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Contactors

Power Contactors

- | | | | |
|---------------|--------------------|--------------------|---------------|
| 1 Pole | 2 Pole | 3 Pole | 4 Pole |
| • MR | • MNX | • MX Power | • MCX |
| | New • MU-2P | • MNX | |
| | | • MO | |
| | | • MDX (DC Control) | |
| | | • ML | |

Control Relays (Auxiliary Contactors)

- MX0 (Mini)
- MO0
- MNO

Capacitor Duty Contactors

- MO C

Definite Purpose Contactors

- MK1
- MU

3 Pole Power Contactors

3 Pole Power Contactors - Type MNX

Features

- Conforms to IS / IEC 60947-4-1 & IEC 60947-4-1
- Range from 9A – 650AAC-3
- Entire range is UL listed
- Click fit type construction up to 40A
- Coil on top design in 95A and above
- Spares available for entire range



MNX 22



MNX 40



MNX 80



MNX 140



MNX 250



MNX 650

Size	AC3 Rating (A)	AC1 Rating (A)	Type	Aux. Contacts	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Fr 1	9	25	MNX 9	1 NO	CS94106	760	10
				1 NC	CS94107	760	10
	12	30	MNX 12	1 NO	CS94108	860	10
				1 NC	CS94109	860	10
	18	30	MNX 18	1 NO	CS94100	1005	10
				1 NC	CS94101	1005	10
22	32	MNX 22	1 NO	CS94980	1160	10	
			1 NC	CS94981	1160	10	
Fr 2	25	45	MNX 25	#	CS94110	1245	10
	32	55	MNX 32	#	CS94111	2665	10
	40	55	MNX 40	#	CS94190	4050	10
Fr 3	45	85	MNX 45	#	CS97074	5295	1
	50	85	MNX 50	#	CS97075	5650	1
	70	100	MNX 70	#	CS97076	7775	1
	80	100	MNX 80	#	CS97077	9530	1
Fr 4	95	160	MNX 95	2 NO + 2 NC	CS94136	12090	1
	110	160	MNX 110	2 NO + 2 NC	CS94137	14500	1
	140	160	MNX 140	2 NO + 2 NC	CS94138	19135	1
Fr 5	185	250	MNX 185	2 NO + 2 NC	CS94139	24470	1
	225	300	MNX 225	2 NO + 2 NC	CS94140	26935	1
	250	300	MNX 250	2 NO + 2 NC	CS94141	28590	1
Fr 6	265	350	MNX 265	2 NO + 2 NC	CS94142	32830	1
	300	400	MNX 300	2 NO + 2 NC	CS90280	35110	1
	325	400	MNX 325	2 NO + 2 NC	CS94143	37680	1
	400	425	MNX 400	2 NO + 2 NC	CS94144	48215	1
	550	650	MNX 550	2 NO + 2 NC	CS94145	69145	1
	650	800	MNX 650	2 NO + 2 NC	CS96327	98545	1

3 Pole Power Contactors - Type MO

Features

- Conforms to IS / IEC 60947-4-1 & IEC 60947-4-1
- Range from 9A - 110AAC-3
- Compact dimensions saving panel space
- Lug less termination
- New** • Built in surge suppressor
- MO 9/12/18 contactor comes with in-built 1 NO+1 NC in 45mm width
- Standardized accessories throughout the range
- Low pick-up VA consumption
- RoHS compliant



MO 18



MO 45



MO 70



MO 110

Size	AC3 Rating (A)	AC1 Rating (A)	Type	Aux. Contacts	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Fr 0	9	30	MO 9	1 NO + 1 NC	CS94833	1185	10
	12	32	MO 12	1 NO + 1 NC	CS94834	1315	10
	18	32	MO 18	1 NO + 1 NC	CS94835	1495	10
Fr 1	25	45	MO 25	#	CS94567	1605	10
	32	50	MO 32	#	CS94568	3570	10
	40	50	MO 40	#	CS94569	4695	10
	45	50	MO 45	#	CS94570	5060	10
Fr 2	50	100	MO 50	#	CS94572	5610	1
	60	100	MO 60	#	CS94573	6485	1
	70	100	MO 70	#	CS94574	7635	1
Fr 3	80	125	MO 80	#	CS94576	9305	1
	95	125	MO 95	#	CS94577	11400	1
	110	140	MO 110	#	CS94578	13755	1

Notes:

- 1) # Add-on blocks can be ordered separately
- 2) For ordering MNX/MO add-on aux contact blocks, please refer page No. 8
- 3) For ordering MNX surge suppressor and MNX/MO MIL kit, please refer page No. 9
- 4) For ordering Suffix, please refer page No. 9, Table A
- 5) Standard coil voltage: MNX/MO - 110V, 220V, 240V and 415V, 50Hz.
- 6) For ordering spreader link kit for MO 25-45, Please refer page No.9

2 Pole Power Contactors

3 Pole Power Contactors

2 Pole Power Contactors - Type MNX

Features

- Conforms to IS / IEC 60947-4-1 & IEC 60947-4-1
- Range from 9A – 650A AC-3
- DC ratings available
- Click fit type construction up to 40A
- Coil on top design in 95A and above
- Common spares and accessories as MNX 3P

Size	AC3 Rating (A)	AC1 Rating (A)	Type	Aux. Contacts	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Fr 1	9	25	MNX 9-2P	1 NO	CS90232	575	10
	12	30	MNX 12-2P	1 NO	CS90234	620	10
	18	30	MNX 18-2P	1 NO	CS90236	740	10
	22	32	MNX 22-2P	1 NO	CS90238	850	10
Fr 2	25	45	MNX 25-2P	#	CS90240	935	10
	32	55	MNX 32-2P	#	CS90241	2040	10
	40	55	MNX 40-2P	#	CS90242	3130	10
Fr 3	45	85	MNX 45-2P	#	CS94060	3960	1
	50	85	MNX 50-2P	#	CS94061	4325	1
	70	100	MNX 70-2P	#	CS94062	5615	1
	80	100	MNX 80-2P	#	CS94063	6955	1
	95	160	MNX 95-2P	2 NO + 2 NC	CS94064	8790	1
Fr 4	110	160	MNX 110-2P	2 NO + 2 NC	CS94065	9865	1
	140	160	MNX 140-2P	2 NO + 2 NC	CS94066	12940	1
	185	250	MNX 185-2P	2 NO + 2 NC	CS94978	17010	1
Fr 5	225	300	MNX 225-2P	2 NO + 2 NC	CS94979	18395	1
	250	300	MNX 250-2P	2 NO + 2 NC	CS90301	20350	1
	265	350	MNX 265-2P	2 NO + 2 NC	CS94067	22985	1
Fr 6	300	400	MNX 300-2P	2 NO + 2 NC	CS90346	24745	1
	325	400	MNX 325-2P	2 NO + 2 NC	CS94068	25785	1
	400	425	MNX 400-2P	2 NO + 2 NC	CS94069	32090	1
	550	650	MNX 550-2P	2 NO + 2 NC	CS90243	50455	1
	650	800	MNX 650-2P	2 NO + 2 NC	CS90578	70480	1

3 Pole Power Contactors - Type MDX (DC Control)

Features

- Conforms to IS/IEC 60947-4-1 & IEC 60947-4-1
- Range from 9 - 110A AC-3
- Built in surge suppressor for MDX 9 - 38
- IP20 connection security for MDX 9 - 38



MDX 25



MDX 38



MDX 110

Size	AC3 Rating (A)	AC1 Rating (A)	Type	Aux. Contacts	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Fr 1	9	25	MDX 9	1 NO	CS96564	1450	1
	12	28	MDX 12	1 NO	CS96565	1560	1
	18	32	MDX 18	1 NO	CS96566	1730	1
	25	32	MDX 25	1 NO	CS96567	2525	1
Fr 2	32	56	MDX 32	#	CS96552	4900	1
	38	56	MDX 38	#	CS96553	5725	1
Fr 3	50	90	MDX 50	#	CS96554	8140	1
	65	110	MDX 65	#	CS96555	9310	1
	80	125	MDX 80	#	CS96556	11385	1
	95	125	MDX 95	#	CS96557	14485	1
	110	125	MDX 110	#	CS96558	15175	1

Notes:

- 1) # Add-on blocks can be ordered separately.
- 2) For ordering MDX/MNX add-on aux contact blocks, please refer page No. 8
- 3) For ordering MDX/MNX surge suppressor and MIL kit, please refer page No. 9
- 4) For ordering Suffix, please refer page No. 9, Table A
- 5) Standard coil voltage: MDX - 24V, 48V, 110V and 220V DC.
- 6) Standard coil voltage: MNX 2P - 240V, 50Hz
- 7) For DC power ratings refer catalogue

3 Pole Power Contactors

3 Pole Power Contactors - Type MX Mini

Features

- Conforms to IS / IEC 60947-4-1 & IEC 60947-4-1
- AC/DC Contactor in 45mm width
- Base as well as DIN Rail mounting facility
- Inbuilt Surge Suppressor in MX DC



MX 06

AC3 Rating (A)	AC1 Rating (A)	Type	Aux. Contact	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
For AC control (Std. Coil Voltage - 24, 110, 240, 415V, 50Hz)						
6A	20A	MX 06	1 NO	CS94012	690	10
6A	20A	MX 06	1 NC	CS94013	690	10
9A	20A	MX 09	1 NO	CS94014	725	10
9A	20A	MX 09	1 NC	CS94015	725	10
12A	20A	MX 12	1 NO	CS94016	800	10
12A	20A	MX 12	1 NC	CS94017	800	10
For DC control (Std. Coil Voltage - 24, 110, 220V)						
6A	20A	MX 06	1 NO	CS94021	1080	10
6A	20A	MX 06	1 NC	CS94022	1080	10
9A	20A	MX 09	1 NO	CS94023	1135	10
9A	20A	MX 09	1 NC	CS94024	1135	10
12A	20A	MX 12	1 NO	CS94025	1240	10
12A	20A	MX 12	1 NC	CS94026	1240	10

3 Pole Power Contactors - Type ML

Features

- Conforms to IS/IEC 60947-4-1 & IEC 60947-4-1
- Range from 25 - 300A AC-3
- Robust and suitable for hostile applications



ML 1.5



ML 3



ML 6



ML 12

Size	AC3 Rating (A)	AC1 Rating (A)	Type	Aux. Contacts	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Fr 1	25	25	ML 1.5	2 NO + 2 NC	SS91851	2410	1
	32	40	ML 2	2 NO + 2 NC	SS90701	4475	1
Fr 2	40	45	ML 3	2 NO + 2 NC	SS90721	6605	1
	70	100	ML 4	2 NO + 2 NC	SS90910	10805	1
Fr 3	110	125	ML 6	2 NO + 2 NC	SS90921	17055	1
	200	250	ML 10 *	2 NO + 2 NC	SS90935	37675	1
Fr 4	300	400	ML 12 *	2 NO + 2 NC	SS91010	40565	1

Notes:

- 1) For ordering ML/MX add-on aux contact blocks, please refer page No. 8
- 2) For ordering MX surge suppressor and MIL kit, please refer page No. 9
- 3) For Ordering Suffix, please refer page No. 9, Table A
- 4) Std. Coil Voltage: ML - 110V, 240V and 415V, 50Hz

* Available till stock lasts

4 Pole Power Contactors & AST System Components

4 Pole Power Contactors - Type MCX

Features

- Conforms to IS / IEC 60947-4-1 & IEC 60947-4-1
- Range from 16A – 800A AC-1
- Wide operating band up to 130A AC-1



MCX 22



MCX 34



MCX 47

Size	AC-1 Rating (A)	Type	Aux Contacts	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Fr 1	16	MCX 01	#	CS97009	1025	10
	25	MCX 02	#	CS97010	1115	10
	32	MCX 03	#	CS97011	1175	10
	40	MCX 04	#	CS97012	1830	10
Fr 2	50	MCX 11	#	CS97013	2280	1
	63	MCX 12	#	CS97014	4395	1
	80	MCX 13	#	CS97015	5960	1
Fr 3	80	MCX 21*	#	CS97016	6975	1
	100	MCX 22*	#	CS97017	7420	1
	130	MCX 23*	#	CS97018	9280	1
Fr 4	130	MCX 31	2 NO + 2 NC	CS97019	11615	1
	160	MCX 32	2 NO + 2 NC	CS97020	15260	1
	200	MCX 33	2 NO + 2 NC	CS97021	18240	1
	255	MCX 34	2 NO + 2 NC	CS97022	19355	1
Fr 5	325	MCX 41	2 NO + 2 NC	CS97023	37000	1
	360	MCX 42	2 NO + 2 NC	CS97024	40135	1
	400	MCX 43	2 NO + 2 NC	CS97025	47430	1
	500	MCX 44	2 NO + 2 NC	CS97026	59520	1
	600	MCX 45	2 NO + 2 NC	CS97027	71595	1
	700	MCX 46	2 NO + 2 NC	CS97028	84025	1
	800	MCX 47	2 NO + 2 NC	CS94291	108315	1

Auto Source Transfer Controller



AuXC-1000L



AuXC-1000

Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
AuXC-1000L	ST800240000	43770	1
AuXC-1000	ST802300000	52745	1

Can be used along with OMEGA, sine MCCBs, MCX contactors & Cline Motorized Changeover switches

Notes:

- 1) # Add on blocks can be ordered separately.
- 2) For ordering MCX add-on aux contact blocks, please refer page No. 8
- 3) For ordering MCX surge suppressor and MIL kit, please refer page No. 9
- 4) For Ordering Suffix, please refer page No. 9, Table A
- 5) Std. Coil Voltage: MCX - 220V, 240V and 415V 50Hz
- 6) *Ordering Suffix for MCX 21 / 22 / 23; F000 - 240V AC, R000 - 415V AC
- 7) Mounting of side add-on aux. contact block is not recommended for mechanically interlocked MCX 11/12/13 contactors

Control Relays (Auxiliary Contactors)

Type MX0



MX0 40E

Features

- Conforms to IS / IEC 60947-4-1 & IEC 60947-4-1
- Available with AC or DC control in 45mm width
- Inbuilt Surge Suppressor in MX DC

Rated Current	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
For AC control std. Coil Voltage - 24, 110, 240, 415V, 50Hz				
AC-15 4A at 415V	MX0 40E (4 NO)	CS94018	810	10
	MX0 31E (3 NO + 1 NC)	CS94019	810	10
	MX0 22E (2 NO + 2 NC)	CS94020	810	10
	MX0 13E (1 NO + 3 NC)	CS94041	810	10
	MX0 04E (4 NC)	CS94042	810	10
For DC control std. Coil Voltage - 24, 110, 220V				
AC-15 4A at 415V	MX0 40E (4 NO)	CS94027	1145	10
	MX0 31E (3 NO + 1 NC)	CS94028	1145	10
	MX0 22E (2 NO + 2 NC)	CS94029	1145	10
	MX0 13E (1 NO + 3 NC)	CS94043	1145	10
	MX0 04E (4 NC)	CS94044	1145	10

Notes:

- 1) For Ordering Suffix, please refer page No. 9, Table A
- 2) 5 NC & above combinations are not recommended for MX0 DC Control Contactors
- 3) 1 NO + 3 NC, 4 NC add on block combinations are not recommended for MX0 DC Control Contactors. For Example, In MX0 DC control Contactors, 4NO + 4NC combination can be achieved with 2NO + 2NC aux contactor and 2NO + 2NC add on block and not with 4NO standalone contactor and 4NC add on block

AC Control Contactor - MO0



MO0 AC

Features

- MO0 in 5 pole design in 45mm width
- Same add-on aux. contact block in MO0 as of MO power contactors
- Built in surge suppressor

Rated Current	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
For AC control std. Coil Voltage - 24, 110, 240, 415V, 50Hz				
AC-15 4A at 415V	MO0 41E (4 NO + 1 NC)	CS94825	985	10
	MO0 32E (3 NO + 2 NC)	CS94826	985	10
	MO0 23E (2 NO + 3 NC)	CS94827	985	10
	MO0 14E (1 NO + 4 NC)	CS94828	985	10

Note: 7NC & above combination is not recommended for MO0

DC Control Contactor - MN0



MN0 DC 22E

Rated Current	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
For DC control std. Coil Voltage - 24, 110, 220V				
AC-15 4A at 415V	MN0 40E (4 NO)	SS94665	1580	10
	MN0 31E (3 NO + 1 NC)	SS94666	1580	10
	MN0 22E (2 NO + 2 NC)	SS94667	1580	10
	MN0 13E (1 NO + 3 NC)	SS94668	1580	10
	MN0 04E (4 NC)	SS94669	1580	10

Capacitor Duty Contactors

Capacitor Duty Contactors - Type MO C



MO C25



MO C50



MO C80

Size	kVAr Rating @ 415V, 3Ph, 50Hz	Type	Built-in Auxiliary Contacts	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Fr 1	5	MO C5	1NO	CS96127	1470	1
			1NC	CS96128	1470	1
	8.5	MO C8.5	1NO	CS96320	1790	1
			1NC	CS96337	1790	1
	12.5	MO C12.5	1NO	CS96321	2075	1
			1NC	CS96338	2075	1
	15	MO C15	1NO	CS90019	2925	1
			1NC	CS90020	2925	1
	20	MO C20	1NO	CS90021	3345	1
			1NC	CS90022	3345	1
	25	MO C25	1NO	CS96322	3795	1
			1NC	CS96339	3795	1
Fr 2	33.5	MO C33.5	1NO	CS96323	7225	1
			1NC	CS96340	7225	1
	50	MO C50	1NO	CS96324	10140	1
			1NC	CS96341	10140	1
Fr 3	70	MO C70	1NO	CS96325	12670	1
			1NC	CS96342	12670	1
	80	MO C80	1NO	CS96326	14125	1
			1NC	CS96343	14125	1

Features

- MO C Range available from 5 - 80 kVAr
- Delatching auxiliary contacts
- Encapsulated resistor assembly
- Separate termination for damping resistors
- Lug less termination
- Built in surge suppressor
- Low pick-up VA
- Standard accessories throughout the range in line with MO contactor
- **RoHS** compliant

**For Power Quality Solutions,
please refer page No. 59-61**

Note :

- 1) For ordering add-on aux. contact block, please refer page No. 8
- 2) For ordering suffix, please refer page No. 9, Table A
- 3) For ordering spare coils, please refer page No. 10
- 4) For ordering spreader link kit of MO C 5-25, please refer page No. 9
- 5) Standard coil voltage : 240V, 50Hz

Definite Purpose Contactors

Single Pole Contactors - Type MR

Features

- Wide and chatter free operating band
- High AC-1 rating for single phase applications



MR 11W
(Wide band coil)



MR 13



MR 11NW
SPN (Wide band coil)

AC3 Rating (A)	Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
25A	MR 11W	CS94176	675	10
25A	MR 11NW	CS94178	725	10
40A	MR 13	CS94992	740	40

Ordering Suffix BOOO - 240V, 50Hz

Type MK1



MK 1

Type	AC3 Rating (A)	Motor Output 3 Phase 415V, 50Hz		Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
		HP	KW			
MK 1	15A	7.5	5.5	SS95200	1050	10

For Overload Relays type MK1, please refer page No. 13
For Ordering Suffix, please refer page No. 9, Table A
(For 360V wide band, Ordering Suffix - SOOO)

Type MU



MU 1



MU 2

AC3 Rating (A)	Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
16A	MU 1	CS94007	1655	10
20A	MU1 H	CS90623	1805	10
25A	MU 2	CS94008	2245	10
32A	MU 3	CS90609	2700	10

For Overload Relays type MU refer page No.13
For Ordering Suffix please refer page No. 9, Table A

Two Pole Contactors - Type MU-2P



MU 16-2P

Features

- Wide band molded coil
- Neutral isolation

AC3 Rating (A)	Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
16A	MU16-2P	CS90117	640	10
25A	MU25-2P	CS90118	830	10
40A	MU40-2P	CS90119	1080	10

Note: 1) Coil voltages available for MU-2P are 220V, 240V, wide band coil 160-220V
2) Ordering suffix for wide band coil of MU-2P is NOOO

Accessories - Add-on Auxiliary Contact Blocks

	MNX 9-80	MNX 95-650	MO 9-110	ML	MX	MDX 9-110	MCX 01-23	MCX 31-47	MX0	MNO	MO0	MO C	MR	MU
Front add-on possible	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No
Side add-on possible	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No	Yes

Note: 1) Mounting of side add-on aux. contact block is not recommended for mechanically interlocked MCX 11/12/13 contactors
2) Accessories are common for MNX 2P & MNX 3P contactors

Front Mounting Add-on aux. Contact Block



**MNX / MCX
Front Add-on
aux. contact Block**



**MO / MO0
Front Add-on
aux. contact Block**



**MDX Front
Add-on
aux. contact Block**



**MX Front
Add-on
aux. contact Block**



**MU-2P
Front Add-on
aux. contact Block**



**MNO Front
Add-on
aux. contact Block**

Front Mounting	Suitable for											
	MNX 9-80 / MCX 01-23	M.R.P. (₹) Per Unit	MO 9-110 / MO0	M.R.P. (₹) Per Unit	MDX 9-110	M.R.P. (₹) Per Unit	MX 0/6/9/12	M.R.P. (₹) Per Unit	MU-2P	M.R.P. (₹) Per Unit	MNO DC	M.R.P. (₹) Per Unit
4 NO	CS94112	450	CS94594	450	-	-	CS94033	390	-	-	SS94083	410
3 NO + 1 NC	CS94113	450	CS94595	450	-	-	CS94034	390	-	-	SS94084	410
2 NO + 2 NC	CS94114	450	CS94596	450	CS96569	525	CS94035	390	-	-	SS94085	410
1 NO + 3 NC	CS94115	450	CS94597	450	CS90906	525	CS94036	390	-	-	SS94086	410
4 NC	CS94116	450	CS94598	450	-	-	CS94037	390	-	-	SS94087	410
2 NO	CS94117	300	CS94591	300	-	-	CS94030	250	CS90692	300	SS94080	280
1 NO + 1 NC	CS94118	300	CS94592	300	CS96568	305	CS94031	250	CS90693	300	SS94081	280
2 NC	CS94119	300	CS94593	300	-	-	CS94032	250	CS90694	300	SS94082	280
1 NO	CS94120	150	CS94585	150	CS96586	170	-	-	CS90695	150	SS94715	140
1 NC	CS94121	150	CS94586	150	-	-	-	-	CS90696	150	SS94716	140

Side Mounting Add-on aux. Contact Block



**MNX/MCX
Side Add-on
aux. contact Block**



**MO/MO C
Left Add-on
aux. contact Block**



**MDX
Side Add-on
aux. contact Block**

Side Mounting	Aux Contact	Suitable for											
		MNX 9-40/ MCX 01-04	M.R.P. (₹) Per Unit	MCX 11-13	M.R.P. (₹) Per Unit	MNX 45-80/ MCX 21-23	M.R.P. (₹) Per Unit	MNX 95-650/ MCX 31-47	M.R.P. (₹) Per Unit	MO 9-110/ MO C 5-80	M.R.P. (₹) Per Unit	MDX 9-110	M.R.P. (₹) Per Unit
First left	1 NO + 1 NC	CS94220	450	CS94201	485	CS94201	485	CS94205	550	CS94580	450	ST94985	630
First Right	1 NO + 1 NC	CS94221	450	CS94202	485	CS94202	485	CS94206	550	CS94581	450		
Second Left	1 NO + 1 NC	-	-	-	-	CS94203	485	CS94207	550	CS94582	450	-	-
Second right	1 NO + 1 NC	-	-	-	-	CS94204	485	CS94208	550	CS94583	450	-	-

Note: Mounting of side add-on aux. contact block is not recommended for mechanically interlocked MCX 11/12/13 contactors

Side Mounting Add-on aux. Contact Block - ML Add-on aux. Contact Block - MR & MU



**ML Add-on
aux. contact Block**



MR 1NO

Side Mounting	Aux Contact	Suitable for			
		ML 4/6	M.R.P. (₹) Per Unit	ML 10/12	M.R.P. (₹) Per Unit
Left	1 NO + 1 NC	SS91494	560	-	-
Right	1 NO + 1 NC	-	-	SS91474	590

Description	For Contactor	Contacts Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Top add-on single pole	MR	1 NO	CS94179	180	10
Side mounted auxiliary contact block	MU 1/MU 2	1 NO + 1 NC	SS94072	155	10
		1NC	SS94074	125	10

Note: Ordering Suffix for Add-on aux. contact blocks : OOOO

Accessories - Surge Suppressors

For MX, MNX, MDX & MCX



For Contactor	Cat. No.	M.R.P. (₹) Per Unit
MX 06 to MX 12 / MX 0 AC	CS94039*	385
MNX 9 - 40 / MCX 01 - 04	CS94166*	390
MNX 45 - 80 / MCX 11 - 23	CS94163*	425
MNX 95 - 250 / MCX 31 - 34	CS94164#	1405
MNX 265 - 400 / MCX 41 - 44	CS94165#	1900
MDX 50 - 110	CS96571**	360

Ordering Suffix * 110-240V: B000, 415V: D000 ** : 0000
110V: A000, 220-240V: B000, 360-525V: D000
- MX DC has in-built surge suppressor

For MN0



Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
MN0 DC	SS94781	425	1

Ordering Suffix: 24-48VDC : 5000
110-220VDC : 2000

Accessories - Mechanical Interlock Kits & Spreader Link Kit

Mechanical Interlock Kit for MX, MO, MDX, MNX & MCX



For Contactor	Cat. No.	M.R.P. (₹) Per Unit
MX 06 to MX 12 / MX 0	CS94038	375
MO 9 - 110*	CS94584	495
MDX 9 - 38	CS96572	400
MDX 50 - 110	CS96573	1225
MNX 9 - 40	CS94126	400
MNX 45 - 80	CS94197	1810
MNX 95 - 140	CS94198	2815
MNX 185 - 250	CS94199	3210
MNX 265 - 650	CS94200	3640
MCX 01 - 04	CS94126	400
MCX 11 - 13	ST50540	755
MCX 21 - 23	CS93095	2735
MCX 31 - 34	SS94992	2825
MCX 41 - 47	CS94301	4665

Note 1) Ordering Suffix for Mechanical Interlock Kits : 0000
2) * MO MIL Kit contains inbuilt 2 NC Contacts
3) Mounting of side add-on aux. contact block is not recommended for mechanically interlocked MCX 11/12/13 contactors
4) MIL kit for MNX 45-80 comes with 2 left & 2 right side add-on aux. contact blocks i.e. 4 NO + 4 NC
5) MIL kit for MCX 21/22/23 comes with 2 left & 2 right side add-on aux. contact blocks i.e. 4 NO + 4 NC

MO Spreader Link Kit



For Contactor	Cat. No.	M.R.P. (₹) Per Unit
MO 25-45 / MO C 5-25	CS942740000	365

Note: 1) Spreader Link Kit consists of six terminals
2) Use above Spreader Link when using MO 45/MO C 25 with 16 sq mm cable

Ordering Suffix for Standard Coil Voltages

Table A

Ordering Suffix for Standard Coil Voltages			
AC Control		DC Control*	
Voltage (V)	Suffix	Voltage (V)	Suffix
24	G000	24	4000
110	A000	48	5000
220	K000	110	1000
240	B000	220	2000
415	D000		
440	P000		

Note: 1) * For MX DC, MDX, MX0 DC & MN0 DC
2) For other coil voltages please contact nearest branch office

Spare Contact Kit and Spare Coil



Type	Spare Contact kit		Spare Coil	
	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
MU 1	CS94010	595	CS94009	450
MU 2	CS94011	1055		
ML 1.5	SS95305	1415	SS90873	590
ML 2	SS95307	2215	SS90545	960
ML 3	SS95309	3765		
ML 4	SS95311	5875	SS91258	1840
ML 6	SS95313	10240		
ML 10	SS95315	20090	SS91011	4025
ML 12	SS95317	24900		
MR	-	-	CS94102	370
New MU16-2P	CS90217	200	CS90793	240
New MU25-2P	CS90218	260		
New MU40-2P	CS90219	380		
MO 0 AC	-	-	CS94841	440
MN 0 AC	-	-	SS94191	470
MN 0 DC	-	-	SS94651	865

Note:
 1) Coil voltages available for MU-2P are 220V, 240V, wide band coil 160-220V
 2) Ordering suffix for wide band coil of MU-2P is NOOO

MO C Spare Coils		
Type	Cat. No.	M.R.P. (₹) Per Unit
MO C5 - 25	CS96317	440
MO C33.5 - 50	CS96318	1390
MO C70 - 80	CS96319	2205

Front housing & Moving bridge kit and Combination coil with timer for ML contactor



Front housing and moving bridge kit		
Type	Cat. No.	M.R.P. (₹) Per Unit
ML 1.5	ST28734	425
ML 2/ ML 3	ST23866	585
ML 4/ ML 6	ST28735	1060
Combination coil with timer		
Type	Cat. No.	M.R.P. (₹) Per Unit
ML 2	SS90650	2005

Note :
 1) Ordering Suffix for Spare Contact kit - OOOO
 2) For Spare Coil Ordering Suffix refer page No. 9, Table A

Spare Contact Kit and Spare Coil



Type	Spare Contact kit		Spare Coil			
	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit		
MO 9 (1 NO + 1 NC)	CS94843	490	CS94841	440		
MO 12 (1 NO + 1 NC)	CS94844	635				
MO 18 (1 NO + 1 NC)	CS94845	695				
MO 9	CS96380	490	CS96317	440		
MO 12	CS96381	635				
MO 18	CS96382	695				
MO 25	CS96383	795				
MO 32	CS96384	1585				
MO 40	CS96385	2365				
MO 45	CS96386	2745				
MO 50	CS96387	2805				
MO 60	CS96388	3315			CS96318	1390
MO 70	CS96389	3920				
MO 80	CS96390	4690	CS96319	2205		
MO 95	CS96391	5730				
MO 110	CS96392	6920				
MNX 9	CS94123	490	CS94105	440		
MNX 12	CS94124	635				
MNX 18	CS94125	695				
MNX 22	CS94269	715				
MNX 25	CS94127	795				
MNX 32	CS94128	1485				
MNX 40	CS94147	2365				
MNX 45	CS94149	2745				
MNX 50	CS94150	2805				
MNX 70	CS94151	4040			CS94192	1390
MNX 80	CS94152	5135	CS94196	2205		
MNX 95	CS94153	5950				
MNX 110	CS94154	7355				
MNX 140	CS94155	10195	CS94194	4010		
MNX 185	CS94156	12215				
MNX 225	CS94157	13870				
MNX 250	CS90310	15160				
MNX 265	CS94159	16880				
MNX 300	CS90283	18590				
MNX 325	CS94160	20495				
MNX 400	CS94161	26855				
MNX 550	CS94162	35410				
MNX 650	CS96336	47455			CS94193	14675
MCX 01-04	-	-	CS94105	440		
MCX 11	CS94077	1590	CS94009	450		
MCX 12	CS94078	2615				
MCX 13	CS90307	3655				
MCX 21	CS94330	3855	ST91291*	1390		
MCX 22	CS94331	4440				
MCX 23	CS90078	5555	CS94196	2205		
MCX 31	CS94081	6440				
MCX 32	CS94082	8360				
MCX 33	CS94083	10510				
MCX 34	CS94084	11505				
MCX 41	CS94295	20075				
MCX 42	CS94296	25475				
MCX 43	CS94297	28575				
MCX 44	CS94298	35005				
MCX 45	CS94299	37735				
MCX 46	CS94300	43420	CS94193	14675		
MCX 47	CS90308	55975				

* Ordering Suffix for 240V AC - FOOO, 415V AC - ROOO

AuXC-1000 - The Auto Source Transfer Solution from L&T



AuXC-1000 & AuXC-1000L

Technology that Spells Reliability

AuXC - 1000 & AuXC - 1000L from L&T. It shows you the difference that Auto Source Transfer controller can make.

L&T's ASTS Controller works on a more advanced level of technology compared to conventional changeover systems. And what makes it different makes it better. You get a greater level of reliability, and the assurance that critical changeovers work each time, every time.

Make AuXC - 1000 the nodal point for changeover using L&T's ACBs, MCCBs, Changeover switches and Contactors...and experience the reliability L&T can give.

Customer Interaction Center (CIC)

BSNL / MTNL (toll free): 1800 233 5858 Reliance (toll free): 1800 200 5858

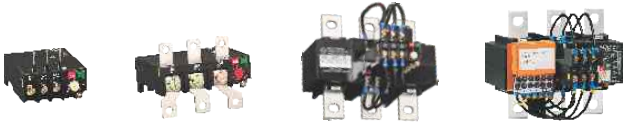
Tel: 022 6774 5858 Fax: 022 6774 5859 Email: cic@Lntebg.com Web: www.Lntebg.com

Thermal Overload Relays

Type MN

Features

- Available in 3 frame sizes from 0.2-570 A
- Ambient temperature compensated up to 55°C
- Built-in Single Phasing protection
- Manual and auto reset mode



MN 2

MN 5

MN 12

MN 12L

Type of Mounting (Operation)	Relay Range (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)	
MN 2					
(Directly Operated)	0.2 - 0.33	SS941410OEO	1170	10	
	0.3 - 0.5	SS941410OGO	1170	10	
	0.45 - 0.75	SS941410OJO	1170	10	
	0.6 - 1	SS941410OKO	1170	10	
	0.9 - 1.5	SS941410OMO	1170	10	
	1.4 - 2.3	SS941410OPO	1170	10	
	2 - 3.3	SS941410OQO	1180	10	
	3 - 5	SS941410OSO	1180	10	
	4.5 - 7.5	SS941410OUO	1180	10	
	6 - 10	SS941420OVO	1180	10	
Direct mounting on MNX 9 - 40	9 - 15	SS941420OBO	1215	10	
	14 - 23	SS941440ODO	1335	10	
	20 - 33	SS941450OEO	1965	10	
	24 - 40	SS941450OFO	2040	10	
	MN 5				
	(Directly Operated)	9 - 15	SS941350OBO	2280	10
14 - 23		SS941350ODO	2280	10	
20 - 33		SS941360OEO	2300	10	
30 - 50		SS941360OGO	2530	10	
45 - 75		SS941370OJO	3540	10	
Direct Mounting on MNX 45 - 80	66 - 110	SS941370OKO	3775	10	
	MN 12				
(CT Operated)	28 - 46.5	SB942110OGO	6405	1	
	42 - 69	SS941380OHO	6405	1	
	60 - 100	SS941380OKO	6405	1	
	90 - 150	SS941380OMO	6405	1	
	135 - 225	SS941380OPO	7060	1	
	180 - 300	SS941390OQO	7945	1	
Separate Mounting	270 - 450	SS941390ORO	9085	1	
	MN 12L #				
	(CT Operated)	42 - 69	SS941270OHO	10610	1
		60 - 100	SS941270OKO	10610	1
90 - 150		SS941270OMO	10610	1	
135 - 225		SS941270OPO	10610	1	
180 - 300		SS941270OQO	10610	1	
Separate Mounting	340 - 570	SS941270OSO	10610	1	

For motors with longer starting time (Trip class 30)

Type RTO

Features

- Ambient temperature compensated upto 55°C
- Built-in Single Phasing protection
- Manual and auto reset mode
- Front access to START and STOP/RESET buttons
- Sealable in OFF condition



RTO 1

RTO 2

RTO 3

Type of Mounting (Direct)	Relay Range (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
RTO - 1				
MO 9 - 45	0.23 - 0.41	CS963550OFO	1530	10
	0.31 - 0.55	CS963550OGO	1530	10
	0.55 - 0.85	CS963550OJO	1530	10
	0.78 - 1.2	CS963550OLO	1530	10
	1.2 - 2.0	CS963550ONO	1530	10
	1.9 - 2.8	CS963550OPO	1530	10
	2.4 - 3.6	CS963550OQO	1540	10
	3.5 - 5.2	CS963550OSO	1540	10
	4.6 - 6.7	CS963550OTO	1540	10
	6.7 - 9.7	CS963550OVO	1540	10
	8.5 - 12.5	CS963550OAO	1590	10
	12.5 - 18.5	CS963560OCO	1745	10
	17 - 25.5	CS963560ODO	1745	10
	25 - 37	CS963560OEO	2665	10
	35 - 45	CS963560OGO	2665	10
RTO - 2				
MO 50 - 70	10.5 - 16	CS963660OBO	2980	1
	15 - 21	CS963660OCO	2980	1
	20 - 31	CS963660OEO	3005	1
	30 - 43	CS963660OFO	3305	1
	40 - 57	CS963660OSO	4625	1
MO 80 - 110	50 - 75	CS963670OJO	5090	1
	RTO - 3			
MO 80 - 110	23-30	CS908730OEO	5165	1
	29-38	CS963030OQO	5165	1
	37-49	CS963040OGO	5535	1
	47-62	CS963120OTO	5535	1
	60-78	CS963130OJO	6395	1
	75 - 110	CS963140OKO	7400	1



Modular Load Feeder

RTO Relays can be directly mounted onto MO contactors. This along with the standardized accessories of MO provides you a complete modular feeder solution.

Mini Motor Protection Relay



Features

- Selectable trip class 10A, 10, 20 and 30.
- In-built CT (1A - 88A)
- Test facility
- Protection
 - Thermal Overload
 - Single phasing
 - Current unbalance
 - Phase sequence reversal
 - Locked Rotor
 - Earth Fault
 - Under current

Note : For comprehensive Relays portfolio kindly refer page No. 64

Model	Thermal O/L Range	Aux. Supply: 240 V AC		Aux. Supply: 110 V AC	
		Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
MPR300	1-2.75	MPR300BE010	5700	MPR300BB010	5700
	2-5.5	MPR301BE020	5700	MPR301BB020	5700
	4-11	MPR302BE040	6100	MPR302BB040	6100
	8-22	MPR303BE080	6100	MPR303BB080	6100
	16-44	MPR304BE160	6500	MPR304BB160	6500
	32-88	MPR305BE320	6500	MPR305BB320	6500

Thermal Overload Relays

Type MX-R0



MX - R0

Features

- Direct mounting on MX contactor
- Built-in single phasing protection
- Front access to START and STOP/RESET buttons

Type of Mounting (Operation)	Relay Range (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
(Directly Operated)	0.1 - 0.16	ST94074O0BO	890	10
	0.16 - 0.24	ST94074O0DO	890	10
	0.22 - 0.33	ST94074O0EO	890	10
	0.3 - 0.45	ST94074O0GO	890	10
	0.45 - 0.67	ST94074O0HO	890	10
	0.67 - 1.0	ST94074O0KO	890	10
Direct Mounting on MX Contactors	1.0 - 1.5	ST94074O0MO	890	10
	1.4 - 2.1	ST94074O0NO	890	10
	1.8 - 2.7	ST94074O0PO	890	10
	2.4 - 3.6	ST94074O0QO	890	10
	3.5 - 5	ST94074O0SO	890	10
	4.0 - 6.0	ST94074O0TO	890	10
	5.5 - 8.5	ST94074O0UO	890	10
	8.5 - 12.5	ST94074O0VO	890	10

Type ML



ML

Type of Mounting (Operation)	Relay Range (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
(Directly Operated)	ML 1			
	0.15 - 0.25	SS91858O0DO	1695	10
	0.25 - 0.4	SS91858O0FO	1695	10
	0.4 - 0.65	SS91858O0HO	1695	10
	0.6 - 1	SS91858O0KO	1695	10
	1 - 1.6	SS91858O0MO	1695	10
	1.5 - 2.5	SS91858O0PO	1695	10
	2.5 - 4	SS91858O0RO	1695	10
	4 - 6.5	SS91858O0TO	1695	10
	6 - 10	SS91858O0VO	1695	10
(Directly Operated)	ML 2 / ML 3			
	9 - 14	SS91859O0AO	2505	2
	13 - 21	SS91859O0CO	2505	2
	20 - 32	SS91859O0EO	2505	2
	28 - 42	SS91859O0FO	2505	2
Direct Mounting on ML 1.5 Contactors				

New Type MU-2P (2 Pole)



MU-2P

Type	Cat. No.	M.R.P. (₹) Per Unit
1 - 1.6A	CS90207O0MO	500
1.5 - 2.5A	CS90207O0PO	500
2.5 - 4A	CS90207O0RO	500
4 - 6.5A	CS90207O0TO	500
6 - 10A	CS90207O0VO	500
9 - 14A	CS90207O0AO	500
11 - 18A	CS90207O0CO	575
13 - 22A	CS90207O0DO	575
20 - 32A	CS90207O0EO	725
26 - 40A	CS90207O0FO	725

Type MU



MU1



MU2

Type of Mounting (Operation)	Relay Range (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
(Directly Operated)	MU1			
	4 - 6.5	SS96557O0TO	1025	1
Direct Mounting on MU Contactor	6 - 10	SS96557O0VO	1025	1
	MU2			
	9 - 14	SS95979O0AO	1120	1
	13 - 21	SS95979O0CO	1190	1
	15 - 25	SS95979O0DO	1295	1
	20 - 32	SS95979O0EO	1445	1
	24 - 38	SS95979O0GO	1545	1
28 - 42	SS95979O0FO	1710	1	

Type MK1



MK1

Type of Mounting (Operation)	Relay Range (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
(Directly Operated)	0.6 - 1	SS90035O0KO	765	10
	1 - 1.6	SS90035O0MO	765	10
	1.5 - 2.5	SS90035O0PO	765	10
	2.5 - 4	SS90035O0RO	765	10
Direct Mounting on MK1 Contactors	4 - 6.5	SS90035O0TO	765	10
	6 - 10	SS90035O0VO	765	10
	9 - 14	SS90035O0AO	765	10
	11 - 18	SS90036O0CO	815	10
	13 - 22	SS91888O0DO	860	10

Accessories for Thermal Overload Relays

Accessories for Thermal Overload Relays



Relay Mounting Kit Kit for Mounting MN5 Relay Din Rail Mounting Kit MN2 Relay

Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Push button unit for MK 1 / ML Relays	SS90004	90	1
Push button extn. unit for MN 2 Relays	SS94968	45	100
Kit for Mounting MN 2 Relay on ML 1.5 contactor	SS94701	160	50
Kit for Mounting MN 2 Relay separately (Direct Mounting Type)	SS94700	160	50
Kit for Mounting MN 5 Relay on MNX 95 / 110 / 140 contactor	SS94638	250	20
Kit for Mounting MN 5 Relay on ML 2 / ML 3 contactor	SS94151	175	20
Kit for Mounting MN5 Relay on ML 4 / ML 6 contactor	SS94152	230	20
DIN Rail Mounting Kit Relay on MN 2 Relay	SS91887	125	50

Relay Reset Cord for MN2 Relay



Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
MN2 Relay reset cord - 400mm	SB942070000	565	1
MN2 Relay reset cord - 650mm	SB942080000	595	1
MN2 Relay reset cord - 900mm	SB942090000	650	1
MN2 Relay reset cord - 1200mm	SB942100000	730	1

Separate Mounting Kit for RTO Relay



Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
RTO-1 Relay Separate Mounting Kit	CS963350000	220	1
RTO-2 Relay Separate Mounting Kit	CS963060000	500	1
RTO-3 Relay Separate Mounting Kit	CS963070000	750	1

New Relay Reset Cord for RTO Relay

Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
RTO Relay reset cord - 400mm	CS909410000	565	1
RTO Relay reset cord - 650mm	CS909420000	595	1
RTO Relay reset cord - 900mm	CS909430000	650	1
RTO Relay reset cord - 1200mm	CS909440000	730	1

Control Accessories

Actuator Units Type TK3*

6A, 415V, 50 Hz (Suitable for 30.5mm Cutout Dia.)

Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Selector actuator - 2 position (black only)	SS91516	485	30
Selector actuator - 3 position (black only)	SS91517	485	30
Mushroom push button actuator (red, green or black)	SS91518	295	30
Shrouded push button actuator (red, black, green, yellow, blue or grey)	SS91519	215	30
Unshrouded push button actuator (red, black, green, yellow, blue or grey)	SS91520	215	30
Key actuator - lockable in 1 position	SS91522 #	660	30
Key actuator - lockable in both positions	SS91521 #	660	30
Element with 2 fixing screws	SS90375 #	240	100

Push Button Pendants*

6A, 415V, 50 Hz

Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
With 2 push buttons	SS90502	1130	30
With 4 push buttons	SS90504	2095	30
With 6 push buttons	SS90506	2815	30

Ordering Suffix is OOOO

Ordering Suffix for Colour	
Black	OAOO
Red	OBOO
Green	OCOO
Yellow	ODOO
Blue	OEOO
Grey	OFOO
#	OOOO

* Available till stock lasts

To order Control Accessories, please specify Type, Cat no. & Ordering Suffix for color



Complete your panel with our panel accessories



**Rotary Switches &
Cable Ducts**



**Timing Devices &
Supply Monitors**



**Modular Remote
Control Units**



**Digital Panel
Meters**

For Cam operated Rotary switches, Cable ducts, Load break switches, Timers, Time switches, Supply monitors, Ø22.5 mm range of Modular remote control & Indicating units please refer Panel Accessories Price List.

Customer Interaction Center (CIC)

BSNL / MTNL (toll free): 1800 233 5858 Reliance (toll free): 1800 200 5858

Tel: 022 6774 5858 Fax: 022 6774 5859 Email: cic@Lntebg.com Web: www.Lntebg.com

Motor Protection Circuit Breakers

Rocker Type

- MOG-S1: upto 32A
- Short circuit + Overload protection
- Icu=100kA upto 10A, Icu=50kA for 13A & Icu=25kA for 16-32A

Rotary Type

- MOG-H1M: upto 32A
- MOG-H2M: 32A-63A
- Short circuit protection
- Icu=100kA upto 13A & Icu=50kA from 16A-63A

Rotary Type

- MOG-H1: upto 32A
- MOG-H2: 32A-63A
- Short circuit + Overload protection
- Icu=100kA upto 13A & Icu=50kA from 16A-63A

✓ Short circuit protection

✓ Over current protection

Circuit Breaker


✓ Overload protection

✓ Phase loss protection

✓ Wide range of current adjustment dial

✓ Ambient temperature compensation

Thermal Overload Relay



MPCB

✓ Compact

✓ Wide Range

✓ High breaking capacity

✓ Short circuit protective coordination

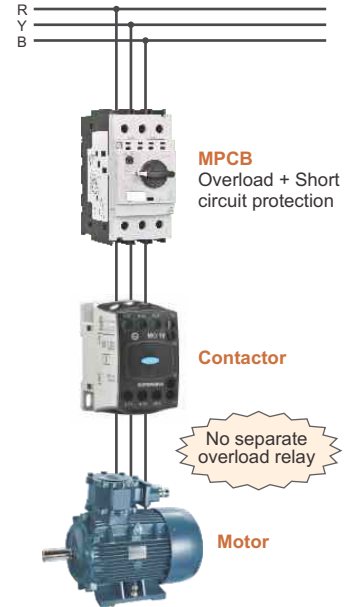
✓ Reduction in wiring work

✓ High switching durability

✓ Padlocking feature available even without external operating handle

✓ Stand alone motor protection

✓ Common accessories



Type MOG-S1 (Rocker Type)

(ROM cannot be fitted with MOG - S1)
With short circuit & overload protection



Rating (A)	Recommended Motor Rating at 415V, 3-Ph, 50Hz (KW)	Thermal Release range (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
0.16	-	0.1 - 0.16	ST418890000	2340	1
0.25	0.06	0.16 - 0.25	ST418900000	2340	1
0.40	0.09	0.25 - 0.40	ST418910000	2340	1
0.63	0.12	0.40 - 0.63	ST418920000	2445	1
1.00	0.25	0.63 - 1.00	ST418930000	2445	1
1.60	0.55	1.00 - 1.60	ST418940000	2505	1
2.50	0.75	1.60 - 2.50	ST418950000	2505	1
4.00	1.50	2.50 - 4.00	ST418960000	2570	1
6.30	2.20	4.00 - 6.30	ST418970000	2585	1
10.00	4.00	6.30 - 10.00	ST418980000	2585	1
13.00	5.40	9.00 - 13.00	ST418990000	2855	1
New 16.00	7.50	11.00 - 16.00	ST419000000	3120	1
New 20.00	9.00	14.00 - 20.00	ST419010000	3410	1
New 25.00	12.50	19.00 - 25.00	ST419020000	3660	1
New 32.00	15.00	24.00 - 32.00	ST419030000	5860	1

Breaking capacity: Icu = 100kA upto 10A, Icu = 50kA for 13A & Icu = 25kA for 16-32A

Type MOG-H1M (Rotary Type) - Frame 1

With short circuit protection only



Rating (A)	Recommended Motor Rating at 415V, 3-Ph, 50Hz (KW)	Short Circuit Release (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
0.16	-	2.1	ST419230000	2190	1
0.25	0.06	3.3	ST419240000	2190	1
0.40	0.09	5.2	ST419250000	2190	1
0.63	0.12	8.2	ST419260000	2940	1
1.00	0.25	13	ST419270000	2940	1
1.60	0.55	20.8	ST419280000	2940	1
2.50	0.75	32.5	ST419290000	2940	1
4.00	1.50	52	ST419300000	3100	1
6.30	2.20	81.9	ST419310000	3100	1
10.00	4.00	130	ST419320000	3205	1
13.00	5.40	169	ST419330000	3330	1
16.00	7.50	208	ST419340000	3385	1
20.00	9.00	260	ST419350000	3625	1
25.00	12.50	325	ST419360000	4385	1
32.00	15.00	416	ST419370000	6015	1

Breaking capacity: Icu = 100kA upto 13A & Icu = 50kA from 16A - 32A

Motor Protection Circuit Breakers

Type MOG-H1 (Rotary Type) - Frame 1



With short circuit & overload protection

Rating (A)	Recommended Motor Rating at 415V, 3-Ph, 50Hz (KW)	Thermal Release range (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
0.16	-	0.1 - 0.16	ST419040000	2750	1
0.25	0.06	0.16 - 0.25	ST419050000	2885	1
0.40	0.09	0.25 - 0.40	ST419060000	2885	1
0.63	0.12	0.40 - 0.63	ST419070000	3105	1
1.00	0.25	0.63 - 1.00	ST419080000	3105	1
1.60	0.55	1.00 - 1.60	ST419090000	3110	1
2.50	0.75	1.60 - 2.50	ST419100000	3110	1
4.00	1.50	2.50 - 4.00	ST419110000	3170	1
6.30	2.20	4.00 - 6.30	ST419120000	3230	1
10.00	4.00	6.30 - 10.00	ST419130000	3330	1
13.00	5.40	9.00 - 13.00	ST419140000	3620	1
16.00	7.50	11.00 - 16.00	ST419150000	4000	1
20.00	9.00	14.00 - 20.00	ST419160000	4315	1
25.00	12.50	19.00 - 25.00	ST419170000	4695	1
32.00	15.00	24.00 - 32.00	ST419180000	7325	1

Breaking capacity: Icu = 100kA upto 13A & Icu = 50kA from 16A - 32A

Type MOG-H2 (Rotary Type) - Frame 2



With short circuit & overload protection

Rating (A)	Recommended Motor Rating at 415V, 3-Ph, 50Hz (KW)	Thermal Release range (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
32.00	15.00	24.00 - 32.00	ST419190000	9470	1
40.00	20.00	28.00 - 40.00	ST419200000	9590	1
50.00	25.00	35.00 - 50.00	ST419210000	10540	1
63.00	34.00	45.00 - 63.00	ST419220000	11220	1

Breaking capacity: Icu = 50kA from 32A - 63A

Type MOG-H2M (Rotary Type) - Frame 2



With short circuit protection only

Rating (A)	Recommended Motor Rating at 415V, 3-Ph, 50Hz (KW)	Short Circuit Release (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
32.00	15.00	416	ST419380000	7730	1
40.00	20.00	520	ST419390000	7730	1
50.00	25.00	650	ST419400000	9430	1
63.00	34.00	819	ST419410000	9430	1

Breaking capacity: Icu = 50kA from 32A - 63A

Accessories for MOG



Short Circuit Alarm



Auxiliary + Alarm



External Operating Handle



Shunt Trip



MPCBs with bus bar connection



Connecting Busbar link



3 Phase Feed in terminal

Mounting Position *	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
F1/F2	Auxiliary Contact Front mtg. 1NO	ST419420000	480	10
F1/F2	Auxiliary Contact Front mtg. 1NC	ST419430000	480	10
L	Auxiliary Contact Left side mtg. 2NO	ST419440000	590	1
L	Auxiliary Contact Left side mtg. 1NO + 1NC	ST419450000	590	1
L	Auxiliary Contact Left side mtg. 2NC	ST419460000	575	1
F2	Trip Alarm Contact Front mtg. 1NO	ST419470000	765	10
F2	Trip Alarm Contact Front mtg. 1NC	ST419480000	765	10
L	Auxiliary + Alarm Left side mtg. 2NO	ST419490000	815	1
L	Short circuit alarm Left side mtg. 1NO + 1NC	ST419500000	815	1
R	Shunt trip 24V DC	ST419510000	1330	1
R	Shunt trip 110V, 50Hz	ST419520000	1400	1
R	Shunt trip 230V, 50Hz	ST429520000	1400	1
R	Under Voltage release, 110V, 50Hz	ST419530000	1400	1
R	Under Voltage release, 415V, 50Hz	ST419540000	1400	1
-	External operating handle, (Black) Frame 1	ST419550000	1050	1
-	External operating handle, (Black) Frame 2	ST419560000	1050	1

*F1- Front left slot F2- Front right slot L- Left side R- Right side

Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Connecting Busbar link			
2 MPCB 45 mm width w/o acc	ST419570000	590	5
3 MPCB 45 mm width w/o acc	ST419580000	650	5
4 MPCB 45 mm width w/o acc	ST419590000	705	5
5 MPCB 45 mm width w/o acc	ST419600000	765	5
2 MPCB 45 mm width with one acc 9 mm	ST419610000	690	5
3 MPCB 45 mm width with one acc 9 mm	ST419620000	750	5
4 MPCB 45 mm width with one acc 9 mm	ST419630000	805	5
5 MPCB 45 mm width with one acc 9 mm	ST419640000	865	5
2 MPCB 55 mm width w/o acc	ST419660000	1080	1
3 MPCB 55 mm width w/o acc	ST419670000	1230	1
4 MPCB 55 mm width w/o acc	ST419680000	1480	1
2 MPCB 55 mm width with one acc 9 mm	ST419690000	1180	1
3 MPCB 55 mm width with one acc 9 mm	ST419700000	1330	1
4 MPCB 55 mm width with one acc 9 mm	ST419710000	1580	1
2 MPCB 55 mm width with two acc 18 mm	ST419720000	1380	1
4 MPCB 55 mm width with two acc 18 mm	ST419730000	1530	1
Feed in terminal for 45 mm width Busbar	ST419650000	690	1
Feed in terminal for 55 mm width Busbar	ST419740000	1195	1
Bus bar safety cover 45 mm width Busbar	ST419750000	300	10
Bus bar safety cover 55 mm width Busbar	ST419760000	325	10

acc: Accessories

Direct-on-Line Starters

in Sheet-Steel Enclosure Type MF, MK, MU & MB
(Motor Rating AC-3 Duty, 415V, 50Hz, 3-Ph)



MF1 3-Ph MK1 MU 1H MU 3

Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
7.5	5.5	9 - 15	MF1	SS97210	1155	1
7.5	5.5	9 - 14	MK1 DOL	SS96210	1920	1
7.5	5.5	11 - 18	MK1 DOL	SS96211	1965	1
7.5	5.5	13 - 22	MK1 DOL	SS96228	2010	1
10.0	7.5	15 - 25	MU1 DOL #	SS95647	3390	1
10.0	7.5	14 - 23	MB1 DOL #	SS95649	3310	1
12.5	9.3	20 - 32	MU1H DOL #	CS90622	3670	1
15.0	11.0	24 - 38	MU2 DOL #	SS95648	4545	1
15.0	11.0	20 - 33	MB2 DOL #	SS95650	4445	1
17.5	13	28 - 42	MU3 DOL #	CS90613	4955	1

For lower relay ranges, please refer Agricultural Electrical Products' price list.

Single Phase Starters



MF1 1-Ph MU-2P DOL

Max. Motor Output at 230V, 1-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
2.0	1.5	10.5 - 17.5	MF1	SS97227O0BO	860	1
3.0	2.2	12 - 20	MF1	SS97227O0CO	860	1
2	1.5	9 - 14	MU-2P	CS90319KOAO	1390	1
2	1.5	11 - 18	MU-2P	CS90319KOCO	1430	1
3	2.2	13 - 22	MU-2P	CS90319KODO	1475	1

Semi-Automatic Star-Delta Starters

in Sheet-Steel Enclosure Type MK, MU & MB
(Motor Rating AC-3 Duty, 415V, 50Hz, 3-Ph)



MK 1S MU 1S MB 2S

Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
12.5	9.3	9 - 14	MK1 SASD	SS96255	6310	1
15.0	11.0	11 - 18	MK1 SASD	SS96258	6355	1
15.0	11.0	13 - 22	MK1 SASD	SS96260	6400	1
15.0	11.0	13 - 21	MU1 SASD #	SS95891	8490	1
15.0	11.0	14 - 23	MB1 SASD #	SS95895	9215	1
30.0	22.5	20 - 32	MU2 SASD #	SS95893	10735	1
30.0	22.5	20 - 33	MB2 SASD #	SS95897	10910	1

For lower relay ranges, please refer Agricultural Electrical Products' price list.

Note: 1) # Type MU1 / MU2 consists of type MU Relay + MU1 / MU2 contactors
Type MB1 / MB2 consists of type MN Relay + MU1 / MU2 contactors
2) For Ordering Suffix please refer table B page No. 20

Direct-on-Line Starters

in Sheet-Steel Enclosure Type MN with Single Phase Protection feature (Motor Rating AC-3 Duty, 415V, 50Hz, 3-Ph)



MN 16 MN 45

Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
10.0	7.5	9 - 15	MN 16 DOL	SS94351	3165	1
15.0	11.0	14 - 23	MN 25 DOL	SS94352	4840	1
20.0	15.0	20 - 33	MN 32 DOL	SS94353	7810	1
30.0	22.5	30 - 50	MN 45 DOL	SS94017	13360	1
45.0	33.5	45 - 75	MN 65 DOL	SS94018	18300	1

Direct-on-Line Starters

in Sheet-Steel Enclosure Type ML
(Motor Rating AC-3 Duty, 415V, 50Hz, 3-Ph)



ML 1.5 ML 2 ML 3

Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
15.0	11.0	20 - 32	ML 1.5 DOL	SS91854	4865	1
20.0	15.0	20 - 32	ML 2 DOL	SS90702	8105	1
30.0	22.5	28 - 42	ML 3 DOL	SS90722	13925	1

Semi-Automatic Star-Delta Starters

in Sheet-Steel Enclosure Type ML
(Motor Rating AC-3 Duty, 415V, 50Hz, 3-Ph)



ML 1.5S ML 2S

Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
25.0	18.5	13 - 21	ML1.5 SASD	SS91856	11200	1
35.0	26.0	20 - 32	ML2 SASD	SS90707	19575	1

Fully Automatic Star-Delta Starters



MN 16F

in Sheet-Steel Enclosure Type MN
with Single Phase Protection feature
(Motor Rating AC-3 Duty, 415V, 50Hz, 3-Ph)

Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
15.0	11.0	9 - 15	MN 16 FASD	SS94362	10665	1
25.0	18.5	14 - 23	MN 25 FASD	SS94364	11925	1
35.0	26.0	20 - 33	MN 32 FASD	SS94366	19620	1
50.0	37.5	30 - 50	MN 45 FASD	SS94021	31505	1
75.0	55.0	45 - 75	MN 65 FASD	SS94022	52215	1
90.0	67.0	45 - 75	MN 80 FASD	SS94705	57080	1
125.0	90.0	66 - 110	MN 110 FASD	SS94706	74705	1
175.0	130.0	90 - 150	MN 140 FASD	SS94707	78205	1

Fully-Automatic Star-Delta Starters

in Sheet-Steel Enclosure Type MK, ML, MU & MB
(Motor Rating AC-3 Duty, 415V, 50Hz, 3Ph)



MK 1F



MB 1F



MU 2F

Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
12.5	9.3	9 - 14	MK1 FASD	SS96254	7180	1
15.0	11.0	11 - 18	MK1 FASD	SS96257	7225	1
15.0	11.0	13 - 22	MK1 FASD	SS96259	7270	1
15.0	11.0	13 - 21	MU1 FASD #	SS95890	9825	1
15.0	11.0	14 - 23	MB1 FASD #	SS95894	9825	1
30.0	22.5	20 - 32	MU2 FASD #	SS95892	11830	1
30.0	22.5	20 - 33	MB2 FASD #	SS95896	11850	1

For lower relay ranges, please refer Agricultural Electrical Products' price list.



ML 2F



ML 1.5F

Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
25.0	18.5	13 - 21	ML1.5 FASD	SS91855	12715	1
35.0	26.0	20 - 32	ML2 FASD	SS90705	20185	1
50.0	37.5	28 - 42	ML3 FASD	SS90730	33570	1
75.0	55.0	45 - 75	ML4 FASD	SS90913	57530	1
125.0	90.0	66 - 110	ML6 FASD	SS90923	94320	1
250.0	180.0	135 - 225	ML10 FASD *	SS90938	149285	1
400.0	300.0	180 - 300	ML12 FASD *	SS91019	169100	1

Note: 1) # Type MU1 / MU2 consists of type MU Relay + MU1 / MU2 contactors
Type MB1 / MB2 consists of type MN Relay + MU1 / MU2 contactors
2) For Ordering Suffix please refer table B page No. 20

* Available till stock last

Spares for MK1 Starters



Aux contact block



Spare coil



Combination coil



Push button unit

Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Single Moving Contact	SS91009	35	10
Std. Operating coils			
400 / 440V, 50Hz	SS90047	155	10
360V, 50Hz	SS90165	155	10
230V, 50Hz	SS90045	155	10
220V, 50Hz	SS90044	155	10
110V, 50Hz	SS90043	155	10
Auxiliary contact block: 1 NO + 1 NC	SS90120	200	50
Spare kit with hardware	CS90983	395	50
Thermal timer without combination coil	SS90224	575	1
Combination coils			
Combination coils for 400 / 440V, 50Hz	SS90443	385	10
Combination coils for 230V, 50Hz	SS90444	385	10
Combination coils for 380V, 50Hz	SS90445	385	10
Combination coils for 360V, 50Hz	SS90446	385	10
Push Button Unit	SS90004	90	1
Arc Shield	SS50004	95	1
Contact bridge without Contacts	SS50005	90	1

Spares for MN Starters

Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Bracket for Mounting cont. MNX 25 - 32	SS94030000	100	20
MN DOL Push Button	SS93941000	165	10

Salient Features and Benefits of Starters

- Conforms to IS/IEC 60947-4-1 & IEC 60947-4-1
- Sheet steel enclosures with IP 54 protection
- Wide range of relay settings and coil voltages
- Standardized accessories and spares available

Submersible Pump Controller

In Sheet Enclosure Type MU - G
(Motor Rating AC-3 Duty, 415V, 50Hz, 3 phase)



MU - G6



MU - G10

Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
6	4.5	9 - 14	MU - G6 DOL Starter*	SS97756	5435	1
10	7.5	13 - 21	MU - G10 DOL Starter*	SS95983	6460	1
10	7.5	28 - 42	MU - G10H DOL Starter*	SS95974	7560	1

* For lower relay ranges, please refer Agricultural Electrical Products' price list.

Submersible Pump Controller

In Sheet Enclosure Type MU-G
(Motor Rating AC-3 Duty, 415V, 50 Hz, 3 phase)



MU-G15



MU-G20



MU-G50



MU-G75

Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
15	11	13 - 22	MU-G15 Fully Automatic Star - Delta Starter*	CS94091	10600	1
20	15	13 - 21	MU-G20 Fully Automatic Star - Delta Starter*	SS95984	12405	1
20	15	28 - 42	MU-G20H Fully Automatic Star - Delta Starter*	SS95975	15180	1
30	22.5	30 - 50	MU-G30 Fully Automatic Star - Delta Starter*	CS96008	25075	1
50	37.5	45 - 75	MU-G50 Fully Automatic Star - Delta Starter*	CS96009	40055	1
75	101	66 - 110	MU-G75 Fully Automatic Star - Delta Starter*	CS96451	54790	1

* For lower relay ranges, please refer Agricultural Electrical Products' price list.

Submersible Pump Controller

In Sheet Steel Enclosure Type MR-G, MF-G

With MU-2P Contactor & MU-2P Relay



MR-G2



MF-G1

Max. Motor Output at 230V, 3-Ph		Relay Max. Range (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
HP	kW					
0.5	0.37	6 - 10	Type MR-G2 * For Single Phase Motors (Only Ammeter Version)	SS96988	3520	1
1.0	0.75	9 - 14		SS96560	3840	1
1.5	1.1	11 - 18		SS96989	4245	1
2.0	1.5	13 - 22		SS96990	4440	1
3.0	2.2	13 - 22		SS97725	4755	1
0.5	0.37	6.5 - 11	Type MF-G1 * For Single Phase Motors (Only Ammeter Version)	SS97734	2360	1
1.0	0.75	12 - 20		SS97736	2465	1
1.5	1.1	12 - 20		SS97737	2550	1
2.0	1.5	12 - 20		SS97738	2595	1

Note: For dual meter (Ammeter + Voltmeter) version - Add (₹) 215

* For lower Relay Ranges & dual meter version, please refer Agricultural Electrical Products' price list.

M-POWER - Module for Mobile Starter



Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Module for Mobile Starter & Submersible Controllers	GSM03010000	5950	1

Salient Features and Benefits of Submersible Pump Controller

- Conforms to IS/IEC 60947-4-1 & IEC 60947-4-1
- Protections Offered - Overload, Single Phasing, Phase reversal, Phase imbalance
- Auto Restart Feature
- Vibration proof enclosure with IP54 protection class
- Indications Offered - ON/OFF, Voltage and Ampere
- Compatible with M-POWER

Ordering Suffix for MK1/MU/MB/ML & MN Starters

Table B

Coil Voltages	Relay Range (A)				
	MK1	MU	MB	ML	MN
B - 240 V	A : 9 - 14	A : 9 - 14	B : 9 - 15	A : 9 - 14	B : 9 - 15
C - 360 V	C : 11 - 18	C : 13 - 21	D : 14 - 23	B : 10 - 16	D : 14 - 23
D - 415 V	D : 13 - 22	D : 15 - 25	E : 20 - 33	C : 13 - 21	E : 20 - 33
P - 440 V	M : 1 - 1.6	E : 20 - 32		E : 20 - 32	G : 30 - 50
	P : 1.5 - 2.5	G : 24 - 38		F : 28 - 42	J : 45 - 75
	R : 2.5 - 4	F : 28 - 42		G : 30 - 50	K : 66 - 110
	T : 4 - 6.5			J : 45 - 75	Q : 2 - 3.3
	V : 6 - 10			K : 66 - 110	S : 3 - 5
				M : 90 - 150	U : 4.5 - 7.5
				P : 135 - 225	V : 6 - 10
				Q : 180 - 310	
				R : 2.5 - 4	
				T : 13 - 21	



**Operate your pump
from anywhere using your mobile phone.**



Clarity/RP/042013



Designed especially for  Controllers

Customer Interaction Center (CIC)

BSNL / MTNL (toll free): 1800 233 5858 Reliance (toll free): 1800 200 5858

Tel: 022 6774 5858 Fax: 022 6774 5859 Email: cic@Lntebg.com Web: www.Lntebg.com

Electronic Timers Type ST 100



ST 100

Description	Cat. No.	M.R.P. (₹) Per Unit	Std Pkg. (Nos.)
240 / 360 / 415V, 50Hz for			
3 - 30 secs.	ST803280000	1440	1
12 - 120 secs.	ST803290000	1440	1

Note: ST 100 supplied with Mounting Kit, suitable for ET 100 replacement.
For Complete range of Timing Devices, please refer the Panel Accessories Price List.

Salient Features and Benefits of Electronic Timers ST 100

- Wide operating voltage band of 160V to 500V
- Available in Time-Delay range of 3-30Sec and 12-120Sec
- 1-mod design provides compactness in size
- Suitable for base mounting and DIN mounting
- Ease of connection
- Star-Operation LED display to indicate Star to Delta changeover

Thermal Timers Type GT 200



GT 200

Description	Cat. No.	M.R.P. (₹) Per Unit	Std Pkg. (Nos.)
Operating Voltages: 230 / 250V, 360V, 400 / 440V, 500V, 50 Hz for 5 - 18 secs. range	SS91270	2480	1

Ordering Suffix for GT 200 Timer	
Voltage (V)	Suffix
250V	N000
320V	R000
360V	C000
380V	L000
400 / 440V	P000

Single Phase Preventor Relay



Sz5



SDz5

With Settable time ON Delay 30sec - 5min

Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
SPPR type Sz5 (7 Wire), 380V	ST921660000	630	1
SPPR type Sz5 (6 Wire), 360V	CS94824C000	630	1
SPPR type Sz5 (6 Wire), 380V	CS94824L000	630	1
SPPR type Sz5 (6 Wire), 415V	CS94824D000	630	1
SPPR type SDz5, SPPR + Timer, 360V	XM818080000	1250	1
SPPR type SDz5, SPPR + Timer, 380V	XM818070000	1250	1
SPPR type SDz5, SPPR + Timer, 415V	XM818090000	1250	1

Salient Features and Benefits of Single Phase Preventor Relay

- Protection from
 - Single Phasing condition
 - Phase Reversal condition
 - Phase Unbalance condition
- Modes of Operation
 - Auto
 - Manual
 - Bypass
- Auto-Restart benefit with 30sec - 5min settable time ON-Delay
- Colourful dial and Colourful wiring for ease of connection with Starter
- Compact in dimensions
- Sz5 SPPR is suitable for DOL Starter and SDz5 SPPR is suitable for Star-Delta Starter.
- Sz5 SPPR is available in 6-wire version and 7-wire version
- SDz5 has in-built Star-Delta Timer



MU-2P DOL Single Phase Starter

- Single Phase Starter for
 - Monoblock Pumps
 - Jet Pumps
 - Compressor Pumps
- Works even at 120V (low voltage)
- Complete safety with neutral isolation

Customer Interaction Center (CIC)

BSNL / MTNL (toll free): 1800 233 5858 Reliance (toll free): 1800 200 5858

Tel: 022 6774 5858 Fax: 022 6774 5859 Email: cic@Lntebg.com Web: www.Lntebg.com

Switch-Disconnecter-Fuse Units

Type FN S-D-F suitable for DIN fuse-link (2P / 3P)

Type FN S-D-F suitable for BS fuse-link (TPN)

Features offered by FN S-D-F

- Range 32A to 800A, 415V, AC 23A
- 2P / TP / TPN Versions
- Suitable for cylindrical / DIN / Bolted fuse-link
- Conforms to IEC 60947-3, IS/IEC 60947-3
- Door interlock & padlock facility

Also for 220Vdc & 240Vac application

Also for Capacitor, Motor back-up & 440Vdc application



FN 2P S-D-F

FN TP S-D-F

FN - TPN S-D-F

Size	Rated Current (A)	Suitable fuse-link type	Type FN (2P) S-D-F suitable for DIN fuse-link			Type FN (TP) S-D-F suitable for DIN fuse-link			Suitable fuse-link type	Type FN (TPN) S-D-F suitable for bolted fuse-link			Std. Pkg (Nos.)
			Open Execution			Open Execution				Open Execution			
			Type	Cat. No.	M.R.P. (₹) Per Unit	Type	Cat. No.	M.R.P. (₹) Per Unit		Type	Cat. No.	M.R.P. (₹) Per Unit	
Fr 1	32	HF 14x51	FN 32 2P	SK95594	1410	FN 32 TP	ST27892	1650	A1L	FN 32 TPN	SK95653	1710	1
	63	HF 14x51	FN 63 2P	SK95595	1940	FN 63 TP	ST27893	2260	A1L	FN 63 TPN	SK95651	2330	1
Fr 2	100	HN Size 000/00	FN 100 2P	ST35086	3940	FN 100 TP	ST30287	4510	A4	FN 100 TPN	SK95570	4670	1
	125	HN Size 000/00	FN 125 2P	ST35087	5030	FN 125 TP	ST27894	5880	A4	FN 125 TPN	SK95009	5770	1
	160	HN Size 000/00	FN 160 2P	ST35088	5380	FN 160 TP	SK95998	6450	A4	FN 160 TPN	SK95714	6270	1
Fr 3	200	HN Size 0	FN 200 2P	ST35089	6740	FN 200 TP	ST27895	8310	B1 / B2	FN 200 TPN	SK95588	7890	1
	250	HN Size 1	FN 250 2P	ST31674	8100	FN 250 TP	ST31731	10060	B2 / B3	FN 250 TPN	SK95682	10000	1
Fr 4	315	HN Size 1	FN 315 2P	ST38930	10290	FN 315 TP	ST27897	12930	B3	FN 315 TPN	SK95590	13100	1
	400	HN Size 2	FN 400 2P	ST31676	12280	FN 400 TP	ST27898	14990	B4	FN 400 TPN	SK95591	14410	1
Fr 5	630	HN Size 3	FN 630 2P	ST35090	19820	FN 630 TP	ST27899	25100	C2	FN 630 TPN	SK95592	24120	1
	800	HN Size 3	-	-	-	FN 800 TP	ST27900	26980	-	-	-	-	1

Type FN S-D-F suitable for DIN fuse-link (TPN)

Features offered by FN S-D-F

- Range 32A to 800A, 415V, AC 23A
- Suitable for cylindrical / DIN fuse-link
- Available in interior / Sheet steel enclosure version
- Conforms to IEC 60947-3, IS/IEC 60947-3
- Door interlock & padlock facility



FN - TPN S-D-F (Open Execution)

FN - TPN S-D-F in SS Enclosure

Size	Rated Current (A)	Suitable HRC fuse-link		Open Execution Type FN (TPN) S-D-F suitable for DIN fuse-link			Std. Pkg. (Nos.)	In Sheet Steel Enclosure Type FN (TPN) S-D-F suitable for DIN fuse-link			Std. Pkg. (Nos.)
		Type	Range (A)	Type	Cat. No.	M.R.P. (₹) Per Unit		Type	Cat. No.	M.R.P. (₹) Per Unit	
Fr 1	32	HF	2 to 32	FN 32 TPN / FP	SK95518	1740	1	FN 32 TPN / FP CE*	SK95612*	3940	1
	32	HF	2 to 32	FN 32 TPN / FP CE*	SK95703*	1560	1				
	63	HF	2 to 63	FN 63 TPN / FP	SK95421	2420	1	FN 63 TPN / FP CE*	SK95613*	4690	
	63	HF	2 to 63	FN 63 TPN / FP CE*	SK95704*	2130	1				
Fr 2	100	HN Size 000/00	63 to 100	FN 100 TPN	SK95568	4980	1	FN 100 TPN	SK95569	7730	1
	125	HN Size 000/00	63 to 125	FN 125 TPN	SK95001	6520	1	FN 125 TPN	SK95005	9160	1
	160	HN Size 000/00	63 to 160	FN 160 TPN	SK95713	7100	1	FN 160 TPN	SK95715	9810	1
Fr 3	200	HN Size 0	80 to 200	FN 200 TPN	SK95418	9080	1	FN 200 TPN	SK95511	12890	1
	250	HN Size 1	125 to 250	FN 250 TPN	SK95642	10770	1	FN 250 TPN	SK95681#	14880	1
Fr 4	315	HN Size 1	125 to 315	FN 315 TPN	SK95461	13310	1	FN 315 TPN	SK95514	17640	1
	400	HN Size 2	200 to 400	FN 400 TPN	SK95481	16050	1	FN 400 TPN	SK95515	20580	1
Fr 5	630	HN Size 3	315 to 630	FN 630 TPN	SK95521	25810	1	FN 630 TPN	SK95547	32990	1
	800	HN Size 3	315 to 800	FN 800 TPN	SK95679	28010	1	FN 800 TPN	SK95705	35400	1

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

Spare cat no. ST978950000 is of Interior FN 250 SDF suitable for Sheet steel enclosure

Notes: 1) Please refer page no. 27 for Switch-Disconnecter & 4 pole Switch-Disconnecter-Fuse

2) Type FN S-D-F range (Bolted fuse-link) suitable for harsh environment is also available. Please contact nearest branch office for further details

3) For 690V ac application please contact nearest branch office

4) More spacious SS Enclosure (does not require separate cable gland box) version available on request

HRC Fuses

Features offered by HRC fuse link

- Conforms to IEC 60269-2, IS 13703 part 2
- Range: 2A to 800A, 415V, AC 50Hz
- Type: Cylindrical (2A to 63A), DIN (63A to 800A) & Bolted (2A to 630A)
- High breaking capacity: 100kA for type HN and 80kA for type HF/HG/HQ

Cylindrical fuse links Type HF



Size	Rated Current (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
14 X 51	2	Suitable for Type FN 32 / 63 / FNX 32 / 63 S-D-F & for HCO 32 Fuse base	SF90144	95	30
	4		SF90145	95	30
	6		SF90146	95	30
	8		SF90147	95	30
	10		SF90148	95	30
	16		SF90150	95	30
	20		SF90151	95	30
	25		SF90152	95	30
	32		SF90142	95	30
	40		SF90143	105	30
14 X 51	50	Suitable for Type FN 63 / FNX 63 S-D-F & for HC 63 Fuse base	SF90158	230	30
	63		SF90159	297	30

DIN Type Fuse Links Type HN

000



00



0



1



2



3



Size	Rated Current (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
000	63	Suitable for Type FN 100/125/160 / FNX 100/125/160 S-D-F & for HB 160 Fuse base	SF94940	310	3
	80		SF94941	325	3
	100		SF94942	325	3
	125		SF94946	375	3
00	63	Suitable for Type FN 100/125/160 / FNX 125/160 S-D-F & for HB 160 Fuse base	SF94027	395	3
	80		SF94028	395	3
	100		SF94029	395	3
	125		SF94030	415	3
	160		SF94939	415	3
0	80	Suitable for Type FN 200 / FNX 200 S-D-F & for HB 250 Fuse base	SF94128	535	3
	100		SF94129	535	3
	125		SF94130	535	3
	160		SF94131	545	3
	200		SF94132	545	3
1	125	Suitable for Type FN 250/315 / FNX 250/315 S-D-F & for HB 250 Fuse base	SF94230	585	3
	160		SF94231	610	3
	200		SF94232	610	3
	250		SF94233	670	3
	315		SF94234	790	3
2	200	Suitable for Type FN 400 / FNX 400 S-D-F & for HB 800 Fuse base	SF94332	835	3
	250		SF94333	870	3
	315		SF94334	885	3
	400		SF94335	895	3
3	315	Suitable for Type FN 630/800 / FNX 630/800 S-D-F & for HB 800 Fuse base	SF94434	1240	1
	400		SF94435	1240	1
	500		SF94436	1395	1
	630		SF94437	1420	1
	800		SF94938	1725	1

Fuse holders & Fuse bases suitable for Cylindrical / DIN fuse-links



HB

HCO

Rated Current (A)	Type	Description	Suitable fuse-link		Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
			Type	Range (A)			
32	HCO 32	Fuse holder	HF	2-32	SK91314	180	10
63	HC 63	Fuse holder	HF	2-63	SK91043	200	10
160	HB 160	Fuse base	HN-Size 000 & 00	63-160	SK90405	315	12
250	HB 250	Fuse base	HN-Size 0 & 1	80-250	SK90406	660	3
800	HB 800	Fuse base	HN-Size 2 & 3	200-800	SK91051	1300	3

Bolted fuse links: Type HG and HQ



Type	Fixing Method	Size	Rating (A)	Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)	
HG	Offset, staggered	F1	2	Suitable for type HD 20H/20P/20B, HD 32H/32P/32B fuse base	ST30725	46	24	
			4		ST30726	46	24	
			6		ST30727	46	24	
			10		ST30728	46	24	
			16		ST30729	46	24	
			20		ST30730	53	24	
			25		ST30731	53	24	
			32		ST30732	53	24	
HQ	Offset	A1L	20	Suitable for type FN 32/63 S-D-F	ST34527	81	15	
			25		ST34528	81	15	
			32		ST34529	87	15	
			50		ST35827	87	15	
			63		ST35828	87	15	
		A2	4	Suitable for type HK 32H/32B fuse base	ST30747	69	12	
			6		ST30748	69	12	
			10		ST30749	69	12	
			16		ST30750	69	12	
			20		ST30751	69	12	
			25		ST30752	69	12	
			32		ST30753	69	12	
	A3	35	Suitable for type HK 63B/63H Fuse base	ST30759	100	12		
		50		ST30760	100	12		
		63		ST30761	100	12		
	A4	80	Suitable for type FN 100/125/160 S-D-F & for HK 125H/125B Fuse base	ST30767	190	12		
		100		ST30768	195	12		
		125		ST30769	235	12		
		160		ST35829	245	12		
	Centre Tag, 2 holes	B1	80	Suitable for type FN 200 S-D-F	ST30774	215	12	
			100		ST30775	215	12	
			125		ST30776	275	12	
		B2	125		ST30777	300	3	
			160		ST30778	315	3	
200			ST30779		315	3		
B3		250	Suitable for type FN 250/315 S-D-F		ST30781	455	3	
		315			ST30782	465	3	
B4		355	Suitable for type FN 400 S-D-F		ST30783	700	3	
		400			ST30784	735	3	
Centre Tag, 4 holes		C2	400		Suitable for type FN 630 S-D-F	ST30785	1255	1
			500			ST30786	1430	1
	630		ST30787	1550		1		

