA size 5, 270A, 600V AC
UI508 listed CSA22.2 certified IEC947-4-1
- IEC HP/KW rated 400A, 660V/1000V/1500VAC
- Heavy Duty Mining Design
- Visual ON/OFF indicator
- Mounts in any plane
- 1NO+ 1NC aux. contacts as a standard
- Compact construction
- Front accessible



1500V 600A

- NEMA size 6, 540A, 600V AC -
UL508 listed CSA22.2 certified IEC947-4-1
- IEC HP/KW rated 600A, 660V AC
- Heavy Duty Mining Design
- Visual ON/OFF indicator
- Mounts in any plane
- 1NO+ 1NC aux. contacts as a standard
- Compact construction
- Front accessible

Contactors Rating	Cat reference	Description	MRP [₹]
225A	CV77U033A12 -22 -B22	225A Vacu cont 1140V 3P 2NO+2NC 220VAC	**
	CV77U033A12 -11 -B22	225A Vacu cont 1140V 3P 2NO+2NC 110VAC	**
265A	CV77U033A12 -22 -B26	265A Vacu cont 1140V 3P 2NO+2NC 220VAC	**
	CV77U033A12 -11 -B26	265A Vacu cont 1140V 3P 2NO+2NC 110VAC	**
300A	CV77U033A12 -22 -B30	300A Vacu cont 1140V 3P 2NO+2NC 220VAC	115,350
	CV77U033A12 -11 -B30	300A Vacu cont 1140V 3P 2NO+2NC 110VAC	
400A	CV77U034A06 -26	400A Vacu cont 1000V 3P 1NO+1NC 220VAC	145,800
	CV77U034A06 -76	400A Vacu cont 1000V 3P 1NO+1NC 110VAC	
	CV77U034A06 -125	400A Vacu cont 1000V 3P 1NO+1NC 125VDC	
	CV77U034A06 -250	400A Vacu cont 1000V 3P 1NO+1NC 250VDC	
	CV77U034A15 -26	400A Vacu cont 1500V 3P 1NO+1NC 220VAC	
	CV77U034A15 -76	400A Vacu cont 1500V 3P 1NO+1NC 110VAC	
	CV77U034A15 -125	400A Vacu cont 1500V 3P 1NO+1NC 125VDC	
	CV77U034A15 -250	400A Vacu cont 1500V 3P 1NO+1NC 250VDC	
600A	CV77U036A06 -26	600A Vacu cont 1000V 3P 1NO+1NC 220VAC	189,200
	CV77U036A06 -76	600A Vacu cont 1000V 3P 1NO+1NC 110VAC	
	CV77U036A06 -125	600A Vacu cont 1000V 3P 1NO+1NC 125VDC	
	CV77U036A06 -250	600A Vacu cont 1000V 3P 1NO+1NC 250VDC	
	CV77U036A15 -26	600A Vacu cont 1500V 3P 1NO+1NC 220VAC	
	CV77U036A15 -76	600A Vacu cont 1500V 3P 1NO+1NC 110VAC	
	CV77U036A15 -125	600A Vacu cont 1500V 3P 1NO+1NC 125VDC	
	CV77U036A15 -250	600A Vacu cont 1500V 3P 1NO+1NC 250VDC	

** Price on request

Electronic Overcurrent Relay BCH

BOCR SS



- Over Current
- Locked Rotor
- Phase Loss

BOCR SSD



- Over Current
- Locked Rotor
- Phase Loss

BOCR DS3



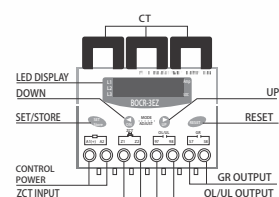
- Over Current
- Locked Rotor
- Phase Loss
- Phase Reversal

BOCR 3DE



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

BOCR 3EZ



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

Bhartia Electronic Overcurrent Relay

Model	Cat. No.	Range	MRP [₹]
BOCR SS 05	MP21SS005S4	Electronic Over Current Relay 0.5-6A24-240VAC /DC	3150
BOCR SS 05	MP21SS005W1	Electronic Over Current Relay 0.5-6A 380-440V AC	
BOCR SS 30	MP21SS030S4	Electronic Over Current Relay 3-30A24-240VAC/DC	
BOCR SS 30	MP21SS030W1	Electronic Over Current Relay 3-30A 380-440V AC	
BOCR SS 60	MP21SS060S4	Electronic Over Current Relay 5-60A24-240VAC/DC	
BOCR SS 60	MP21SS060W1	Electronic Over Current Relay 5-60A 380-440V AC	
BOCR SSD 05	MP22SSD005A4	Electronic Over Current Relay 0.5-6A 110V AC	6070
BOCR SSD 05	MP22SSD005B4	Electronic Over Current Relay 0.5-6A 220V AC	
BOCR SSD 30	MP22SSD030A4	Electronic Over Current Relay 3-30A 110V AC	
BOCR SSD 30	MP22SSD030B4	Electronic Over Current Relay 3-30A 220V AC	
BOCR SSD 60	MP22SSD060A4	Electronic Over Current Relay 10-60A 110V AC	
BOCR SSD 60	MP22SSD060B4	Electronic Over Current Relay 10-60A 220V AC	
BOCR DS3 05	MP34DS3005S4	Electronic Over Current Relay 0.5-6A24-240VAC/DC	5050
BOCR DS3 30	MP34DS3030S4	Electronic Over Current Relay 3-30A24-240VAC/DC	
BOCR DS3 60	MP34DS3060S4	Electronic Over Current Relay 5-60A24-240VAC/DC	
BOCR 3DE	MP353DE800A4	Electronic Over Current Relay 0.5-60A 110V AC	17220
BOCR 3DE	MP353DE800B4	Electronic Over Current Relay 0.5-60A 220V AC	
BOCR 3DE*	MP35FDE800A4	Detachable Screen EOCR Model 3DE 0.5-60A 110 VAC	17060
	MP35FDE800B4	Detachable Screen EOCR Model 3DE 0.5-60A 220 VAC	
BOCR 3EZ	MP363EZ800A4	Electronic Over Current Relay 0.5-60A 110VAC	18380
BOCR 3EZ	MP363EZ800B4	Electronic Over Current Relay 0.5-60A 220VAC	
BOCR 3EZ*	MP36FEZ800A4	Detachable Screen EOCR Model 3E2 0.5-60A 110VAC	18420
	MP36FEZ800B4	Detachable Screen EOCR Model 3E2 0.5-60A 220VAC	

CTs

Cat No.	Description	MRP [₹]
3CT-H1-100-C	3CT version 100/5	2765
3CT-HH-150-C	3CT version 150/5	2765
3CT-H2-200-C	3CT version 200/5	2765
3CT-H3-300-C	3CT version 300/5	2765
3CT-H4-400-C	3CT version 400/5	2765
Z-CTs (For ground Fault protection, to be used with 3 EZ)		
Cat No.	Description	MRP [₹]
ZCT-035	ZCT version 35mm hole	3150
ZCT-080	ZCT version 80mm hole	4200
ZCT-120	ZCT version 120mm hole	6485

Above 60A, external CT is required

*Cable for EOCR-FDE & EOCR-FEZ model

Cat No.	Description	MRP [₹]
CABLE-15-003Q	CABLE-15-EP 3M FEZ/FDE	590

Note : Cable must be ordered separately along with the EOCR detachable models i.e. EOCR-FDE & EOCR-FEZ

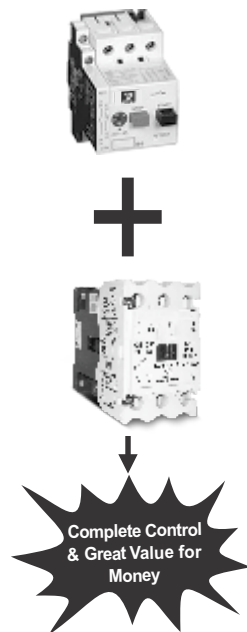
MPE Range (0.1 - 25A)



- Conforms to IEC 60947
- Perfect Coordinated system for Motor Control
- Electrical Life : 100000 Operations
- Excellent Current limiting characteristics
- Modular Snap fit Accessories
- 2 Pole version, Only Magnetic Trip Version available on request

MPCB (with thermal & magnetic release)

Cat ref	Setting Range (A)	Motor Rating in kW at 415 V	MRP [₹]
MPE-01	0.1...0.16	-	2370
MPE-02	0.16...0.25	0.06	
MPE-03	0.25...0.4	0.12	
MPE-04	0.4...0.63	0.18	2615
MPE-05	0.63...1	0.25, 0.37	
MPE-06	1...1.6	0.55	2665
MPE-07	1.6...2.5	0.75, 1.1	
MPE-08	2.5...4	1.5	2720
MPE-10	4...6.3	2.2, 3	
MPE-14	6.3...10	4, 5	2855
MPE-16	10...16	5.5, 9	3100
MPE-20	16...20	11	3510
MPE-22	20...25	12.5	3800



Accessories of MPE Range



Reference	Contacts	MRP [₹]
Auxiliary		Switch
MPA 0010	1NO	355
MPA 0001	1NC	
MPA 0011	1NO + 1NC	520
MPA 0020	2NO	
Enclosures (IP55)		
MPA-EF	Flush mounted	770
MPA-ES	Surface mounted	855
Voltage Releases		
MPA-U ■	Under Voltage Release	1220
MPA-S ■	Shunt Release	

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

Reference	Tap-o *	MRP [₹]
Bus Bar		
MPA-BB245	2 Tap-o (45mm)	575
MPA-BB345	3 Tap-o (45mm)	730
MPA-BB445	4 Tap-o (45mm)	875
MPA-BB545	5 Tap-o (45mm)	955
MPA-BB263	2 Tap-o (63mm)	575
MPA-BB463	4 Tap-o (63mm)	865
MPA-BB1	Incoming Block	525

*centre to centre distance.



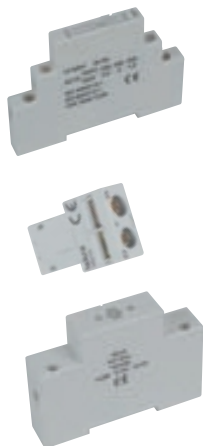
MS32 range (0.1 to 32A)



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



Cat ref	Setting range (A)	Motor rating in KW at 415V	MRP [₹]
MS32-0.16	0.1-0.16	-	On Request
MS32-0.25	0.16-0.25	0.06	
MS32-0.4	0.25-0.4	0.09	
MS32-0.63	0.4-0.63	0.12 to 0.18	On Request
MS32-1.0	0.63-1.0	0.18 to 0.25	
MS32-1.6	1.0-1.6	0.37 to 0.55	2655
MS32-2.5	1.6-2.5	0.75	2790
MS32-4.0	2.5-4	1.1 to 1.5	2860
MS32-6.3	4-6.3	2.2	
MS32-10	6.3-10	3 to 4	3245
MS32-14.0	9-14	5.5	
MS32-18	13-18	7.5	On Request
MS32-23	17-23	9 to 11	On Request
MS32-27	20-27	11	On Request
MS32-32	25-32	15	5100



Accessories - MS32 range

Cat ref	type	Contacts	MRP [₹]
HS11	Aux contact side mounting	1NO+1NC	555
HSV10	Aux contact top mounting	1NO	495
HSV01		1NC	495
HRS10	Trip indicating block top mounting	1NO	On Request
HRS01		1NC	On Request
MS32-UR	Under voltage release	-	On Request
MS32-AR	Shunt release	-	On Request

Note: For further details, please contact nearest sales office

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

Cat. No.	MOQ	AC51 Rating	I ² t (A ² S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SC941110L	10	12A	72	600V AC	12-280V AC	4-30V DC	1180
SC942110L	10	25A	288	600V AC	12-280V AC	4-30V DC	1380
SC944110L	10	40A	612	600V AC	12-280V AC	4-30V DC	1780

MOQ - Minimum Order Qty.



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

SC9 Series 1-Phase ZERO CROSS With LED

Cat. No.	MOQ	AC51 Rating	I ² t (A ² S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SC941160L	10	12A	72	600V AC	12-280V AC	4-30V DC	1190
SC942160L	10	25A	288	600V AC	12-280V AC	4-30V DC	1400
SC944160L	10	40A	612	600V AC	12-280V AC	4-30V DC	1810
SC945160L	10	50A	1500	600V AC	12-280V AC	4-30V DC	3700
SC947160L	10	75A	5000	600V AC	12-280V AC	4-30V DC	4120

MOQ - Minimum Order Qty.

SC9 Series 1-Phase ZERO CROSS With LED

Cat. No.	MOQ	AC51 Rating	I ² t(A ² S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SC962160L	10	25A	265	1200V AC	24-600V AC	5-30V DC	4990
SC965160L	10	50A	1500	1200V AC	24-600V AC	5-30V DC	6280
SC967160L	10	75A	5000	1200V AC	24-600V AC	5-30V DC	9800

MOQ - Minimum Order Qty.

Solid State Relay BCH



SO9 Series 1-Phase ZERO CROSS With LED in okpac® Housing IP20 Protection

Cat. No.	MOQ	AC51 Rating	$I^2t(A^2S)$	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SO942560*	10	25A	600	600V AC	12-280V AC	7-30V DC	3150
SO963460*	10	35A	1250	1200V AC	24-600V AC	3.5-32V DC	3770
SO945460*	10	50A	2500	600V AC	12-280V AC	3-32V DC	4200
SO967460*	10	90A	7200	1200V AC	24-600V AC	3.5-32V DC	4850

*Non Sock Items, allow 4-6 weeks delivery time

MOQ - Minimum Order Qty.

Innovation - Performance- Design

- Removable IP20 flaps.
- Only 29 mm height.
- Designed for all types of loads.
- TMS² Technology with very long life expectancy.
- Control Status LED.
- Very low zero cross level.
- UL/cUL, VDE (EN60950), IEC/EN60947-4-3, CE marking



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



Cat. No.	MOQ	AC51 Rating	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SU942460*	44	25A	600V AC	12-280V AC	3-32V DC	On Request
SU963460*	44	35A	1200V AC	24-600V AC	3.5-32V DC	On Request
SU965460*	44	50A	1200V AC	24-600V AC	3.5-32V DC	2120
SU967460*	44	75A	1200V AC	24-600V AC	3.5-32V DC	2230

*Non Stock items, allow 4-6 weeks delivery time.

SU Range

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

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



Cat. No.	MOQ	AC51 Rating	$I^2t(A^2S)$	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SO842074*	12	25A	600	600V AC	12-275V AC	3-32V DC	3850
SO863070*	12	35A	1250	1200V AC	24-510V AC	3.5-32V DC	4250
SO845070*	12	50A	2500	600V AC	12-275V AC	3-32V DC	4550
SO848070*	12	95A	14400	600V AC	12-275V AC	3-32V DC	6850
SO889060*	12	125A	24000	1600V AC	24-600V AC	3.5-32V DC	18200

*Non Sock Items, allow 4-6 weeks delivery time

MOQ - Minimum Order Qty.