Fuse holders suitable for bolted fuse-links



Rated Current (A)	Type	Connection Method	Fuse Type	Suitable Fuse Range (A)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
20	HD 20H	Both side cable (Front)	F1	2-20	ST30772	115	12
	HD 20P	Both side busbar (Back)	F1	2-20	ST30773	125	12
	HD 20B	Top busbar & bottom cable	F1	2-20	ST30766	120	12
32	HD 32H	Both side cable (Front)	F1	2-32	ST30733	125	12
	HD 32P	Both side busbar (Back)	F1	2-32	ST30734	155	12
	HD 32B	Top busbar & bottom cable	F1	2-32	ST30735	145	12
	HK 32H	Both side cable (Front)	A2	4-32	ST30754	195	12
	HK 32B	Top busbar & bottom cable	A2	4-32	ST30755	225	12
	63	HK 63H	Both side cable (Front)	A3	35-63	ST30762	255
HK 63B		Top busbar & bottom cable	A3	35-63	ST30763	315	6
125	HK 125H	Both side cable (Front)	A4	80-125	ST30770	805	3
	HK 125B	Top busbar & bottom cable	A4	80-125	ST30771	880	3

Switch-Disconnecter-Fuse Units

Type FNX S-D-F suitable for DIN fuse-link in open execution

Features offered by FNX S-D-F

- Range 32A to 800A, 415V, AC 23A
- TPN and 4P version
- Suitable for cylindrical / DIN fuse-link
- Telescopic shaft for depth adjustment
- DIN rail mounting up to 100A
- Conforms to IEC 60947-3, IS/IEC 60947-3
- Door interlock & padlock facility



FNX TPN S-D-F



FNX 4P S-D-F

Size	Rated Current (A)	Suitable fuse-link type	Range (A)	Open Execution Type FNX (TPN) S-D-F suitable for DIN fuse-link				Open Execution Type FNX (4P) S-D-F suitable for DIN fuse-link			Std. Pkg. (Nos.)
				Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)	Type	Cat. No.	M.R.P. (₹) Per Unit	
Fr 1	32	HF	2 to 32	FNX 32 TPN / FP	SK96903	1930	1	FNX 32 TPN / FP	SK96903	1930	1
	63	HF	2 to 63	FNX 63 TPN / FP	SK96904	2550	1	FNX 63 TPN / FP	SK96904	2550	1
Fr 2	100	HN Size 000	63 to 100	FNX 100 TPN / FP	SK96906	5030	1	FNX 100 TPN / FP	SK96906	5030	1
Fr 3	125	HN Size 000/00	63 to 125	FNX 125 TPN	SK95806	6800	1	FNX 125 FP	SK95814	6880	1
	160	HN Size 000/00	63 to 160	FNX 160 TPN	SK95807	7580	1	FNX 160 FP	SK95815	7760	1
Fr 4	200	HN Size 0	80 to 200	FNX 200 TPN	SK95808	9680	1	FNX 200 FP	SK95816	10020	1
	250	HN Size 1	125 to 250	FNX 250 TPN	SK95809	11510	1	FNX 250 FP	SK95817	11690	1
Fr 5	315	HN Size 1	125 to 315	FNX 315 TPN	SK95810	14220	1	FNX 315 FP	SK95818	14420	1
	400	HN Size 2	200 to 400	FNX 400 TPN	SK95811	17150	1	FNX 400 FP	SK95819	17370	1
Fr 6	630	HN Size 3	315 to 630	FNX 630 TPN	SK95812	27590	1	FNX 630 FP	SK95820	27990	1
	800	HN Size 3	315 to 800	FNX 800 TPN	SK95813	29910	1	FNX 800 FP	SK95821	30300	1

Note : For 690V ac application please contact nearest branch office

Type FN & COS Switch-Disconnecter (2P / TPN / 4P)

Features offered by S-D

- Range 32A to 2000A, 415V, AC 23A
- Conforms to IEC 60947-3, IS/IEC 60947-3
- Door interlock & padlock facility
- Telescopic shaft for depth adjustment 1000A and above
- Flip-able handle 1000A and above



FN 2P S-D



FN TPN S-D

Size	Rated Current (A)	Open Execution 2P S-D			Std. Pkg. (Nos.)	Open Execution TPN S-D			Std. Pkg. (Nos.)
		Type	Cat. No.	M.R.P. (₹) Per Unit		Type	Cat. No.	M.R.P. (₹) Per Unit	
Fr 1	32	FN 32 2P	SK904180000	1250	1	FN 32 TPN / 4P	SK955410000	1800	1
	63	FN 63 2P	SK904190000	1710	1	FN 63 TPN / 4P	SK955400000	2490	1
Fr 2	100	FN 100 2P	SK904200000	3480	1	FN 100 TPN	SK955710000	4610	1
	125	FN 125 2P	SK904210000	4440	1	FN 125 TPN	SK954050000	5800	1
Fr 3	200	FN 200 2P	SK904500000	5950	1	FN 200 TPN	SK956070000	7840	1
	250	FN 250 2P	SK904540000	7150	1	FN 250 TPN	SK956830000	9980	1
Fr 4	315	FN 315 2P	SK904650000	9090	1	FN 315 TPN	SK956090000	11200	1
	400	FN 400 2P	SK904660000	10850	1	FN 400 TPN	SK956100000	13960	1
Fr 5	630	FN 630 2P	SK904670000	17500	1	FN 630 TPN	SK956110000	20860	1
	800	FN 800 2P	SK904680000	18350	1	FN 800 TPN	SK955510000	24040	1
	1000	FN 1000 2P	SK904690000	23580	1	FN 1000 TPN	SK957100000	31980	1
Fr 6	1000	-	-	-	-	COS SD 1000 4P	COS10000040	36400	1
	1250	-	-	-	-	COS SD 1250 4P	COS12500040	40820	1
	1600	-	-	-	-	COS SD 1600 4P	COS16000040	54600	1
	2000	-	-	-	-	COS SD 2000 4P	COS20000040	67800	1

Switch-Disconnecter-Fuse: Spares & Accessories

Spares & Accessories for type FNX



Castell Type Lock



DIN Rail Assembly



Auxiliary Contact Kit



Handle Assembly

Description	Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Auxiliary Contact Kit (1NO + 1 NC)	FNX 32 / 63	SK91537	165	1
	FNX 100	SK91538	320	1
	FNX 125 / 160	SK91539	320	1
	FNX 200 / 250	SK91540	415	1
	FNX 315 / 400 / 630 / 800	SK91541	470	1
Handle Assembly	FNX 32 / 63 / 100	SK91524	270	1
	FNX 125 / 160 / 200 / 250	SK91525	510	1
	FNX 315 / 400 / 630 / 800	SK91526	640	1
Castell Type Lock	FNX 32 / 63 / 100	SK91530	500	1
	FNX 125 / 160 / 200 / 250	SK91531	880	1
	FNX 315 / 400 / 630 / 800	SK91531	880	1
DIN Rail Assembly	FNX 32 / 63 / 100	SK91617	70	1

Fuse pulling handle



For Type HN fuse-link



For Type HF fuse-link

Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Fuse pulling handle for HF Fuse-link from 2A-63A	SK91185	110	1
Insulated fuse pulling handle for Type HN fuse-link from 63A-800A	SF90126	410	1

Spares & Accessories for type COS Switch-Disconnecter

Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Auxiliary Contact Kit (1 sets of C/O contact)	CXS6002	550	1
Operating Handle	CXS6001	1250	1
Castell Type Lock	CX60004	1550	1

Spares & Accessories for type FN



Terminal Shroud Kit



Handle Assembly



Switched Neutral Kit



Auxiliary Contact Kit



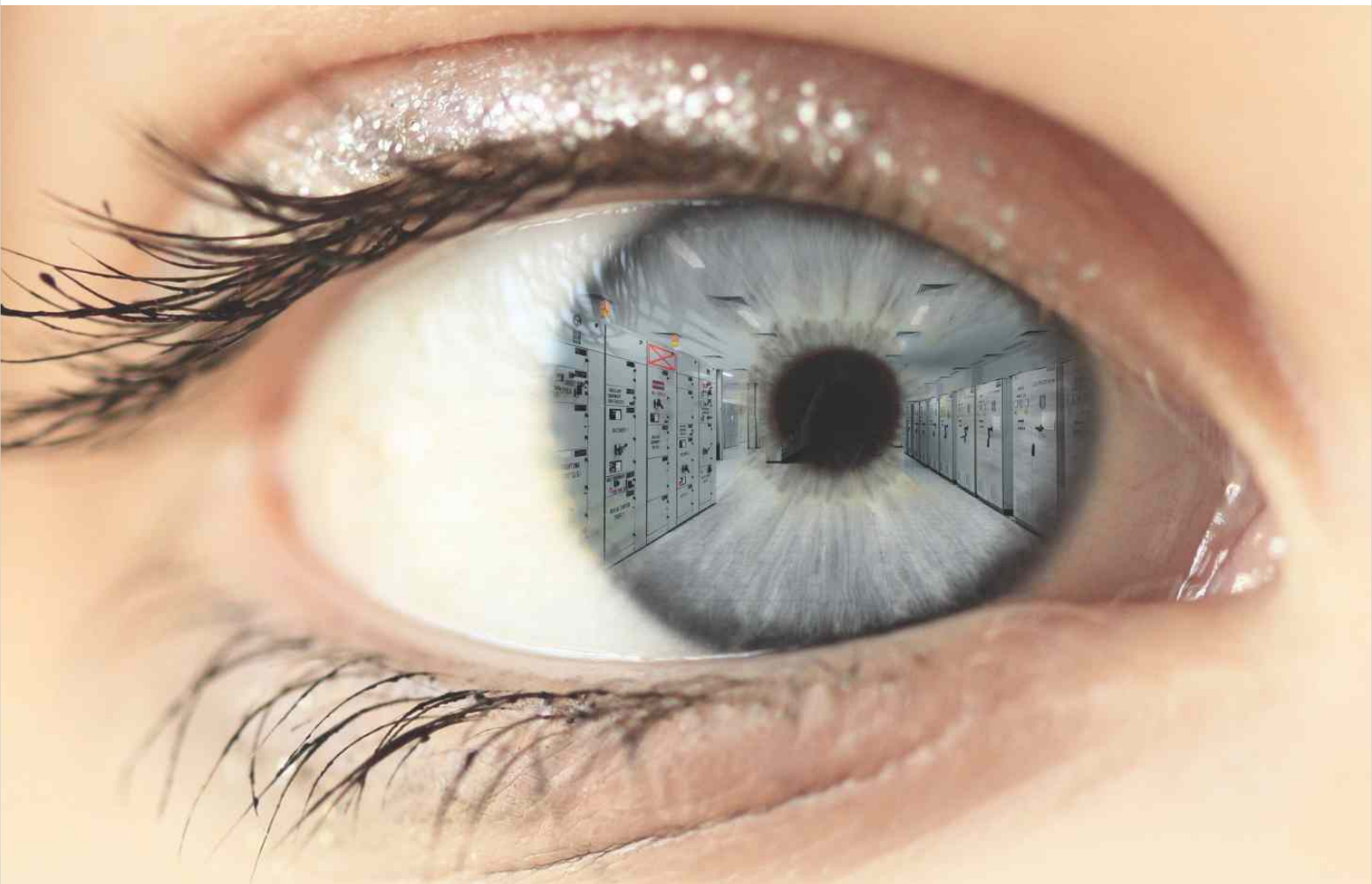
Shaft Extension Kit



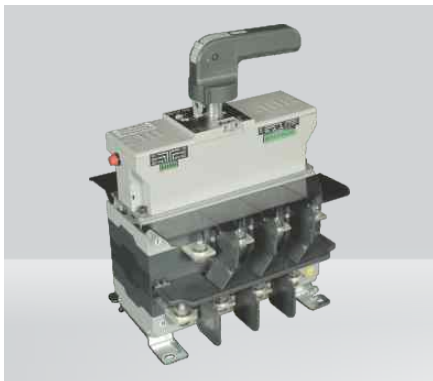
Castell Type Lock

Description	Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)	
Auxiliary Contact Kit (1NO + 1 NC)	FN 32 / 63	SK91302	385	1	
	FN 100 / 125 / 160	SK91328	435	1	
	FN 200 / 250	SK91329	515	1	
	FN 315 / 400 / 630 / 800	SK91330*	570	1	
Terminal Shroud Kit	FN 32 / 63	SK91190	90	1	
	FN 100 / 125 / 160	SK91137	120	1	
	FN 200 / 250	SK91335	210	1	
	FN 315 / 400	SK91346	220	1	
	FN 630 / 800	SK91347*	230	1	
Handle Assembly - A	FN 32 / 63	SK91257	260	1	
	FN 100 / 125 / 160	SK91258	570	1	
	FN 200 / 250	SK91258	570	1	
	FN 315 / 400 / 630 / 800	SK91259*	635	1	
Handle Assembly - B	FN 32 / 63	SK91277	260	1	
	FN 100 / 125 / 160	SK91278	570	1	
	FN 200 / 250	SK91278	570	1	
Handle Assembly - CE	FN 315 / 400 / 630 / 800	SK91279*	635	1	
	FN 32 / 63	SK91337	150	1	
Switched Neutral Kit	FN 100 / 125 / 160	SK95233	2610	1	
	FN 200 / 250	SK95516	2680	1	
	FN 315 / 400	SK95517	2790	1	
	FN 630 / 800	SK95546*	3780	1	
Interphase Barrier Kit	FN 200	SK91343	190	1	
	FN 315 / 400	SK91344	200	1	
	FN 630 / 800	SK91345*	210	1	
Shaft Extension Kit	FN 100 / 125 / 160	SK95600	150	1	
	FN 315 / 400 / 630 / 800	SK91331*	180	1	
Castell Type Lock	FN 100 / 125 / 160 / 200 / 250	A	SK00333	1550	1
		B	SK00334	1550	1
		C	SK00335	1550	1
		D	SK00336	1550	1
	FN 315 / 400 / 630 / 800	A	SK00345*	1550	1
		B	SK00346*	1550	1
		C	SK00347*	1550	1
		D	SK00348*	1550	1

*Also suitable for Switch-Disconnecter FN 1000



Open your world to L&T's Motorised Changeover Switches



Look at the benefits you reap when select L&T's motorised changeover switches:

- No increase in panel area
- Product operating life that's double the IEC standard
- A manual override feature for operator safety
- Two operating options: Manual and Auto
- Built in 2 sets of Aux Contacts
- Padlocking in OFF position in both modes
- Automatic control using controller

What's more, if you have a manual switch, our motorised kit lets you upgrade it. So you save time, you save money, and you gain a host of benefits.

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On Load Changeover Switch - Disconnectors

Changeover switch-disconnector (Conforms to IEC 60947-3, IS/IEC 60947-3)

Features offered by Manual Changeover

- Range 63A to 2000A, 415V, AC 23A, 4P
- Site convertible fuse version for open execution
- Site convertible dual shaft position
- SS enclosure version does not require separate cable gland box
- Staggered terminals



Open execution



SS enclosure



Motorised Changeover

Features offered by Motorised Changeover

- Range 125 A to 2000A, 415V, AC 23A, 4P (Control Voltage 240 Vac)
- No change in HxWxD dimension of motorised and manual changeover switch
- Padlocking in OFF position
- Option for selection between manual and auto mode

Inbuilt 2 C/O Auxiliary Contact across the range

Size	Rated Current (A)	Type	Manual Changeover Open Execution		Manual Changeover In Sheet Steel Enclosure#		Motorised Changeover Open Execution		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	
Fr 1	63	CO1-63	CO106300000	4340	CO106300S00	6210	-	-	1
	63	CO1-63	CO10630000D ▲	4070					
	100	CO1-100	CO110000000	5750					
	100	CO1-100	CO11000000D ▲	5320					
Fr 2	125	CO2-125	CO212500000	8660	CO212500S00	11670	CK90161B000	29050	1
	160	CO2-160	CO216000000	9460					
	200	CO2-200	CO22000000A	10600					
	200	CO2-200 \$	CO220000000 \$	11410					
Fr 3	250	CO3-250	CO325000000	16450	CO325000S00	20510	CK90164B000	38500	1
	315	CO3-315	CO331500000	17410					
Fr 4	400	CO4-400	CO440000000	25440	CO440000S00	31370	CK90166B000	49350	1
	630	CO4-630	CO463000000	29970					
Fr 5	630	CO5-630 \$	CO563000000 \$	31050	-	-	CK90168B000	55650	1
	800	CO5-800	CO580000000	44870	CO580000S00	54090	CK90169B000	79950	1
	1000	CO5-1000	CO510000000	75290	CO510000S00	95040	CK90170B000	103920	1
Fr 6	1250	CO6-1250	CO612500000	93500	-	-	*	*	1
	1600	CO6-1600	CO616000000	109450	-	-	*	*	1
	2000	CO6-2000	*	*	-	-	*	*	1

▲ Direct handle version # All sheet steel enclosure version are with extended handle switch * Available on request
 \$ CO5-630 Changeover switch is suitable for fuse mounting kit CX563000ODO
 CO2-200 Changeover switch is suitable for fuse mounting kit CX220000ODO

Spares & Accessories for Manual Changeover S-D



Auxiliary Contact



Operating Handle (63A to 200A)



Flip-able Handle (250A to 2000A)



Castell Type Lock

Description	Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Auxiliary Contact Kit (2 sets of C/O contact)	CO1-(63-100A)	CX100020000	230	1
	CO2-(125-200A)	CX200020000	450	1
	CO3-(250-315A)	CX300020000	660	1
	CO4-(400-630A)	CX400020000	700	1
	CO5-(800-1000A)	CX500020000	800	1
	CO6-(1250-2000A)	CX600020000	850	1
Operating Handle	CO1-(63-100A)	CX100010000	450	1
Operating Handle Kit (handle + shaft + center bush + bush cip)	CO2-(125-200A)	CX300010000	800	1
	CO3-(250-315A)	CK903920000	1050	1
	CO4-(400-630A)	CX400010000	1050	1
	CO5-(800-1000A)	CX500010000	1150	1
Operating Handle	CO6-(1250-2000A)	CX600010000	1250	1
Castell Type Lock	CO-(125-1000A)	CX400040000	1550	1
	CO6-(1250-2000A)	CX600040000	1550	1
Output shorting link	CO1-(63-100A) Top Side	CX10005000T	500	1
	CO1-(63-100A) Bottom Side	CX10005000B	500	1

Spares & Accessories for Motorised Changeover S-D



Illuminated Push Button assembly



AST Controller with wire harness



AuxC-1000L controller with wire harness

Description	Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Control Accessories	Illuminated Push Button assembly with Wire harness	CK901950000	2100	1
	AST Controller with wire harness	CK901920000	13000	1
	AuxC-1000L controller with wire harness	ST800240000	43770	1
Operating Handle	C/O Frame 2 & 3 (125-315A)	CK903740000	800	1
	C/O Frame 4 & 5 (400-1000A)	CK903780000	1050	1
	C/O Frame 6 (1250-2000A)	CK906450000	1250	1

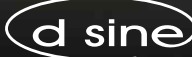
Fuse Mountable Kit



Description	Suitable fuse-link	Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Fuse Mountable Kit	HF 14x51	CO1-63	CX106300OCO	1160	1
	HN Size 000	CO2-125	CX212500ODO	2820	1
	HN Size 00	CO2-160	CX216000ODO	3740	1
	HN Size 0	CO2-200	CX220000ODO	4770	1
	HN Size 1	CO3-250	CX325000ODO	5120	1
	HN Size 1	CO3-315	CX331500ODO	5360	1
	HN Size 2	CO4-400	CX440000ODO	7820	1
	HN Size 3	CO5-630	CX563000ODO	16890	1
	HN Size 3	CO5-800	CX580000ODO	18870	1



**Communication
Total Selectivity
Advanced Protections
Energy Metering**

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 **Range of MCCBs**


 **Range of MCCBs**

Range: 20A to 1250A

Breaking capacity: 25/36/50/70/100kA

Variants: 3P/4P

Our new advanced MTX3.0 release fosters Energy Management along with most advanced protections. It also enables communication of various parameters for this automation era.

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DU MCCB Range

DU With Thermal - Magnetic Release :

Rating (A)	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400
Icu (kA)															
10	DU100										DU125U				
18	DU100D										DU125D				
25											DU250C				
30	DU100H										DU125H				
36											DU250				
50														DU400N	

2 Pole MCCBs

DU100/DU125U MCCBs



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 16A to 125A, 2P
- Compact size
- SS Enclosure available

3 Pole MCCBs

DU100/DU125U MCCBs



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 16A to 125A, 3P
- Compact size
- SS Enclosure available

Type	Current Rating (A)	Breaking Capacity Icu (kA)	2 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	
DU100	16	AC : 25kA @ 240V AC, 50Hz DC : 10kA @ 125V DC, (2P in Series) L/R < 15 msec.	CM977950000	1230	1
	20		CM977960000	1230	1
	25		CM977970000	1230	1
	32		CM977980000	1230	1
	40		CM977990000	1230	1
	50		CM978000000	1230	1
	63		CM978010000	1230	1
	80		CM978020000	1340 ▲	1
	100		CM978030000	1340 ▲	1
DU125U	125		CM9096500LY	1900 ▲	1

Type	Current Rating (A)	Breaking Capacity Icu at 415V AC 50Hz. (kA)	3 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	
DU100	16	10	CM977510000	1680	1
	20		CM977520000	1680	1
	25		CM977530000	1680	1
	32		CM977540000	1680	5
	40		CM977550000	1680	1
	50		CM977560000	1680	1
	63		CM977570000	1680	5
	80		CM989210000	1840 ▲	1
	100		CM989220000	1840 ▲	5
DU125U	125		CM9032200LY	2600 ▲	1

▲- Spreader Terminals are included

Note: 2P in 3P frame size

DIN rail kit available as an accessory. Please refer DU100/DU125U accessories table on page no. 34

3 Pole / 4 Pole MCCBs

DU100D/DU125D MCCBs



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 20A to 125A, 3P & 4P
- Ics=100% of Icu
- Compact size
- SS Enclosure available
- Wide Range of snap fit Internal and External Accessories
- Adjustable Overload Setting: 0.8 - 1.0 x In

For motor back-up protection MCCB please refer page no.43

Type	Thermal Release Range (A)	Breaking Capacity Icu at 415V AC 50Hz. (kA)	3 Pole		4 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	
DU100D	16-20	18	CM9051700CO	3710	CM9051800CO	4740	1
	20-25		CM9051700DO	3710	CM9051800DO	4740	1
	25-32		CM9051700EO	3710	CM9051800EO	4740	1
	32-40		CM9051700FO	3710	CM9051800FO	4740	1
	40-50		CM9051700GO	3710	CM9051800GO	4740	1
	50-63		CM9051700HO	3710	CM9051800HO	4740	1
	63-80		CM9051700JO	3710	CM9051800JO	4740	1
	80-100		CM9051700KO	3710	CM9051800KO	4740	1
DU125D	100-125		CM9067600LO	3920	CM9067700LO	5300	1

Note: DIN rail kit available as an accessory. Please refer DU100D/DU125D accessories table on page no. 34

DU MCCB Range

2 Pole / 3 Pole / 4 Pole MCCBs

DU100H/DU125H MCCBs



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 20A to 125A, 2P, 3P & 4P
- Compact size
- SS Enclosure available
- Wide Range of snap fit Internal and External Accessories
- Adjustable Overload Setting: 0.8 - 1.0 x In

Type	Thermal Release Range (A)	Breaking Capacity Icu (kA)	2 Pole		Breaking Capacity Icu at 415V AC 50Hz. (kA)	3 Pole		4 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit		Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	
DU100H	16-20	AC : 65kA @ 240V AC, 50Hz	CM97898OOC2	3050	30	CM97894OOC2	4360	CM97933OOC2	5890	1
	20-25		CM97898OOD2	3050		CM97894OOD2	4360	CM97933OOD2	5890	1
	25-32		CM97898OOE2	3050		CM97894OOE2	4360	CM97933OOE2	5890	1
	32-40		CM97898OOF2	3050		CM97894OOF2	4360	CM97933OOF2	5890	1
	40-50	DC : 15kA @ 250V DC, (2P in Series) L/R < 15 msec.	CM97898OOG2	3050		CM97894OOG2	4360	CM97933OOG2	5890	1
	50-63		CM97898OOH2	3050		CM97894OOH2	4360	CM97933OOH2	5890	1
	63-80		CM97898OOJ2	3050		CM97894OOJ2	4360	CM97933OOJ2	5890	1
	80-100		CM97898OOK2	3050		CM97894OOK2	4360	CM97933OOK2	5890	1
New DU125H	100-125		CM91198OOL0	3920	New CM90678OOL0	4490	New CM90679OOL0	6120	1	

Note: 2P in 3P frame size
DIN rail kit available as an accessory. Please refer DU100H/DU125H accessories table on page no. 34

2 Pole / 3 Pole / 4 Pole MCCBs

DU250C/DU250/DU400N MCCBs



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 160A to 400A, 2P, 3P & 4P
- Compact size
- Wide Range of snap fit Internal and External Accessories
- Adjustable Overload Setting: 0.8 - 1.0 x In

For motor back-up protection MCCB please refer page no.43

Type	Thermal Release Range (A)	Breaking Capacity Icu (kA)	2 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	
New DU250	125-160	AC : 65kA @ 240V AC, 50Hz DC : 15kA for DU250 @250V DC & 25kA for DU400N @ 250V DC, (2P in Series) L/R < 15 msec.	CM90905OOMO	4620	1
	160-200		CM90905OONO	5340	1
	200-250		CM90905OOPO	5980	1
New DU400N	250-320		CM90886OOQO	10440	1
	320-400		CM90886OORO	10660	1

Note: 2P in 3P frame size

Type	Thermal Release Range (A)	Breaking Capacity Icu at 415V AC 50Hz. (kA)	3 Pole		4 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	
DU250C	125-160	25	CM90631OOMO	6070	CM90634OOMO	7600	1
	160-200		CM90631OONO	7000	CM90634OONO	8820	1
	200-250		CM90631OOPO	7840	CM90634OOPO	10270	1
DU250	125-160	36	CM98062O000	8030	CM98065O000	9770	1
	160-200		CM98061O000	10500	CM98065O000	13620	1
	200-250		CM98060O000	12130	CM98065OOPO	15760	1
DU400N	250-320	50	CM98402O0QO	14910	CM98404O0QO	18720	1
	320-400		CM98402OORO	15230	CM98404OORO	19040	1

Accessories for DU MCCBs

Accessories for DU100/DU125U MCCBs



Auxiliary Contact



Shunt Release

Description	Internal		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Auxiliary Contact			
1 C/O - Right	CM977810000	465	1
1 C/O - Left	CM977820000	465	1
Trip Alarm Contact			
1 C/O - Right	SL970370000	640	1
Shunt Release			
240/415V AC, 110 DC - Left	CM977830000	600	1

Note: All internal accessories & ROMs are common for 2P MCCBs



Spreader Terminals



Direct Rotary Handle



Extended Rotary Handle

Description	External		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Spreader Terminals			
2 Pole	CM977850002	160	Set of 4
3 Pole	CM977850000	230	Set of 6
Rotary Handle			
Direct	SL970440000	765	1
Extended	CM999180000	1460	1
DIN rail kit			
DU100/DU125U	CM909440000	60	1

Note: Phase Barriers are supplied along with MCCBs

Accessories for DU100D/DU125D/DU100H/DU125H/DU250C/DU250 MCCBs



Auxiliary Contact



ATAC



Shunt Release



UV Release

Description	Internal		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Auxiliary Contact			
1 C/O - Right	CM978860000	730	1
2 C/O - Right	CM978870000	1300	1
Trip Alarm Contact			
1 C/O - Right	CM978880000	730	1
2 C/O - Right	CM978890000	1300	1
Auxiliary + Trip Alarm Contact			
1 C/O + 1C/O - Right	CM978900000	1300	1
Shunt Release			
110V AC - Left	CM978830A00	1135	1
240/415V AC - Left	CM978830M00	1135	1
Under Voltage Release			
240V AC - Left	CM97892B000	1520	1



Spreader Terminals



Direct Rotary Handle



Extended Rotary Handle

Description	External			
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)	
Spreader Terminals				
DU100H - 2 Pole	CM977850002	160	Set of 4	
DU125H - 2 Pole	CM9119900LO	210	Set of 4	
DU250 - 2 Pole	CM909600000	850	Set of 4	
DU100D/DU100H - 3 Pole	CM977850000	230	Set of 6	
DU125D/DU125H - 3 Pole	CM9068700LO	300	Set of 6	
DU250C/DU250 - 3 Pole	ST980530000	1220	Set of 6	
DU100D/DU100H - 4 Pole	CM979210000	350	Set of 8	
DU125D/DU125H - 4 Pole	CM9068800LO	420	Set of 8	
DU250C/DU250 - 4 Pole	CM920070000	1480	Set of 8	
Rotary Handle				
DU100D/DU125D/	Direct	CM978950000	970	1
DU100H/DU125H		CM978960000	1460	1
DU250C/DU250	Direct	CM980400000	1035	1
	Extended	CM980410000	1480	1
DIN rail kit				
DU100D/DU125D/DU100H/DU125H	CM909440000	60	1	

Note: Phase Barriers are supplied along with MCCBs

Accessories for DU400N MCCBs



Auxiliary Contact



TAC



Shunt Release



UV Release

Description	Internal		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Auxiliary Contact			
1 C/O	CM998010000	860	1
2 C/O	CM998020000	1470	1
Trip Alarm Contact			
1 C/O - Right	CM998030000	860	1
Auxiliary + Trip Alarm Contact			
1 C/O + 1C/O - Right	CM998040000	1650	1
Shunt Release			
110/240/415V AC, 110/220V DC	CM998050000	2025 @	1
24V DC	CM989760400	2025 @	1
Under Voltage Release			
240V AC - Left	CM99986B000	2430	1



Spreader Terminals



Direct Rotary Handle



Extended Rotary Handle

Description	External		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Spreader Terminals			
2 Pole	CM909640000	1470	Set of 4
3 Pole	ST980650000	2100	Set of 6
4 Pole	ST980660000	3020	Set of 8
Rotary Handle			
Direct	CM998600000	1700	1
Extended	CM998610000	2720	1

Note: Phase Barriers are supplied along with MCCBs
All internal accessories & ROMs are common for 2P MCCBs
@ - 'NO' of control contactor to be connected in series for DC control supply

DH MCCB Range

DH/DL With Thermal - Magnetic Release :

Rating (A) Icu (kA)	16	20	25	32	40	50	63	80	100	125
25	DH100									
35	DH125									
50	DL100									



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 16A to 125A, 3P & 4P
- Ics = 100% Icu
- Adjustable thermal setting: 0.8-1.0 x In
- SS Enclosure available
- Wide Range of Internal and External Accessories

For motor back-up protection MCCB please refer page no.43

Type	Thermal Release Range (A)	Breaking Capacity Icu at 415V AC, 50Hz. (kA)	3 Pole		4 Pole		Std. Pkg. (Nos.)	
			Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit		
DH100	12-16	25	SL972010000	5300	SL985970000	7190	1	
	16-20		SL972020000	5300	SL985980000	7190	1	
	20-25		SL972030000	5300	SL985990000	7190	1	
	25-32		SL972040000	5300	SL986000000	7190	1	
	32-40		SL972050000	5300	SL986010000	7190	1	
	40-50		SL972060000	5300	SL986020000	7190	1	
	50-63		SL972070000	5300	SL986030000	7190	1	
	63-80		SL972080000	5300	SL986040000	7190	1	
	80-100		SL972090000	5590▲	SL986050000	7570▲	1	
DH125	12-16	35	SL986440000	6450	SL986110000	7630	1	
	16-20		SL986450000	6450	SL986120000	7630	1	
	20-25		SL986460000	6450	SL986130000	7630	1	
	25-32		SL986470000	6450	SL986140000	7630	1	
	32-40		SL986480000	6450	SL986150000	7630	1	
	40-50		SL986490000	6450	SL986160000	7630	1	
	50-63		SL986500000	6450	SL986170000	7630	1	
	63-80		SL986510000	6450	SL986180000	7630	1	
			80-100	SL986520000	7200▲	SL986190000	8540▲	1
			100-125	SL986530000	7340▲	SL986070000	8780▲	1

▲ - Spreader Terminals are included

DL MCCB Range



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 16A to 100A, 3P & 4P
- Ics = 100% Icu
- Adjustable thermal setting: 0.8-1.0 x In
- Wide Range of Internal and External Accessories
- For Icu=65 kA, please contact branch office

Type	Thermal Release Range (A)	Breaking Capacity Icu at 415V AC, 50Hz. (kA)	3 Pole		4 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	
DL100	12-16	50	SL978010000	9950	SL986200000	11410	1
	16-20		SL978020000	9950	SL986210000	11410	1
	20-25		SL978030000	9950	SL986220000	11410	1
	25-32		SL978040000	9950	SL986230000	11410	1
	32-40		SL978050000	9950	SL986240000	11410	1
	40-50		SL978060000	9950	SL986250000	11410	1
	50-63		SL978070000	9950	SL986260000	11410	1
	63-80		SL978080000	9950	SL986270000	11410	1
			80-100	SL978090000	11000▲	SL986280000	12590▲

▲ - Spreader Terminals are included

DTH MCCB Range

DTH With Thermal - Magnetic Release :



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Suitable for distribution & induction furnace application
- Rugged construction
- Adjustable thermal setting : 600 - 800A
- Adjustable magnetic setting : 2600 - 6400A

3 Pole (for Distribution Application)					
Type	Thermal Release Range (A)	Breaking Capacity Icu at 415V, 50Hz (kA)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
DTH800	600-800	50	SL944720000	42055	1

3 Pole (for Induction Furnace Application)						
Type	Current Rating (A)	Instantaneous Setting (A)	Breaking Capacity Icu at 415V, 50Hz (kA)	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
DTH800 - Instantaneous	250	360	50	SB950520000	42055	1
	400	550	50	SB950530000	42055	1
	630	850	50	SB950540000	42055	1
	800	1050	50	SB950550000	42055	1

Accessories for DH100/DH125, DL100 MCCBs



Auxiliary Contact



TAC



Shunt Release



UV Release



Spreader Terminal



Extended Rotary Handle

Description	Internal		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Auxiliary Contact			
1 C/O - Right	SL972960000	805	1
1 C/O - Left	SL972970000	805	1
Trip Alarm Contact			
1 C/O - Right	SL972980000	805	1
Shunt Release			
110/240/415V AC - Left	SL972990M00	1070	1
24V DC - Left	SL972990400	1070	1
Under Voltage Release			
240V AC - Left	SL976110000	1410	1

Description	External		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Spreader Terminals			
3 Pole	ST980470000	370	Set of 6
4 Pole	ST980600000	485	Set of 8
Rotary Handle			
Extended	CM991030000	1450	1

Note: Phase Barriers are supplied along with MCCBs

Accessories for DTH 800 MCCBs



UV Release



Shunt Release



Auxiliary Contact



Extended Rotary Handle

Description	Internal		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Auxiliary Contact			
2 C/O	SL942170000	1590	1
Shunt Release			
415V AC, 220V DC - Right	SL985260000	1995	1
240V AC, 110V DC - Right	SL985340000	1995	1
Under Voltage Release			
415V AC - Left	SL985480000	1995	1
240V AC - Left	SL985450000	1995	1
110V AC - Left	SL985430000	1995	1

Description	External		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Extension Link			
3 Pole	ST306580000	3000	Set of 6
Rotary Handle			
Extended	CM998980000	2655	1

Note: For (DTH800+TAC), please contact nearest branch office

SS Enclosure for DU / DH



DU SS Enclosure

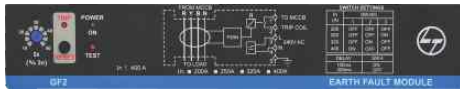


DH SS Enclosure

Description	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
DU100/DU125U SS Enclosure	ST980500000	785	1
DU100D/DU125D/DU100H/DU125H SS Enclosure	ST420210000	810	1
DH100/DH125 SS Enclosure	ST299670000	1510	1

Note : Suitable for 3P MCCBs

Ground Fault Module



- Provides protection against ground fault
- GF Module for ground fault protection can be used with all Thermal Magnetic MCCBs
- Adjustable ground fault sensitivity selection: 10% - 50% of In
- Adjustable time delay: 100ms / 200ms
- Test facility to check healthiness of ground fault protection system without tripping MCCB
- Suitable for 3 phase 3 wire & 3 phase 4 wire electrical distribution network with cable termination
- LED for earth fault indication

Ground Fault Protection					
Type	Range (A)	Cat. No.	M.R.P. (₹) Per Unit	CT	Std. Pkg. (Nos.)
GF1	100 - 200A	ST277450000	6035	Built in CBCT	1
GF2	250 - 400A	ST277460000	9175	Built in CBCT	1
GF11	up to 800A	ST285940000	5500 #	External CT required	1

External CTs of 5P10 class with secondary rating of 1A or 5A



DN4



DN3



DN3B



DN2



DN1



DN0

d sine With Thermal - Magnetic Release :

Rating (A) Icu (kA)	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	
25	DN0-100C																
25/50										DN1							
36	DN0-100D/125D											DN3B					
36/50/70										DN2				DN3			



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 20A to 630A, 3P & 4P
- Choice of 25kA / 36kA / 50kA / 70kA breaking capacities
- Ics = 100% Icu*
- Suitable for Isolation
- Adjustable Over Load setting: 0.8 - 1.0 x In
- Adjustable Short Circuit setting: 6 - 10 x In**
- Manual, Rotary or Motorised versions available @
- Wide Range of snap fit Internal and External Accessories

Type	Thermal Release Range (A)	Breaking Capacity Icu at 415V AC, 50Hz. (kA)	3 Pole		4 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	
DN0-100D*	16-20	36	CM97893OOC2OG	5340	CM97919OOC2OG	7080	1
	20-25		CM97893OOD2OG	5340	CM97919OOD2OG	7080	1
	25-32		CM97893OOE2OG	5340	CM97919OOE2OG	7080	1
	32-40		CM97893OOF2OG	5340	CM97919OOF2OG	7080	1
	40-50		CM97893OOG2OG	5340	CM97919OOG2OG	7080	1
	50-63		CM97893OOH2OG	5340	CM97919OOH2OG	7080	1
	63-80		CM97893OOJ2OG	5340	CM97919OOJ2OG	7080	1
	80-100		CM97893OOK2OG	5340	CM97919OOK2OG	7080	1
New DN0-125D*	100-125		CM90680OOLOO	6530	CM90681OOLOO	8470	1
DN1-250N*	100 - 125	50	CM98608OOLO	10140	CM98613OOLO	12820	1
	125 - 160		CM98608OOMO	13060	CM98613OOMO	15600	1
	160 - 200		CM98608OONO	17270	CM98613OONO	22230	1
	200 - 250		CM98608OPO	20240	CM98613OPO	24080	1
DN0-100C	16-20	25	CM91612OOCOOG	6360	CM91712OOCOOG	8710	1
	20-25		CM91612OODOOG	6360	CM91712OODOOG	8710	1
	25-32		CM91612OOEOOG	6360	CM91712OOEOOG	8710	1
	32-40		CM91612OOF0OG	6360	CM91712OOF0OG	8710	1
	40-50		CM91612OOGOOG	6360	CM91712OOGOOG	8710	1
	50-63		CM91612OOHOOG	6360	CM91712OOHOOG	8710	1
	63-80		CM91612OOJOOG	6360	CM91712OOJOOG	8710	1
	80-100		CM91612OOKOOG	6360	CM91712OOKOOG	8710	1
DN1-250C	100-125		CM90638OOLO	9000	CM90642OOLO	11700	1
	125-160		CM90638OOMO	11800	CM90642OOMO	13800	1
	160-200		CM90638OONO	15000	CM90642OONO	19500	1
	200-250		CM90638OPO	17800	CM90642OPO	22300	1

For motor back-up protection MCCB please refer page no.43

Note: Breaking Capacity :
 C = 25kA, D = 36kA, N = 50kA, S = 70kA
 @ Motorised version available for DN2 and DN3 frames (please refer page No. 45)
 * DN0-100D/125D, DN1-250N: Ics = 50% Icu
 **For DN0, DN1, DN3B-Short Circuit Setting: 9In

dsine With Thermal - Magnetic Release :