Solid State Relay BCH

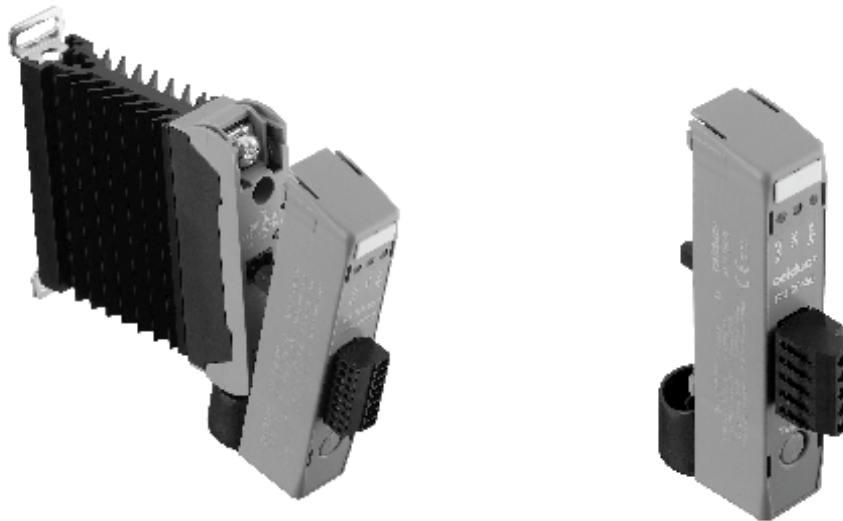
BCH

Single phase SSR solutions with current monitoring & temp. controller PID



The 22.5mm pitch SSR solution

Two modules are available directly pluggable on SSR type SU and SUL



Save room / Save cost / Add more functions

SU/SUL combined with	SU/SUL combined with									
ESUC (Current monitoring module)	ECOM0010 (Temp. controller PID, current monitor and communication interface in one unit)									
<p>Add to your SSR</p> <p>Diagnostic information for up to 5 heaters in parallel with :</p> <ul style="list-style-type: none"> > Permanent load current monitoring, > Current teaching function, > 2 alarm thresholds (+/-16%) > Partial load break detection, > Open load detection, > Detection of short-circuited SSR. <p>Product</p> <table border="1"> <thead> <tr> <th>reference</th> <th>Current range</th> <th>Control</th> </tr> </thead> <tbody> <tr> <td>ESUC0450</td> <td>2-40A 2-40A</td> <td>8-30VDC</td> </tr> <tr> <td>ESUC048</td> <td>2-40A 0 2-40A</td> <td>24-45VDC</td> </tr> </tbody> </table>	reference	Current range	Control	ESUC0450	2-40A 2-40A	8-30VDC	ESUC048	2-40A 0 2-40A	24-45VDC	<p>Add to your SSR</p> <ul style="list-style-type: none"> > Temperature controller with : <ul style="list-style-type: none"> • PID with automatic or manual settings, • Insulated inputs for J, K, T, E thermocouples, PT100 to come • Auxiliary output for heating, cooling, alarm or to control a 3 phase Solid State Relay, • Loop and heater break alarms. > Current monitoring and alarms up to 50A. > RS485 communication interface / Modbus RTU (others on request) > Power supply : 24Vdc +/- 10%
reference	Current range	Control								
ESUC0450	2-40A 2-40A	8-30VDC								
ESUC048	2-40A 0 2-40A	24-45VDC								
<p>Why choosing this function ?</p> <ul style="list-style-type: none"> > Quick fault detections (instantaneous alarm). > Maintenance. > To detect when a heater is broken which brings problems and is difficult to locate. > To maintain good quality production for plastic/rubber machines (specially thermosetting machines). > 22.5mm wide with integrated heatsink and DIN rail adaptor. 	<p>Why choosing this function ?</p> <ul style="list-style-type: none"> > The ECOM is the most compact solution available on the market that incorporates the latest measuring and control technology. > This solution can answer the needs of cost reduction of electrical cabinets (smaller), PLC (less analogue and digital I/O's) and wiring (bus communication). 									

For price and technical specifications, please contact nearest BCH branch office.

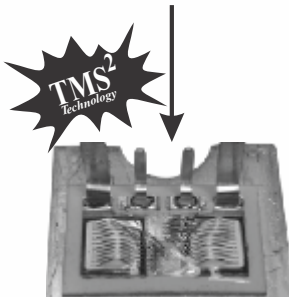
Solid State Relay BCH

Single Phase SSR's for Motor Control Applications SC7 Series 1-Phase Without LED (Random Switching)

Cat. No.	MOQ	AC51 Rating	AC53 Rating	I ² t (A ² S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SC741110L	10	12A	2.5A	72	600V AC	12-280 AC	4-30V DC	1160
SC761110L	10	12A	2.5A	72	1200V AC	24-520V AC	5-30V DC	1730
SC742110L	10	25A	5A	312	600V AC	12-280 AC	4-30V DC	1370
SC762110L	10	25A	5A	265	1200V AC	24-520V AC	5-30V DC	2450
SC744110L	10	40A	9A	612	600V AC	12-280 AC	4-30V DC	2650
SC764110L	10	50A	12A	1500	1200V AC	24-520V AC	5-30V DC	5550
SC767110L	10	75A	16A	5000	1200V AC	24-520V AC	5-30V DC	9500
SC768110L	5	95A	20A	11000	1200V AC	24-520V AC	5-30V DC	9800
SC769110L	5	125A	30A	20000	1200V AC	24-520V AC	5-30V DC	15800

MOQ - Minimum Order Qty.

Direct Copper Bonding Technology



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

SO7 Series 1-Phase With LED in okpac® Housing IP20 Protection (Random Switching)

Cat. No.	MOQ	AC51 Rating	AC53 Rating	I ² t(A ² S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SO745090	12	50A	12A	2500	600V AC	12-275V AC	3-32V DC	5350
SO767090	12	75A	16A	7200	1200V AC	24-510V AC	3.5-32V DC	7850
SO768090	12	95A	20A	14400	1200V AC	24-510V AC	3.5-32V DC	9200
SO769090	12	125A	30A	24000	1200V AC	24-510V AC	3.5-32V DC	13500

*Non Sock Items, allow 4-6 weeks delivery time

MOQ - Minimum Order Qty.

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



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

Cat. No.	MOQ	AC51 Rating	AC53 Rating	I ² t(A ² S)	Peak Voltage	Operating	Control Voltage	MRP [₹]
DC CONTROL								
SVT861394	5	12A	2.5A	72	1200V AC	24-520V AC	8.5-30V DC	16800
SVT864374	5	50A	12A	1500	1200V AC	24-520V AC	10-32V DC	20500
SVT868394E	5	95A	24A	5000	1200V AC	24-520V AC	8.5-30V DC	21500
SVT869394	5	125A	32A	20000	1200V AC	24-520V AC	8.5-30V DC	25500
AC CONTROL								
SVT864994	5	50A	12A	1500	1200V AC	24-520V AC	90-240V AC	21500
SVT967960	5	75A	-	1500	1200V AC	24-520V AC	90-240V AC	24200
SVT869994	5	125A	32A	20000	1200V AC	24-520V AC	90-240V AC	26500

MOQ - Minimum Order Qty.

Proportional Controllers SG4 / SG5 Series 1-Phase Without LED



SG4 / SG5 Range Proportional Controllers

Dierent Control Possibilities

- Phase angle control
- Full wave pulse control
- Full cycle Fast burst control
- Soft starter

Applications : Light dimmer, Heating, Regulation single ph. Variable Speed Control (Vibrating feeders etc).

Cat. No.	MOQ	AC51 Rating	I ² t(A ² S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SG4 Series							
SG441020*	1	10A	72	600VAC	115-265VAC	0-10V DC	Contact nearest sales office for Prices.
SG444020*	3	40A	1500	600VAC	115-265VAC	0-10V DC	
SG444120*	3	40A	1500	600VAC	115-265VAC	0-5V / Pot [§]	
SG444420*	3	40A	1500	600VAC	115-265VAC	4-20mA	
SG464020*	3	40A	1500	1200VAC	200-460VAC	0-10V DC	
SG464120*	3	40A	1500	1200VAC	200-460VAC	0-5V / Pot [§]	
SG464420*	1	40A	1500	1200VAC	200-460VAC	4-20mA	
SG468020*	1	70A	5000	1200VAC	200-460VAC	0-10V DC	
SG468420*	1	70A	5000	1200VAC	200-460VAC	4-20mA	
SG469020*	3	110A	20000	1200VAC	200-460VAC	0-10V DC	
SG469120*	1	110A	20000	1200VAC	200-460VAC	0-5V / Pot [§]	
SG469420*	1	110A	20000	1200VAC	200-460VAC	4-20mA	
SG5 Series							
SG541020*	1	10A	72	600VAC	115-253VAC	0-10V DC	Contact nearest sales office for Prices.
SG541420*	1	10A	72	600VAC	115-253VAC	0-5V / Pot [§]	
SG541420*	1	10A	72	600VAC	115-253VAC	4-20mA	
SG544020*	3	40A	72	600VAC	115-253VAC	0-10V DC	
SG544120*	3	40A	72	600VAC	115-253VAC	0-5V / Pot [§]	
SG564020*	3	40A	612	1200VAC	200-440VAC	0-10V DC	
SG564120*	3	40A	612	1200VAC	200-440VAC	0-5V / Pot [§]	
SG564420*	3	40A	612	1200VAC	200-440VAC	4-20mA	

*Non Sock Items, allow 4-6 weeks delivery time

MOQ - Minimum Order Qty.

Phase Angle Controllers SO4 Series 1-Phase With LED in okpac® Housing IP20 Protection



SO4 new generation phase angle controllers allows numerous functions (Over Protection by Varistor)

- Phase angle control
- Full wave pulse control
- Fast burst control
- Soft starter
- Timers
- Flashing relay

Cat. No.	MOQ	AC51 Rating	I ² t(A ² S)	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SO445020*	2	50A	2500	600	90-280VAC	0-10V DC	Contact nearest sales office for Prices.
SO445120*	2	50A	2500	600	90-280VAC	0-5V DC	
SO445320*	2	50A	2500	600	90-280VAC	Pot [§]	
SO445420*	2	50A	2500	600	90-280VAC	4-20mA	
SO465020*	2	50A	2500	1200	200-480VAC	0-10V DC	
SO465320*	2	50A	2500	1200	200-480VAC	Pot [§]	
SO465420*	2	50A	2500	1200	200-480VAC	4-20mA	
SO467420*	2	95A	7200	1200	200-480VAC	4-20mA	
SO468020*	2	95A	7200	1200	200-480VAC	0-5V DC	
SO468120*	2	95A	7200	1200	200-480VAC	0-5V DC	
SO468420*	2	95A	7200	1200	200-480VAC	4-20mA	
SO469020*	2	125A	7200	1200	200-480VAC	0-10V DC	
SO469120*	2	125A	7200	1200	200-480VAC	0-5V DC	
SO469420*	2	125A	7200	1200	200-480VAC	4-20mA	

*Non Sock Items, please allow 4-6 weeks delivery time

Pot[§] = Potentiometer

MOQ - Minimum Order Qty.

Solid State Relay BCH

Reverser Relay SG/SV/SW Series - 3-Phase Without LED

Cat. No.	MOQ	AC51 Rating	$I^2t(A^2S)$	Reversing Time	Peak Voltage	Operating Voltage	Control Voltage	MRP [₹]
SG969100*	3	6.6A	612	Adj.0.06s-4.0s	1200V AC	24-500V AC	12-30V DC	Contact nearest sales office for Prices.
SG969300*	3	8.5A	1500	Fixed 70ms	1600V AC	24-520V AC	12-30V DC	
SV969300*	3	8.5A	1500	Fixed 70ms	1600V AC	24-520V AC	12-30V DC	
SV969500*	1	16A	5000	Fixed 70ms	1600V AC	24-520V AC	12-30V DC	
SW960330*	3	4.5A	1500	Fixed 70ms	1600V AC	24-520V AC	12-30V DC	
SW961230*	3	8.5A	1500	Fixed 70ms	1600V AC	24-520V AC	12-30V DC	

*Non Sock Items. please allow 4-6 weeks delivery time

MOQ - Minimum Order Qty.



Common IP20 Protective Cover for SC series SSR.



Heat Sink - 65 mm

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

Accessories for SSR

Cat. No.	MOQ	Description	MRP [₹]
SC1K4600	20	IP20 Cover SC*	30
SCHS6 DIN	20	Din Clip	130
SCHS2200	5	Heat Sink 2.2K/W	800
SCHS1100	5	Heat Sink 1.1 K/W	2590
SCHS0900	5	Heat Sink 0.9 K/W	3065
SCHS0300	5	Heat Sink 0.3K/W	4995

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

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

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

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

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

Contact nearest Branch Office for Price & technical details for following Special duty Solid State Relays

- SSR with AC Controls
- PCB Mounted SSR
- DC Relays
- Soft Starters
- SSR Integrated with heatsink-Softlife range
- SSR with spring terminals
- Celpac® range - 22.5 & 45 mm pitch with system diagnostics
- SSR for transformer starting
- Three Phase Universal digital Proportional Controllers - SVTA - SWTA range

Solid State Relay BCH

Other range of relays and sensors

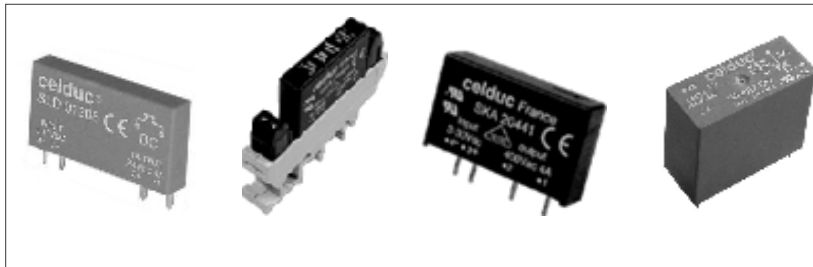
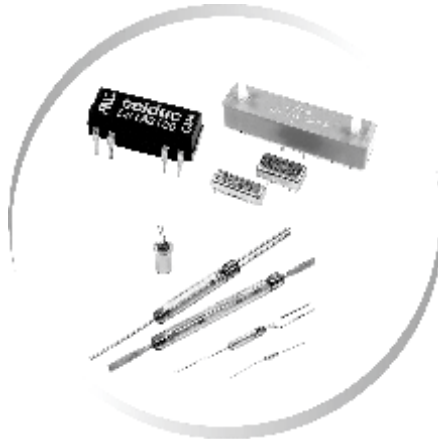
Magnetic sensors for Level, safety, speed, proximity & speed

Used for monitoring or controlling level, clearance, movement, position and rpm recording etc. These sensors can be used anywhere in consumer goods or industrial sectors like automotive, aircraft or telecommunications.



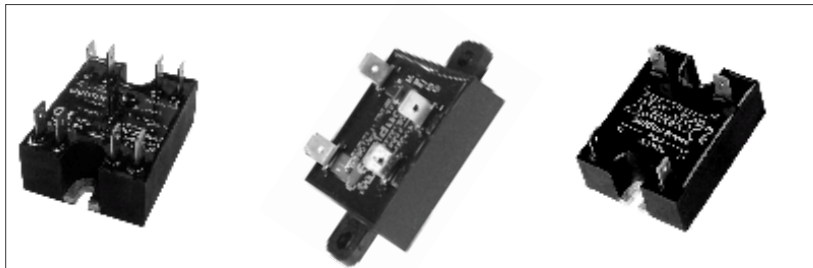
Reed Switches & Relays

Reed switches are used in magnetic proximity sensors & reed relays. The range meets the demands of the increasing number of new applications.



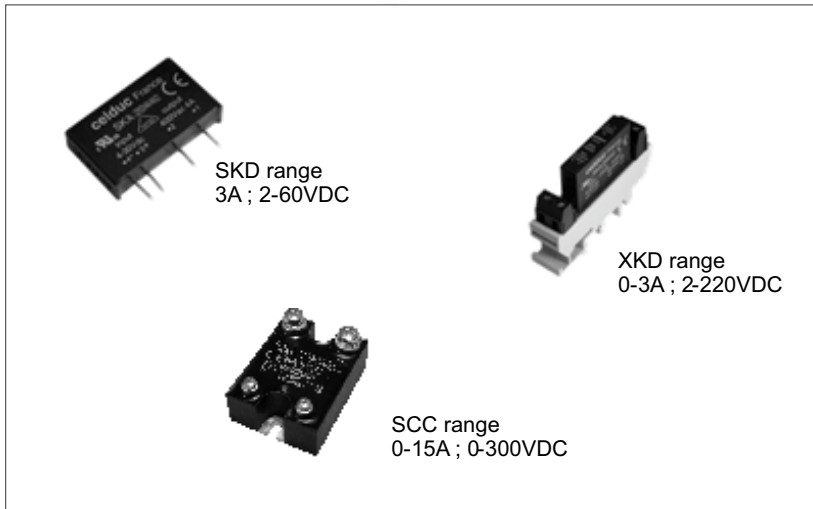
SLIM range (SP/ST/SL/XK) - AC/DC control

- SP-ST: 1.0-5.0A
- SKA/SKB: standard range/ 2.0- 5.0A
- SKL: For mounting on heatsink / 16.0-75.0A
- SKH: with an integrated heatsink/ 16.0-25.0A



SSR with faston terminals (easy to connect) - AC/DC control

- SF range : 10.0-20.0A
- SCF range: to control resistive loads/ 25A
- SCFL range – EMC optimised (low RFI)/ 25A



DC Solid State Relays (up to 150A 1200VDC)

These relays are designed to switch DC loads i.e. solenoid valves, brakes, indicators & motors.

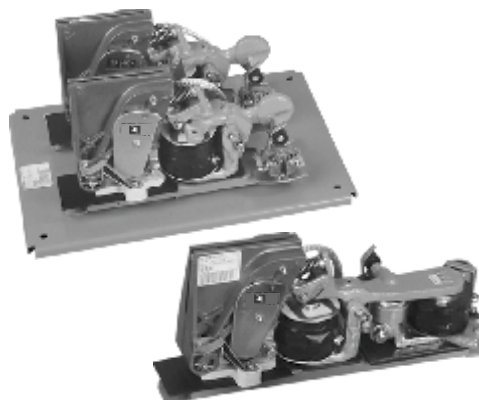
Applications

- DC Motors (travelling cranes, cranes, vehicles, ...)
- Batteries (ships, solar systems, ...)
- Heaters (air conditioning in trains, tramways, ...)
- Electro-magnet (induction motor braking, ...)
- DC power supplies (converters like choppers, inverters, ...)

For price and technical specifications, please contact nearest BCH branch office.

DC Mill Duty Contactor

No. of poles	(A)	Auxilliary Contacts	Cat. No.	MRP [₹]
50 Amperes				
Single pole Normally Open	15A 25A 50A	2NO+2NC 2NO+2NC 2NO+2NC	912x1522 ■ 912x2522 ■ 912x5022 ■	23200
Double pole Normally Open	15A 25A 50A	2NO+2NC 2NO+2NC 2NO+2NC	D912x1522 ■ D912x2522 ■ D912x5022 ■	49885
Mechanically Interlocked 2 Nos. SP NO	15A 25A 50A	2NO+2NC 2NO+2NC 2NO+2NC	M912x1522 ■ M912x2522 ■ M912x5022 ■	55335
150 Amperes				
Single pole Normally Open	150A	2NO+2NC	914x22 ■	39630
Double pole Normally Open	150A	2NO+2NC	D914x22 ■	84975
Mechanically Interlocked 2 Nos. SP NO	150A	2NO+2NC	M914x22 ■	89675
Single pole Normally Closed	150A	1NO+1NC	924x11 ■	40820
Single pole Normally Open with Holdout Coil #	150A	1NO+1NC	934x11 ■	42965
Single pole Normally Open with AC Blow out Coil	150A	2NO+2NC	974x22 ■	50245
300 Amperes				
Single pole Normally Open	300A	2NO+2NC	915x22 ■	57545
Double pole Normally Open	300A	2NO+2NC	D915x22 ■	122570
Mechanically Interlocked 2 Nos. SP NO	300A	2NO+2NC	M915x22 ■	127435
Single pole Normally Closed	300A	1NO+1NC	925x11 ■	57845
Single pole Normally Open with Holdout Coil #	300A	1NO+1NC	935x11 ■	62455
Single pole Normally Open with AC Blow out Coil	300A	2NO+2NC	975x22 ■	72775



- From 50 A to 600 A
- Conforms to NEMA Standards
- Ready to use mechanically interlocked version
- Normally closed version
- Hold on coil for time delay
- Mechanical life : 20 million operation
- Electrical life : 1 million operation

Unique Arc quenching system with blow out coils for switching heavy duty loads

DC Mill Duty Contactor

No. of poles	(A)	Auxilliary Contacts	Cat. No	MRP [₹]
600 Amperes				
Single pole Normally Open	600A	2NO+2NC	916x22 ■	128270
Double pole Normally Open	600A	2NO+2NC	D916x22 ■	266355
Mechanically Interlocked 2 Nos. SP NO	600A	2NO+2NC	M916x22 ■	270665
Single pole Normally Closed	600A	1NO+1NC	926x11 ■	131850
Single pole Normally Open with Holdout Coil#	600A	1NO+1NC	936x11 ■	162965
Single pole Normally Open with AC Blow out Coil	600A	2NO+2NC	976x22 ■	161545

For 934 / 935 / 936 with holdout coil, suffix voltage code from table for 150, 300 & 600 Amps replace 'x' by 'y' for surface mounting rear connection, 'z' for elevated mounting rear connection

* Add Rs. 2625/- for AC Control

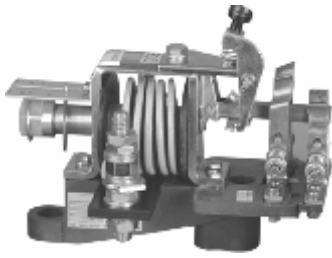
Double Pole DC Mill Duty Contactor

A	Auxilliary Contacts	Cat. No.	Unit Price [₹]
150A	2NO+2NC	954x22 ■	Contact Branch office for Price
300A	2NO+2NC	955x22 ■	

DC Mill Duty Contactors - Spares

Description	Qty. Reqd.	50A		150A		300A		600A	
		Cat. No.	MRP [₹]	Cat. No.	MRP [₹]	Cat. No.	MRP [₹]	Cat. No.	MRP [₹]
DC Arc Chute Assy. Consisting of a. LH Arc Shield b. RH Arc Shield c. DC Blow Out Arc Horn d. DC Blow Out Arc Piece e. DC Blow Out Spacer Assy. f. Polarity Wire g. Latch Strips (Top & Bottom) h. Hardware for Polarity Wire & Latch	1 Set	9C9J101*	11745	9C9P101	20125	9C9T101	29180	9C9V101	63530
AC Arc Chute Assy. Consisting of a. LH Arc Shield b. RH Arc Shield c. AC Blow Out Pole Piece d. AC Blow Out Spacer Assy. e. Polarity Wire f. Latch Strips (Top & Bottom) g. Hardware for Polarity Wire & Latch	1Set	-	-	9C9P102	32795	9C9T102	46855	9C9V102	103030
Fixed & Moving Contacts	1 Set	9C9J105	2540	9C9P105	3500	9C9T105	5680	9C9V105	15490
Contact Lever with Braid	1 Set	9C9J106	3095	9C9P106	5050	9C9T106	6690	9C9V106	11625
Set of Armature Spares Consisting of a. Adjusting Pin b. Contact lever spring c. Contact lever spring pin with circlip d. Armature hinge pin e. Armature Securing pin	1 Set	9C9J107	1090	9C9P107	1520	9C9T107	2200	9C9V107	3200
Set of Armature Spares for 924, 925, 926 Consisting of a. Adjusting Pin b. Contact lever spring c. Contact lever spring pin with circlip d. Armature hinge pin e. Armature Securing pin f. Armature spring g. Spring retaining washer	1 Set	-	-	9C9P108	1860	9C9T108	2760	9C9V108	3970
Set of Armature Spares for 934/935/936 Consisting of a. Adjusting pin b. Contact lever spring c. Contact lever hinge pin d. Armature hinge pin e. Armature securing pin f. Armature spring g. Spring retaining washer h. Adjusting screw	1 Set	-	-	9C9P109	2220	9C9T109	3285	9C9V109	4210
Terminal Block	1	9C9J110	1410	9C9P110	1860	9C9T110	2605	9C9V110	3255
No Volt Coil for 912, 914, 915, 916, 934, 935 & 936 **Suffix voltage code	1	9C9J111■	5260	9C9P111■	8055	9C9T111■	10610	9C9V111■	18285
No Volt Coil for 924, 925, 926 **Suffix voltage code	1	-	-	9C9P112■	10610	9C9T112■	16490	9C9V112■	26635
Coil clamp for 914 & 934	1	-	-	9C9P118	190	-	-	-	-
Coil clamp for 924, 915, 935, 916 & 936	1	-	-	9C9P118	190	9C9T118	190	9C9V118	335

- Suffix coil voltage code from table on page 31
- * Only item a & b is supplied in this set
- Please add Rs. 2625 for AC control



- Magnetic Operated Overload relay for heavy duty applications
- From 1.5A to 600A
- Instantaneous and Time delay tripping
- Manual and automatic resetting
- 1NO + 1NC Contacts

DC Mill Duty Contactors - Spares & Accessories

Description	Cat. No.	MRP [₹]
1NO+1NC Auxilliary Contact Block	AC10E11	4670
2NO Auxilliary Contact Block	AC10E20	4670
2NC Auxilliary Contact Block	AC10E02	4670
Single unit driver with mounting plate (50 A)	9C9J115	725
Double unit driver with mounting plate (50 A)	9C9J116	1055
Single unit driver with mounting plate (150-600A)	9C9P116	785
Double unit driver with mounting plate (150-600A)	9C9P117	1150
Hold out coil for 934, 935 & 936	9C9P113	12805
Condenser 50 + 50uF for 934, 935 & 936	9C9P114	785
Mechanical interlock for 150/300/600A	AC10M4/M8/M12	5205
Rectifier 110/240 V	SP30R	2625

■ Suffix voltage code from Table on page 32

DC Magnetic Overload Relays *

Cat. No.	Coil No.	Continuous Rating	Range Amps	MRP [₹]
B3A23	159-10	2.8	1.5 to 3.5	13585
B3B23	159-5	3.9	3 to 7	
B3C23	159-4	5.4	5 to 13	
B3E23	159-3	10.9	8 to 24	
B3F23	159-2	16.9	10 to 30	
B3G23	159-1	21.9	20 to 40	
B3H23	159-8	34.9	25 to 65	
B3J23	159-6	50.0	35 to 75	
B3K23	179-39	69.0	40 to 120	15905
B3L23	179-38	109.0	70 to 190	
B3M23	179-37	179.0	100 to 300	
B3N23	179-36	250.0	200 to 600	17355
B3Y23	179-36.2	199.0	200 to 600	
B3P23		549.0	300 to 900	21110
B3R23		500.0	500 to 1500	

* With 1NO + 1NC Contacts

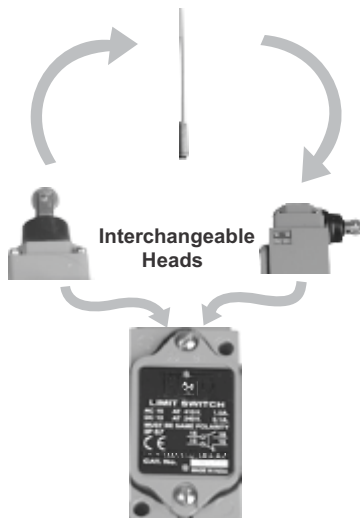
Hold Out Coil details for 934/935/936

Hold out coil code	Voltage
494-1	400/500
494-2	100/125
494-5	200/250 & 400/550
494-7	400/450
492-12	100/125
494-43	200/250 & 400/550

Heavy Duty Limit Switch - Snap Action Type NL IP 67

Type	Description	Cat. No. Screw Terminal (1NO+1NC)	MRP [₹]	Cat.No. Precabled (1NO+1NC)	MRP [₹]	Cat. No. Screw Terminal (2NO+2NC)	MRP [₹]	Cat. No. Precabled (2NO+2NC)	MRP [₹]
Roller Lever	Standard-38MM Standard-76.2mm Adjustable	NLL1 NLL2 NLLA	1440	NLL1C NLL2C NLLAC	1565	NLL1-22 NLL2-22 NLLA-22	2200	NLL1-22C NLL2-22C NLLA-22C	2280
	Maintained Type Maintained Type Maintained Type	NLL1M NLL2M NLLAM	1615	NLL1MC NLL2MC NLLAMC	1690	NLL1M-22 NLL2M-22 NLLAM-22	2430	NLL1M-22C NLL2M-22C NLLAM-22C	2480
Push Roller	Top Side	NLTPR	1440	NLTPRC	1565	NLTPR-22	2200	NLTPR-22C	2280
		NLSPR	1575	NLSPRC	1690	NLSPR-22	2370	NLSPR-22C	2480
Push Button	Top Adjustable Side Adjustable	NLTPBA	1440	NLTPBAC	1565	NLTPBA-22	2145	NLTPBA-22C	2280
		NLSPBA	1575	NLSPBAC	1690	NLSPBA-22	2370	NLSPBA-22C	2480
Cat Whisker	Nylon Rod Steel Rod	NLCW	1265	NLCWC	1355	NLCW-22	2090	NLCW-22C	2200
		NLJW	1440	NLJWC	1540	NLJW-22	2200	NLJW-22C	2280
Fork Type	Roller in same line Offset Rollers	NLLF NLLFO	1615	NLLFC NLLFOC	1690	NLLF-22 NLLFO-22	2440	NLLF-22C NLLFO-22C	2480
	Roller in same line Maintained Offset Rollers Maintained	NLLFM NLLFOM	1895	NLLFMC NLLFOMC	1965	NLLFOM-22	2640	NLLFOM-22C	2690