For motor back-up protection MCCB please refer page no.43

Type	Thermal Release Range (A)	Breaking Capacity Icu at 415V AC, 50Hz. (kA)	3 Pole		4 Pole		Std. Pkg. (Nos.)	
			Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit		
DN2-250D	100-125	36	CM92008OOL1OG	10500	CM92108OOL1OG	12840	1	
	125-160		CM92008OOM1OG	13350	CM92108OOM1OG	15700	1	
	160-200		CM92009OON1OG	19300	CM92109OON1OG	23520	1	
	200-250		CM92009OOP1OG	21000	CM92109OOP1OG	25160	1	
DN3B-400D	250-320		CM98401OOQOOG	22580	CM98403OOQOOG	28350	1	
	320-400		CM98401OOROOG	23050	CM98403OOROOG	28810	1	
DN3-400D	250-320		CM94005OOQ1OG	25130	CM94105OOQ1OG	31480	1	
	320-400		CM94005OOR1OG	25340	CM94105OOR1OG	31760	1	
DN3-630D	400-500		CM94006OOS1OG	27460	CM94106OOS1OG	34980	1	
	500-630		CM94006OOT1OG	30480	CM94106OOT1OG	37640	1	
DN2-250N	100-125		50	CM92005OOL1OG	13170	CM92105OOL1OG	17060	1
	125-160			CM92005OOM1OG	16010	CM92105OOM1OG	19520	1
	160-200	CM92006OON1OG		21590	CM92106OON1OG	26990	1	
	200-250	CM92006OOP1OG		23210	CM92106OOP1OG	27840	1	
DN3-400N	250-320	CM94003OOQ1OG		26300	CM94103OOQ1OG	32500	1	
	320-400	CM94003OOR1OG		26390	CM94103OOR1OG	32950	1	
DN3-630N	400-500	CM94004OOS1OG		29850	CM94104OOS1OG	38620	1	
	500-630	CM94004OOT1OG		32310	CM94104OOT1OG	41370	1	
DN2-250S	100-125	70		CM92002OOL1OG	19450	CM92102OOL1OG	22130	1
	125-160			CM92002OOM1OG	22940	CM92102OOM1OG	27780	1
	160-200			CM92003OON1OG	25950	CM92103OON1OG	34030	1
	200-250			CM92003OOP1OG	27190	CM92103OOP1OG	34850	1
DN3-400S	250-320		CM94001OOQ1OG	31110	CM94101OOQ1OG	35920	1	
	320-400		CM94001OOR1OG	31260	CM94101OOR1OG	36050	1	
DN3-630S	400-500		CM94002OOS1OG	40270	CM94102OOS1OG	48870	1	
	500-630		CM94002OOT1OG	41570	CM94102OOT1OG	51880	1	

Note: Breaking Capacity - C = 25kA, D = 36kA, N = 50kA, S = 70kA

General Information

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

Special Applications

- dsine/DU MCCBs with TM release can be used for DC application (2P/3P/4P)
- dsine/DU MCCBs can be used for Capacitor back-up protection
- For Motor back-up protection, use 'M' series of MCCBs such as DN0-M, DN1-M, DN2-M, DN3-M
- For isolation, use SD version (without protection release)

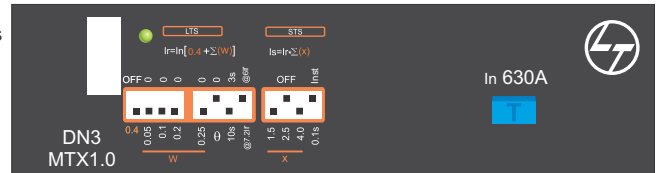
dsine With Microprocessor Release :

Rating (A) Icu (kA)	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	
36/50/70/100	DN2								DN3								
50/70/100													DN4				

dsine With Microprocessor Release MTX1.0 :



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 40A to 1250A, 3P & 4P
- Choice of 36kA / 50kA / 70kA / **100kA** breaking capacities
- Ics = 100% Icu
- Suitable for Isolation
- Adjustable Over Load from 0.4 - 1.0 x In
- Adjustable Short Circuit from 1.5 - 8 x Ir
- Inbuilt Instantaneous Protection
- Provision of Thermal Memory : ON/OFF
- Variable trip class at 7.2 Ir & 6 Ir
- Front LED indication of Over Load (Ready, Over load pre-alarm & Overload)
- Manual, Rotary or Motorised versions available @
- Wide Range of snap fit Internal and External Accessories



Type	Release Range (A)	Breaking Capacity Icu at 415V AC, 50Hz. (kA)	3 Pole		4 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	
DN2-250D	16 - 40	36	CM920630000X1	14310	CM921550000X1	18350	1
	25 - 63		CM920710000X1	14310	CM921540000X1	18350	1
	40 - 100		CM920510000X1	14310	CM921530000X1	18350	1
	63 - 160		CM920740000X1	17500	CM921520000X1	23750	1
	100 - 250		CM920540000X1	23810	CM921510000X1	31060	1
DN3-400D	160 - 400		CM930010000X1	28640	CM930030000X1	35720	1
DN3-630D	250 - 630		CM930050000X1	31440	CM930070000X1	41680	1
DN2-250N	16 - 40	50	CM920640000X1	17000	CM921600000X1	20910	1
	25 - 63		CM920720000X1	17000	CM921590000X1	20910	1
	40 - 100		CM920520000X1	17000	CM921580000X1	20910	1
	63 - 160		CM920750000X1	21410	CM921570000X1	26570	1
	100 - 250		CM920550000X1	26730	CM921560000X1	34550	1
DN3-400N	160 - 400		CM930020000X1	31480	CM930040000X1	40210	1
DN3-630N	250 - 630		CM930060000X1	34220	CM930080000X1	44660	1
DN4-1250N	320 - 800		CM960210000X1	52530	CM961110000X1	65290	1
	400 - 1000		CM960220000X1	79460	CM961120000X1	112740	1
	500 - 1250		CM960230000X1	97220	CM961130000X1	143770	1
DN2-250S	16 - 40	70	CM920650000X1	20200	CM921650000X1	25480	1
	25 - 63		CM920730000X1	20200	CM921640000X1	25480	1
	40 - 100		CM920590000X1	20200	CM921630000X1	25480	1
	63 - 160		CM920760000X1	27240	CM921620000X1	34760	1
	100 - 250		CM920560000X1	33660	CM921610000X1	39420	1
DN3-400S	160 - 400		CM940530000X1	40080	CM941530000X1	50390	1
DN3-630S	250 - 630		CM940790000X1	43560	CM941790000X1	55730	1
DN4-1250S	320 - 800		CM960250000X1	69650	CM961150000X1	85730	1
	400 - 1000		CM960260000X1	100030	CM961160000X1	142930	1
	500 - 1250		CM960270000X1	124770	CM961170000X1	171460	1

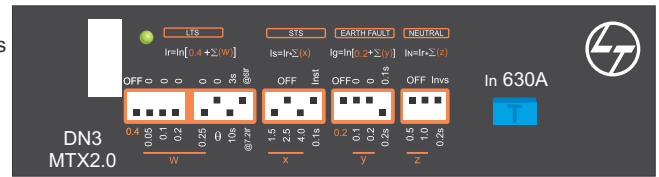
For Icu=Ics=100kA, please contact branch office

Note: dsine-V Version (Icu=Ics=100kA) MCCBs are available on request.
 @ Motorised version available for DN2 and DN3 frames (please refer page No. 45)

d sine With Microprocessor Release MTX2.0 :



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 40A to 1250A, 3P & 4P
- Choice of 36kA / 50kA / 70kA / 100kA breaking capacities
- Ics = 100% Icu
- Suitable for Isolation
- Adjustable Over Load from 0.4 - 1.0 x In
- Adjustable Short Circuit from 1.5 - 8 x Ir
- Inbuilt Instantaneous Protection
- Inbuilt ground fault protection from 20% - 50% of In
- Adjustable neutral overload protection available : 50% to 150% of Ir
- Provision of Thermal Memory : ON/OFF
- Variable trip class at 7.2 Ir & 6 Ir
- Front LED indication of Over Load (Ready, Over load pre-alarm & Overload)
- Panel mounted display available for Current metering & trip record
- Manual, Rotary or Motorised versions available @
- For 3 phase 4 wire system, External neutral CTs available for 3P MCCBs
- Wide Range of snap fit Internal and External Accessories



Type	Release Range (A)	Breaking Capacity Icu at 415V AC, 50Hz. (kA)	3 Pole		4 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	
DN2-250D	16 - 40	36	CM920630000AG	24900	CM921550000AG	28910	1
	25 - 63		CM920710000AG	24900	CM921540000AG	28910	1
	40 - 100		CM920510000AG	24900	CM921530000AG	28910	1
	63 - 160		CM920740000AG	28510	CM921520000AG	35350	1
	100 - 250		CM920540000AG	33700	CM921510000AG	41480	1
DN3-400D	160 - 400		CM930010000AG	39720	CM930030000AG	46430	1
DN3-630D	250 - 630		CM930050000AG	42790	CM930070000AG	52950	1
DN2-250N	16 - 40	50	CM920640000AG	27310	CM921600000AG	31510	1
	25 - 63		CM920720000AG	27310	CM921590000AG	31510	1
	40 - 100		CM920520000AG	27310	CM921580000AG	31510	1
	63 - 160		CM920750000AG	32290	CM921570000AG	38480	1
	100 - 250		CM920550000AG	35650	CM921560000AG	44700	1
DN3-400N	160 - 400		CM930020000AG	41260	CM930040000AG	49230	1
DN3-630N	250 - 630		CM930060000AG	45650	CM930080000AG	59010	1
DN4-1250N	320 - 800		CM960210000AG	76040	CM961110000AG	87740	1
	400 - 1000		CM960220000AG	97280	CM961120000AG	130170	1
	500 - 1250		CM960230000AG	113930	CM961130000AG	163040	1
DN2-250S	16 - 40	70	CM920650000AG	32310	CM921650000AG	37400	1
	25 - 63		CM920730000AG	32310	CM921640000AG	37400	1
	40 - 100		CM920590000AG	32310	CM921630000AG	37400	1
	63 - 160		CM920760000AG	40570	CM921620000AG	49250	1
	100 - 250		CM920560000AG	45520	CM921610000AG	54640	1
DN3-400S	160 - 400		CM940530000AG	51550	CM941530000AG	63250	1
DN3-630S	250 - 630		CM940790000AG	58430	CM941790000AG	80290	1
DN4-1250S	320 - 800		CM960250000AG	87440	CM961150000AG	102770	1
	400 - 1000		CM960260000AG	120240	CM961160000AG	160880	1
	500 - 1250		CM960270000AG	139990	CM961170000AG	190960	1

For Icu=Ics=100kA, please contact branch office

Note: dsine-V Version (Icu=Ics=100kA) MCCBs are available on request.
 @ Motorised version available for DN2 and DN3 frames (please refer page No. 45)

Modules for MTX2.0 release	Cat. No.	M.R.P. (₹) Per Unit
Current Metering Module (Display & Metering Module)	CM956980000	10000
Cable (2m length)	CM011960000	1000
Power Supply Module	CL907220000	*
UNCO Module for Status Indication & Control through communication	CL908520000	9000

* Available on request

Current Metering & latest trip record



Display Module



Metering Module



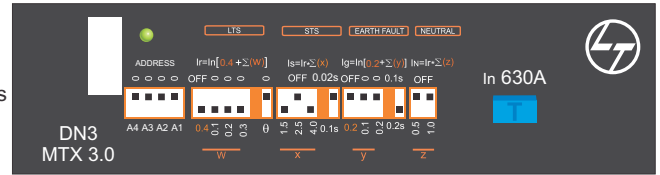
MTX2.0 with current metering module

d sine With Microprocessor Release MTX3.0 :

New



- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Range: 40A to 1250A, 3P & 4P
- Choice of 36kA / 50kA / 70kA / **100kA** breaking capacities
- $I_{cs} = 100\% I_{cu}$
- Suitable for Isolation
- Adjustable Over Load from 0.4 - 1.0 x I_n
- Adjustable Short Circuit from 1.5 - 8 x I_r with selectable time delay
- Instantaneous protection with fine settings
- Inbuilt ground fault protection from 10% - 50% of I_n
- Adjustable neutral overload protection available : 50% to 150% of I_r
- Advanced Current, Voltage, Frequency & Power based protections
- Other Protections like Maximum Demand, Phase Sequence, THD etc.
- Comprehensive Current, Power, Energy, PF, MD, THD metering
- Provision of Thermal Memory : ON/OFF
- Variable trip class at 1.5 I_r , 6 I_r & 7.2 I_r
- Front LED indication of Over Load (Ready, Over load pre-alarm & Overload)
- Panel mounted display available for advanced protections & metering
- Communication capable release
- Manual, Rotary or Motorised versions available @
- For 3 phase 4 wire system, External neutral CTs available for 3P MCCBs
- Wide Range of snap fit Internal and External Accessories



Type	Release Range (A)	Breaking Capacity I_{cu} at 415V AC, 50Hz. (kA)	3 Pole		4 Pole		Std. Pkg. (Nos.)
			Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	
DN2-250D	16 - 40	36	CM920630000BG	*	CM921550000BG	*	1
	25 - 63		CM920710000BG		CM921540000BG		1
	40 - 100		CM920510000BG		CM921530000BG		1
	63 - 160		CM920740000BG		CM921520000BG		1
	100 - 250		CM920540000BG		CM921510000BG		1
DN3-400D	160 - 400		CM930010000BG		CM930030000BG		1
DN3-630D	250 - 630		CM930050000BG		CM930070000BG		1
DN2-250N	16 - 40	50	CM920640000BG	*	CM921600000BG	*	1
	25 - 63		CM920720000BG		CM921590000BG		1
	40 - 100		CM920520000BG		CM921580000BG		1
	63 - 160		CM920750000BG		CM921570000BG		1
	100 - 250		CM920550000BG		CM921560000BG		1
DN3-400N	160 - 400		CM930020000BG		CM930040000BG		1
DN3-630N	250 - 630		CM930060000BG		CM930080000BG		1
DN4-1250N	320 - 800		CM960210000BG		CM961110000BG		1
	400 - 1000		CM960220000BG		CM961120000BG		1
	500 - 1250		CM960230000BG		CM961130000BG		1
DN2-250S	16 - 40	70	CM920650000BG	*	CM921650000BG	*	1
	25 - 63		CM920730000BG		CM921640000BG		1
	40 - 100		CM920590000BG		CM921630000BG		1
	63 - 160		CM920760000BG		CM921620000BG		1
	100 - 250		CM920560000BG		CM921610000BG		1
DN3-400S	160 - 400		CM940530000BG		CM941530000BG		1
DN3-630S	250 - 630		CM940790000BG		CM941790000BG		1
DN4-1250S	320 - 800		CM960250000BG		CM961150000BG		1
	400 - 1000		CM960260000BG		CM961160000BG		1
	500 - 1250		CM960270000BG		CM961170000BG		1

For $I_{cu}=I_{cs}=100kA$, please contact branch office

Note: dsine-V Version ($I_{cu}=I_{cs}=100kA$) MCCBs are available on request.
 @ Motorised version available for DN2 and DN3 frame.

Modules for MTX3.0 release	Cat. No.	M.R.P. (₹) Per Unit
Communication Module	CM956800000	*
Voltage Module	CM956850000	
Display Module	CM956760000	
Power Supply Module	CL907220000	
UNCO Module for Status Indication & Control through communication	CL908520000	9000

* Available on request

MCCB with MTX3.0 release



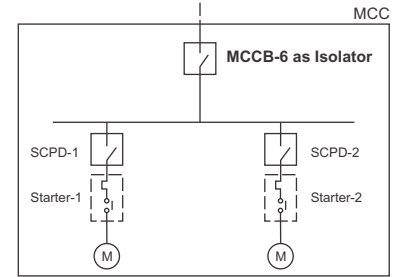
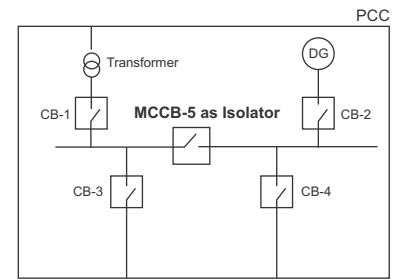
MTX3.0 with all modules

d sine Switch Disconnecter - SD (MCCBs without protection release):



- Used as switching devices for isolation
- Range: 32A to 1250A, 3P & 4P
- Suitable for isolation
- Wide Range of snap fit Internal and External Accessories

Type	Current Rating (A)	3 Pole		4 Pole		Std. Pkg. (Nos.)
		Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	
DN0-160SD	32	CM907160OEO	4500	CM907170OEO	5850	1
	63	CM907160OHO	4500	CM907170OHO	5850	1
	100	CM907160OKO	5450	CM907170OKO	7090	1
	125	CM907160OLO	5950	CM907170OLO	7740	1
	160	CM907160OMO	6450	CM907170OMO	8390	1
DN2-250SD	200	CM968140ONOOG	13510	CM968150ONOOG	17060	1
	250	CM968020OPOOG	13870	CM968030OPOOG	18070	1
DN3B-400SD	320	CM984100OQOOG	16800	CM984120OQOOG	21840	1
	400	CM984100OROOG	18900	CM984120OROOG	23630	1
DN3-400SD	320	CM968040OQOOG	19240	CM968050OQOOG	26310	1
	400	CM968040OROOG	20610	CM968050OROOG	27480	1
DN3-630SD	500	CM968060OSOOG	22440	CM968070OSOOG	29320	1
	630	CM968060OTOOG	23130	CM968070OTOOG	31020	1
DN4-1250SD	800	CM930410OUO	51430	CM930420OUO	64820	1
	1000	CM930410OVO	69490	CM930420OVO	90100	1
	1250	CM930410OAO	85950	CM930420OAO	120360	1

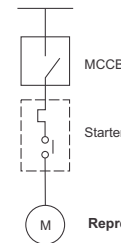


Representative Application Image

d sine MCCBs for Motor back-up Protection:



- Range: 32A to 630A, 50kA
- Suitable for isolation
- Wide Range of snap fit Internal and External Accessories



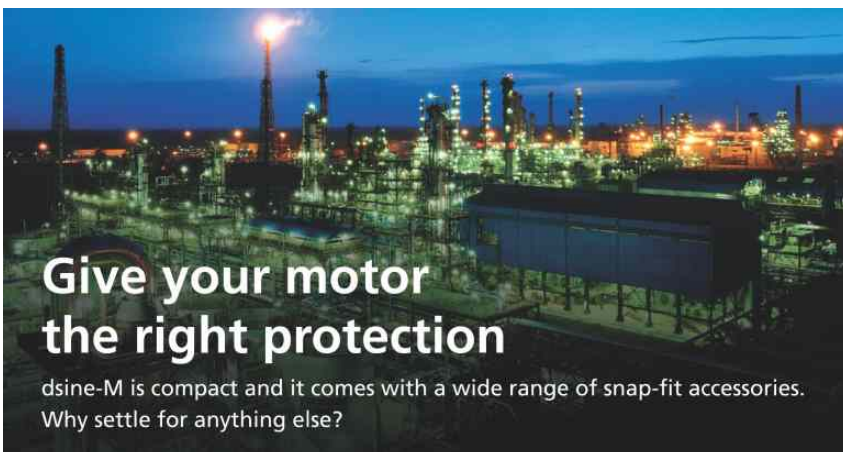
Representative Application Image

Type	Current Rating (A)	Breaking Capacity Icu at 415V. AC, 50Hz. (kA)	3 Pole		
			Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
DN0-100M	32	50	CM989440OEO	4830	1
	40		CM989440OFO	4830	1
	50		CM989440OGO	4830	1
	63		CM989440OHO	4830	1
	80		CM989440OJO	4830	1
	100		CM989440OKO	4830	1
DN1-160M	100	CM903450OKO	7730	1	
	125	CM903450OLO	8240	1	
	160	CM903450OMO	9790	1	

Type	Current Rating (A)	Breaking Capacity Icu at 415V. AC, 50Hz. (kA)	3 Pole		
			Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
DN2-250M	200	50	CM921710ONOOG	13330	1
	250		CM921710OPOOG	16970	1
DN3-400M	320		CM945160OQOOG	19720	1
	400		CM945160OROOG	20890	1
DN3-630M	500		CM945150OSOOG	24620	1
	630		CM945150OTOOG	25030	1

Note: Please contact nearest branch office for fuseless type 2 co-ordination selection chart

For lower HP motors, Please select MPCB. Details are given on page no. 16



Give your motor the right protection

dsine-M is compact and it comes with a wide range of snap-fit accessories. Why settle for anything else?



d sine
dsine-M range

Automatic Source Transfer System

- Stored Energy operated
- Automatic / Manual control of power supply source
- Set-up data programming
- Virtual front panel viewing with key activation feature
- Programmable I/Os
- Test function
- LED display
- Voltage and Frequency display
- Inbuilt UV protection
- Inbuilt phase unbalance protection



2 dsine MCCBs + 2 SE-EOM + 2 UV + 1 MIL kit

ASTS with Thermal - Magnetic Releases

Frame	Current Rating (A)	Breaking Capacity Icu at 415V AC, 50Hz. (kA)	3 Pole	4 Pole
			M.R.P. (₹) Per Unit	M.R.P. (₹) Per Unit
DN2	100	36	114240	119080
	160		121280	125980
	250		136580	144900
DN2	100	50	118020	123980
	160		126600	133620
	250		141000	150260
DN3	400	70	155310	168150
	630		169250	187370
DN2	160	70	140460	150140
	250		148960	164280
DN3	400	70	167150	176730
	630		187770	208390

Auto Source Transfer Controller

Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
AuXC-1000L	ST800240000	43770	1
AuXC-1000	ST802300000	52745	1

Can be used along with OMEGA, dsine MCCBs, MCX contactors & Motorised Changeover switches

ASTS with Microprocessor Release MTX1.0

Frame	Current Rating (A)	Breaking Capacity Icu at 415V AC, 50Hz. (kA)	3 Pole	4 Pole
			M.R.P. (₹) Per Unit	M.R.P. (₹) Per Unit
DN2	100	36	123200	131280
	160		129580	142080
	250		142200	156700
DN2	100	50	128580	136400
	160		137400	147720
	250		148040	163680
DN3	400	70	167590	185050
	630		173070	193950
DN2	160	70	149060	164100
	250		161900	173420
DN3	400	70	184790	205410
	630		191750	216090

ASTS with Microprocessor Release MTX2.0

Frame	Current Rating (A)	Breaking Capacity Icu at 415V AC, 50Hz. (kA)	3 Pole	4 Pole
			M.R.P. (₹) Per Unit	M.R.P. (₹) Per Unit
DN2	100	36	144380	152400
	160		151600	165280
	250		161980	177540
DN2	100	50	149200	157600
	160		159160	171540
	250		165880	183980
DN3	400	70	187150	203090
	630		195930	222650
DN2	160	70	175720	193080
	250		185620	203860
DN3	400	70	207730	231130
	630		221490	265210

ASTS MRP consists of the following products: 2 dsine MCCBs, 2 SE-EOMs, 2 UV release, 2 Aux + Trip Alarm contact, 1 MIL Kit & 1 AuXC-1000L Controller
For ASTS with AuXC-1000 please add ₹ 8975 to the above MRP

Note: Picture shown is for representation purpose only, MCCB + EOM + UV combination, MIL kit & AuXC-1000L to be purchased separately & assembled at site.

Accessories for MCCBs



Auxiliary Contact



TAC



Shunt Release



UV Release

Description	Internal		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Auxiliary Contact			
DN0, DN1 - 1 C/O - Right	CM97886O000	730	1
DN0, DN1 - 2 C/O - Right	CM97887O000	1300	1
DN2, DN3B, DN3, DN4 - 1 C/O	CM99801O000	860	1
DN2, DN3B, DN3, DN4 - 2 C/O	CM99802O000	1470	1
Trip Alarm Contact			
DN0, DN1 - 1 C/O - Right	CM97888O000	730	1
DN0, DN1 - 2 C/O - Right	CM97889O000	1300	1
DN2, DN3B, DN3, DN4 - 1 C/O - Right	CM99803O000	860	1
Auxiliary 1 C/O + TAC 1 C/O			
DN0, DN1 - Right	CM97890O000	1300	1
DN2, DN3B, DN3, DN4 - Right	CM99804O000	1650	1
Shunt Release			
DN0, DN1 - 110V AC - Left	CM97883OAOO	1135	1
DN0, DN1 - 240/415V AC - Left	CM97883OMOO	1135	1
DN2, DN3B, DN3, DN4 - 110/240/415V AC, 110/220V DC	CM99805O000	2025@	1
DN2, DN3B, DN3 - 24V DC	CM98976O4OO	2025@	1
Under Voltage Release			
DN0, DN1 - 240V AC - Left	CM97892BOOO	1520	1
DN2, DN3B, DN3 - 240V AC - Left	CM99986BOOO	2430**	1
DN4 - 240V AC - Left	CM99906O000	2640**	1

New

@ - 'NO' of control contactor to be connected in series for DC control supply
 ** - Use these UV Cat. Nos. with Grey look MCCBs only



Neutral CT



Adaptor kit for NCT

Description	External		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
External Neutral CT			
DN2 - 40A	CM99946O000	1400	1
DN2 - 63A	CM99947O000	1400	1
DN2 - 100A	CM99948O000	1400	1
DN2 - 160A	CM99949O000	2000	1
DN2 - 250A	CM99950O000	2000	1
DN3 - 400A	CM99954O000	3700	1
DN3 - 630A	CM99955O000	3700	1
DN4 - 800A	CM99889O000	5500	1
DN4 - 1000A	CM99890O000	5500	1
DN4 - 1250A	CM99891O000	5775	1
Adaptor kit for External Neutral CT			
DN2 - 250	CM99994O000	475	Set of 2
DN3 - 400	CM99995O000	985	Set of 2
DN3 - 630	CM99997O000	1000	Set of 2
DN4 - 800	CM99996O000	1680	Set of 2
DN4 - 1000	CM90966O000	3360	Set of 4
DN4 - 1250	CM99998O000	6250	Set of 2
Stored Energy Electrical Operating Mechanism			
DN2 - 240V AC	*		
DN3 - 240V AC			

* Available on request



Direct Rotary Handle



Extended Rotary Handle



Key Lock

Description	External		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Rotary Handle			
DN0 Direct	CM97895O000	970	1
DN1 Direct	CM98040O000	1035	1
DN2 Direct	CM99829O000	1115	1
DN3B, DN3 Direct	CM99860O000	1700	1
DN0 Extended	CM97896O000	1460	1
DN1 Extended	CM98041O000	1480	1
DN2 Extended	CM99830O000	1675	1
DN3B, DN3 Extended	CM99861O000	2720	1
DN4 Extended	CM99884O000	3590	1
Panel door mounted Key lock for Extended Rotary Handle #			
Type 1	CM99958TO000	1475	1
Type 2	CM99958TO00A	1475	1
Type 3	CM99958TO00B	1475	1
Type 12	CM99958TO00C	1475	1
Type 23	CM99958TO00D	1475	1

- Can be used with dsine, DU, DH/DL, DTH new look extended ROM



Spreader Terminals



MIL Kit - Base Mounted

Description	External		
	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Spreader Terminals			
DN0-100 - 3 Pole	CM97785O000	230	Set of 6
DN0-125D - 3 Pole	CM90687O0LO	300	Set of 6
DN1, DN2 - 250 - 3 Pole	ST98053O000	1220	Set of 6
DN3B/DN3-400 - 3 Pole	ST98065O000	2100	Set of 6
DN3-630 - 3 Pole	ST98054O000	2365	Set of 6
DN4-800 - 3 Pole	CM91161OOUO	4795	Set of 6
DN4-1000 - 3 Pole	CM91161OOVO	9590	Set of 12
DN4-1250 - 3 Pole	CM91161OAOO	17355	Set of 6
DN0-100 - 4 Pole	CM97921O000	350	Set of 8
DN0-125D - 4 Pole	CM90688O0LO	420	Set of 8
DN1, DN2 - 250 - 4 Pole	CM92007O000	1480	Set of 8
DN3B/DN3-400 - 4 Pole	ST98066O000	3020	Set of 8
DN3-630 - 4 Pole	CM92004O000	3545	Set of 8
DN4-800 - 4 Pole	ST90362O000	6240	Set of 8
DN4-1000 - 4 Pole	CM90064O0VO	12480	Set of 16
DN4-1250 - 4 Pole	ST98058O000	22920	Set of 8
Mechanical Interlock Kit - Base Plate			
DN2-250	CM99731O000	3950	1
DN3-400	CM99732O000	6000	1
DN3-630	CM99854O000	6000	1
DIN rail kit			
DN0	CM90944O000	60	1

Note: Phase Barriers are supplied along with MCCBs



Features

- Compliance with latest standard - IEC 61439-2
- Rating upto 630 A
- Higher withstand capacity upto 36 kA for 1 s
- Metering & cabling extensions are available as accessories
- Ready to use, off the shelf solution
- Choice of number of outgoing ways of 4,8 and 12
- Ingress protection upto IP 43
- Suitable for dsine range of MCCBs

Ordering Details

Description	Cat. No.	M.R.P. (₹) Per Unit	Height (H) (mm)	Width (W) (mm)	Depth (D) (mm)
SMDB - TN250D, O/G 100A 4 ways	DA20D1044CZZ0	38000	637	670	208.5
SMDB - TN250D, O/G 100A 8 ways	DA20D1084CZZ0	46000	787	670	208.5
SMDB - TN250D, O/G 100A 12 ways	DA20D1124CZZ0	59000	937	670	208.5
SMDB - TN400D, O/G 100A 4 ways	DA40D1044CZZ0	43000	937	670	208.5
SMDB - TN400D, O/G 100A 8 ways	DA40D1084CZZ0	49000	1087	670	208.5
SMDB - TN400D, O/G 100A 12 ways	DA40D1124CZZ0	63000	1237	670	208.5
SMDB - TN630D, O/G 100A 4 ways	DA60D1044CZZ0	* Available on request			
SMDB - TN630D, O/G 100A 8 ways	DA60D1084CZZ0				
SMDB - TN630D, O/G 100A 12 ways	DA60D1124CZZ0				

Incoming Device		
SMDB Type	Description	FG Cat. No.
SMDB TN250D	DN1-250N 3 Pole MCCB - 160A	CM98608OOMO
	DN1-250N 3 Pole MCCB - 200A	CM98608OONO
	DN1-250N 3 Pole MCCB - 250A	CM98608OPO
SMDB TN400D	DN3-400D 3 Pole MCCB - 320A	CM94005OOQ1OG
	DN3-400D 3 Pole MCCB - 400A	CM94005OOR1OG

Outgoing Device		
SMDB Type	Description	FG Cat. No.
SMDB TN250D & TN400D	DN0-100D 3 Pole MCCB - 20 A	CM97893OOC2OG
	DN0-100D 3 Pole MCCB - 25 A	CM97893OOD2OG
	DN0-100D 3 Pole MCCB - 32 A	CM97893OOE2OG
	DN0-100D 3 Pole MCCB - 40 A	CM97893OOF2OG
	DN0-100D 3 Pole MCCB - 50 A	CM97893OOG2OG
	DN0-100D 3 Pole MCCB - 63 A	CM97893OOH2OG
	DN0-100D 3 Pole MCCB - 80 A	CM97893OOJ2OG
	DN0-100D 3 Pole MCCB - 100 A	CM97893OOK2OG

Note: While ordering SMDB, incoming and outgoing MCCBs have to be ordered separately. Prices of MCCBs are not included in SMDB prices. PI refer MCCB section for prices of incoming and outgoing devices.



READY-TO-USE POWER DISTRIBUTION SOLUTION

ENERSYS-S
SUB-MAIN DISTRIBUTION BOARD

Enersys-S from L&T is Sub Main Distribution board that complies with IEC 61439-2 and certified by DEKRA. This Sub Main Distribution board used for power distribution which is designed for easy handling and simple installation. It also offers safe, reliable and higher performance.



U-POWER

OMEGA Range of Air Circuit Breakers

Air Circuit Breakers

- Complete range conforms to IS/IEC 60947-2 & IEC 60947-2
- Current rating from 400A to 6300A in 3 frame sizes
- Available in 3 Pole/4 Pole, Manually & Electrically operated, Fixed/Draw-out version
- Common Height & Depth across the range
- High short time fault withstand capacity, $I_{cu} = I_{cs} = I_{cw}$ for 1 sec for total selectivity
- High mechanical and electrical operating life
- Neutral pole is 100% rated, option of 50% & 200% rated neutral also available
- Available in both NRYB & RYBN configuration in 4 Pole ACBs **with on-site change facility**
- In-built Electrical & Mechanical Anti-Pumping
- Modular & snap-fit accessories
- Ease of on-site conversion from Fixed to Draw-out version

Matrix Protection & Control units:

- Available in versions - MTX1.0/1G/1.5G, MTX2.5/2.5G, MTX3.5/3.5EC & MTX4.5
- Unique O-LED display for metering
- Touch screen technology in UW-MTX4.5
- Unique withdrawable Communication & Power metering modules
- Dual protection curve settings & Password protection
- Soft-rating plug for precise protection at lower load currents
- Provision for on-load self-diagnosis of Releases & modules
- Data communication on Modbus, Profibus & wireless Zigbee protocols
- Power & Harmonics measurement
- Temperature rise monitoring & protection
- Easy to integrate with HMI & PLC
- Add-on modules for advance protection
- Protection Releases conform to EMI/EMC standard



UW-MTX1.0



UW-MTX1G



UW-MTX1.5G



UW-MTX2.5/2.5G



UW-MTX3.5/3.5EC



UW-MTX4.5

Breaking Capacities offered:

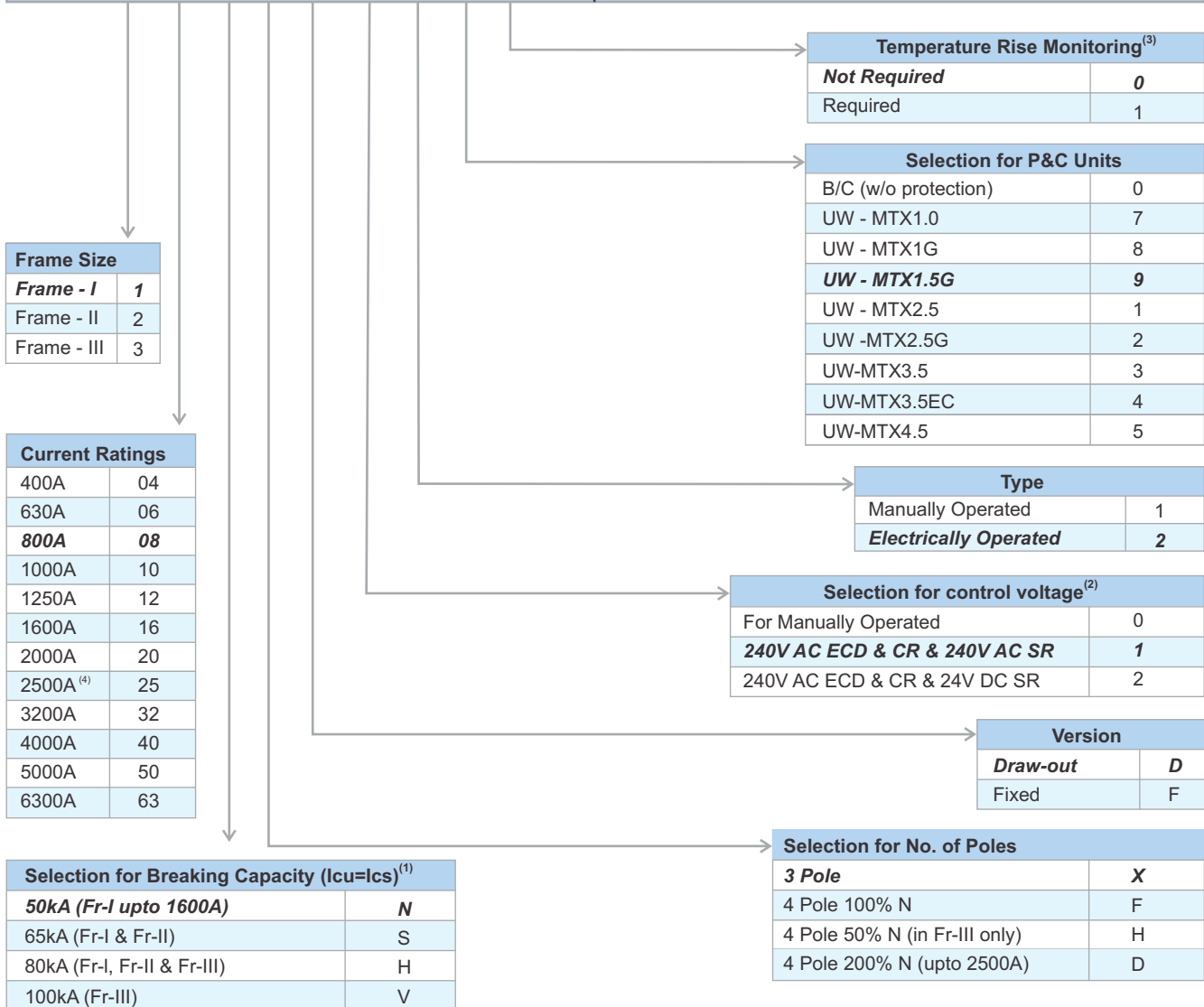
		I _{cu} = I _{cs} = I _{cw} for 1 sec									
		800A	1000A	1250A	1600A	2000A	2500A	3200A	4000A	5000A	6300A
Frame-1	N : 50kA	■	■	■	■						
	S : 65kA	■	■	■	■	■	■				
	H : 80kA	■	■	■	■	■	■	■			
		UW1-08	UW1-10	UW1-12	UW1-16	UW1-20	UW1-25				
Frame-2	S : 65kA						■	■			
	H : 80kA	■	■	■	■	■	■	■			
		UW2-08	UW2-10	UW2-12	UW2-16	UW2-20	UW2-25	UW2-32			
Frame-3	H : 80kA								■	■	■
	V : 100kA	■	■	■	■	■	■	■	■	■	■
		UW3-08	UW3-10	UW3-12	UW3-16	UW3-20	UW3-25	UW3-32	UW3-40	UW3-50	UW3-63

Note: 400A & 630A ACBs are also available on request.

OMEGA ACB ordering information:

Air Circuit Breakers

UW 1 08 N X D 1 2 9 0 0^(D) OMEGA 800A Fr-1 50kA 3P EDO UW-MTX1.5G



Please Note :

- ⁽¹⁾ For Icu values please refer product catalogue
- ⁽²⁾ Other options of control voltage are available as accessory
- ⁽³⁾ Temperature protection is available in UW-MTX3.5/3.5EC/4.5
- ⁽⁴⁾ For Fr-1, 2500A selection, please contact the nearest branch office
- ^(D) Refer point 'D' of Omega ACBs standard features

OMEGA ACBs are offered with following standard features:

Air Circuit Breakers

- Draw-out version :** Omega ACBs with UW-MTX release will have inbuilt- Current Metering (MTX 1.5G/2.5/2.5G/3.5/3.5EC/4.5), Common Fault Indication microswitch, 4NO+4NC Aux. contacts, Smart-racking shutter, Safety shutter assembly, Racking Handle, Door sealing frame, Pad-locking arrangement for ON/OFF button, Rating Error Preventer, Arc shield (with frame 1N, 2S & 3H version)
- A) For ratings upto 1600A, one side vertical terminal adaptors (Bottom).
 - B) For ratings 2000A & above, both side vertical terminal adaptors (Top & Bottom).
 - C) For ratings 4000A & above, operation counter inbuilt.
 - D) For rating 4000A & 5000A, replace 13th digit of ACB cat no with (recommended for Buscoupler only)
 - X : For Top Horizontal (Long) & Bottom Vertical
 - Y : For Top & Bottom Horizontal (Long)
 (Please refer Omega catalogue for details)
- Fixed Version :** Omega ACBs with UW-MTX release will have inbuilt- Current Metering (MTX 1.5G/2.5/2.5G/3.5/3.5EC/4.5), Common Fault Indication microswitch, 4NO+4NC Aux. contacts, Door sealing frame & Pad-locking arrangement for ON/OFF push button.
- A) For ratings upto 1600A, one side vertical terminal adaptors (Bottom).
 - B) For ratings 2000A & above, both side vertical terminal adaptors (Top & Bottom).
 - C) For ratings 4000A & above, operation counter inbuilt
- Electrically operated ACB includes ECD (240V AC), CR (240V AC) & SR (240V AC OR 24V DC).

3 Pole ACBs with UW-MTX1.5G (LSING + Current Metering)



Current Rating	Version	3 Pole Manual Draw-out ACB with UW-MTX1.5G							
		N (50kA)		S (65kA)		H (80kA)		V (100kA)	
		Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
800A	MDO	UW108NXD01900	*	UW108SXD01900	*	UW108HXD01900	*	UW308VXD01900	*
1000A		UW110NXD01900		UW110SXD01900		UW110HXD01900		UW310VXD01900	
1250A		UW112NXD01900		UW112SXD01900		UW112HXD01900		UW312VXD01900	
1600A		UW116NXD01900		UW116SXD01900		UW116HXD01900		UW316VXD01900	
2000A		-	-	UW120SXD01900	UW120HXD01900	UW320VXD01900	*		
2500A		-	-	UW225SXD01900	UW225HXD01900	UW325VXD01900			
3200A		-	-	UW232SXD01900	UW232HXD01900	UW332VXD01900			
4000A		-	-	-	UW340HXD01900	UW340VXD01900			
5000A		-	-	-	UW350HXD01900	UW350VXD01900			
6300A		-	-	-	UW363HXD01900	UW363VXD01900			

Current Rating	Version	3 Pole Manual Fixed ACB with UW-MTX1.5G							
		N (50kA)		S (65kA)		H (80kA)		V (100kA)	
		Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
800A	MF	UW108NXF01900	*	UW108SXF01900	*	UW108HXF01900	*	UW308VXF01900	*
1000A		UW110NXF01900		UW110SXF01900		UW110HXF01900		UW310VXF01900	
1250A		UW112NXF01900		UW112SXF01900		UW112HXF01900		UW312VXF01900	
1600A		UW116NXF01900		UW116SXF01900		UW116HXF01900		UW316VXF01900	
2000A		-	-	UW120SXF01900	UW120HXF01900	UW320VXF01900	*		
2500A		-	-	UW225SXF01900	UW225HXF01900	UW325VXF01900			
3200A		-	-	UW232SXF01900	UW232HXF01900	UW332VXF01900			
4000A		-	-	-	UW340HXF01900	UW340VXF01900			
5000A		-	-	-	UW350HXF01900	UW350VXF01900			
6300A		-	-	-	UW363HXF01900	UW363VXF01900			

M.R.P. changes for product customization	M.R.P. (₹) Per Unit
MDO to EDO or MF to EF conversion (Includes ECD 240V AC, CR 240V AC & SR 240V AC or 24V DC)	*
Buscoupler (without protection release)	
UW-MTX1.0 (LSI - BCD Switches)	
UW-MTX1G (LSING - BCD Switches)	
UW-MTX3.5 (LSING + Current Metering) - can be upgraded for Power Metering & Communication	
UW-MTX3.5EC (LSING + Power Metering + Communication)	
UW-MTX4.5 (LSING + Power Metering + Communication with Touch Screen navigation + UW-PS Module)	
UW-PS, Auxiliary power supply module for display in No-load or OFF condition	
COM Module (MODBUS) for communication	
PM Module for power metering	

* Available on request

4 Pole ACBs with UW-MTX1.5G (LSING + Current Metering)



Current Rating	Version	4 Pole Manual Draw-out ACB with UW-MTX1.5G							
		N (50kA)		S (65kA)		H (80kA)		V (100kA)	
		Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
800A	MDO	UW108NFD01900	*	UW108SFD01900	*	UW108HFD01900	*	UW308VFD01900	*
1000A		UW110NFD01900		UW110SFD01900		UW110HFD01900		UW310VFD01900	
1250A		UW112NFD01900		UW112SFD01900		UW112HFD01900		UW312VFD01900	
1600A		UW116NFD01900		UW116SFD01900		UW116HFD01900		UW316VFD01900	
2000A		-	UW120SFD01900	UW120HFD01900	UW320VFD01900				
2500A		-	UW225SFD01900	UW225HFD01900	UW325VFD01900				
3200A		-	UW232SFD01900	UW232HFD01900	UW332VFD01900				
4000A		-	-	UW340HFD01900	UW340VFD01900				
5000A		-	-	UW350HFD01900	UW350VFD01900				
6300A		-	-	UW363HFD01900	UW363VFD01900				

4 Pole Manual Fixed ACB with UW-MTX1.5G									
800A	MF	UW108NFF01900	*	UW108SFF01900	*	UW108HFF01900	*	UW308VFF01900	*
1000A		UW110NFF01900		UW110SFF01900		UW110HFF01900		UW310VFF01900	
1250A		UW112NFF01900		UW112SFF01900		UW112HFF01900		UW312VFF01900	
1600A		UW116NFF01900		UW116SFF01900		UW116HFF01900		UW316VFF01900	
2000A		-	UW120SFF01900	UW120HFF01900	UW320VFF01900				
2500A		-	UW225SFF01900	UW225HFF01900	UW325VFF01900				
3200A		-	UW232SFF01900	UW232HFF01900	UW332VFF01900				
4000A		-	-	UW340HFF01900	UW340VFF01900				
5000A		-	-	UW350HFF01900	UW350VFF01900				
6300A		-	-	UW363HFF01900	UW363VFF01900				

* Available on request

Accessories of OMEGA Air Circuit Breakers



Draw-out ACBs Terminal Adaptors



Fix ACBs Terminal Adaptors

Description	Cat. No.	M.R.P. (₹) Per Unit
Terminal Adaptors for Draw-out Omega ACBs		
Frame-1 400-2000A (Vertical / Horizontal)	CL609630000	*
Frame-1 2500A (Vertical)	CL609640000	
Frame-2 400-3200A (Vertical / Horizontal)	CL907470000	
Frame-3 400-3200A (Vertical / Horizontal) #		
Frame-3 4000A (Vertical) #	CL600730000	
Frame-3 4000A (Horizontal-Long)	CL600670000	
Frame-3 5000A (Vertical) #	CL609660000	
Frame-3 5000A (Horizontal-Long)	CL609650000	
Frame-3 6300A (Vertical) #		

Description	Cat. No.	M.R.P. (₹) Per Unit
Terminal Adaptors for Fixed Omega ACBs		
Frame-1 400-1600A N/S (Vertical / Horizontal)	CL609670000	*
Frame-1 400-2000A H & 2000A S (Vertical/Horizontal)	CL609680000	
Frame-1 2500A S/H (Vertical)	CL609760000	
Frame-2 400-3200A S/H (Vertical / Horizontal)	CL609770000	
Frame-3 400-4000A H/V (Vertical/Horizontal) #	CL906680000	
Frame-3 5000A H/V (Vertical) #	CL609820000	
Frame-3 6300A H/V (Vertical) #	CL906690000	

: Please consider 4 terminal adaptors per phase (I/C + O/G)

: Please consider 4 terminal adaptors per phase (I/C + O/G)

U-POWER
Accessories of **OMEGA** Air Circuit Breakers
Air Circuit Breakers



Operation Counter



Door Interlock

Description	Cat. No.	M.R.P. (₹) Per Unit
Operation Counter	CL909830000	*
Door Interlock	CL909780000	
Electrical Position Indication (EPI)	CL958260000	
Microswitch for Common Fault Indication (CFI)	CL909490000	
Microswitch for Ready To Close Indication (RTC)	CL909530000	
Microswitch for Shunt Release	CL909510000	
Microswitch for Undervoltage Release	CL909470000	
Microswitch for Spring Charging Indication	ST426720000	



R-Lock



C-Lock

Description	Cat. No.	M.R.P. (₹) Per Unit
Mechanical Interlock using Key & Lock		
R - Lock Type - 1	CL006590000	*
R - Lock Type - 2	CL006600000	
R - Lock Type - 3	CL006610000	
R - Lock Type - 12	CL006620000	
R - Lock Type - 23	CL006630000	
Locking arrangement for OFF button with R - Lock (on breaker)	CL908150000	
Locking arrangement for ISO position with R - Lock (on Cradle)	CL908650000	
Locking arrangement for ANY position with R - Lock (on Cradle)	CL909270000	
C - Lock Type - S	CL006640000	
C - Lock Type - T	CL006650000	
C - Lock Type - ST	CL006660000	
C - Lock Type - SS	CL006670000	
C - Lock Type - TT	CL006680000	
Locking arrangement for OFF button with C - Lock (on breaker)	CL908140000	
Locking arrangement for ISO position for C - Lock (on Cradle)	CL909820000	
Locking arrangement for ANY position with C - Lock (on Cradle)	CL909810000	

Note: For Mechanical Interlock using Key & Lock please order combination of Lock and Locking arrangement.



Closing Release



Shunt Release



UV Release

Description	Cat. No.	M.R.P. (₹) Per Unit
Electrical Charging Device (ECD)		
24-30V DC	CL903620000	*
110V AC / 110-125V DC	CL903600000	
220V AC / 200V DC	CL903640000	
240V AC / 250V DC	CL903590000	
415V AC / 400V DC	CL903610000	
Closing Release (CR)		
24-30V DC	CL908174000	*
110V AC & DC	CL90817A000	
240V AC / 220 - 250V DC	CL90817B000	
415V AC	CL90817D000	
Shunt Release (SR)		
24-30V DC	CL908160400	*
110V AC / 110V DC	CL908160A00	
240V AC / 220 - 250V DC	CL908160B00	
415V AC	CL908160D00	
Under Voltage Release (UVR) with time delay (0-1-3-5 sec)		
24-30V DC	CL908184000	*
110V AC	CL90818A000	
240V AC (DG application)	ST427450000	
240V AC	CL90818B000	
415V AC	CL90818D000	



NCT

Description	Cat. No.	M.R.P. (₹) Per Unit
External Neutral CT for UW-MTX Releases		
Frame-1, 2 & 3 400-800A	CL007170000	*
Frame-1, 2 & 3 1000-1600A	CL007180000	
Frame-1 2000-2500A	CL007190000	
Frame-2 & 3 2000-3200A	CL007200000	
Frame-3 4000A		
Frame-3 5000-6300A	CL007210000	

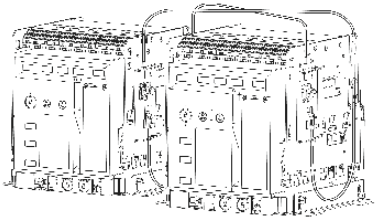
* Available on request

Auto Source Transfer Controller

Type	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
AuXC-1000L	ST800240000	43770	1
AuXC-1000	ST802300000	52745	1

Can be used along with **OMEGA** U-POWER Air Circuit Breakers, **d sine** MCCBs, MCX contactors & Motorised Changeover switches

U-POWER
Accessories of **OMEGA** Air Circuit Breakers
Air Circuit Breakers



Mechanical Interlock using Bowden Cable

Description	Cat. No.	M.R.P. (₹) Per Unit
Mechanical Interlock using Bowden Cable (5 meters length)		
Between 2 Incomers	CL906630000	*
Between 3 Incomers	CL906640000	
Between 2 Incomers & 1 Standby	CL906650000	
Between 2 Incomers & 1 Buscoupler	CL906660000	
Mechanical Interlock using Bowden Cable (3 meters length)		
Between 2 Incomers	CL906590000	*
Between 3 Incomers	CL906600000	
Between 2 Incomers & 1 Standby	CL906610000	
Between 2 Incomers & 1 Buscoupler	CL906620000	
Mechanical Interlock using Bowden Cable (2 meters length)		
Between 2 Incomers	CL908100000	*
Between 3 Incomers	CL908110000	
Between 2 Incomers & 1 Standby	CL908120000	
Between 2 Incomers & 1 Buscoupler	CL908130000	

Note: Common from 400A to 6300A and can be interlocked between Fixed / Draw-out / Mixed version

* Available on request



MODBUS Module



Power Metering Module

Description	Cat. No.	M.R.P. (₹) Per Unit
MATRIX Releases & Modules		
UW-MTX1.0	CL919660000	*
UW-MTX1G	CL919710000	
UW-MTX1.5G	CL919650000	
UW-MTX2.5	CL901120000	
UW-MTX2.5G	CL906100000	
UW-MTX3.5	CL901130000	
UW-MTX3.5EC	CL907000000	
UW-MTX4.5	CL906110000	
Power supply module (UW-PS)	CL907220000	
Relay Module	CL907160000	
MODBUS Module	CL907090000	
Profibus Module	CL907320000	
MATRIX SMART CARD Module	CL907050000	
Power Metering Module	CL907040000	
ZSI Module (UW-ZSI)	CL907180000	
TCS Module (UW-TCS)	CL907190000	
EL Module	CL907200000	
REF Module	CL907210000	
Simulation Kit	CL907240000	

For Energy Management Communication Software
Please contact the nearest branch office

Upgrade to the new-age OMEGA ACB with Minimal Modifications



Pre-Engineered Retrofit Solution
Upgrade L&T CNCS ACB to OMEGA ACB



Presenting the pre-engineered L&T CNCS to OMEGA Retrofit kit

The L&T CNCS to OMEGA Retrofit kit is a pre-engineered solution which allows you to upgrade from the old CNCS ACB to the advanced L&T OMEGA ACB - with minimal modification. All installations are done by trained Engineers from the nearest L&T Authorised Service Centre to ensure total reliability and minimum shut-down time.

Specifications

- ETP grade Copper links with Silver Plating
- CNCS to OMEGA Retrofit solution is available from 800A to 3200A

Customer Interaction Center (CIC)

BSNL / MTNL (toll free): 1800 233 5858
Reliance (toll free): 1800 200 5858
Tel: 022 6774 5858 Fax: 022 6774 5859
Email: cic@Lntebg.com Web: www.Lntebg.com

For retrofitting of any ACB to Omega ACB please contact the nearest branch office

C-POWER Air Circuit Breakers

C-POWER S1 Range of Air Circuit Breakers

- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Current rating from 400A to 3200A
- Available in 3 Pole/4 Pole, Manually & Electrically operated, Fixed & Draw-out versions
- High short time withstand capacity, $I_{cu} = I_{cs} = I_{cw}$ for 1 sec for total selectivity
- High mechanical and electrical operating life
- 100% rated neutral pole
- Common height and depth across the range
- Protection through Thermal - Magnetic (DN1) & Microprocessor releases (SR18, SR18G, SR18G+D & SR18Gi+D)
- Self diagnostic Microprocessor based Releases with on-load testing through TEST button
- Inbuilt thermal memory
- Protection Releases conform to EMI/EMC standards
- Breaker control through MODBUS protocol



C-POWER S1 ACB



C-POWER ACB

C-POWER Range of Air Circuit Breakers

- Conforms to IS/IEC 60947-2 & IEC 60947-2
- Current rating from 800A to 6300A
- Available in 3 Pole/4 Pole, Manually & Electrically operated, Fixed & Draw-out versions
- High short time fault withstanding capacity, $I_{cu} = I_{cs} = I_{cw}$ for 1 sec for total selectivity
- High mechanical and electrical operating life
- 100% rated neutral pole
- Protection through Thermal - Magnetic (DN1) & Microprocessor releases (SR18, SR18G, SR18G+D, SR18Gi+D & SR71)
- Self diagnostic Microprocessor based Releases with on-load testing through TEST button
- Inbuilt thermal memory
- Protection Releases conform to EMI/EMC standards
- Data communication & Power Management
- Breaker control through MODBUS protocol

C-POWER ACBs for DG Application

- G Range Air Circuit Breakers for DG protection
- 400A to 2000A in 3P Manual Fix version
- Choice of Thermo-Magnetic release-DN1 / Micro processor based release SR18G (LSIG)
- $I_{cu}=I_{cs}=I_{cw}=50kA$ for 1 second across the entire range
- Compact and rugged design with inbuilt Under-voltage protection



C-POWER G Range

C-POWER HE ACBs for Harsh Environment New

- Please contact the nearest branch office for Details & product Selection

Breaking Capacities Offered:

		I _{cu} = I _{cs} = I _{cw} for 1 sec										
		630A	800A	1000A	1250A	1600A	2000A	2500A	3200A	4000A	5000A	6300A
CN-CS : E / G		50kA	50kA	50kA	50kA	50kA	50kA					
	Frame-1											
CN-CS : S1		50kA	50kA	50kA	50kA	50kA	50kA	60kA	60kA			
	Frame-1							Frame-2				
CN-CS : C			50kA	50kA	50kA	50kA	55kA	60kA			95kA	95kA
CN-CS : H			65kA	65kA	65kA	65kA	75kA	75kA				
CN-CS : H2									75kA	75kA		
CN-CS : H / H1									100kA	100kA		
		Frame-1				Frame-2		Frame-3		Frame-4		

For technical & dimension details please refer product catalogue. 400AACB also available on request.

C-POWER Air Circuit Breakers



C-POWER S1 3 & 4 Pole Draw-out ACBs

Rating	Breaking Capacity Icu=Ics=Icw (1 sec)	Version
630A	50kA	MDO
		EDO
800A	50kA	MDO
		EDO
1000A	50kA	MDO
		EDO
1250A	50kA	MDO
		EDO
1600A	50kA	MDO
		EDO
2000A	50kA	MDO
		EDO

Microprocessor Based SR18G			
3 Pole		4 Pole	
Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
SL96041	144580	SL96061	181630
SL96051	178580	SL96071	215630
SL96042	144580	SL96062	181630
SL96052	178580	SL96072	215630
SL96043	151900	SL96063	191960
SL96053	185900	SL96073	225960
SL96044	169860	SL96064	213610
SL96054	203860	SL96074	247610
SL96045	191680	SL96065	234940
SL96055	225680	SL96075	268940
SL96046	228140	SL96066	286150
SL96056	262140	SL96076	320150

Thermal-Magnetic DN1			
3 Pole		4 Pole	
Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
SL95331	132580	SL95351	169630
SL95341	166580	SL95361	203630
SL95332	132580	SL95352	169630
SL95342	166580	SL95362	203630
SL95333	139900	SL95353	179960
SL95343	173900	SL95363	213960
SL95334	157860	SL95354	201610
SL95344	191860	SL95364	235610
SL95335	179680	SL95355	222940
SL95345	213680	SL95365	256940
SL95336	216140	SL95356	274150
SL95346	250140	SL95366	308150

C-POWER S1 3 & 4 Pole Fixed ACBs

Rating	Breaking Capacity Icu=Ics=Icw (1 sec)	Version
630A	50kA	MF
		EF
800A	50kA	MF
		EF
1000A	50kA	MF
		EF
1250A	50kA	MF
		EF
1600A	50kA	MF
		EF

Microprocessor Based SR18G			
3 Pole		4 Pole	
Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
SL95561	102710	SL95581	128400
SL95571	136710	SL95591	162400
SL95562	102710	SL95582	128400
SL95572	136710	SL95592	162400
SL95563	107070	SL95583	133830
SL95573	141070	SL95593	167830
SL95564	129150	SL95584	161450
SL95574	163150	SL95594	195450
SL95565	141920	SL95585	177420
SL95575	175920	SL95595	211420

Thermal-Magnetic DN1			
3 Pole		4 Pole	
Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
SL95481	90710	SL95501	116400
SL95491	124710	SL95511	150400
SL95482	90710	SL95502	116400
SL95492	124710	SL95512	150400
SL95483	95070	SL95503	121830
SL95493	129070	SL95513	155830
SL95484	117150	SL95504	149450
SL95494	151150	SL95514	183450
SL95485	129920	SL95505	165420
SL95495	163920	SL95515	199420

M.R.P. changes for product customization w.r.t. SR18G ACB M.R.P.		M.R.P. (₹) Per Unit
Bus - Coupler (w/o protection)	Reduce	23000
Microprocessor based SR18 (LSI)	Reduce	2500
Microprocessor based SR18G+D (LSING + Current Metering)	Add	4500
Microprocessor based SR18Gi+D (LSING + Current metering + ZSI)	Add	6000

C-POWER S1 Draw-Out ACBs will have inbuilt - 2NO+2NC Aux contact for MDO & 6NO+6NC Aux contact for EDO breakers, Safety shutter assembly, Racking handle, Door sealing frame, Push-button cover & Rating error preventor.
C-POWER S1 Fixed ACBs will have inbuilt - 2NO+2NC Aux contact for MF & 6NO+6NC Aux contact for EF breakers, Door sealing frame & Push-button cover.
 Electrical version includes 240V AC Shunt trip coil, Closing coil and Motor for electrical charging.
Note: 1 NO Aux contact in manual version & 2NO+2NC in electrical version breakers will be pre-wired with accessories mounted in breaker.
 In electrically operated breaker with DN1 release, either earth fault or undervoltage protection can be used.

CN-CS...E Range 3 Pole Manual Fixed

Rating	Breaking Capacity Icu=Ics=Icw (1 sec)	Version
400A	50kA	3P MF
630A	50kA	3P MF
800A	50kA	3P MF
1000A	50kA	3P MF
1250A	50kA	3P MF
1600A	50kA	3P MF
2000A	50kA	3P MF

Thermal-Magnetic Release Type DN1	
Cat. No.	M.R.P. (₹) Per Unit
SL957210000	62750
SL957220000	63300
SL957230000	65160
SL957240000	67450
SL957250000	87540
SL957260000	97500
SL932970000	110810

G Range 3 Pole Manual Fixed for DG Application

(with in-built UV Protection & 2NO + 2NC Aux Contact Block)

Thermal-Magnetic Release Type DN1	
Cat. No.	M.R.P. (₹) Per Unit
SL912630000	76600
SL912640000	76750
SL912650000	77200
SL912660000	80300
SL912670000	100100
SL912680000	110800
SL912690000	130300

Microprocessor Based SR18G	
Cat. No.	M.R.P. (₹) Per Unit
SL913200000	88600
SL913210000	88750
SL913220000	89200
SL913230000	92300
SL913240000	112100
SL913250000	122800
SL913260000	142300

C-POWER Air Circuit Breakers



C-POWER 3 & 4 Pole Draw-out ACBs

Rating	Breaking Capacity I _{cu} =I _{cs} =I _{cw} (1 sec)	Version
800A	65kA	MDO
		EDO
1000A	65kA	MDO
		EDO
1250A	65kA	MDO
		EDO
1600A	65kA	MDO
		EDO
2000A	55kA	MDO
		EDO
2500A	60kA	MDO
		EDO
3200A	75kA	MDO (H2)
		EDO (H2)
4000A	75kA	MDO (H2)
		EDO (H2)
5000A	95kA	MDO/EDO
6300A	95kA	MDO/EDO

Microprocessor Based SR18G			
3 Pole		4 Pole	
Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
SL95311	189010	#	241220
SL95321	223010	#	275220
SL95312	204270	#	256110
SL95322	238270	#	290110
SL95313	230820	#	280510
SL95323	264820	#	314510
SL95314	251020	#	314180
SL95324	285020	#	348180
ST35545	261570	ST35565	319710
ST35555	295570	ST35575	353710
ST35546	286890	ST35566	349700
ST35556	320890	ST35576	383700
SL94822	356240	SL94826	436810
SL94824	390240	SL94828	470810
SL94823	432680	SL94827	547740
SL94825	466680	SL94829	581740
#	*	#	*
#	*	#	*

Thermal-Magnetic DN1			
3 Pole		4 Pole	
Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
#	177010	#	229220
#	211010	#	263220
#	192270	#	244110
#	226270	#	278110
#	218820	#	268510
#	252820	#	302510
#	239020	#	302180
#	273020	#	336180
SL93065	249570	ST25035	307710
SL93085	283570	ST25045	341710
SL93066	274890	ST25036	337700
SL93086	308890	ST25046	371700
SL94814	344240	SL94818	424810
SL94816	378240	SL94820	458810
SL94815	420680	SL94819	535740
SL94817	454680	SL94821	569740
#	*	#	*
#	*	#	*

Note: For higher breaking capacities & 690V AC application please contact the nearest branch office

C-POWER 3 & 4 Pole Manual Fixed ACBs

Rating	Breaking Capacity I _{cu} =I _{cs} =I _{cw} (1 sec)	Version
800A	50kA	MF
1000A	50kA	
1250A	50kA	
1600A	50kA	
2000A	55kA	
2500A	60kA	
3200A	70kA	

Microprocessor Based SR18G			
3 Pole		4 Pole	
Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
*			
SL97635	165230	#	214330
SL97636	182070	#	245450
#	*	#	*

Thermal-Magnetic DN1			
3 Pole		4 Pole	
Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
*			
SL93005	153230	#	202330
SL93006	170070	#	233450
#	*	#	*

Note: For higher breaking capacities & 690V AC application please contact the nearest branch office

M.R.P. changes for product customization w.r.t. SR18G M.R.P.		M.R.P. (₹) Per Unit
Bus-Coupler (w/o protection)	Reduce	23000
Microprocessor based SR18 (LSI)	Reduce	2500
Microprocessor based SR18G+D (LSING + Current Metering)	Add	4500
Microprocessor based SR18Gi+D (LSING + Current metering + ZSI)	Add	6000
Microprocessor based SR71 (LSING + Current metering + Advance protection + PS Module)	Add	
Communication Module (MODBUS) for SR71 release (SR71 - COM)	SL94698	*
Power Metering Module for SR71 release (SR71 - PM)	SL94699	

C-POWER Draw-Out ACBs will have inbuilt - 6NO+6NC Aux contact, Safety shutter assembly, Racking handle, Door sealing frame, Push-button cover & Rating Error preventor. Option of horizontal & vertical termination upto 4000A also available. Operation counter for 4000A & above.

EDO version includes 240V AC Shunt trip coil, Closing coil and Motor for electrical charging.

C-POWER Fixed ACBs will have inbuilt - 6NO+6NC Aux contact, Door sealing frame & Push-button cover. Operation counter for 4000A & above.

Note: 1 NO Aux contact in manual version & 2NO+2NC in electrical version breakers will be pre-wired with accessories mounted in breaker.

In electrically operated breaker with DN1 release, either earth fault or undervoltage protection can be used.

Note: Electrical Fixed type breakers are available on request.

Available on "Made to order" basis. * Available on request

Accessories of C-POWER Air Circuit Breakers

Accessories (Common for C-POWER Family)



AN1 Module



LTPB



LIP



Shunt Release



UV Release

Description	Cat. No.	M.R.P. (₹) Per Unit
Lockable Trip Push Button (LTPB)		
Type AA	SL93148000A	2460
Type BB	SL93148000B	2460
Type CC	SL93148000C	2460
Type DD	SL93148000D	2460
Lockable Trip Push Button kit (3 I/C & 2 B/C)	SL919360000	12340
Lockable Trip Push Button kit (A to Z)	ST288950000	64100
Lockable Trip Push Button kit (A to P)	ST287300000	39450
Locking of ACB in Isolated position (LIP)		
Type A	SL93146000A	2460
Type B	SL93146000B	2460
Type C	SL93146000C	2460
Type D	SL93146000D	2460
Locking of ACB in Any position (LAP)		
Type A	SL93147000A	2460
Type B	SL93147000B	2460
Type C	SL93147000C	2460
Type D	SL93147000D	2460
Racking Interlock		
Type AA	SL93149000A	4630
Type BB	SL93149000B	4630
Type CC	SL93149000C	4630
Type DD	SL93149000D	4630
Door Interlock	SL931500000	2460



Vertical Terminal Adaptor

Description & Rating	Cat. No.	Qty	M.R.P. (₹) Per Unit
Vertical Terminal Adaptors for Draw out C-POWER ACB			
400-1250 S1/800-1000 C	SL932810000	1	3220
1600-2000 S1/1250-1600 C/800-1600 H	SL932820000	1	3770
2000 C	SL932840000	1	5160
2000 H/2500 C/H	SL932850000	1	5600
2500 S1	SL932890000	1	5600
3200 S1	SL932860000	1	6200
3200H2/H1, 4000H2/H	SL932880000	1	15040

Description	Cat. No.	M.R.P. (₹) Per Unit
Shunt Release (SR)		
Type EA : 24/48V DC	SL927180400	2460
Type EA : 110V DC	SL927180100	2460
Type EA : 220V DC	SL927180200	2460
Type EA1 : 110V AC	SL927180A00	2460
Type EA1 : 240V AC	SL927180B00	2460
Type EA1 : 415V AC	SL927180D00	2460
Under Voltage Release (UVR)		
Type MV : 24V DC	ST368770000	3620
Type MV : 240V AC	SL92720B000	3620
Type MV : 415V AC	SL92720D000	3620
Earth Fault Release (for DN1)		
Type EF1 (10%, 20% In)	SL913400000	2460
Type EF2 (30%, 40%, 50% In)	SL913410000	2460

AN1 Remote Annunciation Module for SR18/SR18G/SR18G+D/SR18Gi+D/SR21i : 240V AC	SL946540000	7680
Microswitch for Voltmetric Releases (2) each	SL927030000	1990
Microswitch for Common Indication of O/L & S/C (3) each	SL927040000	1990
Microswitch for Separate Indication of O/L & S/C (3) each (for DN1 release)	SL927050000	3330
Service Position Microswitch - Right (2)	SL931420000	1340
Service Position Microswitch - Left (2)	SL931430000	1340
Test or Isolated Position Microswitch - Right (2)	SL931440000	1340
Test or Isolated Position Microswitch - Left (2)	SL931450000	1340

Note :

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



UN-CO module

Features

- Remote Status & Control of ACB
- Communicates on MODBUS Protocol
- Inbuilt RS485 Port

Description	Cat. No.	Qty	M.R.P. (₹) Per Unit
UN-CO module for Breaker control	CL908520000	1	9000

Spares of C-POWER Air Circuit Breakers

Protection Releases



SR71



SR18G+D/SR18Gi+D



SR18G



SR18



DN1



Test Kit



CT

Description	Cat. No.	M.R.P. (₹) Per Unit
Protection Releases		
Microprocessor based type SR71	On Request	
Microprocessor based type SR18Gi+D	SL948130000	36000
Microprocessor based type SR18G+D	SL948120000	34500
Microprocessor based type SR18G	SL939590000	30000
Microprocessor based type SR18	SL939580000	27500
Thermal-Magnetic Release type DN1	SL931520000	18000
Test-Kit SRT-2 (SR21/SR18G/SR18)	ST231300000	31300
Test-Kit SRT (SR18G+D/SR18Gi+D)	CL908530000	24860

Upgrade to high end communicable Release SR71

Retrofit kit solutions are available

For further details please contact the nearest branch office

Description	Cat. No.	Qty.	M.R.P. (₹) Per Unit
CTs for SR18 / SR18G / SR18G+D / SR18Gi+D			
400 S1 Fix & Draw-out	SL015230000	1	4280
630 S1 Fix & Draw-out	ST374950000	1	4280
800 C/H/S1 Fix & Draw-out	SL018570000	1	4280
1000 C/H/S1 Fix & Draw-out	SL018580000	1	4280
1250 C/H/S1 Fix & Draw-out	SL905710000	1	5200
1600 C/H/S1 Fix & Draw-out	SL905720000	1	5200
2000 C/H Fix & Draw-out	SL905650000	1	5570
2000 S1 Draw-out	SL932100000	1	5570
2500 C/H Fix & Draw-out	SL905660000	1	5570
2500 S1 Draw-out			
3200 D Fix & Draw-out	SL905670000	1	6740
3200 S1 Draw-out	SL905750000	1	6740
3200 H2/H1 Draw-out	SL017400000	1	6740
4000 C Fix & Draw-out	SL905680000	1	7620
4000 H2/H Draw-out	SL017390000	1	7620

For External Neutral C.T.s please use the above Cat. No.

Protect your equipment in Sulphur-rich environments



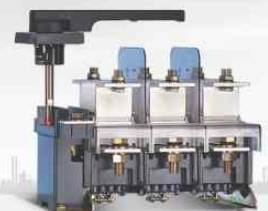
C-POWER HE Air Circuit Breaker

- Range 1250A to 5000A, 415/690V ac
- Available in 3 Pole/4 Pole, Manually & Electrically operated, Fixed & Draw-out versions
- Protection through Microprocessor release



FN BOLTED HE Switch-Disconnecter-Fuse

- Range 32A to 800A, 415V ac, AC 23A
- TPN version suitable for Bolted Fuse Link
- Door Interlocking & Padlocking facility



L&T's HE range of Air Circuit Breakers (ACBs) and Switch-Disconnecter-Fuse (S-D-F) are designed to ensure that they operate at peak efficiency for their entire lifespan in harsh, Sulphur-rich environments.

Customer Interaction Center (CIC)

BSNL / MTNL (toll free): 1800 233 5858 Reliance (toll free): 1800 200 5858 Tel: 022 6774 5858 Fax: 022 6774 5859 Email: cic@Lntebg.com Web: www.Lntebg.com

Save more with our Power Quality Solutions



Variations in power quality can damage your equipment. And your balance sheet.

At L&T, we tackle the causes of poor power quality with a range of products, systems and solutions.

Reactive Power Management Solutions

- etaSYS – APFC Panels
- Power Capacitors – Standard, Heavy & Ultra heavy duty
- Capacitor Switching – MO C Capacitor duty contactors & Thyristor switching modules
- Branch Protection – MCCBs, MCBs and Fuses
- Control – etaCON APFC Controller

Harmonic Filtering Solutions

- Active Harmonic Filter
- Passive Harmonic Filter – 7% or 14% detuned reactor with power capacitor
- Hybrid Filter – Combination of active and passive filters

Improved power quality ensures fewer breakdowns, improved plant productivity, reduced electricity bills. And a better balance sheet.

For power quality solutions, contact us today.

Customer Interaction Center (CIC)

BSNL / MTNL (toll free): 1800 233 5858 Reliance (toll free): 1800 200 5858

Tel: 022 6774 5858 Fax: 022 6774 5859 Email: cic@Lntebg.com Web: www.Lntebg.com

Power Factor Correction Capacitors

Standard Duty Capacitors



- MPP standard duty capacitors
- Operating losses - 0.45 W / kVAr
- Over current withstand capability - 1.5 times rated current
- Inrush current withstand capability - 200 times rated current
- Number of switching - 5000 operations per year

Duty	Type	kVAr Rating	Voltage (V)	M.R.P. (₹) per kVAr
Standard Duty	Cylindrical 1 to 6 kVAr - Series : LTCCF 7.5 to 25 kVAr - Series : LTCCD	1 to 25	440 V	186
	Box 1 to 6 kVAr - Series : LTBCF 7.5 to 30 kVAr - Series : LTBCD	1 to 30	440 V	254

Heavy Duty Capacitors



- MPP heavy duty capacitors
- Operating losses - 0.35 W / kVAr
- Over current withstand capability - 1.8 times rated current
- Inrush current withstand capability - 300 times rated current
- Operating life - 150000 hours
- Number of switching - 8000 operations per year

Duty	Type	kVAr Rating	Voltage (V)	M.R.P. (₹) per kVAr
Heavy Duty	Cylindrical (Gas filled)	3 to 15	440 V	331
			480 V	364
			525 V	397
			690 V	413
	3 to 30 kVAr Series : LTCCN	20 & 25	440 V	323
			480 V	355
		20 to 30	525 V	388
			690 V	404
	Box (Resin filled)	5 to 15	440 V	406
			480 V	447
			525 V	487
		5 to 50 kVAr Series : LTBCN	20 to 50	440 V
480 V	437			
			525 V	476

LTXL - Ultra Heavy Duty Capacitors

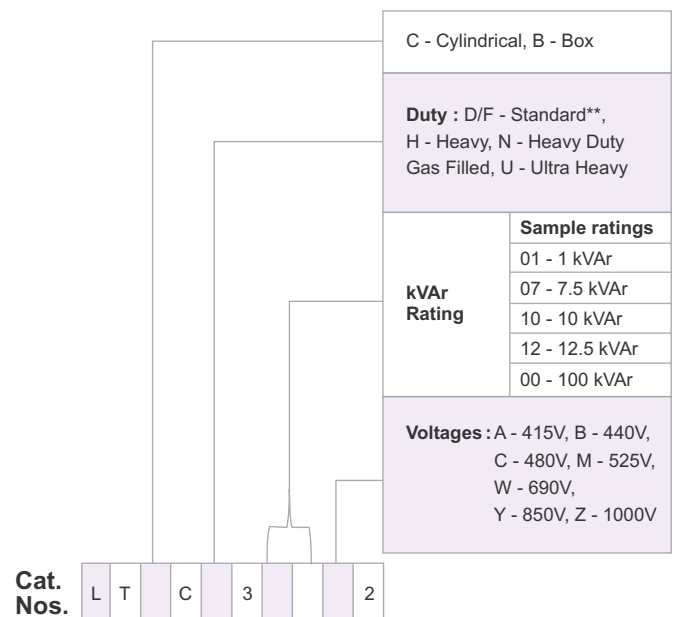


- Advanced APP technology
- Lower operating losses - 0.35 W / kVAr
- High over current withstand capability - 3 times rated current
- High inrush current withstand capability - 500 times rated current
- Higher operating life - 300000 hours
- More number of switching - 20000 operations per year

Duty	Type	kVAr Rating	Voltage (V)	M.R.P. (₹) per kVAr
LTXL - Ultra Heavy Duty	Box (Oil filled) 5 to 50 kVAr Series : LTBCU	5 to 15	440 V	652
			480 V	717
			525 V	782
			690 V	815
		20 to 50	440 V	640
			480 V	704
			525 V	768
			690 V	800

Prices of 850 V and 1000 V LTXL capacitors are available on request

Ordering Information for Capacitors



Cat. Nos.

L T C 3 2

** F - 1 to 6 kVAr. D - 7.5 kVAr & above

Standard kVAr ratings:
440 V - 1, 2, 3, 4, 5, 7.5, 8.33, 10, 12.5, 15, 20, 25, 50
480 V - 7.5, 12.5, 15, 20, 25, 30
525 V - 7.5, 8.33, 12.5, 15, 20, 25, 30, 33.1

7% Detuned Reactors, 440 V 50 Hz



- Copper & Aluminium wound reactors
- Lower operating losses
- High linearity - 1.8 times the rated current
- Thermal cut off

Aluminium Reactor			Copper Reactor	
kVAr Rating	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
5	LTAL0705B2	7000	LTFR0705B2	7390
10	LTAL0710B2	9800	LTFR0710B2	11615
12.5	LTAL0712B2	10750	LTFR0712B2	12875
15	LTAL0715B2	11500	LTFR0715B2	14255
20	LTAL0720B2	13700	LTFR0720B2	16890
25	LTAL0725B2	14500	LTFR0725B2	17950
50	LTAL0750B2	23000	LTFR0750B2	28505
75	LTAL0775B2	34200	LTFR0775B2	42230
100	LTAL0700B2	47000	LTFR0700B2	58065

Note: Prices of 5.67% & 14% reactors are available on request

Selection of capacitors for detuned harmonic filter application

Capacitor kVAr selection is done considering the tuning frequency of 189 Hz with 7% reactor and based on standard ratings available.

Effective kVAr output	With 7% detuned reactor		
	Reactor (440 V)	Capacitor (480 V)	Capacitor (525 V)
5 kVAr	5 kVAr	7.5 kVAr 480 V	7.5 kVAr 525 V
10 kVAr	10 kVAr	12.5 kVAr 480 V	12.5 kVAr 525 V
12.5 kVAr	12.5 kVAr	15 kVAr 480 V	15 kVAr 525 V
15 kVAr	15 kVAr	20 kVAr 480 V	20 kVAr 525 V
20 kVAr	20 kVAr	25 kVAr 480 V	25 kVAr 525 V
25 kVAr	25 kVAr	30 kVAr 480 V	25 kVAr 525 V + 8.33kVAr 525 V
50 kVAr	50 kVAr	2 nos of 30 kVAr 480 V	2 nos of (25 kVAr 525 V + 8.33kVAr 525 V)
75 kVAr	75 kVAr	3 nos of 30 kVAr 480 V	3 nos of (25 kVAr 525 V + 8.33kVAr 525 V)
100 kVAr	100 kVAr	4 nos of 30 kVAr 480 V	4 nos of (25 kVAr 525 V + 8.33kVAr 525 V)

Selection for 5.67% and 14% reactors available on request.

Sample Selection: for 25kVAr 7% detuned reactors with heavy duty capacitors, place an order for: 1 No. 25 kVAr 7% detuned reactor: LTFR0725B2 & 1 No. 30 kVAr LTCCN capacitors at 480 V: LTCCN330C2

Capacitor Duty Contactors - Type MO C



MO C25

MO C50

MO C80

Size	kVAr Rating @ 415V, 3Ph, 50Hz	Type	Built-in Auxiliary Contacts	Cat. No.	M.R.P. (₹) Per Unit	Std. Pkg. (Nos.)
Fr 1	5	MO C5	1NO	CS96127	1470	1
			1NC	CS96128	1470	1
	8.5	MO C8.5	1NO	CS96320	1790	1
			1NC	CS96337	1790	1
	12.5	MO C12.5	1NO	CS96321	2075	1
			1NC	CS96338	2075	1
	15	MO C15	1NO	CS90019	2925	1
			1NC	CS90020	2925	1
	20	MO C20	1NO	CS90021	3345	1
			1NC	CS90022	3345	1
25	MO C25	1NO	CS96322	3795	1	
		1NC	CS96339	3795	1	
Fr 2	33.5	MO C33.5	1NO	CS96323	7225	1
			1NC	CS96340	7225	1
	50	MO C50	1NO	CS96324	10140	1
			1NC	CS96341	10140	1
Fr 3	70	MO C70	1NO	CS96325	12670	1
			1NC	CS96342	12670	1
	80	MO C80	1NO	CS96326	14125	1
			1NC	CS96343	14125	1

Please refer page No. 7 for further details.