- IP 67 degree of Protection
- Choice of 16 Operating Heads
- Interchangeable heads ensures complete modularity and flexibility
- Zinc Die cast body for Heavy duty applications
- Easily replaceable contact blocks
- Precabled version with 2m cable length



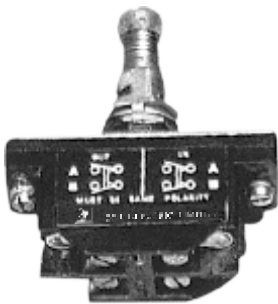
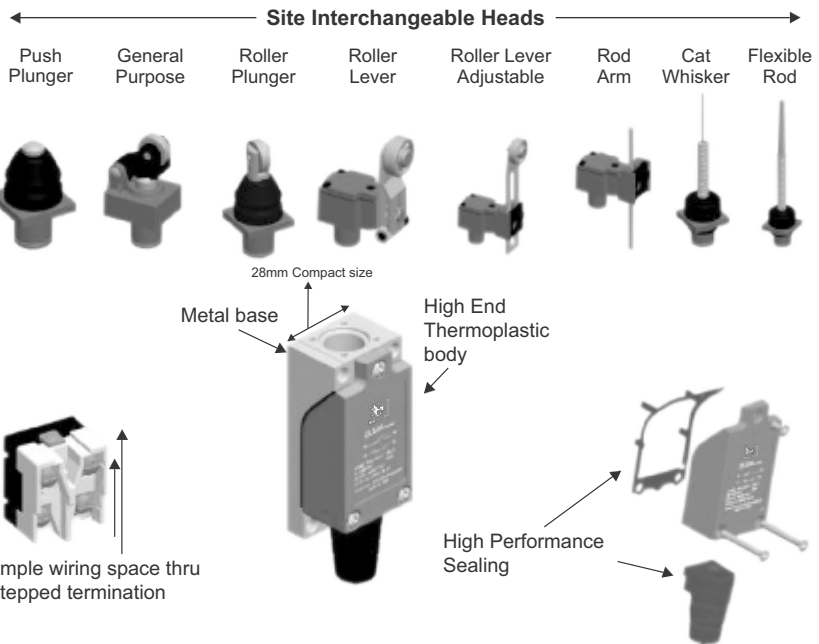


Mini Limit Switch NEW

Type		Cat. No.	MRP [₹]
General Purpose Type		DLSMAR	940
Top Plunger	Standard	DLSMPP	
Push Roller	Standard	DLSMRP	
	Cross	DLSMRPX	
Roller Lever	39mm	DLSMRL	980
	Adjustable	DLSMRLA	
Rod Arm	Adjustable	DLSMJWA	1035
Cat's Whisker	Steel Spring	DLSMSW	
Flexible Rod	Nylon	DLSMSR	

Applications

- Lifts and Escalators
- Machine Tools
- Food and Beverages
- Textile Machines
- Packaging & Printing Machines



Precision Limit Switch

1NO+1NC			2NO+2NC		Lot Size
Type of Operator	Cat. No.	MRP [₹]	Cat. No.	MRP [₹]	
Roller Lever	PSRL-L or R	550	PSRL-L-2 or R-2	665	1
Six Inch Lever	PSSIL-L or R		PSSIL-L-2 or R-2		
Top Push Roller	PSTPR*		PSTPR*-2		
Top Push Button	PSTPB		PSTPB-2		
Spare Contact Block	SP20S1	515	SP20S2	655	

- Conforming to IEC 60947-5-1
- Compact Design requiring less mounting space
- Zinc Die cast base & high end polyamide cover ensuring robustness & excellent aesthetics
- Unique Cross bar contacts for enhanced reliability
- Dust proof, Water proof & Oil resistance construction
- Snap action contacts
- Frequency of operation 7200 Oprns / hr

* A or B

Limit Switches

BCH

Limit Switch for 125°C Application*

Type	Cat. No.	MRP [₹]
with 1NO + 1NC Roller Lever Top Push Roller	LL1-150S-M LTPR-150S-M	On Request

*Refer to our nearest sales office for specification & details

Heavy Duty General Purpose Limit Switch

Snap Action Type L	Angular Roller Top Plunger	LLGS LPGS	950
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Oil Tight Limit Switch - Snap Action Type L IP 65

Type	Description	Cat. No.	MRP [₹]
Roller Lever	Standard-38MM	LL1	2000
	Standard-76.2mm	LL2	
	Adjustable	LLA	
Push Roller	Maintained Type LL1	LL1M	2085
	Maintained Type LL2	LL2M	
	Maintained Type LLA	LLAM	
Push Button	Top Adjustable	LTPBA	2280
	Side Adjustable	LSPBA	
Cat Whisker	Nylon Rod	LCW	1635
	Steel Rod	LJW	2035
Fork Type	Roller in same line	LLF	1840
	Offset Rollers	LLFO	1840
	Roller in same line	LLFM	2150
	Maintained	LLFOM	2150
	Offset Rollers		
Maintained			

Oil Tight Limit Switch - Spares

Description	Suitable for	Cat. No.	MRP [₹]
38 mm lever	NLL1, LL1	SP40L1	315
76.2 mm lever	NLL2, LL2	SP40L2	395
Adjustable lever	NLLA, LLA	SP40LA	395
Operating Head	LLGS, LPGS	SP40HLG	595
Operating Head	Lever	SP40HL	630
Operating Head	Top	SP 40HTP*	630
	Plunger	SP 40HSP*	710
Operating Head	Cat Whisker	SP40CW	435
	Steel Rod	SP40JW	595
Limit Switch Unit Assembly 1NO+1NC	Type 'L' & 'NL' (Except LLGS / LPGS)	SP40S1	910
Limit Switch Unit Assembly 2NO+2NC		SP40S2	1510
Limit Switch Unit Assembly 1NO+1NC	LLGS / LPGS	SP40S1WOM	590
Fork lever in Line	LLF	SP40LF	495
Fork lever Offset	LLFO	SP40LFO	495
Operating Head Maintained	Lever	SP40HLM	740
Oil tight Conduit		SP40CE	345

* B = Button R = Roller

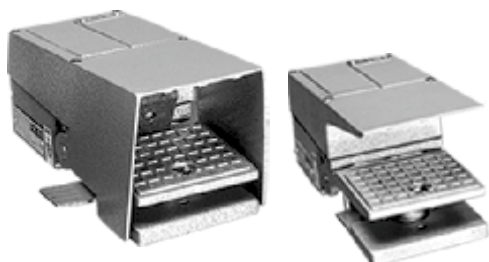
Foot Switch BCH

Number of Contact Blocks	Total contacts available	No. of position	Description	Cat. No.	MRP [₹]	Lot Size
One	1NO+1NC	2	With Guard	FSGX1	3195	1
One	1NO+1NC	2	With Shield	FSSX1	3200	
One	1NO+1NC	2	With Latch	FSGX1L	3370	
Two	4NO+4NC	2	With Shield & Latch	FSSY2L	4515	
One	2NO+2NC	2	With Guard	FSGX2	3470	
One	2NO+2NC	2	With Latch	FSGX2L	3620	
Two	2NO+2NC	2	With Guard	FSGY1	3915	
Two	2NO+2NC	2	With Latch	FSGY1L	4170	
Two	4NO+4NC	2	With Guard	FSGY2	4575	
Two	4NO+4NC	2	With Latch	FSGY2L	4655	
Two	1NO+1NC	3	With Guard	FSGZ1M	3985	
Two	4NO+4NC	3	With Latch	FSGZ2M	4560	

Note : Latching unit (with suffix L) is provided with X & Y versions only.

Spares for Foot Switch

Description	Suitable For	Cat No.	MRP [₹]
Spare Contact Block 1NO+1NC	FGS/FSS	SP20S1	530
Spare Contact Block 2NO+2NC	FSG/FSS	SP20S2	675
Spare Cover with Guard	FSG	SP20CG	1280



- 2 Position and 3 Position
- 1NO+1NC/2NO+2NC/4NO+4NC contact blocks
- Guard and Shielded versions
- Oil tight and water tight enclosure for contact block
- Mechanical and electrical life : 10 million operation
- Suited for heavy duty applications such as :
 - Machine Tools
 - Rubber and Tyre making machines
 - SPMs
 - Welding Machines
- Suffix X1 = One Block of 1NO+1NC
 X2 = One Block of 2NO+2NC
 Y1 = Two Blocks of 1NO+1NC
 Y2 = Two Blocks of 2NO+2NC

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



Range

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

Features

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

Type	Description	Cat. No.	MRP [₹]	Lot Size
Actuator	Standard flush Button Red Green Black Yellow Blue Amber	TSFB-R TSFB-G TSFB-B TSFB-Y TSFB-BL TSFB-A	180	20
	Long Button Red Green Black Yellow Blue Amber (Orange)	TLB-R TLB-G TLB-B TLB-Y TLB-BL TLB-A	180	10
	Mushroom Head -Spring return Red -Spring return Green -Turn to release Red -Turn to release Green	TMH-R TMH-G TMHL-R TMHL-G	230 230 260 260	10
	Selector Actuator -2 or 3 position	TSSA ***	475	10
	Cylindrical Lock -2 or 3 positions	TCL***	695	10
	Station	Start/Stop Pushbutton	E20EA	On request
Contact Block	1NO +1NC	050N1		
	2NO	050N2	225	20
	2NC	050N3		
Aluminium Diecast Enclosure	One button	TEN-1	650	1
	Two buttons	TEN-2	875	
	Three buttons	TEN-3	1030	
	Four buttons	TEN-4	1200	
Accessories	Wrench for retaining ring	TWN	225	1
	Plug for hole	TPL	100	
	Legend plate	050L^	30	

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

Oil Tight Indicating Light - E 30.5mm

Description	Application	Cat. No.	MRP [₹]	Lot Size
(Without lens) Direct type	AC & DC	TILD•10	335	1
Transformer type	AC	TILT•10	425	1
Polycarbonate Lens	-	LENS*	35	10
Spare Bulb	AC & DC	SP61L#	40	1

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

Voltage Code (Direct type lamps)

Volts	6	12	24	48	110	220	240	415
Code	P	S	U	W	A	B	K	M

Voltage Code (Transformer type lamps)

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

Illuminated Push Button - E 30.5mm

Description	Cat. No.	MRP [₹]	Lot Size
Actuator with bulb & terminals @	TIPB ■	295	10
Signal lamp transformer	TR ■	240	10
Bulb-6V or 24V	SP61L#	40	1
Legend plate	050L^	30	1
Plastic lens	L2°	30	1

@ Prices are exclusive of lens

^ Suffix Legend plate code

° Suffix colour code: Milky White 1, Clear 2, Yellow 3, Blue 4, Red 5 & Green 6.

■ For Contact Block, please refer Push Button Type T.

■ The illuminated buttons can be supplied for 6V or 24V direct operations.

■ The Transformers are available in 110/6V, 220/6V, 110/24V & 240/24V

Push Button BCH

Suffix Colour Code - 30.5 mm

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

Legend Plate - Suffix Code for E30 & 22.5

Inscription	Suffix code	
	Type T	E22
Start	1	34
Stop	2	35
Inch	3	14
Forward	4	07
Reverse	5	41
UP	6	40
Down	7	04
Slow	9	33
Fast	10	06
Raise	11	-
Left	-	18
Motor Run	-	22
Motor Stop	-	23
Overload Tripped	-	30
Overload Reset	-	31
Power On	-	32
Stop Reset	-	36
Test	-	37
Trip	-	38
Lower	12	-
Off	13	24
On	14	26
Jog	15	-
Emergency Stop	16	05
Reset	17	-
High	19	12
Run	20	-
Close	21	03
Open	22	27
Blank	23	01
On-Off	28	-

Push Button 22.5mm BCH

Push Button & Indicating Lights - 22.5 mm



Description	Type	Cat. No.	MRP[₹]	Lot Size		
Push Button Actuators with Mounting Adaptor	Opaque	Flush	HEA11*M	70	10	
		Extended	HEA12*M	75		
	Illuminated**	Flush	HEB11*M	105		
		Extended	HEB12*M	105		
	Mushroom Head 28mm Colour - Red/Black	Momentary	HEA21*M	95	10	
		Twist to Release	HEA23*M	140		
		Stayput Key Release	HEA25*M	285		
		Mushroom Head 40mm Colour - Red/Black	Momentary	HEA22*M		120
Light Source Units (LSU)	Basic Unit with Mounting Adaptor	Lamp Holder & Lens	HPL22*	65	10	
		LSU with Bulb-Direct Type	6/12/24/48/60/110V ac/dc	HLSUD#		70
		LSU with Bulb-Resistance Type ■	110V ac/dc & 240V ac	HLSUR#		85
		LSU with Bulb-Transformer Type @	Primary : 110V/240V/415V ac Secondary : 6 & 12V ac	HLSUT#		270
LED Indicating Light	Standard 6/12/24/48/60/110/240/415V ac*** 6-60V ac/dc; 110 & 240V dc	Color - R/Y/G/A	HFB2X*#	165	10	
		Blue	HFB2XL#	345	1	
		Clear	HFB2XC#	490	1	
	Universal 24-240V ac/dc	Color - R/Y/G/A	HFB2X*UH4	215		
		Blue	HFB2XLUH4	435		
	Surge Protected 12-60V ac/dc; 110/240/415V ac; 110/240V dc	Color - R/Y/G/A	HFB2S*#	210	10	
		Blue	HFB2SL#	375	1	
		Clear	HFB2SC#	525	1	
	Low Voltage Glow Protected 220/240V ac	Color - R/Y/G/A	HFB2P*□	250	10	
		Blue	HFB2PLH	450	1	
	Surge & Low Voltage Glow Protected 220/240V ac	Color - R/Y/G/A	HFB2SP*□	250	10	
		Blue	HFB2SPLH	450	1	
Selector Operators with Mounting Adaptor	Selector Key Operator (Color - Black)	2pos Maintained		265	1	
		2pos Spr Ret R>L		265		
		3pos Maintained		275		
		3pos Spr Ret L>C		275		
		3pos Spr Ret R>C		275		
		3pos Spr Ret L>C<R		275		
	Selector Knob or Lever Opaque	2pos Maintained	Pls refer Ordering Sequence & Circuit Combination Table for exact Cat. Ref.	190		
		2pos Spr Ret R>L		190		
		3pos Maintained		190		
		3pos Spr Ret L>C		210		
		3pos Spr Ret R>C		210		
		3pos Spr Ret L>C<R		225		
	Selector Knob or Lever Illuminated •	2pos Maintained		225		
		2pos Spr Ret R>L		225		
		3pos Maintained		225		
		3pos Spr Ret L>C		255		
		3pos Spr Ret R>C		255		
		3pos Spr Ret L>C<R		255		

* Colour Code Table 1 # Voltage Colour Table 2 @ For extended bulb version, use code HLSUTE#

■ Not suitable for illuminated push button types

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

*** LED indicating light (standard) 550VAC, Prices are available on request.

Push Button 22.5mm BCH

Push Button - 22.5 mm



Description	Type	Cat. No.	MRP [₹]	Lot Size
Contact Block		1NO	60	10
		1NC	60	
	Early Make	1NO	65	
	Late Break	1NC	65	
		1NO+1NC	100	
		2NO	100	