Thyristor Switching Module, 440V 50Hz



- High Peak Inverse Voltage (PIV) - 2.2 kV
- Lower operating losses
- Auto thermal cut off

kVAr Rating	Cat. No.	M.R.P. (₹) Per Unit
10	LTSSM10B2	19760
25	LTSSM25B2	28190
50	LTSSM50B2	32900

APFC Relays

etaCON L series with Auto-set function



Model	Description	Steps Description	CT secondary	Voltage input	Cat. No.	M.R.P. (₹) Per Unit
etaCON L3	3 stage	3	5 Amp	415V	ERPML03D500	9000
etaCON L5	5 stage	4 + 1*			ERPML05D500	10000
etaCON L7	7 stage	6 + 1*			ERPML07D500	11000
etaCON L8	8 stage	7 + 1*			ERPML08D500	13600
etaCON L12	12 stage	11 + 1*			ERPML12D500	14800

* Last Contact can be programmed for capacitor switching / Alarm function / Fan Control



Model	Description	CT secondary	Voltage input	Cat. No.	M.R.P. (₹) Per Unit
RPM 14	Fourteen Stage APFC Relay	1 A or 5 A - Field selectable	240V	MRPM1400000	16900

Active Harmonic Filter (AHF)

New



- Reduces THD within IEEE limits
- Dynamic correction of THD
- Improves both distortion & displacement Power Factor
- Load balancing & Neutral current reduction (triplen harmonics) with 4 wire filter

Filter Rating (A)	3 Phase 3 wire AHF		3 Phase 4 wire AHF	
	Cat. No.	M.R.P. (₹) Per Unit	Cat. No.	M.R.P. (₹) Per Unit
30	AHF030331D2	On Request	AHF030341D2	On Request
60	AHF060331D2		AHF060341D2	
75	AHF075331D2		AHF075341D2	
100	AHF100331D2		AHF100341D2	
150	AHF150331D2		AHF150341D2	
200	AHF200331D2		AHF200341D2	
300	AHF300331D2		AHF300341D2	
400	AHF400331D2		AHF400341D2	
600	AHF600331D2		AHF600341D2	

etaSYS Standard APFC Panels

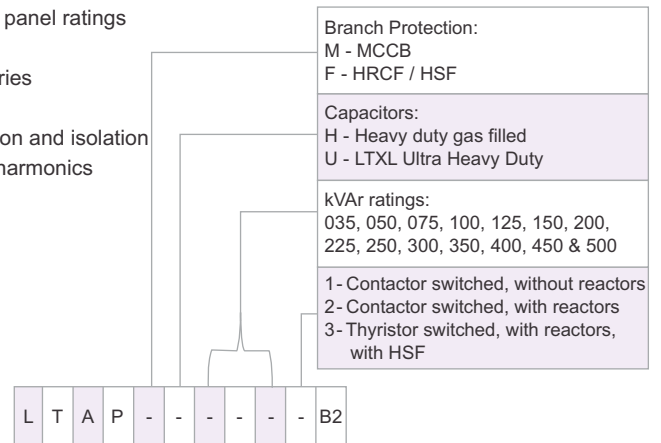
Features

- Wide range of ratings (35 to 500 kVAr) covers the typical requirement of APFC panel ratings
- All the panels are with optimal number of steps and step sizes
 - Offers sufficient step resolution which would be suitable for all types of industries
 - Panel operation without hunting of capacitors
- Pre-selected switchgear with accurate ratings offers reliable operation, protection and isolation
- Accurate combination of capacitor and reactor offers better protection against harmonics
- IP 42 panels
- Standard GA drawing readily available
- Auto and manual switching options

Note:

- 1) Prices are available on request
- 2) Lead time of standard APFC panels is 6 to 8 weeks (Ex-Nagpur)
- 3) Freight charges at actuals
- 4) For other ratings and specifications, contact nearest branch office

Ordering Information for APFC Panels



Product	Description	kVAr ratings	Capacitors	Main Incomer	Branch Protection	Switching	Harmonic filter
etaSYS – MH1	Contactor switched standard APFC Panels	35 to 500 kVAr	Heavy Duty Gas filled capacitors	MCCB - up to 350 kVAr; ACB – 400 to 500 kVAr	MCCB	MO C Capacitor duty contactor	-
etaSYS – MH2	Contactor switched standard APFC Panels with harmonic filters	100 to 500 kVAr	Heavy Duty Gas filled capacitors	MCCB - up to 350 kVAr; ACB – 400 to 500 kVAr	MCCB	MO C Capacitor duty contactor	7% copper reactor
etaSYS - FH1	Contactor switched standard APFC Panels	35 to 500 kVAr	Heavy Duty Gas filled capacitors	MCCB - up to 350 kVAr; ACB – 400 to 500 kVAr	HRC Fuse	MO C Capacitor duty contactor	-
etaSYS - FH2	Contactor switched standard APFC Panels with harmonic filters	100 to 500 kVAr	Heavy Duty Gas filled capacitors	MCCB - up to 350 kVAr; ACB – 400 to 500 kVAr	HRC Fuse	MO C Capacitor duty contactor	7% copper reactor
etaSYS - FH3 (RTPFC)	Thyristor switched standard APFC Panels with harmonic filters	100 to 500 kVAr	Heavy Duty Gas filled capacitors	MCCB - up to 350 kVAr; ACB – 400 to 500 kVAr	Semiconductor fuse	Thyristor switching modules	7% copper reactor
etaSYS - MU1	Contactor switched standard APFC Panels	100 to 500 kVAr	LTXL - Ultra Heavy Duty capacitors	MCCB - up to 350 kVAr; ACB – 400 to 500 kVAr	MCCB	MO C Capacitor duty contactor	-
etaSYS – MU2	Contactor switched standard APFC Panels with harmonic filters	100 to 500 kVAr	LTXL - Ultra Heavy Duty capacitors	MCCB - up to 350 kVAr; ACB – 400 to 500 kVAr	MCCB	MO C Capacitor duty contactor	7% copper reactor
etaSYS - FU1	Contactor switched standard APFC Panels	35 to 500 kVAr	LTXL - Ultra Heavy Duty capacitors	MCCB - up to 350 kVAr; ACB – 400 to 500 kVAr	HRC Fuse	MO C Capacitor duty contactor	-
etaSYS - FU2	Contactor switched standard APFC Panels with harmonic filters	100 to 500 kVAr	LTXL - Ultra Heavy Duty capacitors	MCCB - up to 350 kVAr; ACB – 400 to 500 kVAr	HRC Fuse	MO C Capacitor duty contactor	7% copper reactor
etaSYS - FU3 (RTPFC)	Thyristor switched standard APFC Panels with harmonic filters	100 to 500 kVAr	LTXL - Ultra Heavy Duty capacitors	MCCB - up to 350 kVAr; ACB – 400 to 500 kVAr	Semiconductor fuse	Thyristor switching modules	7% copper reactor

Making MCCs More Intelligent

We go the extra mile.

Conventional MCCs only provide you with basic protection. For smarter MCCs and complete motor protection, control and monitoring, choose L&T MCOMP – the intelligent motor management relay. By combining multiple advantages in one offering, we go the extra mile.



MCOMP Complete solution for Smart MCC

Features & advantages

- Integration of voltage and current based protections
- Enhanced circuit breaker control, interlocking and logic building
- Metering, event recording and trip data recording helps in fault analysis, ensures lower down-time and increases plant efficiency
- Connectivity with SCADA / DCS on Modbus RTU / TCP IP and Profibus DP

Customer Interaction Center (CIC)

BSNL / MTNL (toll free): 1800 233 5858 Reliance (toll free): 1800 200 5858
Tel: 022 6774 5858 Fax: 022 6774 5859 Email: cic@Lntebg.com Web: www.Lntebg.com

Digital Protective Relays

3 Phase Over Current + Earth Fault Relay

C.T. Rating 1A or 5A, Field Selectable



- IDMT & Definite time characteristics
- Last 30 trip data recording with date and time
- Password Protection

Model	Aux. Supply (V)	Output Contacts	Device Code	Cat. No.	M.R.P. (₹) Per Unit
MC31AnX	24 - 240V AC/ DC	2 NO + 2 NC	51, 51N	MC31ANX2200	16000
		4 NO		MC31ANX4000	

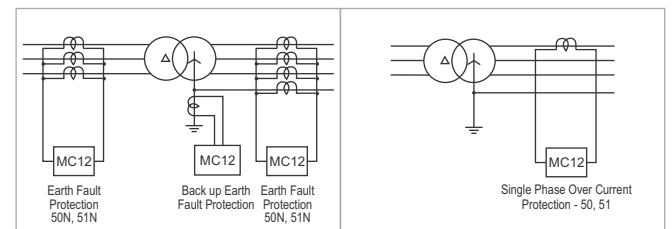
Single Pole Over Current or Earth Fault Relay

C.T. Rating 1A or 5A, Not Field Selectable



- IDMT and Definite time characteristics

Model	Aux. Supply (V)	C.T. Secondary (A)	Device Code	Cat. No.	M.R.P. (₹) Per Unit
MC12	20 - 110V AC/DC	1A	50, 51 or 50N, 51N	MC12AA10X00	9600
		5A		MC12AA50X00	
	88 - 264V AC/DC	1A		MC12AB10X00	
		5A		MC12AB50X00	



3 Phase Over Current + Earth Fault Relay with High Set

C.T. Rating 1A or 5A, Field Selectable



- IDMT & Definite time characteristics
- Last 30 trip data recording with date and time
- Password Protection

Model	Aux. Supply (V)	Output Contacts	Device Code	Cat. No.	M.R.P. (₹) Per Unit
MC61AnX	24 - 240V AC/ DC	2 NO + 2 NC	51, 51N, 50, 50N	MC61ANX2200	18000
		4 NO		MC61ANX4000	

Reverse Power Relay

C.T. Rating 1A or 5A, Not Field Selectable



Model	Aux Supply (V)	C.T. Secondary (A)	Device Code	Cat. No.	M.R.P. (₹) Per Unit
MRP11	20 - 110V AC/DC	1A	32	MRP11A10X00	21500
		5A		MRP11A50X00	
	88 - 264V AC/DC	1A		MRP11B10X00	
		5A		MRP11B50X00	

3 Phase Over Current + Earth Fault Relay with High Set & RS - 485 Port

C.T. Rating 1A or 5A, Field Selectable



- IDMT & Definite time characteristics
- Last 30 trip data recording with date and time
- Password Protection

Model	Aux. Supply (V)	Output Contacts	Device Code	Cat. No.	M.R.P. (₹) Per Unit
MC61CnX	24 - 240V AC/ DC	4 NO	51, 51N, 50, 50N	MC61CNX4000	24000

Trip Circuit Supervision Relay



- Static Relay.
- Monitors Trip Coil in Breaker ON & OFF condition
- Site selectable Trip Coil Voltage

Model	Aux. Supply (V)	Cat. No.	M.R.P. (₹) Per Unit
TCS01nX	20 - 110 V AC/ DC	TCS01NXA000	7500
	88 - 264 V AC/ DC	TCS01NXB000	

Digital Protective Relays

MPR200nX Mini Motor Protection Relay*

New



- Protections:
 - Thermal Overload
 - Locked Rotor
 - Single Phasing, Current Unbalance, Phase Sequence Reversal
 - Under Current

- Inbuilt CT's (1 A to 88 A)
- Trip indication
- Test facility
- Selectable trip class - 10A, 10, 20 and 30 as per IEC 947-4-1

Model	Aux. supply	Thermal O/L Range (A)	Device Code	Cat. No.	M.R.P. (₹) Per Unit
MPR200nX	240V AC	1 - 2.75	49, 51LR, 37, 46,	MPR200BE010	3100
		2 - 5.5		MPR201BE020	3100
		4 - 11		MPR202BE040	3500
		8 - 22		MPR203BE080	3500
		16 - 44		MPR204BE160	3900
		32 - 88		MPR205BE320	3900
	110V AC	1 - 2.75		MPR200BB010	3100
		2 - 5.5		MPR201BB020	3100
		4 - 11		MPR202BB040	3500
		8 - 22		MPR203BB080	3500
		16 - 44		MPR204BB160	3900
		32 - 88		MPR205BB320	3900

New

MPR300 Mini Motor Protection Relay With in-built Earth Fault Protection

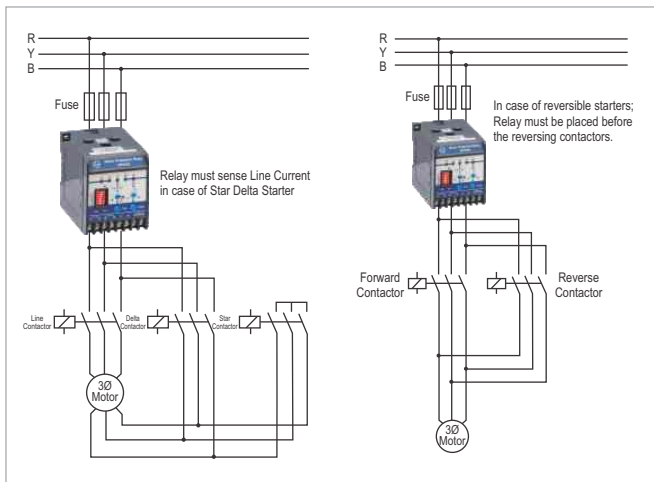


- Protections:
 - Thermal Overload
 - Earth Fault
 - Locked Rotor
 - Single Phasing, Current Unbalance, Phase Sequence Reversal
 - Under Current

- Inbuilt CT's (1 A to 88 A)
- Trip indication
- Test facility
- Selectable trip class - 10A, 10, 20 and 30 as per IEC 947-4-1

Model	Aux. supply	Thermal O/L Range (A)	Device Code	Cat. No.	M.R.P. (₹) Per Unit
MPR300	240V AC	1 - 2.75	49, 51LR, 64, 37, 46,	MPR300BE010	5700
		2 - 5.5		MPR301BE020	5700
		4 - 11		MPR302BE040	6100
		8 - 22		MPR303BE080	6100
		16 - 44		MPR304BE160	6500
		32 - 88		MPR305BE320	6500
	110V AC	1 - 2.75		MPR300BB010	5700
		2 - 5.5		MPR301BB020	5700
		4 - 11		MPR302BB040	6100
		8 - 22		MPR303BB080	6100
		16 - 44		MPR304BB160	6500
		32 - 88		MPR305BB320	6500

MPR200nX / MPR300 Application Diagram



* available on request only

MPR200nX / MPR300- Trip Time Characteristics

Trip class	Trip time delay		
	I = 120% of I _m	I = 150% of I _m	I = 720% of I _m
10A	< 2 hours	2 min	2 - 10 secs
10	< 2 hours	4 min	4 - 10 secs
20	< 2 hours	6 min	6 - 20 secs
30	< 2 hours	12 min	9 - 30 secs

I_m - Motor Full Load Current
I - Actual current drawn by the Motor

Digital Protective Relays

Compact Motor Protection Relay - MM10

- Flush Mounting with display
- Last trip data recording



- Protections:
 - Thermal Overload with pre- alarm
 - Short Circuit
 - Earth fault
 - Phase loss, Unbalance, Phase reversal
 - Under Current
 - Prolong starting, Locked Rotor

Model	Aux. Supply	CT secondary	Device code	Cat. No.	M.R.P. (₹) Per Unit
MM10	110 - 240 V AC / DC	5 Amp	37, 46, 49, 50 / 51, 51LR, 64	MM10240X005	26000

Comprehensive Motor protection relay MM30-743

with current based protections



Model	Aux. Supply	Device code	Cat. No.	M.R.P. (₹) Per Unit
MM30 - 743	20 - 110V AC/ DC	37,46,47,48, 49,50/51,51LR,	EMM30AXX00E	75000
	88 - 240V AC/ DC	64, 66,68,74	EMM30BXX00E	

Comprehensive Motor protection relay MM30-W74*

with current and voltage based protections



Model	Aux. Supply	Device code	Cat. No.	M.R.P. (₹) Per Unit
MM30 - W74	20 -110V AC/DC	12/14,27/59,37, 46,47,48,49,	EMM30WAX002	95000
	88-240V AC/DC	50/51, 51LR,55, 64,66,68,74,81.	EMM30WBX002	

* available on request only

MCOMP - Intelligent Motor Control, Monitoring and Protection Relay

- Current & Voltage based metering and protection in a single compact unit
- In-built voltage module: enables power measurement
- 6 DI & 4 DO in base unit
- Universal auxiliary supply
- Communication capability: Modbus RTU, Modbus TCP / IP, Profibus
- Inbuilt Analog output & RTD / PTC inputs
- OLED Display: 170° viewing angle, brighter pixilation
- Conformal coating



CT Unit



Main unit



Display unit

Description	Cat. No.	M.R.P. (₹) Per Unit
MCOMP Main Unit; RTU (expand); 80 - 240 VAC/ DC; RTD	MCOMPZX90032	24000
MCOMP CT1 UNIT 0.5M CABLE; 0.675A to 2.025A	MCOMPZX90006	4000
MCOMP CT2 UNIT 0.5M CABLE; 1.8A to 5.4A	MCOMPZX90007	5000
MCOMP CT3 UNIT 0.5M CABLE; 4.5A to 13.5A	MCOMPZX90008	5000
MCOMP CT4 UNIT 0.5M CABLE; 12.6A to 37.8A	MCOMPZX90009	5000
MCOMP CT5 UNIT 0.5M CABLE; 36A to 81A	MCOMPZX90010	6000
MCOMP USB DISPLAY UNIT- 1.0 M CABLE; 80-240 V AC/DC	MCOMPZX90042	15000
MCOMP USB DISPLAY UNIT- 2.0 M CABLE; 80-240 V AC/DC	MCOMPZX90043	15000

Digital Protective Relays

APFC Relays

etaCON L series with Auto-set function



- Compact size (96 x 96 mm) for etaCON L3, L5, L7
- Standard size (144 x144 mm) for etaCON L8, L12

Model	Description	Steps Description	CT secondary	Voltage input	Cat. No.	M.R.P. (₹) Per Unit
etaCON L3	3 stage	3	5 Amp	415V	ERPML03D500	9000
etaCON L5	5 stage	4 + 1*			ERPML05D500	10000
etaCON L7	7 stage	6 + 1*			ERPML07D500	11000
etaCON L8	8 stage	7 + 1*			ERPML08D500	13600
etaCON L12	12 stage	11 + 1*			ERPML12D500	14800

* Last Contact can be programmed for capacitor switching / Alarm function / Fan Control



Model	Description	CT secondary	Voltage input	Cat. No.	M.R.P. (₹) Per Unit
RPM 14	14 Stage APFC Relay	1 A or 5 A - Field selectable	240V	MRPM1400000	16900

Generator protection relay



Model	Generator Grounding	Aux. supply	Device code	Cat. No.	M.R.P. (₹) Per Unit
MG30I	Solid grounding	20 - 110 VAC/ DC	21,24,27/59,32,37, 40,46,49,50/27, 50V/51V, 51BF, 60FL, 64S,68,81	EM30GIAXX00	210000
		88 - 240 VAC/DC		EM30GIBXX00	
MG30	Impedance Grounding (NGR/ NGT)	20 - 110 VAC/ DC	21,24,27/59,32,37, 40,46,49,50/27, 50V/51V,51BF, 60FL, 64S,68,81	EMG30AXX000	210000
		88 - 240 VAC/DC		EMG30BXX000	

Model	Description	Aux. supply	Device code	Cat. No.	M.R.P. (₹) Per Unit
MD32G	Generator Differential Relay	20 - 110V AC/ DC	50/51, 68, 87, 87N	ED32GAXX000 *	266500
		88 - 240V AC/DC		ED32GBXX000 *	

Single Phase Under Voltage or Over Voltage Relay



Model	Aux. Supply (V)	Device code	Cat. No.	M.R.P. (₹) Per Unit
MV12A	20 - 110V AC/DC	27 or 59	MV12AA00X00	10000
	88 - 264V AC/DC		MV12AB00X00	

Three phase Voltage and Frequency relay with df/dt and dv/dt protection



Model	Aux. supply	Device code	Cat. No.	M.R.P. (₹) Per Unit
UFD34	20 - 110V AC/ DC	27, 59, 81, df/dt, dv/dt	EFD34A00000	150000
	88 - 240V AC/DC		EFD34B00000	

Voltage Frequency and Zero Sequence Voltage Relay with Vector shift detection



Model	Aux. supply	Device code	Cat. No.	M.R.P. (₹) Per Unit
UM30	20 - 110V AC/ DC	24, 27d/59d, 47, 59, 59Uo, 78, 81	EUM30A00000 *	150000
	88 - 240V AC/DC		EUM30B00000 *	

* available on request only

Metering Devices

Single Phase kWh meter with LCD display

Model EM101+ Class 1 Base mounting



Description	Cat. No.	M.R.P. (₹) Per Unit
1P LCD Meter 5-30A	WM101BC5DL0	1420
1P LCD Meter 5-30A with BOX	WM101BC5DL0BOX	1900
1P LCD Meter 5-30A with OPTICAL PORT	WM101BC5DDH	1950
1P LCD Meter 5-30A with Optical port + BOX	WM101BC5DDHBOX	2430
1P LCD Meter 10-60A	WM101BC7DL0	1720
1P LCD Meter 10-60A with BOX	WM101BC7DL0BOX	2170
1P LCD Meter 10-60A with Optical Port	WM101BC7DDH	2200
1P LCD Meter 10-60A with Optical Port + BOX	WM101BC7DDHBOX	2530

3 Phase 4 Wire kWh meter Counter type

Model EM301B Class 1 Base mounting



Description	Cat. No.	M.R.P. (₹) Per Unit
3Ph 4 W kWh CT op base mtg 240V 5 -10 A	WM301BC3C00	3810
3Ph 4 W kWh Dir base mtg 240V 5 -20 A Sleek	WM301BC4D20	3410
3Ph 4 W kWh Dir base mtg 240V 10 -40 A Sleek	WM301BC6D20	3510
3Ph 4 W kWh Dir base mtg 240V 10 - 60 A big body	WM301BC7D10	4310
3Ph 4 W kWh Dir base mtg 240V 50 -100 A big body	WM301BC8D10	6250

Trivector Meter Class 0.5

Model ER300P Class 0.5 (Base Mounting)



Description	Cat. No.	M.R.P. (₹) Per Unit
3Ph, 4W TVM 110V (L-L) 1 A Class 0.5 BM	WR300BB1200	20500
3Ph, 4W TVM 110V (L-L) 5 A Class 0.5 BM	WR300BB5200	20500
3Ph, 4W TVM 240V (L-N) 1 A Class 0.5 BM *	WR300BC1200	20500
3Ph, 4W TVM 240V (L-N) 5 A Class 0.5 BM	WR300BC5200	20500
3Ph, 4W TVM 110V (L-L) 1 A Class 0.5 BM RS485	WR300BB12RS	24600
3Ph, 4W TVM 110V (L-L) 5 A Class 0.5 BM RS485 *	WR300BB52RS	24600
3Ph, 4W TVM 240V (L-N) 1 A CI 0.5 BM RS485 *	WR300BC12RS	24600
3Ph, 4W TVM 240V (L-N) 5 A CI 0.5 BM RS485	WR300BC52RS	24600

Trivector Meter Class 1 whole current meter

Model ER300P Class 1 (Base Mounting)



Description	Cat. No.	M.R.P. (₹) Per Unit
3Ph, 4W TVM 240 V 10 - 60A BM	WR300BC7300	6660
3Ph, 4W TVM 240 V 10 - 60A BM RS 485 *	WR300BC73RS485	9500

* - available on request only

* - available on request only

Trivector Meter Class 0.2

Model ER300P Class 0.2 (Base Mounting)



Description	Cat. No.	M.R.P. (₹) Per Unit
3Ph, 4W TVM 110V (L-L) 1 A Class 0.2 BM	WR300BB1100	46120
3Ph, 4W TVM 110V (L-L) 5 A Class 0.2 BM	WR300BB5100	46120
3Ph, 4W TVM 110V (L-L) 1 A Class 0.2 BM RS485	WR300BB11RS	49200
3Ph, 4W TVM 110V (L-L) 5 A Class 0.2 BM RS485	WR300BB51RS	49200

Meter Reading Instrument

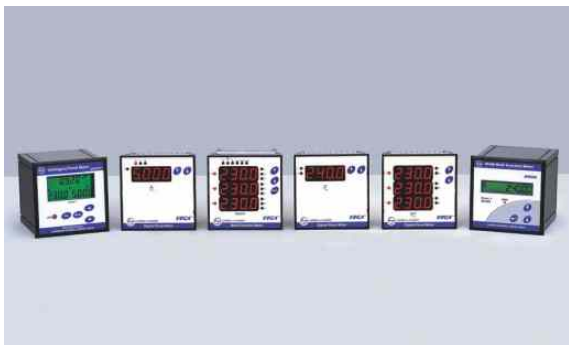


Description	Cat. No.	M.R.P. (₹) Per Unit
Meter Reading Instrument - (6.5 MB)	990MR1XX00S	87120
Meter Reading Instrument - (16.5 MB)	990MR1XX000	100000



Clarity/112014/RP

When accuracy matters the choice is L&T Panel Meters



Digital Panel Meters

Salient features:

- Class 1 and 0.5S accuracy
- 96mm X 96mm size
- Communication port available
- Ease of selection
- Large, easy to read display

Choose from:

- Single function (V,A,F) meters
- VAF + PF meters
- kWh meters
- Dual Source meters
- Multifunction meters

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Tel: 022 6774 5858 Fax: 022 6774 5859 Email: cic@Lntebg.com Web: www.Lntebg.com

Digital Panel Meters

Single Function Meters

Model VEGA

Features

- Accuracy Class 1.0
- Input voltage measurement range 17-520 VAC (P-P)
- Aux supply 90-300VAC
- Flush mounting 96 X 96 mm
- Inbuilt selector switch for 3 phase meters
- CT/PT site programmable



Ammeter



Voltmeter

Description	Cat. No.	M.R.P. (₹) Per Unit
Single Phase Basic Meters		
1Ph Voltmeter Class 1	WDS101FEV00	1000
1Ph Ammeter, Class 1, 5A	WDS101FCA00	1000
1Ph Ammeter, Class 1, 1A	WDS101OCA00	1000
1Ph Freq. meter Class 0.2	WDS121FCF00	1000
Three Phase Basic Meters		
3Ph Voltmeter Class 1	WDS301FEV00	1360
3Ph Ammeter, 5A, Class 1	WDS301FCA00	1360
3Ph Ammeter, 1A, Class 1	WDS301OCA00	1360

VAF + PF Meters

Model VEGA

Features

- Accuracy Class 1.0
- Input voltage measurement range 17-520 VAC (P-P)
- Aux supply 90-300VAC
- Flush mounting 96 X 96 mm
- CT/PT site programmable
- Parameters : V, A, F, RPM and PF



VAF + PF Meter

Description	Cat. No.	M.R.P. (₹) Per Unit
VAF + PF Meter		
3Ph VAF + PF, Class 1, 5A	WDV303FC000	2600
3Ph VAF + PF, Class 1, 1A	WDV303OC000	2600

* RPM - Rotation per minute

LED Multifunction Meters

Model VEGA

Features

- Accuracy Class 1.0, 0.5S ^{Upgraded}
- Input voltage measurement range 17-520 VAC (P-P)
- Aux supply 90-300VAC
- Flush mounting 96 X 96 mm
- Site selectable 1A /5A
- CT/PT site programmable
- Optional RS485 port



Parameters:

Model A: V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh, Runhours, On hours, Interrupts, RPM, % Unbalance (V,A), Phase angle, THD.

Model B: All parameters of Model A + Neutral current, % Load, Maximum Demand (kW & kVA), MD reset

Model C: All parameters of Model B + Bi-directional (Import-Export)

Description	Cat. No.	M.R.P. (₹) Per Unit
Class 1		
Model A, Class 1, RS485 port	WDM303FDWA1	7500
Model B, Class 1, RS485 port	WDM303FDNB1	11400
Model C, Class 1, RS485 port	WDM303FDNC1	16400
Model A, Class 1 without RS485 port	WDM303FDWAX	6990
Model B, Class 1 without RS485 port	WDM303FDNBX	10500
Model C, Class 1 without RS485 port	WDM303FDNCX	15500
Class 0.5S		
Model A, Class 0.5S, RS485 port	WDM313CDWA1	9000
Model B, Class 0.5S, RS485 port	WDM313CDNB1	14000
Model C, Class 0.5S, RS485 port	WDM313CDNC1	20000

* RPM - Rotation per minute

LCD Multifunction Meters

Model NOVA

Features

- Accuracy Class 1.0
- Input voltage measurement range 3 X 240 VAC (-30% to 20%)
- Aux supply 90-300VAC/DC
- Flush mounting 96 X 96 mm
- CT/PT site programmable
- Optional RS485 port
- Parameters: V, A, F, PF, kW, kWh, Phase sequence



NOVA

Description	Cat. No.	M.R.P. (₹) Per Unit
3Ph 4W 240V 5A with RS485	WM30KFC3CRS	4800
3Ph 4W 240V 5A	WM30KFC3C00	4300

Digital Panel Meters

LCD Multifunction Meter

Model QUASAR

Features

- Accuracy Class 1.0, 0.5
- Flush mounting 96 X 96 mm
- CT/PT site programmable
- Optional RS485 port
- Parameters: V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh, THD, Phase angles, THD, Power demand.



Description	Cat. No.	M.R.P. (₹) Per Unit
3Ph, 4W IPM 240 V (L-N) 1 A Class 1 FM	WI300FC1300	9060
3Ph, 4W IPM 240 V (L-N) 5 A Class 1 FM	WI300FC5300	9060
3Ph, 3W IPM 110 V (L-L) 1 A Class 1 FM	WI301FC1300	9060
3Ph, 3W IPM 110 V (L-L) 5 A Class 1 FM	WI301FC5300	9060
3Ph, 4W IPM 110 V (L-L) 1 A Class 1 FM	WI300FB1300	9060
3Ph, 4W IPM 110 V (L-L) 5 A Class 1 FM	WI300FB5300	9060
3Ph, 4W IPM 240 V (L-N) 1 A Class 1 FM with RS485	WI300FC13RS	10130
3Ph, 4W IPM 240 V (L-N) 5 A Class 1 FM with RS485	WI300FC53RS	10130
3Ph, 3W IPM 110 V (L-L) 1 A Class 1 FM with RS485	WI301FC13RS	10130
3Ph, 3W IPM 110 V (L-L) 5 A Class 1 FM with RS485	WI301FC53RS	10130
3Ph, 4W IPM 110 V (L-L) 1 A Class 1 FM with RS485	WI300FB13RS	10130
3Ph, 4W IPM 110 V (L-L) 5 A Class 1 FM with RS485	WI300FB53RS	10130

Description	Cat. No.	M.R.P. (₹) Per Unit
3Ph, 4W IPM 240 V (L-N) 1 A Class 0.5 FM	WI300FC1200	11190
3Ph, 4W IPM 240 V (L-N) 5 A Class 0.5 FM	WI300FC5200	11190
3Ph, 3W IPM 110 V (L-L) 1 A Class 0.5 FM	WI301FC1200	11190
3Ph, 3W IPM 110 V (L-L) 5 A Class 0.5 FM	WI301FC5200	11190
3Ph, 4W IPM 110 V (L-L) 1 A Class 0.5 FM	WI300FB1200	11190
3Ph, 4W IPM 110 V (L-L) 5 A Class 0.5 FM	WI300FB5200	11190
3Ph, 4W IPM 240 V (L-N) 1 A Class 0.5 FM with RS485	WI300FC12RS	12260
3Ph, 4W IPM 240 V (L-N) 5 A Class 0.5 FM with RS485	WI300FC52RS	12260
3Ph, 3W IPM 110 V (L-L) 1 A Class 0.5 FM with RS485	WI301FC12RS	12260
3Ph, 3W IPM 110 V (L-L) 5 A Class 0.5 FM with RS485	WI301FC52RS	12260
3Ph, 4W IPM 110 V (L-L) 1 A Class 0.5 FM with RS485	WI300FB12RS	12260
3Ph, 4W IPM 110 V (L-L) 5 A Class 0.5 FM with RS485	WI300FB52RS	12260

Dual Source Meter

Model Gemini

Features

- Accuracy Class 1.0
- Input voltage measurement range 3 X 240 VAC (-30% to 20%)
- Aux supply 90-300 VAC/DC
- DG sensing input 10-16 VDC/90-300 VAC
- Flush mounting 96 X 96 mm
- CT/PT site programmable
- RS485 port available
- Parameters: V,A, F, PF, kW, kWh - Dual source, Phase sequence



Gemini

Description	Cat. No.	M.R.P. (₹) Per Unit
3Ph 4W 240V 5A with RS485	WM30DFC3CRS	4600

kWh Meter

LCD Type



Features

- Accuracy Class 1.0
- Aux supply 90 - 300 VAC
- Flush mounting 96 X 96 mm
- CT/PT site programmable
- Optional RS485 port
- Auto scaling of Kilo, Mega and Giga
- Parameter: kWh

Description	Cat. No.	M.R.P. (₹) Per Unit
3Ph 4W, 5A, kWh meter Class 1	WM30JFC3C00	3000
3Ph 4W, 5A, kWh meter Class 1 with RS485 port	WM30JFC3CRS	3500

kWh Meter

Model Acrux – Counter Type



Acrux

Features

- Accuracy Class 1.0
- Flush mounting 96 X 96 mm
- Parameter: kWh

Description	Cat. No.	M.R.P. (₹) Per Unit
3Ph 4W 240V 1A (kWh meter counter type) - Acrux	WM301FC1C10	3200
3Ph 4W 240V 5A (kWh meter counter type) - Acrux	WM301FC3C10	3200

DIN Energy Meter

Model Mi-energy

Features

- Accuracy Class 2.0
- RS485 and Wi-Fi modules available
- Displays day, week, month and push to push consumption
- Parameters: V, A, F, PF, kW, kVA, kVAR, kWh, MD



1 Phase



3 Phase



RS 485 Module



Wi-Fi Module

Description	Cat. No.	M.R.P. (₹) Per Unit
1Ph 5-30A, 240V, Class 2	W2DL050600	2200
3Ph 10-60A, 240V, Class 2	W4DL100600	5000
RS485 module	W1DL0000RS	2200
Wi-Fi module	W1DL0000WF	5000

New

The Drive for Harsh Ambient Conditions.



Sx2000 IP66 AC Drive

Sx2000 provides protection against harsh environmental conditions by restricting entry of foreign substances such as fine dust and high-pressure water spray.

Satisfies IEC 60529 standard IP66 Drive

Satisfies NEMA standard type 4X for indoor use.

Range: 0.75kW to 22kW (HD)

Features:

- Built-in Disconnecter Switch
- V/F, Sensorless Vector Control, Slip compensation
- Starting Torque: 150% at 3 Hz for V/F, 200% at 0.5Hz for Vector Control
- Conformal Coating complying to IEC 60721-3-3 class 3C2
- Built-in RS485 Modbus
- Peer to Peer Communication to share I/O's
- Built-in Brake Control
- Inbuilt PLC functionality
- Component Life Monitor
- Built-in PID
- Multi Keypad
- Built-in Braking Chopper till 22kW (HD)

Customer Interaction Center (CIC)

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AC Drive Range:

- 1) **Cx2000**: Compact Drive - Range : 0.1 to 11kW (ND)
- 2) **Sx2000**: Smart Drive - Range : 0.75 to 90kW (ND)
- 3) **Fx2000**: Flexi Drive - Range : 0.75 to 375kW (HD)
- 4) **Ex2000**: Energy Saver Drive - Range : 5.5 to 450kW (ND)

Application Specific Drives:

- 1) **Hx2000**: HVAC Drive - Range : 0.75 to 90kW (ND)
- 2) **Sx2000**: IP66 Drive - Range : 0.75 to 22kW (HD)
- 3) **Lx2000**: Elevator Drive - Range : 3.7 to 22kW (HD)

Model type & Selection:

LTVF	X	X	XXXX	X	X	A
L&T Variable Frequency Drive	Series	Input Voltage	Drive Current Rating (ND)*	Enclosure	Keypad	Reserved
	C Cx2000 S Sx2000 E Ex2000 F Fx2000 L Lx2000 H Hx2000	1 Single-Phase 200-240[V] 2 Three-Phase 200-240[V] 4 Three-Phase 380-480[V]		A IP00 B IP20 C IP21 X IP66	A With **B Without	

*For Cx2000 230Vac Single-Phase mentioned current is for HD rating.
 **Valid for Cx2000 series only.

AC Drives

Compact Series Cx2000



- Range: 0.1kW to 11kW
- Starting Torque 150% at 3 Hz
- Built-in Potentiometer
- Built-in PID
- Built-in Brake Control
- Conformal Coating complying to IEC 60721-3-3 class 3C2
- Built-in RS485 Modbus RTU
- Built-in Braking Chopper upto 11kW

Input Voltage	Description	Cat. No.	M.R.P. (₹) Per Unit
Single Phase 230Vac	Cx2000 VVVF 230V 1Ph Drive 0.10 kW (HD)	LTVF-C10001BAA	*
	Cx2000 VVVF 230V 1Ph Drive 0.20 kW (HD)	LTVF-C10002BAA	*
	Cx2000 VVVF 230V 1Ph Drive 0.40 kW (HD)	LTVF-C10003BAA	*
	Cx2000 VVVF 230V 1Ph Drive 0.75 kW (HD)	LTVF-C10005BAA	*
	Cx2000 VVVF 230V 1Ph Drive 1.50 kW (HD)	LTVF-C10008BAA	*
	Cx2000 VVVF 230V 1Ph Drive 2.20 kW (HD)	LTVF-C10011BAA	*
Three Phase 230Vac	Cx2000 VVVF 230V 3Ph Drive 0.40 kW (HD) / 0.75 kW (ND)	LTVF-C20003BAA	*
	Cx2000 VVVF 230V 3Ph Drive 0.75 kW (HD) / 1.1 kW (ND)	LTVF-C20006BAA	*
	Cx2000 VVVF 230V 3Ph Drive 1.5 kW (HD) / 2.20 kW (ND)	LTVF-C20010BAA	*
	Cx2000 VVVF 230V 3Ph Drive 2.2 kW (HD) / 3.0 kW (ND)	LTVF-C20012BAA	*
	Cx2000 VVVF 230V 3Ph Drive 3.7 kW (HD) / 4.0 kW (ND)	LTVF-C20018BAA	*
Three Phase 415Vac	Cx2000 VVVF 415V Drive 0.40 kW (HD) / 0.75 kW (ND)	LTVF-C40002BAA	*
	Cx2000 VVVF 415V Drive 0.75 kW (HD) / 1.1 kW (ND)	LTVF-C40003BAA	*
	Cx2000 VVVF 415V Drive 1.50 kW (HD) / 2.20 kW (ND)	LTVF-C40005BAA	*
	Cx2000 VVVF 415V Drive 2.20 kW (HD) / 3.70 kW (ND)	LTVF-C40007BAA	*
	Cx2000 VVVF 415V Drive 3.70 kW (HD) / 4.0 kW (ND)	LTVF-C40010BAA	*
	Cx2000 VVVF 415V Drive 5.50 kW (HD) / 7.50 kW (ND)	LTVF-C40016BAA	*
	Cx2000 VVVF 415V Drive 7.50 kW (HD) / 11.0 kW (ND)	LTVF-C40023BAA	*

Note: * For prices please contact nearest branch office

1) Cx2000 has model without built-in keypad for which external LED keypad (LTOP-DOP-50) is used which comes with default 3m cable.