Ordering Sequence for Selector Operators

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

Suffix Code Tables

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

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

Applicable for	Type	Code
Selector Operator	Maintained in All Position	D
Selector Operator	Spring Return Right>Centre	R
Selector Operator	Spring Return Left>Centre	T
Selector Operator	Spr. Return Left>Centre<Right	S

Suffix Code Tables

Applicable for	(*) Color	Code
LSU, LED	6V AC/DC (DIRECT)	P4
LSU, LED	12V AC/DC (DIRECT)	S4
LSU, LED	24V AC/DC (DIRECT)	U4
LSU, LED	48V AC/DC (DIRECT)	W4
LSU, LED	60V AC/DC (DIRECT)	Y4
LSU	110V AC/DC (DIRECT)	A4
LSU	110V AC/DC (RESISTOR)	A4
LED	110/120V AC	E
LED	110/120V DC	E1
LED	220/240V AC	H
LED	220/240V DC	H1
LSU	110V/6V (TRANSFORMER)	AP
LSU	110V/24V (TRANSFORMER)	AU
LSU	240V/6V (TRANSFORMER)	KP
LSU	240V/24V (TRANSFORMER)	KU
LSU	415V/6V (TRANSFORMER)	MP
LSU	415V/24V (TRANSFORMER)	MU
LED	415V AC	M
LED	220/240V AC (DIODE+RESISTOR)	H

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

Push Button 22.5mm BCH

	Description	Type	Cat. No.	MRP [₹]	Lot Size
Spares & Accessories	Filament Bulb	Normal Bulb	9ED2#	25	10
	Filament Bulb	Extended Bulb	9ED3#	25	
	Mounting Adaptor		HMR	25	
	Lens for Indicating Lamp		H8ED1*	25	1
	Knob for Illum. Selector Actuator		H9ED1K*	25	
	Lever for Illum. Selector Actuator		H9ED1L*	25	
	Legend Plate with Std Inscription	Flush/Extended PB	8EA9 +	25	
	Rubber Boot for IP66 Protection		HRB*	35	
	Padlock to Prevent Operation		8EA1	On request	

* Color Code Table 1 # Voltage Code Table 2 + See E 30 marking

SELECTION CRITERIA FOR 3 POSITION SELECTOR OPERATOR CAM:

Selector Operators with CAM1 :

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

Selector Operator with CAM2 :

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

Push Button & Indicating lights



Range

- Flush and Extended Push buttons
- Selector Operators knob & lever
- Non Illuminated and illuminated type
- Mushroom head-28mm, 40mm, 60mm (coming soon)
- LED Indicating lights
- Filament type Indicating lights

Features

- Chrome plated metal bezel
- Modular Snapfit construction
- Oil Tight, Water tight and corrosion-resistant.
- IP65 Degree of Protection
- Anti Rotation Mounting
- Possibility to add 10 Contacts (Coming Soon)
- Operating temperature -20° C to 60° C

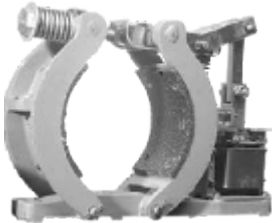
AC Solenoids & Brakes BCH



AC Solenoid - Pull Type

Type	Stroke Length mm	Max. Pull (Continuous Duty) Kg.	Cat. No.	List Price [₹]
B	25.0	1.25	SLB-	3160
D	31.4	6.75	SLD-	4670

* The standard coil voltages are 110, 220 & 415 V 50 Hz. AC



AC Solenoid Brake - Type S

Type of Brake	Wheel dia.		Max. Torque		Duty	Brake		Drum	
	Inch	mm	Lb. ft.	Nm		Cat. No.	List Price [₹]	Cat. No.	List Price [₹]
S-4	4	101.6	10	13.6	Continuous	S-42 ■	8345	AC50D4	1415
S-5	5.5	139.7	25	34.0	Continuous	S-51 ■	11775	AC50D5	1955
			35	48.0	Intermittent	S-52 ■			
S-7	7	177.8	50	68.0	Continuous	S-71 ■	13660	AC50D7	2200
			75	102.0	Intermittent	S-72 ■			

Range

- Solenoids:
 - Type : SLB - 25 mm stroke length
 - Type : SLD - 31.4 mm stroke length
- AC Brakes
 - 4" Dia
 - 5.5" Dia
 - 7" Dia
- Drums

Features

- Class F insulation of the coil
- Continuous & Intermittent duty
- Long life & ease of maintenance
- Ideally suited for applications such as :
 - Cranes
 - Hoists
 - Machines
 - Valves
 - Conveyers

AC Solenoid Brake - Type S-10 NEW

S-250	9.84	250	109	147.0	Continuous	S-2501*	28905	AC50D25	4455
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- The standard coils are 110, 220 & 415 V 50 Hz. AC

- To complete Cat. No. suffix voltage code given below
- Brake drums are of standard specification
- For Intermittent duty (S-250 brake), please contact branch office

AC Solenoid Brakes - Voltage Codes

Coil Voltage	110	220	415
AC	A	B	M

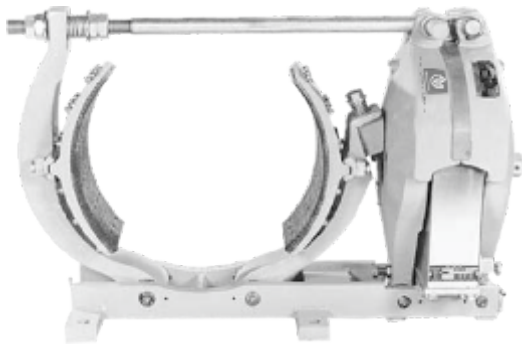
Spares For AC Solenoid Brake

Description	Brake Size : 4"		Brake Size : 5.5"		Brake Size : 7"		Brake Size : 10"	
	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]
Brake lining	SP50L1	1055	SP50L2	1570	SP50L3	2110	SP50L4	4150
Brake shoe Assembly*	SP50SA1	2710	SP50SA2	3830	SP50SA3	6320	SP50SA4	12745
Brake Coil -Continuous -Intermittent	SP50MC01	1530	SP50MC21 ■ SP50MC22 ■	3055	SP50MC21 ■ SP50MC22 ■	3055	SP50MCE31 ■	8080
Brake Drum	AC50D4	1415	AC50D5	1955	AC50D7	2200	AC50D25	4455

- Prices are per set of 2 nos.,

brake shoe assembly is with lining.

- To Complete Cat. No. suffix voltage code is given in table, above.



- Shunt and Series type versions in sizes :
8 Inch to 30 Inch
160 mm to 800 mm
- Conforms to NEMA and AISE Standards
- Fail safe operation
- Unique design for maximum torque and minimum shoe wear
Brakes equivalent to Russian 'TK П' design also available



Optional Features

- Limit Switch Attachment
- Manual Release
- Residual magnetism adjustment

DC Electromagnetic Brakes

Shunt Type				Resistance & Rectifier Panel			
Drum Size	Cat.No.	Torque	List Price [₹]	Single Brake		2 Brakes Simult. Operation	
		KG-M		Cat.No.	List Price [₹]	Cat.No.	List Price [₹]
150mm 160mm	SMH150 SMH160	8	35155	CACS1*MAE	36195	CACS2*MAE	51300
8"/200mm	SMH8	13.8	41385	CACA1*MAE	41155	CACJ2*MAE	53340
	SMH200	13.8					
10"/250mm	SMH10	27.7	50815	CACB1*MAE	43675	CACK2*MAE	60320
	SMH250	27.7					
13"/300mm	SMH13	76.0	83195	CACC1*MAE	47310	CACL2*MAE	69480
	SMH300	76.0					
16"/400mm	SMH16	138.8	133925	CACD1*MAE	54480	CACM2*MAE	76345
	SMH400	138.8					
19"/500mm	SMH19	277.0	214050	CACE1*MAE	65880	CACN2*MAE	96455
	SMH500	277.0					
23"/600mm	SMH23	555.0	341725	CACF1*MAE	84950	CACP2*MAE	118475
	SMH600	555.0					
30"/700mm	SMH30	1242.0	761005	CACG1*MAE	335405	-	-
	SMH700	1242.0					
800mm	SMH800	1242.0	824510	CACG1*MAE	335405	-	-

* For control supply i.e. A=110 V, B=220 V, K =240V and M=415 V AC
 1. DC Electromagnetic Brakes are suitable to operate on:
 For AC Power - Resistance & Rectifier Panel
 For DC Power - Series Resistance Box

- All Brakes are Supplied for Continuous Duty
 - Resistance & Rectifier Panel is supplied without transformer.
 - Control Transformer (Optional) can be supplied at extra cost.
 Please add Rs. 4600/- per unit with the LP of Resistance & Rectifier Panel. Please add 'TR' with respective panel cat. ref. to obtain final cat. Code of such panel with control transformer.

Resistance Boxes for DC Electromagnetic Brakes

Shunt Type			Permanent Series Resistance Box for 230 V DC Supply		Permanent Series Resistance Box for 230 V AC Supply		SPARE	
							Permanent & Economy Resistance Box for 415 V AC Supply	
Size	Cat. No.	Torque KGM	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]	Cat. No.	List Price [₹]
150mm	SMH150	8	CDCS101D	5075	CARS10KE	4640	CARS10ME	9384
160mm	SMH160							
8"/200mm	SMH8	13.8	CDCA101D	5265	CARA10KE	On request	CARA10ME	9380
	SMH200	13.8	CD1A101D*					
10"/250mm	SMH10	27.7	CDCB101D	6255	CARB10KE	On request	CARB10ME	9380
	SMH250	27.7	CD1B101D*					
13"/300mm	SMH13	76.0	CDCC101D	7215	CARC10KE	6555	CARC10ME	10735
	SMH300	76.0	CD1C101D*					
16"/400mm	SMH16	138.8	CDCD101D	7730	CARD10KE	7040	CARD10ME	12485
	SMH400	138.8	CD1D101D*					
19"/500mm	SMH19	277.0	CDCE101D	8275	CARE10KE	7550	CARE10ME	13860
	SMH500	277.0	CD1E101D*					
23"/600mm	SMH23	555.0	CDCF101D	9420	CARF10KE	8485	CARF10ME	14900
	SMH600	555.0	CD1F101D*					
30"/700mm	SMH30	1242.0	CDCG101D	22860	-	-	CARG10ME	25715
	SMH700	1242.0	CD1G101D*					
800mm	SMH800	1242.0	CD1G101D*	22860	-	-	CARG10ME	25715

1. DC Electromagnetic Brakes are suitable to operate on:
 For AC Power - Resistance & Rectifier Panel
 For DC Power - Series Resistance Box
- All Brakes are Supplied for Continuous Duty
 * These cat. references are meant for intermittent duty

DC Brakes..... BCH

Series Type - DC Electromagnetic Brakes

Brake Size	Motor Frame No. (Max.)	Half Hour Rating			One Hour Rating			List Price [₹]
		Torque KGM	Max. FLC (A)	Cat. No.	Torque KGM	Max. FLC (A)	Cat. No.	
8"/200mm	402,802A,403, 602, 802B	13.8	29	SME8H1 SME200H1	8.97	21	SME801 SME20001	85280
			44	SME8H2 SME200H2		31	SME802 SME20002	
10"/250mm	404,603,802C, 406,604,803	27.7	57	SME10H1 SME250H1	18.0	40	SME1001 SME25001	121680
			77	SME10H2 SME250H2		57	SME1002 SME25002	
13"/300mm	408,606,804, 410,608,806	76.0	126	SME13H1 SME300H1	49.4	95	SME1301 SME30001	164870
			176	SME13H2 SME300H2		132	SME1302 SME30002	
16"/400mm	412,610,808	138.8	245	SME16H1 SME400H1	90.2	185	SME1601 SME40001	258035
19"/500mm	414,612,810, 416,614,812	277.0	368	SME19H1 SME500H1	180.0	272	SME1901 SME50001	396405
			500	SME19H2 SME500H2		360	SME1902 SME 50002	
23"/600mm	418,616,814 618,816	555.0	740	SME23H1 SME600H1	361.0	540	SME2301 SME60001	641350
			960	SME23H2 SME600H2		730	SME2302 SME60002	

- During ordering, besides brake drum dia, please confirm duty rating, current rating & motor frame Nos.
- Above current ratings are for 230 V DC Series Motors.
- To convert KGM to LB.FT. multiply by 7.25

Spares & Accessories - DC Electromagnetic Brakes

Description	150/160mm		8"/200mm		10"/250mm		13"/300mm	
	Cat No.	List Price [₹]	Cat No.	List Price [₹]	Cat No.	List Price [₹]	Cat No.	List Price [₹]
 Coil Shunt	9GDS01	23835	9GDA01	25975	9GDB01	30895	9GDC01	49850
 Coil Series	for inch 9GDS02/ for mm 9GDS03	-	9GDA02/ 9GDA03	62820	9GDB02/ 9GDB03	98480	9GDC02/ 9GDC03	127375
 Torque Adj. Screw Assembly	9GDS04	2255	9GDA04	2355	9GDB04	2355	9GDC04	4110
 Torque Spring	9GDS05	6165	9GDA05	6440	9GDB05	7610	9GDC05	12330
 Wedge Assembly with Bolt, Spring and Washers	for inch/mm 9GDS20/ 9GDS22	860	9GDA20/ 9GDA22	1000	9GDB20/ 9GDB22	1160	9GDC20/ 9GDC22	1780
 Pin set for Lever & Armature Consisting of a) Pin Lever 2 Nos. b) Pin armature 2 Nos.	9GDS06	3100	9GDA06	3255	9GDB06	3255	9GDC06 9GDC06-2#	4110
 Coller Set of Lever & Armature Consisting of a) Coller Lever 4 Nos. b) Coller Armature 4 Nos.	9GDS07	3100	9GDA07	3255	9GDB07	3255	9GDC07	4110
 Bush Set for Lever & Armature Consisting of a) Bush Lever 4 Nos. b) Bush Armature 4 Nos.	9GDS08	6165	9GDA08	6475	9GDB08	6475	9GDC08	7050
 Pull Rod Assembly with nuts, spring & washer	9GDS29	2510	9GDA29	2625	9GDB29	3255	9GDC29	5010
 Grease Nipple (1 set consist 8 Nos.)	9GDS09	860	9GDA09	920	9GDB09	920	9GDC09	960
 Shoe Assembly with Clamp & Bolts (1 set consist 2 Nos.)	for inch/mm 9GDS10/ 9GDS11	6415	9GDA10/ 9GDA11	6400	9GDB10/ 9GDB11	7935	9GDC10/ 9GDC11	12330
 Shoe Lining without Bolts	for inch (1 set consist 2 Nos.) for mm 9GDS12/ 9GDS13	2165	9GDA12/ 9GDA13	2255	9GDB12/ 9GDB13	2840	9GDC12/ 9GDC13	4110
 Shoe Lining with Bolts	for inch (1 set consist 2 Nos.) for mm 9GDS23/ 9GDS26	2935	9GDA23/ 9GDA26	3255	9GDB23/ 9GDB26	4110	9GDC23/ 9GDC26	5885
 Dust Cover (made of jeans cloth & painted with fire reterdent al. paint)	-	-	9GDA30	3620	9GDB30	3620	9GDC30	4310
 mm Size Cast Steel Drum without Hard Chrome Plating	9GDS14	7115	9GDA14	7835	9GDB14	12065	9GDC14	20345
 mm Size Cast Steel Drum with Hard Chrome Plating	9GDS14P	9620	9GDA14P	11210	9GDB14P	17295	9GDC14P	29480
 Cast Steel Drum without Hard Chrome Plating*	for inch	-	9GDA15	8015	9GDB15	12340	9GDC15	20880
 Cast Steel Drum with Hard Chrome Plating*	for inch	-	9GDA15P	11505	9GDB15P	17480	9GDC15P	30290

* For brakes manufactured upto September 07.