Smart Series Sx2000



- Range: 0.75kW to 90kW
- Starting Torque: 150% at 3 Hz for V/F, 200% at 0.5Hz for Vector Control
- Built-in Brake Control
- Built-in PLC functionality
- Peer to Peer Communication to share I/O's
- Conformal Coating complying to IEC 60721-3-3 class 3C2
- Built-in RS485 Modbus RTU
- Component Life Monitor
- Built-in Braking Chopper till 30kW

Input Voltage	Description	Cat. No.	M.R.P. (₹) Per Unit
Single Phase 230Vac	Sx2000 VVVF 230V 1Ph Drive 0.40 kW (HD) / 0.75 kW (ND)	LTVF-S10003BAA	*
	Sx2000 VVVF 230V 1Ph Drive 0.75 kW (HD) / 1.5 kW (ND)	LTVF-S10006BAA	*
	Sx2000 VVVF 230V 1Ph Drive 1.5 kW (HD) / 2.20 kW (ND)	LTVF-S10010BAA	*
	Sx2000 VVVF 230V 1Ph Drive 2.2 kW (HD) / 3.70 kW (ND)	LTVF-S10012BAA	*
Three Phase 230Vac	Sx2000 VVVF 230V 3Ph Drive 0.40 kW (HD) / 0.75 kW (ND)	LTVF-S20003BAA	*
	Sx2000 VVVF 230V 3Ph Drive 0.75 kW (HD) / 1.5 kW (ND)	LTVF-S20006BAA	*
	Sx2000 VVVF 230V 3Ph Drive 1.5 kW (HD) / 2.20 kW (ND)	LTVF-S20010BAA	*
	Sx2000 VVVF 230V 3Ph Drive 2.2 kW (HD) / 3.70 kW (ND)	LTVF-S20012BAA	*
	Sx2000 VVVF 230V 3Ph Drive 4.0 kW (HD) / 5.5 kW (ND)	LTVF-S20018BAA	*
	Sx2000 VVVF 230V 3Ph Drive 5.5 kW (HD) / 7.5 kW (ND)	LTVF-S20030BAA	*
	Sx2000 VVVF 230V 3Ph Drive 7.5 kW (HD) / 11 kW (ND)	LTVF-S20040BAA	*
	Sx2000 VVVF 230V 3Ph Drive 11 kW (HD) / 15 kW (ND)	LTVF-S20056BAA	*
	Sx2000 VVVF 230V 3Ph Drive 15 kW (HD) / 18.5 kW (ND)	LTVF-S20069BAA	*
	Sx2000 VVVF 230V 3Ph Drive 22.0 kW (HD) / 30.0 kW (ND)	LTVF-S20091BAA	*
Three Phase 415Vac	Sx2000 VVVF 415V Drive 0.40 kW (HD) / 0.75 kW (ND)	LTVF-S40002BAA	*
	Sx2000 VVVF 415V Drive 0.75 kW (HD) / 1.50 kW (ND)	LTVF-S40003BAA	*
	Sx2000 VVVF 415V Drive 1.50 kW (HD) / 2.20 kW (ND)	LTVF-S40005BAA	*
	Sx2000 VVVF 415V Drive 2.20 kW (HD) / 3.7 kW (ND)	LTVF-S40007BAA	*
	Sx2000 VVVF 415V Drive 4.00 kW (HD) / 5.50 kW (ND)	LTVF-S40010BAA	*
	Sx2000 VVVF 415V Drive 5.50 kW (HD) / 7.50 kW (ND)	LTVF-S40016BAA	*
	Sx2000 VVVF 415V Drive 7.50 kW (HD) / 11.0 kW (ND)	LTVF-S40023BAA	*
	Sx2000 VVVF 415V Drive 11.0 kW (HD) / 15.0 kW (ND)	LTVF-S40030BAA	*
	Sx2000 VVVF 415V Drive 15.0 kW (HD) / 18.5 kW (ND)	LTVF-S40038BAA	*
	Sx2000 VVVF 415V Drive 18.5 kW (HD) / 22.0 kW (ND)	LTVF-S40044BAA	*
	Sx2000 VVVF 415V Drive 22.0 kW (HD) / 30.0 kW (ND)	LTVF-S40058BAA	*
	Sx2000 VVVF 415V Drive 30.0 kW (HD) / 37.0 kW (ND)	LTVF-S40075BAA	*
	Sx2000 VVVF 415V Drive 37.0 kW (HD) / 45.0 kW (ND)	LTVF-S40091BAA	*
	Sx2000 VVVF 415V Drive 45.0 kW (HD) / 55.0 kW (ND)	LTVF-S40107BAA	*
	Sx2000 VVVF 415V Drive 55.0 kW (HD) / 75.0 kW (ND)	LTVF-S40142BAA	*
	Sx2000 VVVF 415V Drive 75.0 kW (HD) / 90.0 kW (ND)	LTVF-S40169BAA	*

Note: * For prices please contact nearest branch office

Flexi Series *Fx2000*



- Range: 0.75kW to 375kW (HD)
- Ideal for Heavy Duty Application Crane, Winder, Textile Application, Plastic extruders
- Starting Torque: 250% at 0Hz for Closed Loop
- Built-in Crane & Wobulation Macros
- Winder Algorithm - Optional
- Conformal Coating complying to IEC 60721-3-3 class 3C2
- Built-in RS485 Modbus RTU
- Built-in DC Reactor from 22kW to 280kW
- Built-in Braking Chopper till 30kW

Input Voltage	Description	Cat. No.	M.R.P. (₹) Per Unit
Three Phase 415Vac	Fx2000 VVVF 415V Drive 0.75 kW (HD) / 1.50 kW (ND)	LTVF-F40004CAA	*
	Fx2000 VVVF 415V Drive 1.50 kW (HD) / 2.20 kW (ND)	LTVF-F40006CAA	*
	Fx2000 VVVF 415V Drive 2.20 kW (HD) / 3.70 kW (ND)	LTVF-F40008CAA	*
	Fx2000 VVVF 415V Drive 3.70 kW (HD) / 4.00 kW (ND)	LTVF-F40012CAA	*
	Fx2000 VVVF 415V Drive 5.50 kW (HD) / 7.50 kW (ND)	LTVF-F40016CAA	*
	Fx2000 VVVF 415V Drive 7.50 kW (HD) / 11.0 kW (ND)	LTVF-F40024CAA	*
	Fx2000 VVVF 415V Drive 11.0 kW (HD) / 15.0 kW (ND)	LTVF-F40030CAA	*
	Fx2000 VVVF 415V Drive 15.0 kW (HD) / 18.5 kW (ND)	LTVF-F40039CAA	*
	Fx2000 VVVF 415V Drive 18.5 kW (HD) / 22.0 kW (ND)	LTVF-F40045CAA	*
	Fx2000 VVVF 415V Drive 22.0 kW (HD) / 30.0 kW (ND)	LTVF-F40061CAA	*
	Fx2000 VVVF 415V Drive 30.0 kW (HD) / 37.0 kW (ND)	LTVF-F40075CAA	*
	Fx2000 VVVF 415V Drive 37.0 kW (HD) / 45.0 kW (ND)	LTVF-F40091CAA	*
	Fx2000 VVVF 415V Drive 45.0 kW (HD) / 55.0 kW (ND)	LTVF-F40110CAA	*
	Fx2000 VVVF 415V Drive 55.0 kW (HD) / 75.0 kW (ND)	LTVF-F40152CAA	*
	Fx2000 VVVF 415V Drive 75.0 kW (HD) / 90.0 kW (ND)	LTVF-F40183CAA	*
	Fx2000 VVVF 415V Drive 90.0 kW (HD) / 110 kW (ND)	LTVF-F40223AAA	*
	Fx2000 VVVF 415V Drive 110 kW (HD) / 132 kW (ND)	LTVF-F40264AAA	*
	Fx2000 VVVF 415V Drive 132 kW (HD) / 160 kW (ND)	LTVF-F40325AAA	*
	Fx2000 VVVF 415V Drive 160 kW (HD) / 185 kW (ND)	LTVF-F40370AAA	*
	Fx2000 VVVF 415V Drive 185 kW (HD) / 220 kW (ND)	LTVF-F40432AAA	*
Fx2000 VVVF 415V Drive 220 kW (HD) / 285 kW (ND)	LTVF-F40547AAA	*	
Fx2000 VVVF 415V Drive 285 kW (HD) / 315 kW (ND)	LTVF-F40613AAA	*	
Fx2000 VVVF 415V Drive 315 kW (HD) / 375 kW (ND)	LTVF-F40731AAA	*	
Fx2000 VVVF 415V Drive 375 kW (HD) / 450 kW (ND)	LTVF-F40877AAA	*	

Note: * For prices please contact nearest branch office

Energy Saver Series *Ex2000* (Fans & Pumps)



- Range: 5.5kW to 450kW
- Starting Torque: 200% at 0.5Hz for Sensorless Control
- Built-in Booster pump control
- Component Life Monitoring
- Conformal Coating complying to IEC 60721-3-3 class 3C2
- Built-in RS485 Modbus ASCII
- Pre-heat Function
- Built-in DC Reactor from 22kW to 280kW

Input Voltage	Description	Cat. No.	M.R.P. (₹) Per Unit
Three Phase 415Vac	Ex2000 VVVF 415V Drive 5.50 kW (ND) / 3.70 kW (HD)	LTVF-E40012BAA	*
	Ex2000 VVVF 415V Drive 7.50 kW (ND) / 5.50 kW (HD)	LTVF-E40016BAA	*
	Ex2000 VVVF 415V Drive 11.0 kW (ND) / 7.50 kW (HD)	LTVF-E40024BAA	*
	Ex2000 VVVF 415V Drive 15.0 kW (ND) / 11.0 kW (HD)	LTVF-E40030AAA	*
	Ex2000 VVVF 415V Drive 18.5 kW (ND) / 15.0 kW (HD)	LTVF-E40039AAA	*
	Ex2000 VVVF 415V Drive 22.0 kW (ND) / 18.5 kW (HD)	LTVF-E40045AAA	*
	Ex2000 VVVF 415V Drive 30.0 kW (ND) / 22.0 kW (HD)	LTVF-E40061AAA	*
	Ex2000 VVVF 415V Drive 37.0 kW (ND) / 30.0 kW (HD)	LTVF-E40075AAA	*
	Ex2000 VVVF 415V Drive 45.0 kW (ND) / 37.0 kW (HD)	LTVF-E40091AAA	*
	Ex2000 VVVF 415V Drive 55.0 kW (ND) / 45.0 kW (HD)	LTVF-E40110AAA	*
	Ex2000 VVVF 415V Drive 75.0 kW (ND) / 55.0 kW (HD)	LTVF-E40152AAA	*
	Ex2000 VVVF 415V Drive 90.0 kW (ND) / 75.0 kW (HD)	LTVF-E40183AAA	*
	Ex2000 VVVF 415V Drive 110 kW (ND) / 90.0 kW (HD)	LTVF-E40223AAA	*
	Ex2000 VVVF 415V Drive 132 kW (ND) / 110 kW (HD)	LTVF-E40264AAA	*
	Ex2000 VVVF 415V Drive 160 kW (ND) / 132 kW (HD)	LTVF-E40325AAA	*
	Ex2000 VVVF 415V Drive 220 kW (ND) / 160 kW (HD)	LTVF-E40432AAA	*
	Ex2000 VVVF 415V Drive 280 kW (ND) / 220 kW (HD)	LTVF-E40547AAA	*
	Ex2000 VVVF 415V Drive 315 kW (ND) / 280 kW (HD)	LTVF-E40613AAA	*
	Ex2000 VVVF 415V Drive 375 kW (ND) / 315 kW (HD)	LTVF-E40731AAA	*
Ex2000 VVVF 415V Drive 450 kW (ND) / 375 kW (HD)	LTVF-E40877AAA	*	

Note: * For prices please contact nearest branch office

Accessories for AC Drives

Input Voltage	Description	Cat. No.	M.R.P. (₹) Per Unit
Cx2000	Cx2000 Digital Operator with 3m cable	LTOP-DOP-50	*
Sx2000	LCD Digital Operator	LTOP-DOP-200	*
	I/O Expansion Card for Sx2000	LTIO-EXP-S	*
	CANOpen Communication card	LTCI-CAN-S	*
	Profibus-DP Communication card	LTCI-PDP-S.	*
	Ethernet IP - Modbus TCP Communication card	LTCI-ETH-S.	*
Fx2000	LCD Digital Operator	LTOP-DOP-200	*
	I/O Expansion Card 1 for Fx2000	LTIO-EX1-F	*
	I/O Expansion Card 2 for Fx2000	LTIO-EX2-F	*
	Synchronization Option Card	LTCN-SYN-F	*
	Position control option card for Fx2000	LTCN-PCN-F	*
	Incremental card for Open collector and Line Driver Encoder	LTEN-INC-F	*
	Profibus-DP Communication Interface card	LTCI-PDP-F	*
	Application Development PLC Option card	LTAD-PLC-F	*
	CANOpen Communication Interface card	LTCI-CAN-F	*
	DeviceNet Communication Interface card	LTCI-DEN-F	*
Ethernet IP/Modbus TCP Communication Interface card	LTCI-ETH-F	*	
Ex2000	LCD Digital Operator	LTOP-DOP-100	*
	Modbus RTU Communication Card	LTCI-MOD-E	*
	Modbus TCP Communication Card	LTCI-TCP-E	*
	Profibus-DP Communication Interface card	LTCI-PDP-E	*
	DeviceNet Communication Interface card	LTCI-DEN-E	*
DBU for Sx2000, Fx2000	Dynamic Braking Unit for 11 - 15kW	LTDBU-0150-4	*
	Dynamic Braking Unit for 18.5 - 22kW	LTDBU-0220-4	*
	Dynamic Braking Unit for 30 - 37kW	LTDBU-0370-4	*
	Dynamic Braking Unit for 45 - 55kW	LTDBU-0550-4	*
	Dynamic Braking Unit for 75kW	LTDBU-0750-4	*
	Dynamic Braking Unit for 220 - 375kW	LTDBU-2200-4	*

Note: * For prices please contact nearest branch office

EMX3 Soft Starters



EMX3 Cat. No.	Suitable for Motor with Rated Current in Amps [#]		M.R.P. (₹) Per Unit	Bypass Contactor
	3 Wire (Inline Connection)	6 Wire (Inside Delta Connection)		
EMX3-0023B-411	23	34	*	Built - In
EMX3-0043B-411	43	64	*	
EMX3-0053B-411	53	79	*	
EMX3-0076B-411	76	114	*	
EMX3-0097B-411	97	145	*	
EMX3-0105B-411	105	157	*	
EMX3-0145B-411	145	217	*	
EMX3-0170B-411	170	255	*	
EMX3-0220B-411	220	330	*	
EMX3-0255B-411	255	382	*	
EMX3-0350B-411	350	525	*	
EMX3-0425B-411	425	638	*	
EMX3-0500B-411	500	750	*	
EMX3-0580B-411	580	870	*	
EMX3-0700B-411	700	1050	*	
EMX3-0820B-411	820	1230	*	
EMX3-0920B-411	920	1380	*	
EMX3-1000B-411	1000	1500	*	

Note: * For prices please contact nearest branch office

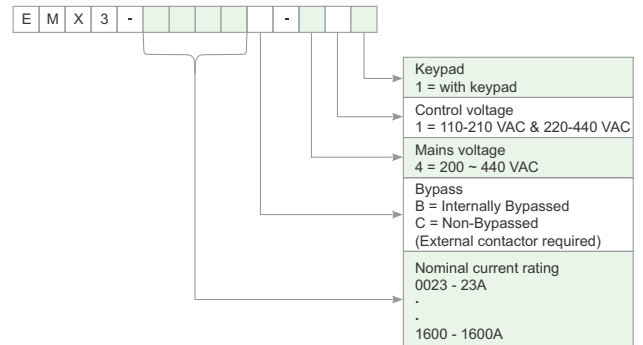
EMX3 Cat. No.	Suitable for Motor with Rated Current in Amps [#]		M.R.P. (₹) Per Unit	Bypass Contactor
	3 Wire (Inline Connection)	6 Wire (Inside Delta Connection)		
EMX3-0255C-411	255	382	*	Terminals for connecting External contactor (AC1 duty)
EMX3-0360C-411	360	540	*	
EMX3-0430C-411	400	645	*	
EMX3-0620C-411	620	930	*	
EMX3-0650C-411	650	975	*	
EMX3-0790C-411	790	1185	*	
EMX3-0930C-411	930	1395	*	
EMX3-1200C-411	1200	1800	*	
EMX3-1410C-411	1410	2115	*	
EMX3-1600C-411	1600	2400	*	

* All protections remain active during bypass operation

Note: * For prices please contact nearest branch office

Note : The above EMX3 current ratings are based on 300% starting current, 10 starts per hour, 10 seconds starting time and ambient temperature of 45°C. For proper sizing of soft starter based on the application parameters please use Winstart Software. For Winstart software please contact Customer Interaction Centre.

Ordering Information for EMX3 Soft Starter



EMX3 Soft Starters : For Heavy Duty Applications

- Ratings from 23 to 1600A
- Control Voltage from 94VAC to 484VAC
- Constant current
- XLR-8 Adaptive acceleration control for pumps
- Kickstart
- XLR-8 Adaptive deceleration control for pumps
- Forward / Reverse Jog
- Comprehensive motor protection
- Large LCD Keypad
- Auto Start / stop
- 2 motor data sets
- Fully programmable overload trip
- 5 digital inputs, 4 digital outputs, 1 analog output
- Built-in RTD & Thermistor inputs
- 99 event logs with time stamping
- Starter communication timeout
- Network communication trip
- Auto detection of inline or inside delta power connection
- Programmable auto start/stop
- 24 VDC auxiliary power supply
- Power through operation allows to run soft starter even with one SCR shorted
- Emergency run operation
- I/O expansion card (optional)

We recommend the use of :

1. Line Contactor : This will isolate and protect the soft starter SCR's from any voltage transient while it's not in operation.
2. Bypass Contactor (For models without built-in bypass) : This will bypass and protect the soft starter SCR's while in running state from Current and Voltage transient's.
3. Semiconductor fuses : This will protect the starter SCR's during starting and stopping states from current transient's and excess I²T.

Digital Soft Starters

CSX Soft Starters



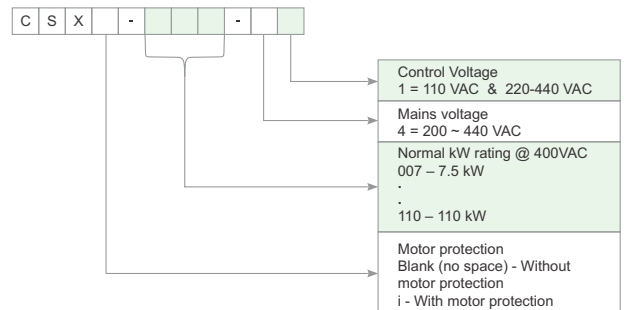
CSXi Soft Starters



Motor kW	Cat. No.	M.R.P. (₹) Per Unit
7.5	CSX-007-41	*
15	CSX-015-41	*
18	CSX-018-41	*
22	CSX-022-41	*
30	CSX-030-41	*
37	CSX-037-41	*
45	CSX-045-41	*
55	CSX-055-41	*
75	CSX-075-41	*
90	CSX-090-41	*
110	CSX-110-41	*

Motor kW	Cat. No.	M.R.P. (₹) Per Unit
7.5	CSXi-007-41	*
15	CSXi-015-41	*
18	CSXi-018-41	*
22	CSXi-022-41	*
30	CSXi-030-41	*
37	CSXi-037-41	*
45	CSXi-045-41	*
55	CSXi-055-41	*
75	CSXi-075-41	*
90	CSXi-090-41	*
110	CSXi-110-41	*

Ordering Information for CSX Series Soft Starter



Note: * For prices please contact nearest branch office

Note : The above CSX & CSXi ratings are based on 400% starting current, 10 starts per hour up to 30kW & 6 starts per hour for 37kW & above, 6 seconds starting time and ambient temperature of 45°C.

For proper sizing of soft starter based on the application parameters please use Winstart Software.

Optional Modules/Cards for CSX / CSXi / EMX3



Description	Cat. No.	M.R.P. (₹) Per Unit
Modbus Interface	PIM-MB-01	*
Profibus Interface	PIM-PB-01	*
DeviceNet Interface	PIM-DN-01	*
USB Interface	PIM-USB-01	*
Modbus TCP Module	PIM-MT-01	*
Ethernet IP Module	PIM-EI-01	*
Profinet Module	PIM-PN-01	*
EMX3 RTD/Ground Fault Expansion Card	995-04804-00	*
EMX3 I/O Expansion Card	995-04803-00	*

Note: * For prices please contact nearest branch office

CSX Soft Starters : For Standard Applications

- Inbuilt Bypass Contactor
- Soft Start / Soft Stop
- Compact
- Complements existing motor protection
- Truly plug & play
- Communication options available

CSXi Soft Starters : For standard applications

- Inbuilt Bypass Contactor
- Soft start / Soft stop / Adjustable current limit
- Essential motor protections against
 - Overload
 - Single phasing
 - Instantaneous overcurrent
 - Phase sequence reversal
 - Abnormality in supply
 - Unbalanced current
- Thermistor protection through PTC
- Excess start time setting
- Communication options available
- PC Interface as optional

We recommend the use of :

1. Line Contactor : This will isolate and protect the soft starter SCR's from any voltage transient while it's not in operation.
2. Bypass Contactor (For models without built-in bypass) : This will bypass and protect the soft starter SCR's while in running state from Current and Voltage transient's.
3. Semiconductor fuses : This will protect the starter SCR's during starting and stopping states from current transient's and excess I²T.

Programmable Logic Controller (PLC) & HMI



LX7 / LX7S

- Compact & Powerful
- LX7S from 10 to 48 I/O
- LX7 from 28 to 104 I/O
- 2 serial ports (with Modbus RTU)
- Built-in backup flash memory
- Built-in High speed counter & Pulse Output
- Built-in real time clock in LX7
- Ideal for small to mid size machine automation / AMF panels / Load management / pump control and many more applications
- Can communicate with ACB, MCCB Releases, Energy Meters

Type	Description	Cat. No.	M.R.P. (₹) Per Unit
LX7S Series (Non Expandable PLC)	AC Powered, 6 Digital Inputs, 4 Digital Outputs (Relay)	LX7S-10ADR	*
	AC Powered, 6 Digital Inputs, 4 Digital Outputs (Transistor)	LX7S-10ADT	*
	AC Powered, 8 Digital Inputs, 6 Digital Outputs (Relay)	LX7S-14ADR	*
	AC Powered, 8 Digital Inputs, 6 Digital Outputs (Transistor)	LX7S-14ADT	*
	AC Powered, 12 Digital Inputs, 8 Digital Outputs (Relay)	LX7S-20ADR	*
	AC Powered, 12 Digital Inputs, 8 Digital Outputs (Transistor)	LX7S-20ADT	*
	AC Powered, 16 Digital Inputs, 12 Digital Outputs (Relay)	LX7S-28ADR	*
	AC Powered, 16 Digital Inputs, 12 Digital Outputs (Transistor)	LX7S-28ADT	*
	AC Powered, 24 Digital Inputs, 16 Digital Outputs (Relay)	LX7S-40ADR	*
	AC Powered, 24 Digital Inputs, 16 Digital Outputs (Transistor)	LX7S-40ADT	*
	AC Powered, 28 Digital Inputs, 20 Digital Outputs (Relay)	LX7S-48ADR	*
	AC Powered, 28 Digital Inputs, 20 Digital Outputs (Transistor)	LX7S-48ADT	*
	DC Powered, 6 Digital Inputs, 4 Digital Outputs (Relay)	LX7S-10DDR	*
	DC Powered, 6 Digital Inputs, 4 Digital Outputs (Transistor)	LX7S-10DDT	*
	DC Powered, 8 Digital Inputs, 6 Digital Outputs (Relay)	LX7S-14DDR	*
DC Powered, 8 Digital Inputs, 6 Digital Outputs (Transistor)	LX7S-14DDT	*	
LX7 Series (Expandable PLC)	Base Modules		
	AC Powered, 16 Digital Inputs, 12 Digital Outputs (Relay)	LX7-28ADR	*
	AC Powered, 16 Digital Inputs, 12 Digital Outputs (Transistor)	LX7-28ADT	*
	AC Powered, 28 Digital Inputs, 20 Digital Outputs (Relay)	LX7-48ADR	*
	AC Powered, 28 Digital Inputs, 20 Digital Outputs (Transistor)	LX7-48ADT	*
	DC Powered, 16 Digital Inputs, 12 Digital Outputs (Relay)	LX7-28DDR	*
	DC Powered, 16 Digital Inputs, 12 Digital Outputs (Transistor)	LX7-28DDT	*
	DC Powered, 28 Digital Inputs, 20 Digital Outputs (Relay)	LX7-48DDR	*
	DC Powered, 28 Digital Inputs, 20 Digital Outputs (Transistor)	LX7-48DDT	*
	AC Powered, 12 Digital Inputs, 8 Digital Outputs (Relay), 4 Analog Inputs	LX7-20ADR-4A	*
	AC Powered, 12 Digital Inputs, 8 Digital Outputs (Relay), 4 Analog Inputs, 2 Analog Outputs	LX7-20ADR-6A	*
	AC Powered, 12 Digital Inputs, 8 Digital Outputs (Transistor), 4 Analog Inputs	LX7-20ADT-4A	*
	AC Powered, 12 Digital Inputs, 8 Digital Outputs (Transistor), 4 Analog Inputs, 2 Analog Outputs	LX7-20ADT-6A	*
	Expansion Modules		
	Expansion Module, 8 Digital Inputs, 6 Digital Outputs (Relay)	LX7-14EDR	*
Expansion Module, 8 Digital Inputs, 6 Digital Outputs (Transistor)	LX7-14EDT	*	
Expansion Module, 16 Digital Inputs, 12 Digital Outputs (Relay)	LX7-28EDR	*	
Expansion Module, 16 Digital Inputs, 12 Digital Outputs (Transistor)	LX7-28EDT	*	

Note: * For prices please contact nearest branch office

Human Machine Interface (HMI)



- Available from 4.3" to 15" in 7 models
- Touch LCD interface
- Modbus Serial, Ethernet, Field bus Communication
- Supports various Fonts and Graphics
- Supports various languages - Japanese, Korean etc
- Multiple PLCs, Controllers connectivity. Communication with ACB, MCCB, Energy Meter
- Advanced features: Multy - Language, Graphic, Extended Alarms, Recipe, Data Logging, Printing, Password protection, Trends
- Supports scripting

Type	Description	Cat. No.	M.R.P. (₹) Per Unit
1	4.3" Wide 65536 Color TFT, SRAM, 480X272, 6M Memory(Serial only), DC powered	S04TDAA	*
2	5.7" 65536 Color TFT, SRAM, 320X240, (Serial/USB/CF/Ethernet), DC powered	E05TDAA	*
3	7" Wide 65536 Color TFT, SRAM, 800X480, 26M Memory (Serial only), DC powered	S07TDAA	*
4	8.4" 65536 Color TFT, SRAM, 640*480, (Serial/USB/CF/Ethernet), DC powered	E08TDAA	*
5	10.4" 65536 Color TFT, SRAM, 800x600, (Serial/USB/CF/Ethernet), DC powered	E10TDWA	*
6	12.1" 65536 Color TFT, SRAM, 800x600, (Serial/USB/CF/Ethernet, Option: Profibus slave), AC powered	F12TAAA	*
7	15" 65536 Color TFT, SRAM, 1024x768, (Serial/USB/CF/Ethernet, Option: Profibus slave), AC powered	F15TAAA	*

Note: * For prices please contact nearest branch office

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Tel: 022 6774 5858 Fax: 022 6774 5859 Email: cic@Lntebg.com Web: www.Lntebg.com

Miniature Circuit Breaker (MCB)

Range Highlights

- True contact indication for individual pole
- Label holder facility for all configurations
- Conforms to IS/IEC 60898
- Breaking capacity of 10kA throughout the range
- Available in B, C & D curves
- Low watt loss - almost 50% of the values prescribed by IS/IEC 60898
- Trip free mechanism
- Design based on advanced current limiting hammer trip mechanism
- No Line-Load bias
- Suitable for accessory fitment
- Suitable for DC application, as per IEC 60947-2
 - Rated Voltage:130V DC (for SP), 250V DC (for DP) with breaking capacity of 6kA



Current Rating (In)	Modules 1 Mod = 17.5mm	B-Curve Cat. No.	M.R.P. (₹) Per Unit	C-Curve Cat. No.	M.R.P. (₹) Per Unit	D-Curve Cat. No.	M.R.P. (₹) Per Unit
Single Pole (SP)							
0.5A	1	-	-	BB10E50C	345	BB10E50D	350
1A	1	-	-	BB10010C	345	BB10010D	350
2A	1	-	-	BB10020C	345	BB10020D	350
3A	1	-	-	BB10030C	345	BB10030D	350
4A	1	-	-	BB10040C	345	BB10040D	350
6A	1	BB10060B	222	BB10060C	222	BB10060D	300
10A	1	BB10100B	222	BB10100C	222	BB10100D	300
16A	1	BB10160B	222	BB10160C	222	BB10160D	300
20A	1	BB10200B	222	BB10200C	222	BB10200D	300
25A	1	BB10250B	222	BB10250C	222	BB10250D	300
32A	1	BB10320B	222	BB10320C	222	BB10320D	300
40A	1	BB10400B	515	BB10400C	515	BB10400D	535
50A	1	BB10500B	515	BB10500C	515	BB10500D	*
63A	1	BB10630B	515	BB10630C	515	BB10630D	*



Current Rating (In)	Modules 1 Mod = 17.5mm	B-Curve Cat. No.	M.R.P. (₹) Per Unit	C-Curve Cat. No.	M.R.P. (₹) Per Unit	D-Curve Cat. No.	M.R.P. (₹) Per Unit
Double Pole (DP)							
0.5A	2	-	-	BB20E50C	910	BB20E50D	925
1A	2	-	-	BB20010C	910	BB20010D	925
2A	2	-	-	BB20020C	910	BB20020D	925
3A	2	-	-	BB20030C	910	BB20030D	925
4A	2	-	-	BB20040C	910	BB20040D	925
6A	2	BB20060B	695	BB20060C	695	BB20060D	720
10A	2	BB20100B	695	BB20100C	695	BB20100D	720
16A	2	BB20160B	695	BB20160C	695	BB20160D	720
20A	2	BB20200B	695	BB20200C	695	BB20200D	720
25A	2	BB20250B	695	BB20250C	695	BB20250D	720
32A	2	BB20320B	695	BB20320C	695	BB20320D	720
40A	2	BB20400B	1145	BB20400C	1145	BB20400D	1160
50A	2	BB20500B	1145	BB20500C	1145	BB20500D	*
63A	2	BB20630B	1145	BB20630C	1145	BB20630D	*

Note: Standard Pack Quantity for MCB : SP - 12 Nos., DP - 6 Nos., TP - 4 Nos., FP - 3 Nos.

* Available on request

Miniature Circuit Breaker (MCB)



Current Rating (In)	Modules 1 Mod = 17.5mm	B-Curve Cat. No.	M.R.P. (₹) Per Unit	C-Curve Cat. No.	M.R.P. (₹) Per Unit	D-Curve Cat. No.	M.R.P. (₹) Per Unit
Three Pole (TP)							
0.5A	3	-	-	BB30E50C	1250	BB30E50D	1275
1A	3	-	-	BB30010C	1250	BB30010D	1275
2A	3	-	-	BB30020C	1250	BB30020D	1275
3A	3	-	-	BB30030C	1250	BB30030D	1275
4A	3	-	-	BB30040C	1250	BB30040D	1275
6A	3	BB30060B	1125	BB30060C	1125	BB30060D	1155
10A	3	BB30100B	1125	BB30100C	1125	BB30100D	1155
16A	3	BB30160B	1125	BB30160C	1125	BB30160D	1155
20A	3	BB30200B	1125	BB30200C	1125	BB30200D	1155
25A	3	BB30250B	1125	BB30250C	1125	BB30250D	1155
32A	3	BB30320B	1125	BB30320C	1125	BB30320D	1155
40A	3	BB30400B	1720	BB30400C	1720	BB30400D	1785
50A	3	BB30500B	1720	BB30500C	1720	BB30500D	*
63A	3	BB30630B	1720	BB30630C	1720	BB30630D	*



Current Rating (In)	Modules 1 Mod = 17.5mm	B-Curve Cat. No.	M.R.P. (₹) Per Unit	C-Curve Cat. No.	M.R.P. (₹) Per Unit	D-Curve Cat. No.	M.R.P. (₹) Per Unit
Four Pole (FP)							
0.5A	4	-	-	BB40E50C	1755	BB40E50D	1780
1A	4	-	-	BB40010C	1755	BB40010D	1780
2A	4	-	-	BB40020C	1755	BB40020D	1780
3A	4	-	-	BB40030C	1755	BB40030D	1780
4A	4	-	-	BB40040C	1755	BB40040D	1780
6A	4	BB40060B	1525	BB40060C	1525	BB40060D	1555
10A	4	BB40100B	1525	BB40100C	1525	BB40100D	1555
16A	4	BB40160B	1525	BB40160C	1525	BB40160D	1555
20A	4	BB40200B	1525	BB40200C	1525	BB40200D	1555
25A	4	BB40250B	1525	BB40250C	1525	BB40250D	1555
32A	4	BB40320B	1525	BB40320C	1525	BB40320D	1555
40A	4	BB40400B	2175	BB40400C	2175	BB40400D	2225
50A	4	BB40500B	2175	BB40500C	2175	BB40500D	*
63A	4	BB40630B	2175	BB40630C	2175	BB40630D	*

Note: Standard Pack Quantity for MCB : SP - 12 Nos., DP - 6 Nos., TP- 4 Nos., FP - 3 Nos.

* Available on request

Auxiliary & Accessories for MCBs



Description	Cat. No.	M.R.P. (₹) Per Unit
Auxiliary Contact - 6A (1NO+1NC), 0.5 Mod	BZA11006	660
Shunt Release - 240V AC, 1 Mod	BZS00240	1760
Trip Alarm Contact - 240V AC, (1NO+1NC), 0.5 Mod	BZT11006	770

Residual Current Circuit Breaker (RCCB)

Range Highlights

- Conforms to IS 12640 (Part 1) / IEC 61008-1
- RCCBs are available in DP and FP versions from 25 to 100A ratings with 30 mA, 100 mA and 300 mA sensitivity
- Truly current operated - operation even at nominal voltage
- Operates on Core Balance Current Transformer (CBCT) principle
- Operation even in case of neutral failure
- Advanced neutral mechanism



Current Rating (In)	Sensitivity	Modules 1 Mod = 17.5 mm	Cat. Nos.	M.R.P. (₹) Per Unit
Double Pole (DP)				
25A	30 mA	2	BG202503	2410
	100 mA	2	BG202510	2485
	300 mA	2	BG202530	2485
40A	30 mA	2	BG204003	2715
	100 mA	2	BG204010	2840
	300 mA	2	BG204030	2840
63A	30 mA	2	BG206303	3405
	100 mA	2	BG206310	3475
	300 mA	2	BG206330	3475
100A	30 mA	2	BG210003	6010
	100 mA	2	BG210010	6055
	300 mA	2	BG210030	6055

Current Rating (In)	Sensitivity	Modules 1 Mod = 17.5 mm	Cat. Nos.	M.R.P. (₹) Per Unit
Four Pole (FP)				
25A	30 mA	4	BG402503	3150
	100 mA	4	BG402510	3260
	300 mA	4	BG402530	3260
40A	30 mA	4	BG404003	3190
	100 mA	4	BG404010	3300
	300 mA	4	BG404030	3300
63A	30 mA	4	BG406303	3640
	100 mA	4	BG406310	3795
	300 mA	4	BG406330	3795
100A	30 mA	4	BG410003	6540
	100 mA	4	BG410010	6640
	300 mA	4	BG410030	6640

Isolators

Range Highlights

- Conforms to IEC 60947-3
- Utilization category AC-22A
- Available in DP, TP and FP versions in 40A, 63A, 80A & 100A ratings



Current Rating (In)	Modules 1 Mod = 17.5 mm	Cat. No.	M.R.P. (₹) Per Unit	Modules 1 Mod = 17.5 mm	Cat. No.	M.R.P. (₹) Per Unit	Modules 1 Mod = 17.5 mm	Cat. No.	M.R.P. (₹) Per Unit
Double Pole (DP)			Three Pole (TP)			Four Pole (FP)			
40A	2	BF204000	425	3	BF304000	755	4	BF404000	985
63A	2	BF206300	550	3	BF306300	865	4	BF406300	1000
80A	2	BF208000	695	3	BF308000	960	4	BF408000	1135
100A	2	BF210000	740	3	BF310000	975	4	BF410000	1200

Note: Standard Pack Quantity for Isolator : DP - 6 Nos., TP - 4 Nos., FP - 3 Nos.