For brakes manufactured after September 07 (pins are different).

Spares & Accessories - DC Brakes

Description	16"/400 mm		19"/500 mm		23"/600 mm		30"/700mm	
	Cat No.	List Price [₹]	Cat No.	List Price [₹]	Cat No.	List Price [₹]	Cat No.	List Price [₹]
 Coil Shunt	9GDD01	75485	9GDE01	104655	9GDF01	167250	9GDG01	372970
 Coil Series	for inch 9GDD02 for mm 9GDD03	187405	9GDE02 9GDE03	244465	9GDF02 9GDF03	377905	-	-
 Torque Adj. Screw Assembly	9GDD04	6150	9GDE04	8775	9GDF04	14035	9GDG04	29420
 Torque Spring	9GDD05	18965	9GDE05	26255	9GDF05	43470	9GDG05	93320
 Wedge Assembly with Bolt, for inch Spring and Washers for mm	9GDD20/ 9GDD22	2355	9GDE20/ 9GDE22	3540	9GDF20/ 9GDF22	5570	9GDG20/ 9GDG22	12355
 Pin set for Lever & Armature Consisting of a) Pin Lever 2 Nos. for inch for mm b) Pin Armature 2 Nos.	9GDD06* 9GDD06-2#	5010	9GDE06* 9GDE06-2#	5010	9GDF06* 9GDF06-2#	7050	9GDF06	On Request
 Coller Set of Lever & Armature Consisting of a) Coller Lever 4 Nos. b) Coller Armature 4 Nos.	9GDD07	3540	9GDE07	3830	9GDF07	4790	9GDF07	On Request
 Bush Set for Lever & Armature Consisting of a) Bush Lever 4 Nos. b) Bush Armature 4 Nos.	9GDD08	7050	9GDE08	7560	9GDF08	9680	9GDF08	On Request
 Pull Rod Assembly with nuts, spring & washer	9GDD29	7610	9GDE29	10530	9GDF29	14165	9GDG29	37085
 Grease Nipple (1 set consist 8 Nos.)	9GDD09	860	9GDE09	1065	9GDF09	1065	9GDG09	On Request
 Shoe Assembly with Clamp & Bolts for inch (1 set consist 2 Nos.) for mm	9GDD10/ 9GDD11	18995	9GDE10/ 9GDE11	26275	9GDF10/ 9GDF11	42025	9GDG10/ 9GDG11	93320
 Shoe Lining without Bolts for inch (1 set consist 2 Nos.) for mm	9GDD12/ 9GDD13	6450	9GDE12/ 9GDE13	10530	9GDF12/ 9GDF13	15595	9GDG12/ 9GDG13	29485
 Shoe Lining with Bolts for inch (1 set consist 2 Nos.) for mm	9GDD23/ 9GDD26	7935	9GDE23/ 9GDE26	13145	9GDF23/ 9GDF26	20430	9GDG23/ 9GDG26	36470
 Dust Cover (made of jeans cloth & painted with fire reterdent al. paint).	9GDD30	4675	9GDE30	5780	9GDF30	6060	-	-
 mm Size Cast Steel Drum without Hard Chrome Plating	9GDD14	25430	9GDE14	40855	9GDF14	57610	-	-
 mm Size Cast Steel Drum with Hard Chrome Plating	9GDD14P	37875	9GDE14P	59680	9GDF14P	88140	-	-
 Cast Steel Drum without Hard Chrome Plating* for inch	9GDD15	26185	9GDE15	42210	9GDF15	58430	-	-
 Cast Steel Drum with Hard Chrome Plating* for inch	9GDD15P	39075	9GDE15P	61770	9GDF15P	91180	9GDG15P	154490

* For brakes manufactured upto September 07.

For brakes manufactured after September 07 (pins are different).

Spares - DC Brakes BCH

Spare Selenium Type Bridge Rectifiers

Rectifier Code / Part No.	Recommended to operate brake at 415V AC		Qty. per set	List Price [₹]
	Individual	Simultaneous		
9GDX01	1x8"/200mm	-	2	7315
9GDX02	1x10"/250mm	2x8"/200mm	2	11420
9GDX03	1x13"/300mm 1x16"/400mm	2x10"/250mm	2	15475
9GDX04	1x19"/500mm	2x13"/300mm 2x16"/400mm	2	20430
9GDX05	1x23"/600mm	2x19"/500mm	2	29155
9GDX06	-	2x23"/600mm	2	58340
9GDX07	1x30"/700 & 800mm	-	2	80900

Spare Resistances

Cat. No.	Ohms	Watts	List Price [₹]
9GDX32	32	200	1345
9GDX42	42	200	
9GDX52	52	200	
9GDX80	80	200	
9GDX112	112	200	

Optional Features - DC Brakes

Brakes Size		Manual Release List Price [₹]	Residual Magnetism Adjustment List Price [₹]	Limit Switch Attachment List Price [₹]
Inch	mm			
8	200	3040	2875	5560
10	250	3040	3390	
13	300	4160	5040	
16	400	4460	7520	
19	500	6885	10325	5665
23	600	9730	11790	

Note : Add following codes to complete brakes code with optional features.

- MR = For Manual Release
- RM = For Residual Magnetism
- LS = For Limit Switch

- RR = For Manual Release + Residual Magnetism
- RL = Residual Magnetism + Limit Switch
- ML = For Manual Release + Limit Switch
- RS = For Manual Release + Residual Magnetism + Limit Switch
- LSA = Limit Switch with fitting Arrangement (1NO + 1NC)
- LSA-2 = Limit Switch (2NO + 2NC) with fitting Arrangement

Plugs & Sockets BCH



Metal Clad - Plugs & Sockets Type 'MP' & 'MS'

Rating	Pins	Type	Cat No.	MRP [₹]
20A, 250V	2P + E	Plug	MP20	160
		Socket	MS20	175
30A, 440V	3P + E	Plug	MP30	350
		Socket	MS30	350



Plastic Plugs & Socket Type 'PS'

Rating Pins		Type	Cat No.	MRP [₹]
20A, 250V	3	Plug	PS16AA7	175
		Flush Mounting Socket	PS16BA7	210
		Socket with Wall Mounting Box	PS16DA7	275
20A, 415V 4	4	Plug	PS16AA1	220
		Flush Mounting Socket	PS16BA1	285
		Socket with Wall Mounting Box	PS16DA1	340
32A, 415V 4	3	Plug	PS32AA7	435
		Socket	PS32BA7	415
	4	Plug	PS32AA1	435
		Socket	PS32BA1	460
	5	Plug	PS32AA5	475
		Socket	PS32BA5	485

- Self Locking design : Extremely safe
- Plug cannot be pulled out in fully engaged position
- Auto closing socket shutter
- Reliable Earthing
- Shrouded Terminals for safety

Heavy duty Metal-Control 'SS'



Heavy Duty Metal - Control Plugs & Sockets Type 'SS'

Rating	Pins	Type	Cat No.	MRP [₹]
12A, 415V (Control)	12	Panel Mounting Socket	2499/12	965
		Plug with inclined Handle	299/12B	965

Heavy duty Metal-Power 'SS'



Heavy Duty Metal - Power Plugs & Sockets Type 'SS'

Rating Pins		Type	Cat No.	MRP [₹]
30A, 415V	3	Panel Mounting Socket	2415B	615
		Plug with inclined Handle	215B	615
30A, 415V	4	Panel Mounting Socket	2413B	640
		Plug with inclined Handle	213B	640
30A, 415V	5	Panel Mounting Socket	2417B	680
		Plug with inclined Handle	217B	680

Note : *Loose Conduit Box Straight (Cat. No. 9J101) - Rs. 220/- each
 *Loose Conduit Box Inclined (Cat. No. 9J102) - Rs. 230/- each
 *Spare Handle Inclined (Cat. No. 9J108) Rs. 100/- each.

Plugs & Sockets BCH

Heavy Duty Metal Plug & Sockets Type 'DS' - 5 Pin (with Integral Switching Device)

Rating	Pins	Type	Cat No.	MRP[₹]
16A, 415V	5	Plug	DS1A7A1	955
		Socket	DS1B7A1	1185
		Conduit Box	SP91WB	640
		Handle Assembly	SP91PH	135
32A, 415V	5	Plug	DS3A7A1	1680
		Socket	DS3B7A1	2105
		Conduit Box	SP93WB	730
		Handle Assembly	SP93PH	145
63A, 415V	5	Plug	DS6A7A1	2695
		Socket	DS6B7A1	3475
		Conduit Box	SP96WB	1140
		Handle Assembly	SP96PH	215
125A, 415V	5	Plug	DS9A7A1	7880
		Socket	DS9B7A1	11040
		Conduit Box	SP99WB	5530
		Handle Assembly	SP99PH	690

Note : Power Receptacles with or without SFU/SDFU/MCB/MCCB having loop-in / loop-out facility is available on request.

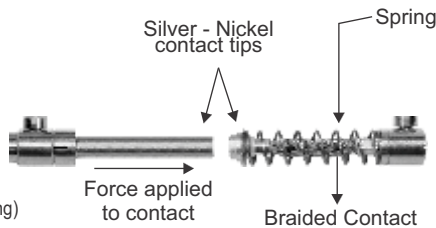


- Spring loaded Butt type contacts
- Self aligning and self wiping

Quick Disconnect



- Range from 16A to 125A
- 5 Pin configuration (3P+N+E)
- Plug cannot come out in ON condition (Integral Interlocking)



*Sparkless
Butt type contact*



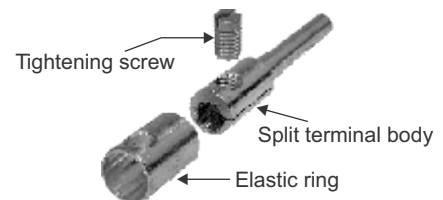
- Self aligning self wiping
- Spring loaded for consistent pressure
- Silver nickle material for extremely low temperature rise

Safety Disk



No access to live parts

Vibration proof termination

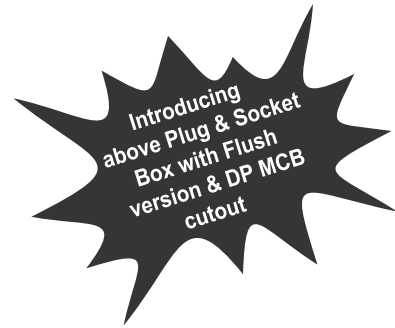


Plug & Socket Box BCH

Metal Clad - Plug & Socket Box Type 'MPSEU'



Rating	Pins	Mounting	Type	Cat No.	MRP [₹]
20A, 250V	2P + E	Universal	Plug & Socket Box - SP-MCB Cutout	MPSEU201	830
20A, 250V	2P + E	Universal	Plug & Socket Box - DP-MCB Cutout	MPSEU202	830
30A, 440V	3P + E	Universal	Plug & Socket Box - TPN-MCB Cutout	MPSEU301	2110



Plastic - Plug & Socket Box Type 'PSEU / PSEF'



Rating	Pins	Mounting	Type	Cat No.	MRP [₹]
20A, 250V	3	Universal	Plug & Socket Box with SP MCB Cutout	PSEU201	970
		Universal	Plug & Socket Box with DP-MCB Cutout	PSEU202	970
	Flush	Universal	Plug & Socket Box with SP MCB Cutout	PSEF201	970
		Universal	Plug & Socket Box with DP-MCB Cutout	PSEF202	970
32A, 415V	4	Universal	Plug & Socket Box with 4P MCB Cutout	PSEU324	2220
			Plug & Socket Box with 4P MCB Cutout	PSEU325	2275
	5	Universal	Plug & Socket Box with 4P MCB Cutout	PSEF324	2220
			Plug & Socket Box with 4P MCB Cutout	PSEF325	2275

Heavy Duty Metal - Plug & Socket Box Type 'SSEU'

Rating	Pins	Mounting	Type	Cat No.	MRP [₹]
30A, 415V	3	Universal	Plug & Socket Box with DP MCB Cutout	SSEU303	2515
	4	Universal	Plug & Socket Box with 4P MCB Cutout	SSEU304	2575
			Plug & Socket Box with 4P MCB Cutout	SSEU305	2635



Stainless Steel Cover Plug & Socket Box Type 'PSEU-SSC'/SSEU-SSC'

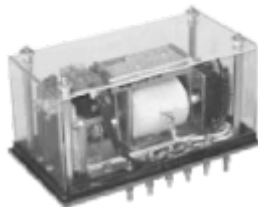
Rating	Pins	Mounting	Type	Cat No.	MRP [₹]
20A, 250V 32A, 415V	3	Universal	P&S Box with 'PS' P&S and SP MCB Cutout	PSEU201-SSC	1250
	5		P&S Box with 'PS' P&S and 4P MCB Cutout	PSEU325-SSC	2600
30A, 415V	3	Universal	Plug & Socket Box with DP MCB Cutout	SSEU303-SSC	2900
	4	Universal	Plug & Socket Box with 4P MCB Cutout	SSEU304-SSC	2960
			Plug & Socket Box with 4P MCB Cutout	SSEU305-SSC	3020

Pneumatic Timers..... BCH

Pneumatic Timer



Timer for Railway Application



- 30 sec / 60 sec/180 sec
- AC and DC Supply
- 1 NO+1NC / 2 NO+2NC Contact Blocks
- Completely enclosed timing head ensures excellent timings in adverse environmental conditions
- Encapsulated coil for better resistance against moisture and corrosion
- Completely maintainable i.e Coil , Contact blocks and Timing head can be replaced
- Special timer for Railway application



Pneumatic Timers Time Delay Relay-Electro Pneumatic

Type	Time (Secs.)	Contact Configuration		Cat No.	MRP [₹]	
		Timed Block	Instantaneous Block		AC	DC
PN	30	1NO + 1NC	-	KRTPN10 [■] -0	3135	4700
	60	1NO + 1NC	-	KRTPN10 [■] -1	3250	4975
	180	1NO + 1NC	-	KRTPN10 [■] -3	3670	5425
	30	2NO + 2NC	-	KRTPN20 [■] -0	3525	5040
	60	2NO + 2NC	-	KRTPN20 [■] -1	3610	5105
	180	2NO + 2NC	-	KRTPN20 [■] -3	3875	5480
PNI	30	1NO + 1NC	1NO + 1NC	KRTPN11 [■] -0	3825	5485
	60	1NO + 1NC	1NO + 1NC	KRTPN11 [■] -1	4350	5990
	180	1NO + 1NC	1NO + 1NC	KRTPN11 [■] -3	4755	6065
	30	2NO + 2NC	2NO + 2NC	KRTPN22 [■] -0	4800	6260
	60	2NO + 2NC	2NO + 2NC	KRTPN22 [■] -1	4855	6590
	180	2NO + 2NC	2NO + 2NC	KRTPN22 [■] -3	5210	6965
		On-Delay Block	Off-Delay Block			
PCN	30	1NO + 1NC	1NO + 1NC	KRTPCN11 [■] -0	5190	6955
	60	1NO + 1NC	1NO + 1NC	KRTPCN11 [■] -1	5455	7010
	180	1NO + 1NC	1NO + 1NC	KRTPCN11 [■] -3	6195	7750
	30	2NO + 2NC	2NO + 2NC	KRTPCN22 [■] -0	5840	7630
	60	2NO + 2NC	2NO + 2NC	KRTPCN22 [■] -1	6115	7725
	180	2NO + 2NC	2NO + 2NC	KRTPCN22 [■] -3	6895	8425

PN, PNI Time Delay Relay will be supplied only as on-delay
 ■ To complete Cat. No. Suffix voltage code from Table

Timer for Railway Application

Type	Time (Secs.)	Contact Configuration		Cat No.	MRP [₹]	
		Timed Block	Instantaneous Block		AC	DC
PN	120	2NO + 2NC	-	KRTPN20A-2R	3775	-
	150	2NO + 2NC	-	KRTPN20A-3R	3775	-

Accessories for Time Delay Relay

^ 110V AC coil voltage, without knob

Description	Cat.No.	MRP [₹]	Lot Size
Contact Block			
1NO+1NC Timed	SP20S3+	705	1
2NO+2NC Timed	SP20S4+	935	
1NO+1NC Inst.	SP20S5+	705	
2NO+2NC Inst.	SP20S6+	935	
Magnet Coil			
AC-PN Relays	SP20MC [■]	880	1
AC-PNI & PCN Relays	SP20MC1 [■]	880	
DC Relays	SP20MC2 [■]	2890	1
Return Spring*			
(PNI & PCN)	SP20RS	155	1
Coil Clip*	SP20CC	260	
Magnet frame assembly without coil	SP20 MA/MA1	1470	1
Knob Assembly	SP20KA	30	10

- High Repeat Accuracy
- Operating Temperature - 40° to +65°
- Mechanical and Electrical Life - 10 million operations

Voltage Sux Code

Coil Voltage	24	110	220	240	415
AC Suffix M Code*	U	A	B	K	M
DC Suffix - Code	U1	A1	B1	K1	-

+ These are supplied with plastic cover
 * For DC Timers only
 ■ To complete suffix voltage code refer to the table

* KRTPN timers with 550V AC coil voltage, Prices available on request

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

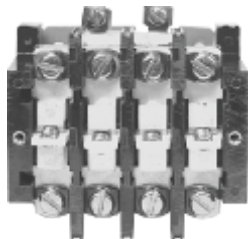


Citation DOL Motor Starters (with 380/415 V coil)

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	2870	NAKLENI	2770	
10 / 7.5	13.2 - 20.0	NALLEN		NALLENI		

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	1635

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
NASSMLLEN	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 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 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 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

Motor Starters BCH



- 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	

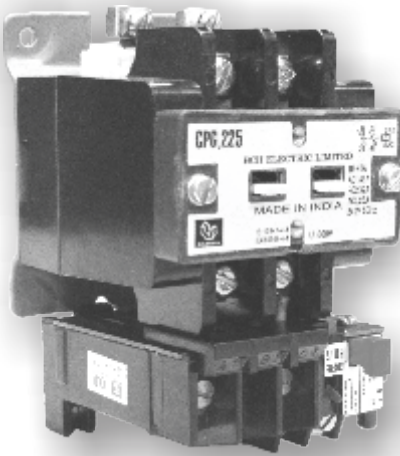
* Add suffix for coil voltage

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

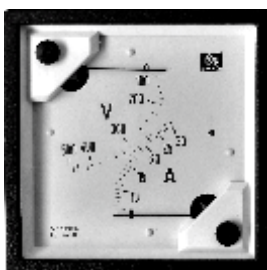
- Consists of 2P CPG Contactor & 2P Overload relay
- Available with 16 & 25 Amp contactor

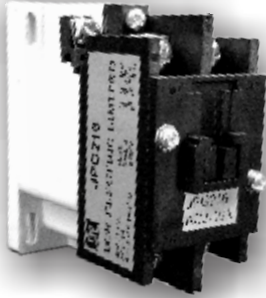
Cat Code CPG225*OLR#	Product Description	MRP [₹]
CPG225HOLRL	2P 25A 220-240V CONTR WITH 13.2-20A O/L	1930
CPG225HOLRM	2P 25A 220-240V CONTR WITH 17.4-24A O/L	1930
CPG225HOLRP	2P 25A 220-240V CONTR WITH 23-32A O/L	2085
CPG225BWOLRL	2P 25A 160-220V CONTR WITH 13.2-20A O/L	1930
CPG225BWOLRM	2P 25A 160-220V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





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

2 Pole JPG Contactor - 16, 20 & 25 Amp

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

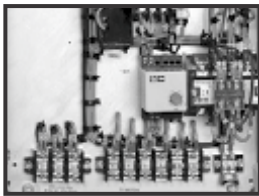
- Direct on line : upto 24 A relay rating
- Star Delta : upto 90 A relay rating
- Protections :
 - Phase failure
 - Phase imbalance
 - Phase reversal
- Short Circuit Protection Thru MCB : In case of Premium models
- Ammeter and Voltmeter
- On/Off and Trip indications
- Powder coated enclosure with PU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



On/Trip Indicators



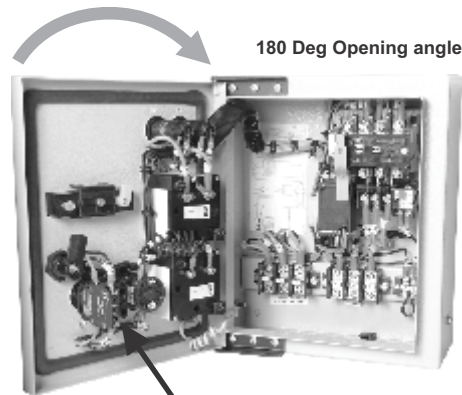
Isolated Terminal blocks for better termination



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

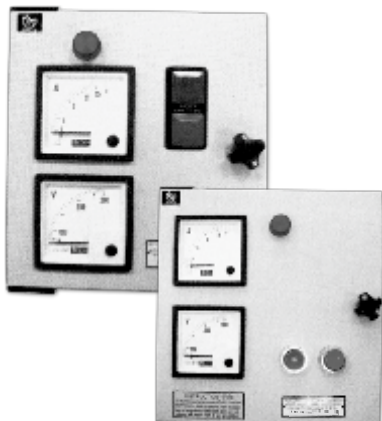


Phase indicators (For std & Premium models)



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 (Maunal - 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

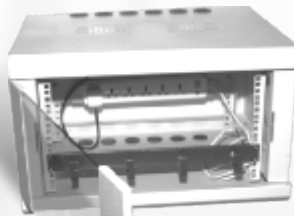
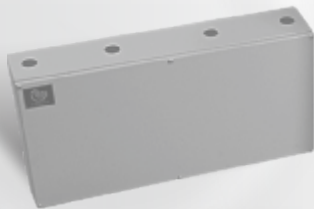
Replace '*' with 'N' for 380-415VAC coil & with 'Y' for 240-400VAC coil

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**

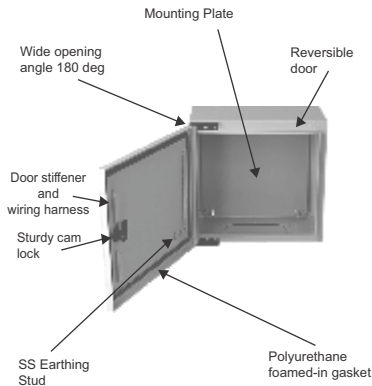
Enclosure Systems BCH

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)

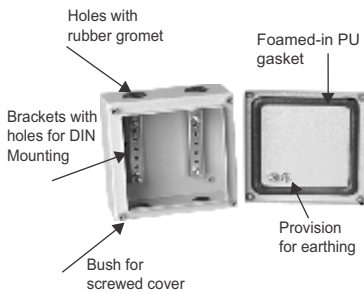
Type	Size (WxHxD) mm	MOQ Nos.	Cat No.	List Price [₹]
SINGLE DOOR BOX	200X300X150	3	BIL-90203015	4150
SINGLE DOOR BOX	300X300X200	3	BIL-90303020	5750
SINGLE DOOR BOX	400X400X200	3	BIL-90404020	7750
SINGLE DOOR BOX	400X500X200	3	BIL-90405020	8770
SINGLE DOOR BOX	400X600X200	3	BIL-90406020	10700
SINGLE 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

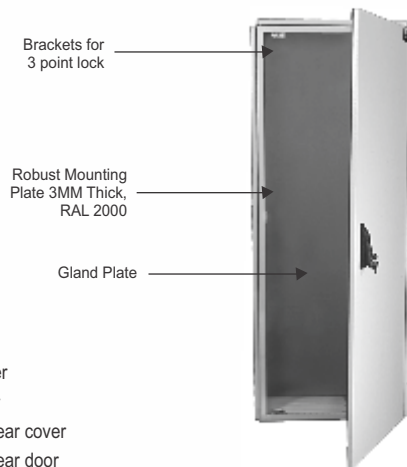
General Technical Particulars

- 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

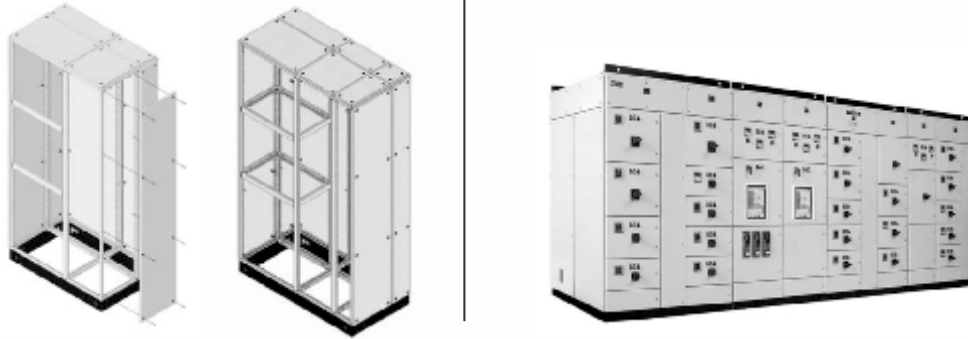
- (a) Choose Cat. No. and LP of Enclosure version from 001, 002, 003 or 004
- (b) Add Cat. No. and LP of Plinth
- (c) Add Cat. No. and LP of Side Covers pair

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



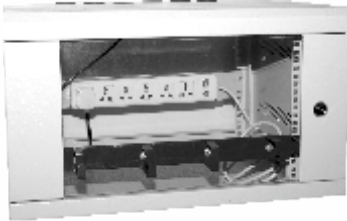
- 100% Modular Structure; can be dispatched into flat pack.
- Flexible Horizontal/Vertical busbar and Cable Compartment Configuration.
- Compartmentalised - upto Form 4.
- IP 54 with polyurethane foam gasketing.
- Doors available in height of 200mm & multiples of 100mm.
- Horizontal Busbar chambers, 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 seperation 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.

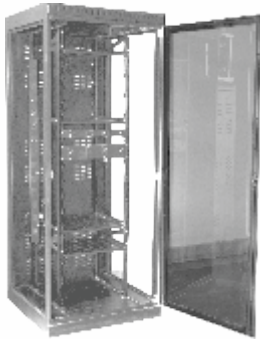
Dimensions (H x W x D) mm	MOQ Nos.	Cat. No.	List Price [₹]
6UX550X400	1	BIL-W-6-5504	3230
9UX550X400	1	BIL-W-9-5504	3705
6UX550X500	1	BIL-W-6-5505	3565
9UX550X500	1	BIL-W-9-5505	4145
12UX550X500	1	BIL-W-12-5505	4610
15UX550X500	1	BIL-W-15-5505	5420

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

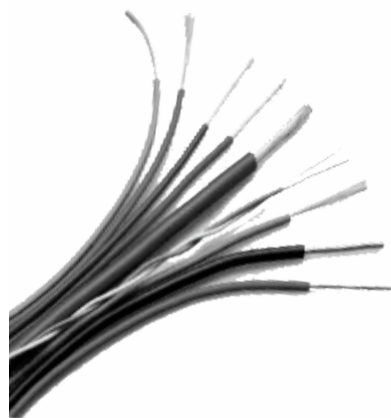
Cat. No.	Conductor Area (nominal)	Safe Current Carrying Capacity 2 wires, Single Phase		Price Per 100 mtrs
		In conduit / Trunking	Unenclosed clipped directly to a surface or on cable tray	
Single Core	(Sq. mm)	(Amp.)	(Amp.)	in [₹]
CRFR01-0005A-AAA	0.5	4	4.5	
CRFR01-0008A-AAA	0.75	7	8	
CRFR01-0010A-AAA	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**

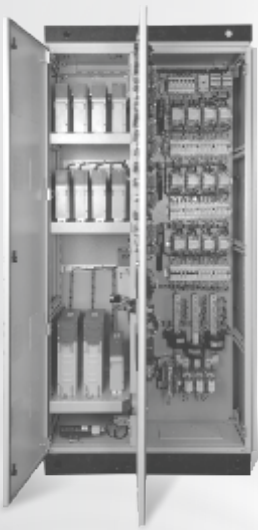


• **LT Power Capacitors - Cylindrical Type**

• **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

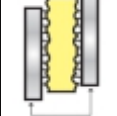


APP Box type Single Layer Capacitors(440V)

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

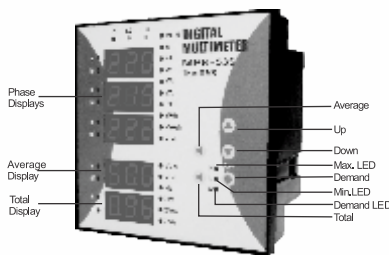
Note : **RG3-8/12/15 and RG3-12/15CS available in 230V only

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.

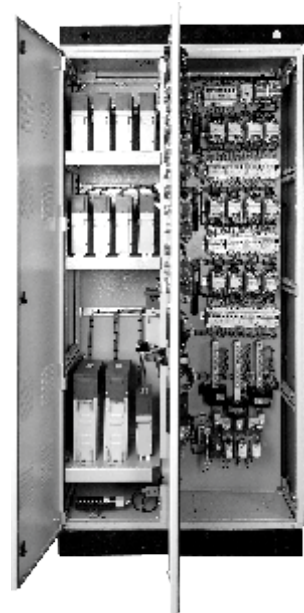
VERSION 2 - With BCH MPP Heavy Duty Reinforced Cylindrical Capacitors & **WITHOUT** Manual option.