Other Protection & Control Devices

Modular Indicator



Description	Cat. No.	M.R.P. (₹) Per Unit
Single Phase Indicator-Red 1 Mod	MM1NDV04	710
Single Phase Indicator-Yellow 1 Mod	MM1NDW04	710
Single Phase Indicator-Blue 1 Mod	MM1NDX04	710
Three Phase Indicator-Red, Yellow & Blue 1Mod	MM3ND04	880

Digital Time Switch



Description	Cat. No.	M.R.P. (₹) Per Unit
Crono Time Switch 110-240V AC 1 C/O- 2 Mod	67DDT0	1900
Pulse Time Switch, 110-240V AC 1 C/O- 2 Mod	67DDT9	1880

Analog Time Switch



Description	Cat. No.	M.R.P. (₹) Per Unit
Time Switch - 1 Mod (1 NO)	J6107B204	2450
Time Switch - 3 Mod (1 C/O)	J6118B304	2400

Astronomical Time Switch



Description	Cat. No.	M.R.P. (₹) Per Unit
Astronomical Time Switch 110-240V 1 C/O - 2 Mod	T2DDT7	3245

Surge Protection Device



Description	Cat. No.	M.R.P. (₹) Per Unit
Type 2 SPDs		
40kA, 1P+N, 1 Mod	AUSP021PN40	7500
40kA, 3P+N, 2 Mod	AUSP023PN40	15000
15kA, 1P+N, 1 Mod	AUSP021PN15	6000
15kA, 3P+N, 2 Mod	AUSP023PN15	11800
Type 1+2 SPDs		
50kA, 1P+N, 2 Mod	AUSP121PN50	10800
50kA, 3P+N, 4 Mod	AUSP123PN50	21200

Modular Energy Meter



Description	Cat. No.	M.R.P. (₹) Per Unit
1-Phase 2-wire 240V, 5-30A	W2DLD050600	2200
3-Phase 4-Wire 240V 10-60A	W4DLD100600	5000

Highlights

- IK 08-for single door DBs, IK 09-for double door DBs
- Available in CRCA sheet steel, RAL9003, powder coated
- Ready to use DBs - Provided with 100A insulated phase bus-bar | neutral bar/s with shroud/s | earth bar/s | sticking saddles | cement spill protector | color-coded interconnecting wire set | cable ties | blanking plates and circuit identification label
- With provision for DP MCB/Isolator/RCCB/RCBO as incomer and SP MCBs as outgoing



IP 30 - Single Door IP 43 - Metal Door IP 43 - Glazed Door

Description	No. of Modules		CAT Nos.	M.R.P. (₹) Per Unit
	Incomer + Outgoing			
IP 30 - Single Door				
4 way	4		DBSPN004SD	995
6 way	6		DBSPN006SD	1085
8 way	8		DBSPN008SD	1245
12 way	12		DBSPN012SD	1475
16 way	16		DBSPN016SD	1815
18 way	18		DBSPN018SD	2440
IP 43 - Metal Door				
4 way	4		DBSPN004DD	1380
6 way	6		DBSPN006DD	1590
8 way	8		DBSPN008DD	1710
12 way	12		DBSPN012DD	2060
16 way	16		DBSPN016DD	2585
18 way	18		DBSPN018DD	3510
IP 43 - Glazed Door				
4 way	4		DBSPN004GD	1735
6 way	6		DBSPN006GD	1855
8 way	8		DBSPN008GD	2025
12 way	12		DBSPN012GD	2450
16 way	16		DBSPN016GD	3035
18 way	18		DBSPN018GD	3665
IP 54 - Metal Door				
4 way	4		DBSPN00454	4470
6 way	6		DBSPN00654	4985
8 way	8		DBSPN00854	5255
12 way	12		DBSPN01254	6070
16 way	16		DBSPN01654	6720
18 way	18		DBSPN01854	7200

Highlights

- IK 08-for single door DBs, IK 09-for double door DBs
- Available in CRCA sheet steel, RAL 9003, powder coated
- Ready to use DBs - Provided with 100A insulated phase bus-bars | neutral bar/s with shroud/s | earth bar/s | sticking saddles | cement spill protector | color-coded interconnecting wire set | cable ties | blanking plates and circuit identification labels
- With provision for FP MCB/Isolator/RCCB/RCBO as incomer and SP MCBs as outgoing



IP 30 - Single Door IP 43 - Metal Door IP 43 - Glazed Door

Description	No. of Modules		CAT Nos.	M.R.P. (₹) Per Unit
	Incomer	Outgoing		
IP 30 - Single Door				
4 way	4	4+4+4	DBTPE004SD	2570
6 way	4	6+6+6	DBTPE006SD	3160
4 way	8	4+4+4	DBTPN004SD	2760
6 way	8	6+6+6	DBTPN006SD	3405
8 way	8	8+8+8	DBTPN008SD	4005
12 way	8	12+12+12	DBTPN012SD	5935
16 way	8	16+16+16	DBTPN016SD	7315
IP 43 - Metal Door				
4 way	4	4+4+4	DBTPE004DD	3155
6 way	4	6+6+6	DBTPE006DD	3895
4 way	8	4+4+4	DBTPN004DD	3395
6 way	8	6+6+6	DBTPN006DD	4190
8 way	8	8+8+8	DBTPN008DD	5020
12 way	8	12+12+12	DBTPN012DD	7520
16 way	8	16+16+16	DBTPN016DD	9280
IP 43 - Glazed Door				
4 way	4	4+4+4	DBTPE004GD	4045
6 way	4	6+6+6	DBTPE006GD	4995
4 way	8	4+4+4	DBTPN004GD	4350
6 way	8	6+6+6	DBTPN006GD	5370
8 way	8	8+8+8	DBTPN008GD	6440
12 way	8	12+12+12	DBTPN012GD	9880
16 way	8	16+16+16	DBTPN016GD	11860
IP 54 - Metal Door				
4 way	4	4+4+4	DBTPE00454	10165
6 way	4	6+6+6	DBTPE00654	12535
4 way	8	4+4+4	DBTPN00454	10705
6 way	8	6+6+6	DBTPN00654	12885
8 way	8	8+8+8	DBTPN00854	14090
12 way	8	12+12+12	DBTPN01254	19860
16 way	8	16+16+16	DBTPN01654	23835

Highlights

- IK 09-for double door DBs
- Available in CRCA sheet steel, RAL 9003, powder coated
- Ready to use DBs - Provided with 100A insulated phase bus-bars | neutral bar/s with shroud/s | earth bar/s | sticking saddles | cement spill protector | color-coded interconnecting wire set | cabel ties | blanking plates and circuit identification labels
- With provision for FP MCB/Isolator//RCCB/RCBO/ as incomer, DP RCCB/RCBO as sub-incomer and SP MCBs as outgoing



Horizontal PPI DBs

IP 43 - Metal Door

Description	No. of Modules			CAT Nos.	M.R.P. (₹) Per Unit
	Incomer	Sub-Incomer	Outgoing		
IP 43 - Metal Door					
4 way	8	2+2+2	4+4+4	DBHPI004DD	5260
6 way	8	2+2+2	6+6+6	DBHPI006DD	6280
8 way	8	2+2+2	8+8+8	DBHPI008DD	7465
12 way	8	2+2+2	12+12+12	DBHPI012DD	10205
16 way	8	2+2+2	16+16+16	DBHPI016DD	12250
IP 54 - Metal Door					
4 way	8	2+2+2	4+4+4	DBHPI00454	12640
6 way	8	2+2+2	6+6+6	DBHPI00654	15060
8 way	8	2+2+2	8+8+8	DBHPI00854	16635
12 way	8	2+2+2	12+12+12	DBHPI01254	22700
16 way	8	2+2+2	16+16+16	DBHPI01654	26995



Tier PPI DBs

IP 43 - Metal Door

Description	No. of Modules			CAT Nos.	M.R.P. (₹) Per Unit
	Incomer	Sub-Incomer	Outgoing		
IP 43 - Metal Door					
6 way	8	2+2+2	6+6+6	DBTPI006DD	7420
8 way	8	2+2+2	8+8+8	DBTPI008DD	9310
10 way	8	2+2+2	10+10+10	DBTPI010DD	9765
12 way	8	2+2+2	12+12+12	DBTPI012DD	10620
16 way	8	2+2+2	16+16+16	DBTPI016DD	11180
12 way	MCCB*	2+2+2	12+12+12	DBTPL012DD	11065
IP 54 - Metal Door					
6 way	8	2+2+2	6+6+6	DBTPI00654	12610
8 way	8	2+2+2	8+8+8	DBTPI00854	15825
10 way	8	2+2+2	10+10+10	DBTPI01054	16600
12 way	8	2+2+2	12+12+12	DBTPI01254	18055
16 way	8	2+2+2	16+16+16	DBTPI01654	19010
12 way	MCCB*	2+2+2	12+12+12	DBTPL01254	18815

*Suitable for 3 pole and 4 pole DU100H MCCB as incomer

Highlights

- IK 08-for single door DBs. IK 09-for double door DBs
- Available in CRCA sheet steel, RAL 9003, powder coated
- Ready to use DBs - Provided with 100A insulated phase bus-bars | neutral bar/s with shroud/s | earth bar/s | sticking saddles | cement spill protector | color-coded interconnecting wire set | cabel ties | blanking plates and circuit identification labels
- With provision for 1. Modular Incomer - FP MCB/Isolator as incomer, DP RCCB/RCBO as sub-incomer and SP MCBs as outgoing
2. MCCB Incomer - TP/FP DU100H MCCB as incomer, DP RCCB/RCBO as sub-incomer and SP MCBs as outgoing



With Modular Incomer

IP 30 - Single Door

IP 43 - Metal Door

Description	No. of Modules			CAT Nos.	M.R.P. (₹) Per Unit
	Incomer	Sub-Incomer	Outgoing		
IP 30 - Single Door					
4 way	8	4+4+4	4+4+4	DBPSG004SD	7720
6 way	8	4+4+4	6+6+6	DBPSG006SD	8415
8 way	8	4+4+4	8+8+8	DBPSG008SD	9020
12 way	8	4+4+4	12+12+12	DBPSG012SD	10380
IP 43 - Metal Door					
4 way	8	4+4+4	4+4+4	DBPSG004DD	8440
6 way	8	4+4+4	6+6+6	DBPSG006DD	9510
8 way	8	4+4+4	8+8+8	DBPSG008DD	10610
12 way	8	4+4+4	12+12+12	DBPSG012DD	13550
IP 54 - Metal Door					
4 way	8	4+4+4	4+4+4	DBPSG00454	14350
6 way	8	4+4+4	6+6+6	DBPSG00654	16160
8 way	8	4+4+4	8+8+8	DBPSG00854	18050
12 way	8	4+4+4	12+12+12	DBPSG01254	23035



With MCCB Incomer

IP 30 - Single Door

IP 43 - Metal Door

Description	No. of Modules			CAT Nos.	M.R.P. (₹) Per Unit
	Incomer*	Sub-Incomer	Outgoing		
IP 30 - Single Door					
4 way	MCCB	4+4+4	4+4+4	DBPGL004SD	11140
6 way	MCCB	4+4+4	6+6+6	DBPGL006SD	12825
8 way	MCCB	4+4+4	8+8+8	DBPGL008SD	14735
12 way	MCCB	4+4+4	12+12+12	DBPGL012SD	17110
IP 43 - Metal Door					
4 way	MCCB	4+4+4	4+4+4	DBPGL004DD	12520
6 way	MCCB	4+4+4	6+6+6	DBPGL006DD	14325
8 way	MCCB	4+4+4	8+8+8	DBPGL008DD	16405
12 way	MCCB	4+4+4	12+12+12	DBPGL012DD	18685
IP 54 - Metal Door					
4 way	MCCB	4+4+4	4+4+4	DBPGL00454	21285
6 way	MCCB	4+4+4	6+6+6	DBPGL00654	24350
8 way	MCCB	4+4+4	8+8+8	DBPGL00854	27890
12 way	MCCB	4+4+4	12+12+12	DBPGL01254	31765

*Suitable for 3 pole and 4 pole DU100H MCCB as incomer

TPN Phase Selector DB

Flexi/Row DB

Highlights

- IK 08-for single door DBs, IK 09-for double door DBs
- Available in CRCA sheet steel, RAL 9003, powder coated
- Ready to use DBs - Provided with 3 nos. of 63A Salzer rotary switches | 3 nos. of rocker switches for phase identification | 100A insulated phase bus-bars | neutral bar/s with shroud/s | earth bar/s | sticking saddles | color-coded interconnecting wire set | cable ties | blanking plates and circuit identification labels
- With provision for - FP MCB/Isolator/RCCB/RCBO as incomer and SP MCBs as outgoing



IP 30 - Single Door

IP 43 - Metal Door

Description	No. of Modules		CAT Nos.	M.R.P. (₹) Per Unit
	Incomer	Outgoing		
IP 30 - Single Door				
4 way	8	4+4+4	DBPSR004SD	10630
6 way	8	6+6+6	DBPSR006SD	11305
8 way	8	8+8+8	DBPSR008SD	12525
10 way	8	10+10+10	DBPSR010SD	12995
12 way	8	12+12+12	DBPSR012SD	13750
IP 43 - Metal Door				
4 way	8	4+4+4	DBPSR004DD	11835
6 way	8	6+6+6	DBPSR006DD	12025
8 way	8	8+8+8	DBPSR008DD	12885
10 way	8	10+10+10	DBPSR010DD	13765
12 way	8	12+12+12	DBPSR012DD	14510
IP 54 - Metal Door				
4 way	8	4+4+4	DBPSR00454	16570
6 way	8	6+6+6	DBPSR00654	16835
8 way	8	8+8+8	DBPSR00854	18040
10 way	8	10+10+10	DBPSR01054	19270
12 way	8	12+12+12	DBPSR01254	20315

Highlights

- IK 08-for single door DBs, IK 09-for double door DBs
- Available in CRCA sheet steel, RAL 9003, powder coated
- Ready to use DBs - neutral bar/s with shroud/s | earth bar/s | sticking saddles | cement spill protector | cable ties | blanking plates and circuit identification labels
- With provision to mount modular devices as per requirement



IP 30 - Single Door

IP 43 - Metal Door

IP 43 - Glazed Door

Description	No. of Modules Per Row	CAT Nos.	M.R.P. (₹) Per Unit
IP 30 - Single Door			
2 Row 28 Module	14	DBROW228SD	3490
3 Row 42 Module	14	DBROW342SD	4190
4 Row 56 Module	14	DBROW456SD	4800
4 Row 64 Module	16	DBROW464SD	5390
IP 43 - Metal Door			
2 Row 28 Module	14	DBROW228DD	4240
3 Row 42 Module	14	DBROW342DD	4995
4 Row 56 Module	14	DBROW456DD	5440
4 Row 64 Module	16	DBROW464DD	5920
IP 43 - Glazed Door			
2 Row 28 Module	14	DBROW228GD	4355
3 Row 42 Module	14	DBROW342GD	5340
4 Row 56 Module	14	DBROW456GD	6050
4 Row 64 Module	16	DBROW464GD	6640
IP 54 - Metal Door			
2 Row 28 Module	14	DBROW22854	7210
3 Row 42 Module	14	DBROW34254	8490
4 Row 56 Module	14	DBROW45654	9250
4 Row 64 Module	16	DBROW46454	10210

DB Accessories

Busbar - Fork Type

Highlights

- Conforms to IEC 61439-3
- Available in Single Pole, Double Pole, Three Pole and Four Pole versions
- Material : Copper



Description	CAT Nos.	M.R.P. (₹) Per Unit	Std. Pack Qty.
SP 13 Mod	BSP13	270	5
SP 56 Mod	BSP56	1020	5
DP 12 Mod	BDP12	450	5
TP 12 Mod	BTP12	480	5
FP 12 Mod	BFP12	1010	5
End Caps for SP	ECP01*	5	10
End Caps for DP/TP	ECP03*	20	10
End Caps for FP	ECP04*	30	10

Blanking Plates

Highlights

- Available in One module and Half module



Description	CAT Nos.	M.R.P. (₹) Per Unit	Std. Pack Qty.
One Module	BKP10	15	10
Half Module	BKP05	15	10

Padlock

Highlights

- Available in two versions
 1. Version to mount your own lock
 2. Version with standard lock and a common key



Description	CAT Nos.	M.R.P. (₹) Per Unit	Std. Pack Qty.
Standard Padlock kit with provision to mount your own lock	PDL01*	300	5
Lock and Key Kit	PDK02	440	5

*For availability, contact nearest L&T branch

Vertical TPN DB with Modular Incomer

Vertical TPN DB with MCCB Incomer

Highlights

- IK 08-for single door DBs, IK 09-for double door DBs
- Available in CRCA sheet steel, RAL 9003, powder coated
- Ready to use DBs - Provided with insulated vertical phase bus-bars | neutral bar/s with shroud/s | earth bar/s | sticking saddles | cement spill protector | color-coded interconnecting wire set | cable ties | blanking plates and circuit identification labels
- With provision for FP MCB/Isolator/RCCB/RCBO as incomer and SP/TP MCBs as outgoing

Highlights

- IK 08-for single door DBs, IK 09-for double door DBs
- Available in CRCA sheet steel, RAL 9003, powder coated
- Ready to use DBs - Provided with insulated vertical phase bus-bars | neutral bar/s with shroud/s | earth bar/s | sticking saddles | cement spill protector | color-coded interconnecting wire set | cable ties | blanking plates and circuit identification labels
- With provision for MCCB* as incomer and SP/TP MCBs as outgoing
 - *Suitable for 3 pole and 4 Pole MCCB as incomer
 - A) Up to 125A - DU100H, DU125H (Icu = 30kA, Ics = 50% Icu)
 - B) Up to 250A - DU250 (Icu = 36kA, Ics = 50% Icu)



IP 30 - Single Door IP 43 - Metal Door IP 43 - Glazed Door



IP 30 - Single Door IP 43 - Metal Door IP 43 - Glazed Door

Description	No. of Modules		CAT Nos.	M.R.P. (₹) Per Unit
	Incomer	Outgoing		
IP 30 - Single Door				
4 way	8	4+4+4	DBVTM004SD	7685
6 way	8	6+6+6	DBVTM006SD	8450
8 way	8	8+8+8	DBVTM008SD	9385
12 way	8	12+12+12	DBVTM012SD	13555
16 way	8	16+16+16	DBVTM016SD	15675
IP 43 - Metal Door				
4 way	8	4+4+4	DBVTM004DD	8200
6 way	8	6+6+6	DBVTM006DD	10430
8 way	8	8+8+8	DBVTM008DD	11430
12 way	8	12+12+12	DBVTM012DD	15815
16 way	8	16+16+16	DBVTM016DD	17945
IP 43 - Glazed Door				
4 way	8	4+4+4	DBVTM004GD	10945
6 way	8	6+6+6	DBVTM006GD	11635
8 way	8	8+8+8	DBVTM008GD	13915
12 way	8	12+12+12	DBVTM012GD	18565
16 way	8	16+16+16	DBVTM016GD	19710
IP 54 - Metal Door				
4 way	8	4+4+4	DBVTM00454	17175
6 way	8	6+6+6	DBVTM00654	19300
8 way	8	8+8+8	DBVTM00854	20660
12 way	8	12+12+12	DBVTM01254	27530
16 way	8	16+16+16	DBVTM01654	29150

Description	No. of Modules		CAT Nos.	M.R.P. (₹) Per Unit
	Incomer*	Outgoing		
IP 30 - Single Door				
4 way	MCCB	4+4+4	DBVTL004SD	8780
6 way	MCCB	6+6+6	DBVTL006SD	9540
8 way	MCCB	8+8+8	DBVTL008SD	10390
12 way	MCCB	12+12+12	DBVTL012SD	15710
16 way	MCCB	16+16+16	DBVTL016SD	18585
IP 43 - Metal Door				
4 way	MCCB	4+4+4	DBVTL004DD	9930
6 way	MCCB	6+6+6	DBVTL006DD	11395
8 way	MCCB	8+8+8	DBVTL008DD	12470
12 way	MCCB	12+12+12	DBVTL012DD	16610
16 way	MCCB	16+16+16	DBVTL016DD	18970
IP 43 - Glazed Door				
4 way	MCCB	4+4+4	DBVTL004GD	10920
6 way	MCCB	6+6+6	DBVTL006GD	12535
8 way	MCCB	8+8+8	DBVTL008GD	13715
12 way	MCCB	12+12+12	DBVTL012GD	18270
16 way	MCCB	16+16+16	DBVTL016GD	20865
IP 54 - Metal Door				
4 way	MCCB	4+4+4	DBVTL00454	19765
6 way	MCCB	6+6+6	DBVTL00654	21200
8 way	MCCB	8+8+8	DBVTL00854	23760
12 way	MCCB	12+12+12	DBVTL01254	29990
16 way	MCCB	16+16+16	DBVTL01654	35890

*Suitable for 3 pole and 4 pole DU100H, DU125H MCCB as incomer.

Vertical TPN DB with MCCB Incomer

Plug & Socket DB

Up to 250A MCCB Incomer



IP 30 - Single Door IP 43 - Metal Door IP 43 - Glazed Door

Description	No. of Modules		CAT Nos.	M.R.P. (₹) Per Unit
	Incomer*	Outgoing		
IP 30 - Single Door				
4 way	MCCB	4+4+4	DBVTH004SD	10670
6 way	MCCB	6+6+6	DBVTH006SD	11195
8 way	MCCB	8+8+8	DBVTH008SD	12315
12 way	MCCB	12+12+12	DBVTH012SD	17395
16 way	MCCB	16+16+16	DBVTH016SD	20960
IP 43 - Metal Door				
4 way	MCCB	4+4+4	DBVTH004DD	12145
6 way	MCCB	6+6+6	DBVTH006DD	13800
8 way	MCCB	8+8+8	DBVTH008DD	15260
12 way	MCCB	12+12+12	DBVTH012DD	20310
16 way	MCCB	16+16+16	DBVTH016DD	24350
IP 43 - Glazed Door				
4 way	MCCB	4+4+4	DBVTH004GD	20230
6 way	MCCB	6+6+6	DBVTH006GD	22715
8 way	MCCB	8+8+8	DBVTH008GD	23620
12 way	MCCB	12+12+12	DBVTH012GD	24890
16 way	MCCB	16+16+16	DBVTH016GD	26785
IP 54 - Metal Door				
4 way	MCCB	4+4+4	DBVTH00454	28140
6 way	MCCB	6+6+6	DBVTH00654	30725
8 way	MCCB	8+8+8	DBVTH00854	31775
12 way	MCCB	12+12+12	DBVTH01254	37210
16 way	MCCB	16+16+16	DBVTH01654	39160

*Suitable for 3 pole and 4 pole DU250 MCCB as incomer

Enclosure

Highlights

- Suitable for Surface and Flush mounting
- Available in CRCA sheet steel RAL9003 powder coated
- With provision to mount MCB/Isolator/RCCB/RCBO and other modular devices



IP 30 - Metal Door

Description	No. of Modules	CAT Nos.	M.R.P. (₹) Per Unit
IP 30 - Metal Door			
2 way	2	DBENC002SD	530
3 way	3	DBENC003SD	530
4 way	4	DBENC004SD	530
6 way	6	DBENC006SD	800

Highlights

- Suitable for Surface and Flush mounting
- Available in CRCA sheet steel RAL9003 powder coated
- Loose Metal Plugs & Sockets conforms to IS 8804; available in Single Phase & Three Phase



Metal Plug & Socket



Plastic Plug & Socket

Description	No. of Pins	No. of Modules	CAT Nos.	M.R.P. (₹) Per Unit
Metal Plug & Sockets				
10 A, 2 Pin + SC [^]	P + N	1	DBMPS110SD	1360
20 A, 2 Pin + SC [^]	P + N	1	DBMPS120SD	1465
20 A, 2 Pin + SC [^]	P + N	2	DBMPS220SD	1595
20 A, 3 Pin + SC [^]	3P	3	DBMPS320SD	2705
32 A, 3 Pin + SC [^]	3P	3	DBMPS332SD	3200
32 A, 3 Pin + SC [^]	3P	4	DBMPS432SD	3400
63 A, 5 Pin + SC [^]	3P+N+E	4	DBMPS463SD	11560
Plastic Plug & Sockets				
16 A, 3 Pin	P+N+E	2	DBPPS316SD	2205
32 A, 3 Pin	P+N+E	4	DBPPS332SD	2380
32 A, 5 Pin	3P+N+E	8	DBPPS532SD	4335
63 A, 5 Pin	3P+N+E	8	DBPPS563SD	11030

Metal Plug



Description	No. of Pins	CAT Nos.	M.R.P. (₹) Per Unit
10 A, 2 Pin + SC [^]	P + N	MPS210P	140
20 A, 2 Pin + SC [^]	P + N	MPS220P	150
20 A, 3 Pin + SC [^]	3P	MPS320P	200
32 A, 3 Pin + SC [^]	3P	MPS332P	375

Metal Socket



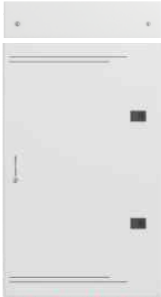
Description	No. of Pins	CAT Nos.	M.R.P. (₹) Per Unit
10 A, 2 Pin + SC [^]	P + N	MPS210S	145
20 A, 2 Pin + SC [^]	P + N	MPS220S	165
20 A, 3 Pin + SC [^]	3P	MPS320S	220
32 A, 3 Pin + SC [^]	3P	MPS332S	375

[^]SC-Scraping Earth

Cable End Boxes

Highlights

- Available in CRCA sheet steel RAL9003 powder coated
- Can be either at the top or bottom of the distribution board



Description	CAT Nos.	M.R.P. (₹) Per Unit
CEB for SPN DBs		
CEB-SPN Double Door, 4 way	DBSPN004CB	580
CEB-SPN Double Door, 6 way	DBSPN006CB	620
CEB-SPN Double Door, 8 way	DBSPN008CB	690
CEB-SPN Double Door, 12 way	DBSPN012CB	770
CEB-SPN Double Door, 16 way	DBSPN016CB	1070
CEB-SPN Double Door, 18 way	DBSPN018CB	1135
CEB for TPN DBs		
CEB-TPN Double Door, 4 way	DBTPN004CB	970
CEB-TPN Double Door, 6 way	DBTPN006CB	1280
CEB-TPN Double Door, 8 way	DBTPN008CB	1900
CEB-TPN Double Door, 12 way	DBTPN012CB	2475
CEB-TPN Double Door, 16 way	DBTPN016CB	2500
CEB-TPE Double Door, 4 way	DBTPE004CB	910
CEB-TPE Double Door, 6 way	DBTPE006CB	1135
CEB for Horizontal PPI DBs		
CEB-Horz. PPI Double Door, 4 way	DBHPI004CB	1120
CEB-Horz. PPI Double Door, 6 way	DBHPI006CB	1270
CEB-Horz. PPI Double Door, 8 way	DBHPI008CB	1500
CEB-Horz. PPI Double Door, 12 way	DBHPI012CB	1675
CEB-Horz. PPI Double Door, 16 way	DBHPI016CB	1890
CEB for Tier PPI DBs		
CEB-Tier PPI Double Door, 6 way	DBTPI006CB	1055
CEB-Tier PPI Double Door, 8 way	DBTPI008CB	1105
CEB-Tier PPI Double Door, 10 way	DBTPI010CB	1340
CEB-Tier PPI Double Door, 12 way	DBTPI012CB	1640
CEB-Tier PPI Double Door, 16 way	DBTPI016CB	1750
CEB-Tier PPI Double Door, 12 way MCCB incomer	DBTPL012CB	1660

Description	CAT Nos.	M.R.P. (₹) Per Unit
CEB for VTPN DBs		
CEB-VTPN Double Door, Modular Incomer	DBVTMXXCB	750
CEB-VTPN Double Door, MCCB Incomer	DBVTXXXCB	2690
CEB for FLEXI DBs		
CEB for Flexi DBS with 14 Modules per Row	DBROWX14CB	870
CEB for Flexi DBS with 16 Modules per Row	DBROWX16CB	990
CEB for Phase Segregated DBs		
CEB-PSG Double Door, 4 way	DBPSG004CB	1660
CEB-PSG Double Door, 6 way	DBPSG006CB	1980
CEB-PSG Double Door, 8 way	DBPSG008CB	2190
CEB-PSG Double Door, 12 way	DBPSG012CB	2435
CEB for Phase Selector DBs		
CEB-Phase Selector Double Door, 4 way	DBPSR004CB	840
CEB-Phase Selector Double Door, 6 way	DBPSR006CB	950
CEB-Phase Selector Double Door, 8 way	DBPSR008CB	1540
CEB-Phase Selector Double Door, 10 way	DBPSR010CB	1780
CEB-Phase Selector Double Door, 12 way	DBPSR012CB	1930

Selection Chart: Fuse Protected Feeders

TYPE '2' Co-ordination, Iq=50 kA at 415V, 3Ø, 50 Hz as per IS/IEC 60947-4-1 standard

- The Full Load Current (FLC) indicated for 3-phase motors are of 'squirrel-cage Induction motors' at full load.
- Contactors / S-D-Fs indicated are of the minimum ratings. Higher rating of contactors and S-D-Fs can be used.
- Selection chart is for standard 3-phase, squirrel cage motor with average power factor and efficiency.
- Selection is valid only for complete L&T combinations.
- Compliance to Type '2' co-ordination is not assured in case these combinations are changed to accommodate another brand / rating of products like S-D-F / Fuse etc.
- All S-D-F ratings are AC-23A as per IS/IEC 60947-3, IEC 60947-3 & EN 60947-3
- Normal motor starting time (<=5 Sec) is assumed. Selection for motors with longer starting times can be made available on request.
- For detailed Type 2 charts for fuseless feeders, kindly contact the nearest branch office.

DOL Starter Feeders with Fuse for IE1/IE2 Motors

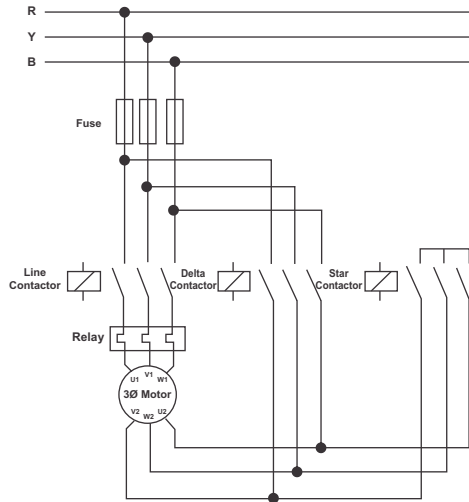
Motor: 3Ø, 415V, 50 Hz			Contactor Type	Overload Relay		Nominal Backup fuse		S - D - F
hp	kW	In (A)		Type	Range (A)	Type	Rating (A)	
0.16	0.12	0.51	MNX 9	MN 2	0.45 - 0.75	HF	2	FN 32
0.25	0.18	0.6	MNX 9	MN 2	0.45 - 0.75	HF	2	FN 32
0.33	0.25	0.8	MNX 9	MN 2	0.6 - 1.0	HF	2	FN 32
0.5	0.37	1.2	MNX 9	MN 2	0.9 - 1.5	HF	4	FN 32
0.75	0.55	1.5	MNX 9	MN 2	1.4 - 2.3	HF	4	FN 32
1	0.75	2	MNX 9	MN 2	1.4 - 2.3	HF	6	FN 32
1.5	1.1	2.7	MNX 9	MN 2	2.0 - 3.3	HF	8	FN 32
1.75	1.3	3	MNX 9	MN 2	2.0 - 3.3	HF	8	FN 32
2	1.5	3.5	MNX 9	MN 2	3 - 5	HF	10	FN 32
3	2.2	4.9	MNX 9	MN 2	4.5 - 7.5	HF	16	FN 32
4	3	6	MNX 9	MN 2	4.5 - 7.5	HF	16	FN 32
5	3.7	7.5	MNX 9	MN 2	4.5 - 7.5	HF	20	FN 32
5.5	4	8.5	MNX 9	MN 2	6 - 10	HF	20	FN 32
7.5	5.5	11	MNX 12	MN 2	9 - 15	HF	32	FN 32
10	7.5	14.5	MNX 22	MN 2	9 - 15	HF	40	FN 63
12.5	9.3	17.3	MNX 25	MN 2	14 - 23	HF	50	FN 63
15	11	21	MNX 25	MN 2	14 - 23	HF	63	FN 63
17.5	13	24	MNX 25	MN 2	20 - 33	HF	63	FN 63
20	15	29	MNX 40	MN 2	20 - 33	HN, 000*	63	FN 100
25	18.5	35	MNX 40	MN 2	24 - 40	HN, 000*	80	FN 100
30	22	40	MNX 45	MN 5	30 - 50	HN, 000*	80	FN 100
40	30	54	MNX 70	MN 5	45 - 75	HN, 000*	100	FN 100
50	37	68	MNX 80	MN 5	45 - 75	HN, 000	125	FN 125
60	45	81	MNX 95	MN 5	66 - 110	HN, 000	125	FN 125
75	55	94	MNX 95	MN 5	66 - 110	HN, 00#	160	FN 160
100	75	130	MNX 140	MN 12	90 - 150	HN, 0	200	FN 200
110	80	139	MNX 140	MN 12	90 - 150	HN, 0	200	FN 200
120	90	157	MNX 185	MN 12	135 - 225	HN, 1	250	FN 250
150	110	189	MNX 225	MN 12	135 - 225	HN, 1	250	FN 250
170	125	207	MNX 250	MN 12	135 - 225	HN, 1	315	FN 315
180	132	226	MNX 250	MN 12	180 - 300	HN, 1	315	FN 315
200	150	248	MNX 265	MN 12	180 - 300	HN, 2	400	FN 400
215	160	270	MNX 300	MN 12	180 - 300	HN, 2	400	FN 400
240	180	298	MNX 325	MN 12	180 - 300	HN, 2	400	FN 400
270	200	336	MNX 400	MN 12	270 - 450	HN, 3	500	FN 630
300	225	360	MNX 400	MN 12	270 - 450	HN, 3	500	FN 630
335	250	420	MNX 550	MN 12	270 - 450	HN, 3	500	FN 630
370	275	440	MNX 550	MN 12	270 - 450	HN, 3	630	FN 630
425	315	529	MNX 550	MN 12L	340 - 570	HN, 3	630	FN 630
452	335	550	MNX 650	MN 12L	340 - 570	HN, 3	800	FN 800

* : Only size '000' fuses to be used with FN 100 S-D-F.

: Only size '00' fuses to be used with FN 160 S-D-F.

Selection Chart: Fuse Protected Feeders

Star Delta Starter Feeders with Fuse for IE1/IE2 Motors



Note : It is recommended that Star Delta configuration is used along with Star-Delta Timer with Pause Time and not On-Delay Timer. Recommended timer Cat No is 12SDT0.

Ratings at 3Ø, 415V, 50 Hz				Contactor			Overload Relay		Nominal Back up fuse		S - D - F
hp	kW	Current, In (A)		Star	Line	Delta	Type	Range (A)	Type	Rating (A)	
		Line	Phase								
1	0.75	2	1.2	MNX 9	MNX 9	MNX 9	MN 2	0.9 - 1.5	HF	4	FN 32
1.5	1.1	2.7	1.6	MNX 9	MNX 9	MNX 9	MN 2	1.4 - 2.3	HF	4	FN 32
1.75	1.3	3	1.7	MNX 9	MNX 9	MNX 9	MN 2	1.4 - 2.3	HF	4	FN 32
2	1.5	3.5	2.0	MNX 9	MNX 9	MNX 9	MN 2	1.4 - 2.3	HF	6	FN 32
3	2.2	4.9	2.8	MNX 9	MNX 9	MNX 9	MN 2	2 - 3.3	HF	8	FN 32
4	3	6	3.5	MNX 9	MNX 9	MNX 9	MN 2	3 - 5	HF	8	FN 32
5	3.7	7.5	4.3	MNX 9	MNX 9	MNX 9	MN 2	3 - 5	HF	10	FN 32
5.5	4	8.5	4.9	MNX 9	MNX 9	MNX 9	MN 2	3 - 5	HF	16	FN 32
7.5	5.5	11	6.4	MNX 9	MNX 9	MNX 9	MN 2	4.5 - 7.5	HF	16	FN 32
10	7.5	14.5	8.4	MNX 9	MNX 9	MNX 9	MN 2	6 - 10	HF	20	FN 32
12.5	9.3	17.3	10.0	MNX 9	MNX 12	MNX 12	MN 2	9 - 15	HF	32	FN 32
15	11	21	12.1	MNX 9	MNX 12	MNX 12	MN 2	9 - 15	HF	32	FN 32
17.5	13	24	13.9	MNX 12	MNX 18	MNX 18	MN 2	9 - 15	HF	32	FN 32
20	15	29	16.7	MNX 12	MNX 22	MNX 22	MN 2	14 - 23	HF	40	FN 63
25	18.5	35	20.2	MNX 18	MNX 25	MNX 25	MN 2	14 - 23	HF	50	FN 63
30	22	40	23.1	MNX 18	MNX 25	MNX 25	MN 2	20 - 33	HF	63	FN 63
40	30	54	31.2	MNX 32	MNX 32	MNX 32	MN 2	20 - 33	HN, 000*	63	FN 100
50	37	68	39.3	MNX 32	MNX 45	MNX 45	MN 5	30 - 50	HN, 000*	80	FN 100
60	45	81	46.8	MNX 45	MNX 70	MNX 70	MN 5	30 - 50	HN, 000*	100	FN 100
75	55	94	54.3	MNX 45	MNX 70	MNX 70	MN 5	45 - 75	HN, 000*	100	FN 100
100	75	130	75.1	MNX 80	MNX 95	MNX 95	MN 5	66 - 110	HN, 00#	160	FN 160
110	80	139	80.3	MNX 80	MNX 95	MNX 95	MN 5	66 - 110	HN, 00#	160	FN 160
120	90	157	90.6	MNX 80	MNX 95	MNX 95	MN 5	66 - 110	HN, 00#	160	FN 160
150	110	189	109	MNX 95	MNX 110	MNX 110	MN 5	66 - 110	HN, 0	200	FN 200
170	125	207	120	MNX 95	MNX 140	MNX 140	MN 12	90 - 150	HN, 1	250	FN 250
180	132	226	130	MNX 110	MNX 140	MNX 140	MN 12	90 - 150	HN, 1	250	FN 250
200	150	248	143	MNX 110	MNX 185	MNX 185	MN 12	135 - 225	HN, 1	250	FN 250
215	160	270	156	MNX 140	MNX 225	MNX 225	MN 12	135 - 225	HN, 1	315	FN 315
240	180	298	172	MNX 140	MNX 225	MNX 225	MN 12	135 - 225	HN, 1	315	FN 315
270	200	336	194	MNX 250	MNX 265	MNX 265	MN 12	135 - 225	HN, 2	400	FN 400
300	225	360	208	MNX 250	MNX 265	MNX 265	MN 12	135 - 225	HN, 2	400	FN 400
335	250	420	242	MNX 265	MNX 325	MNX 325	MN 12	180 - 300	HN, 3	500	FN 630
370	275	440	254	MNX 265	MNX 325	MNX 325	MN 12	180 - 300	HN, 3	500	FN 630
425	315	529	305	MNX 325	MNX 550	MNX 550	MN 12	270 - 450	HN, 3	630	FN 630
452	335	550	318	MNX 400	MNX 550	MNX 550	MN 12	270 - 450	HN, 3	630	FN 630
475	355	589	340	MNX 400	MNX 550	MNX 550	MN 12	270 - 450	HN, 3	630	FN 630
502	375	615	355	MNX 400	MNX 550	MNX 550	MN 12	270 - 450	HN, 3	630	FN 630
535	400	674	389	MNX 550	MNX 650	MNX 650	MN 12	270 - 450	HN, 3	800	FN 800

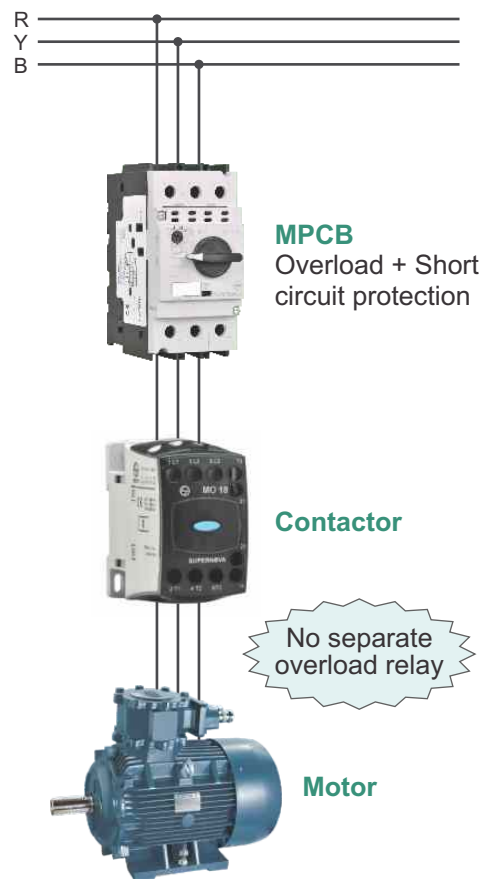
* : Only size '000' fuses to be used with FN 100 S-D-F.

: Only size '00' fuses to be used with FN 160 S-D-F.

Selection Chart: MPCB DOL Starters

DOL Starter Feeders with MPCB for IE1 Motors

Motor Rating: 3Ø, 415V, 50 Hz			Contactor Type	MPCB	
hp	kW	FLC, In (A)		Type	Range (A)
0.16	0.12	0.51	MO 9	MOG-S1 / MOG-H1	0.4 - 0.63
0.25	0.18	0.6	MO 9	MOG-S1 / MOG-H1	0.4 - 0.63
0.33	0.25	0.8	MO 9	MOG-S1 / MOG-H1	0.63 - 1
0.5	0.37	1.2	MO 9	MOG-S1 / MOG-H1	1 - 1.6
0.75	0.55	1.5	MO 9	MOG-S1 / MOG-H1	1 - 1.6
1	0.75	2	MO 9	MOG-S1 / MOG-H1	1.6 - 2.5
1.5	1.1	2.7	MO 12	MOG-S1 / MOG-H1	2.5 - 4
1.75	1.3	3	MO 12	MOG-S1 / MOG-H1	2.5 - 4
2	1.5	3.5	MO 12	MOG-S1 / MOG-H1	2.5 - 4
3	2.2	4.9	MO 18	MOG-S1 / MOG-H1	4 - 6.3
4	3	6	MO 18	MOG-S1 / MOG-H1	4 - 6.3
5	3.7	7.5	MO 25	MOG-S1 / MOG-H1	6.3 - 10
5.5	4	8.5	MO 25	MOG-S1 / MOG-H1	6.3 - 10
7.5	5.5	11	MO 25	MOG-S1 / MOG-H1	9 - 13
10	7.5	14.5	MO 25	MOG-H1	11 - 16
12.5	9.3	17.3	MO 32	MOG-H1	14 - 20
15	11	21	MO 32	MOG-H1	19 - 25
17.5	13	24	MO 45	MOG-H1	24 - 32
20	15	29	MO 45	MOG-H1	24 - 32
25	18.5	35	MO 50	MOG-H2	28 - 40
30	22	40	MO 50	MOG-H2	35 - 50
40	30	54	MO 80	MOG-H2	45 - 63



DOL Starter Feeders with MPCB for IE2 Motors

Motor Rating: 3Ø, 415V, 50 Hz			Contactor Type	MPCB	
hp	kW	FLC, In (A)		Type	Range (A)
0.16	0.12	0.51	MO 9	MOG-S1 / MOG-H1	0.4 - 0.63
0.25	0.18	0.6	MO 9	MOG-S1 / MOG-H1	0.63 - 1
0.33	0.25	0.8	MO 9	MOG-S1 / MOG-H1	0.63 - 1
0.5	0.37	1.2	MO 9	MOG-S1 / MOG-H1	1 - 1.6
0.75	0.55	1.5	MO 9	MOG-S1 / MOG-H1	1 - 1.6
1	0.75	2	MO 9	MOG-S1 / MOG-H1	1.6 - 2.5
1.5	1.1	2.7	MO 12	MOG-S1 / MOG-H1	2.5 - 4
1.75	1.3	3	MO 12	MOG-S1 / MOG-H1	2.5 - 4
2	1.5	3.5	MO 12	MOG-S1 / MOG-H1	2.5 - 4
3	2.2	4.9	MO 18	MOG-S1 / MOG-H1	4 - 6.3
4	3	6	MO 25	MOG-S1 / MOG-H1	4 - 6.3
5	3.7	7.5	MO 25	MOG-S1 / MOG-H1	6.3 - 10
5.5	4	8.5	MO 25	MOG-S1 / MOG-H1	6.3 - 10
7.5	5.5	11	MO 25	MOG-S1 / MOG-H1	9 - 13
10	7.5	14.5	MO 25	MOG-H1	11 - 16
15	11	21	MO 32	MOG-H1	19 - 25
17.5	13	24	MO 45	MOG-H1	24 - 32
20	15	29	MO 50	MOG-H2	28 - 40
25	18.5	35	MO 50	MOG-H2	35 - 50
30	22	40	MO 60	MOG-H2	35 - 50

We are IE3 ready!
IE3 charts are available on request

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Discontinued Products/Suggested Alternate Products

The following products have been discontinued :

Product Group	Discontinued Products	Suggested Alternate Products
Controlgear	ET 100	ST100
	MN0 AC	MO0 AC
	MCX 11-11 Mechanically interlocked contactor (factory fitted)	MCX 11 contactor can be ordered with separate MIL kit
	MCX 12-12 Mechanically interlocked contactor (factory fitted)	MCX 12 contactor can be ordered with separate MIL kit
	MCX 13-13 Mechanically interlocked contactor (factory fitted)	MCX 13 contactor can be ordered with separate MIL kit
Starter	MH0-1 Phase Starter	MU-2P DOL Starter
Air Circuit Breakers	C-Power : 3200A 'D' & 4000A 'C' Draw-out Version	C-Power : 3200A & 4000A - H2 Draw-out Range
Protective Relays	MC31A	MC31AnX
	MC61A	MC61AnX
	MC61C	MC61CnX

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