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

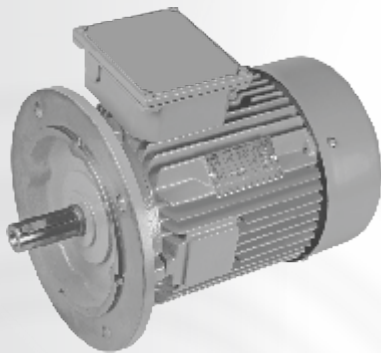
ENDURA

Low Voltage AC TEFC Squirrel
Cage Induction Motors

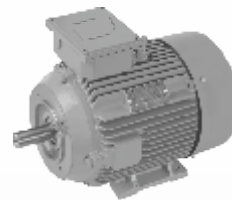
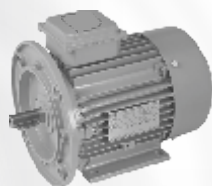
**EFF1
EFF2**

50°C
ambient temperature

Class F

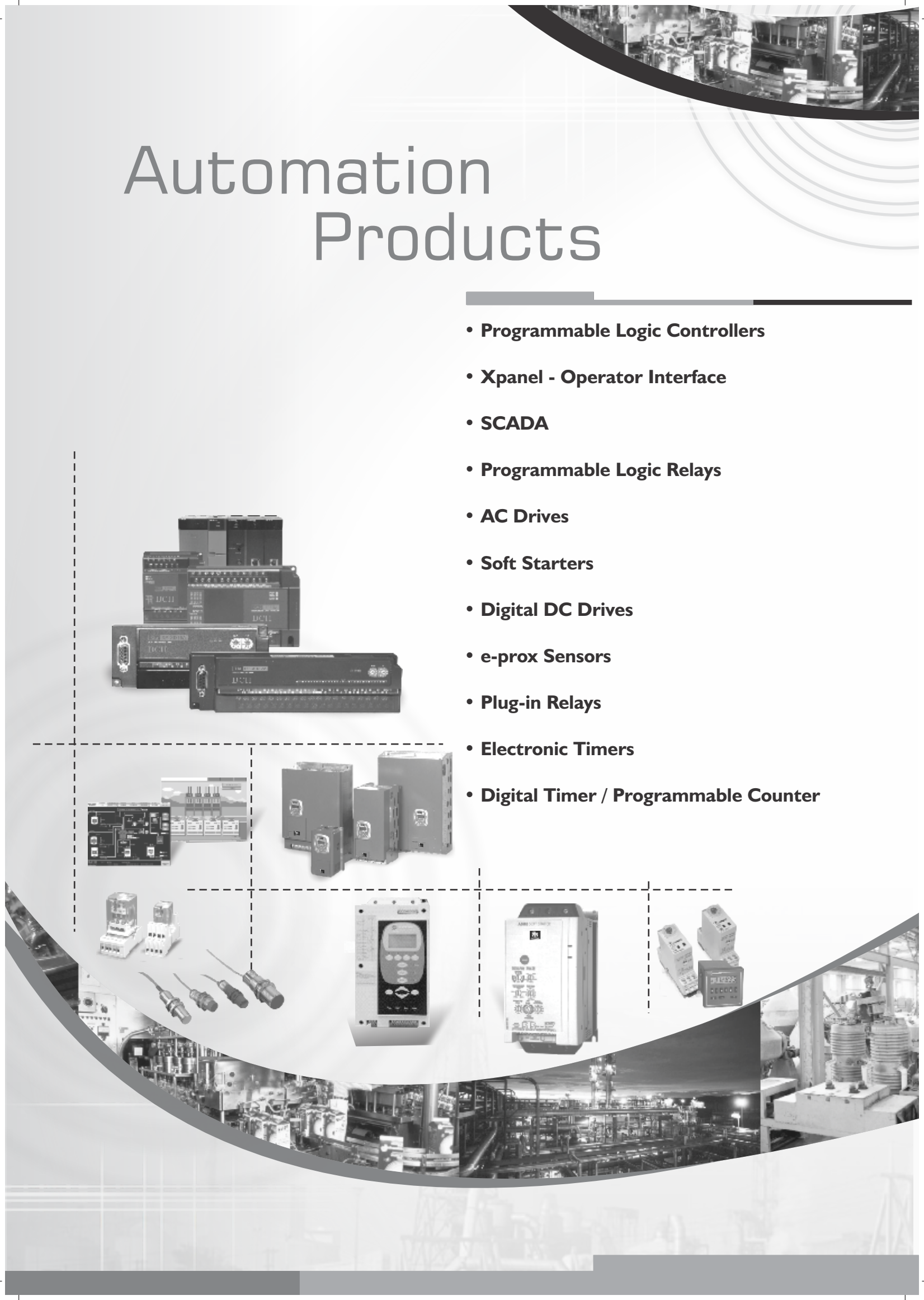
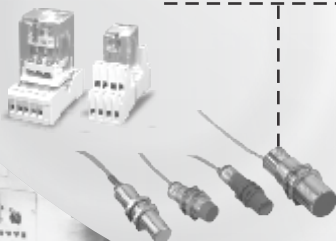
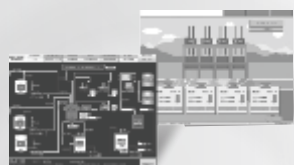
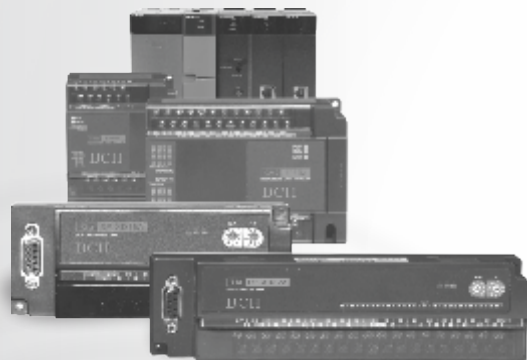


- **0.12 HP to 425 HP**
- **2 to 8 Poles**
- **Vector Plus with forced cooling**
- **Upto 40 intermediate standard ratings**
- **High efficiency, consistent - life long**
- **Low loss for entire life**
- **Inverter duty motor**
- **No deration upto 50° C**
- **Dual coat winding wire as standard feature**
- **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)

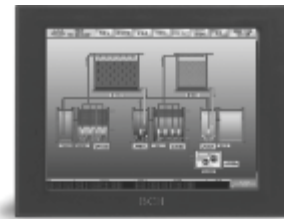


COMPREHENSIVE **HMI** SOLUTION

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

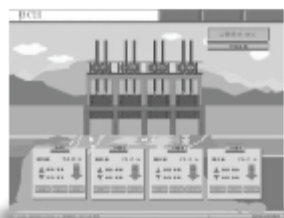
- 12.1" & 19" TFT display
- High color resolution TFT display
- Panel mountable structure
- All in one embedded board
- Connectivity with 4 serial ports and 1 Ethernet port



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		Amps	N°	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

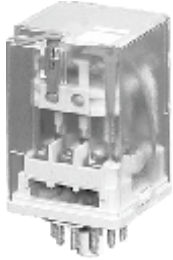
Cat. No.*	Size (mm)	Nominal Sensing Distance (mm)	Output	Max. Load (mA)	MRP [₹]	Lot Size
Flush/Non Flush Version, Nominal Voltage 230V AC, 2 Wire Output, LED Indication, Integrated 3C/2m long Cable, SS Housing						
DINE30SA10HT **	30	4	NO	200	3340	10
DINE30NA10HT **	30	6	NO	200	3325	
DINE18SA10HT **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



Clamp

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	

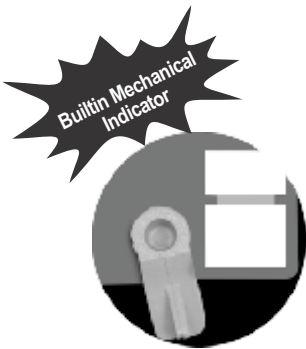
Subject to availability

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 BCH

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

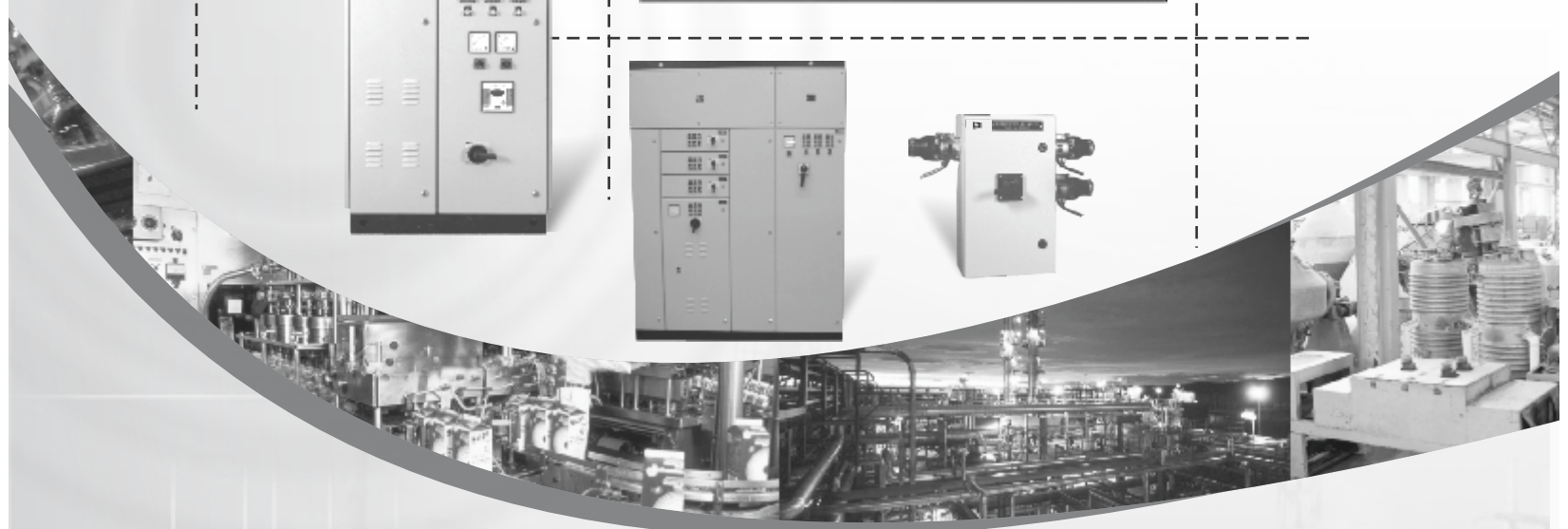


Digital Timer / Programmable Counter - IBC

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

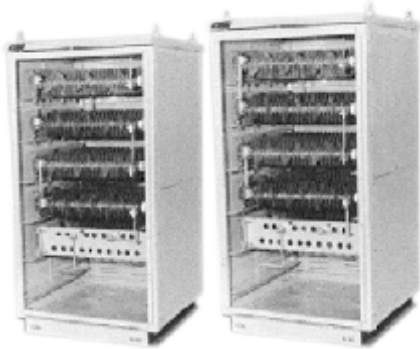
- Simplified reliable circuitary
- Inductive time limit acceleration on josting & lowering
- Better speed control on light or heavy loads when hoisting or lowering
- CRCA Sheet steel construction of the panel.
- 7 Tank pretreated panels for extremely long life

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 Chromium 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

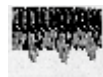
Type	Resistance Per Bank	Continuous Rating	LP
	Ohms	Amps	[₹]
WL10	0.1	225	12255
W12	0.125	200	10840
WL16	0.16	185	12520
WL20	0.2	150	12790
WL25	0.25	134	11285
WL32	0.32	118	10000
WL40	0.4	113	11560
WL50	0.5	100	9760
WL62	0.62	84	12610
WL80	0.8	75	11420
WL100	1	67	10620
WL125	1.25	64	11820
WL160	1.6	57	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



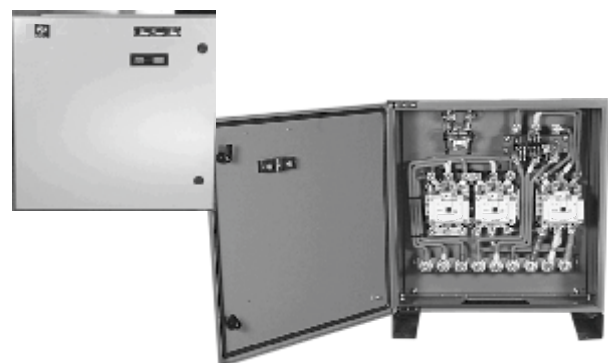
Individual grids are T.I.G. welded for consistent current path



Unique design using staggered grid pattern ensuring maximum air circulation



Terminal designed for 2 types of conductors ensuring flexibility

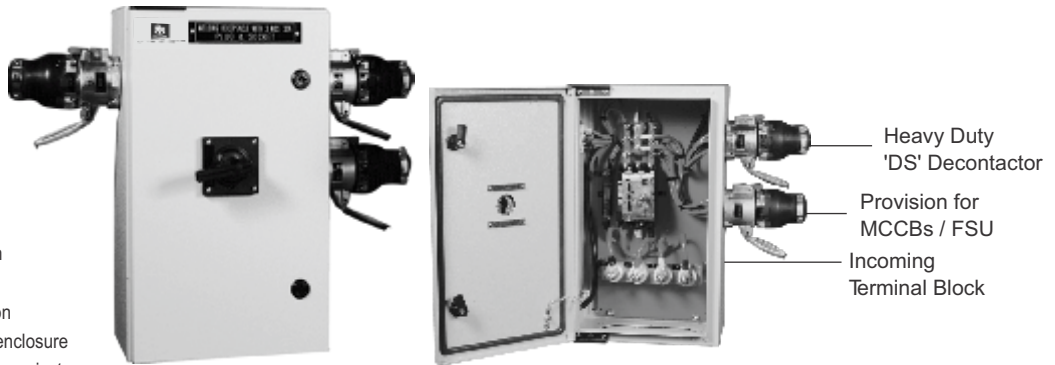


Power Receptacles..... BCH

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.

Power Control Products

Starters & Submersible
Pump Starters

Industrial Enclosures

Industrial Products

Wires & Cables

Motor Control Products

Customised Solution

Automation

a strong commitment to serve better always ...



BCH ELECTRIC LIMITED

Visit us at : www.bchindia.com

Corporate Office : 1105, New Delhi House, 27, Barakhamba Road, New Delhi-110 001 Tel. : 91-11-23316029/3610/6539/43673100 Fax : 91-11-23715247

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
Tel. : 040-66206263/27890306
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
Fax : 0731-2510012
E-mail : indore@bchindia.com

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

Jamshedpur
3rd Floor, Aastha Trade Centre,
'Q' Road, Bistupur,
Jamshedpur - 831 001
Tel. : 0657-2321097/2321481
E-mail : jamshedpur@bchindia.com

Kolkata
Block 1E, 216,
Acharya Jagadish Chandra Bose Road,
Kolkata - 700 017
Tel. : 033-22871728
E-mail : kolkata@bchindia.com

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-B/1, 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 Vyavasayik 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.