

Off-the-shelf solution for power distribution



Sub-Main Distribution Board





SMDB with all accessories



Double Door Construction with Protective Shield



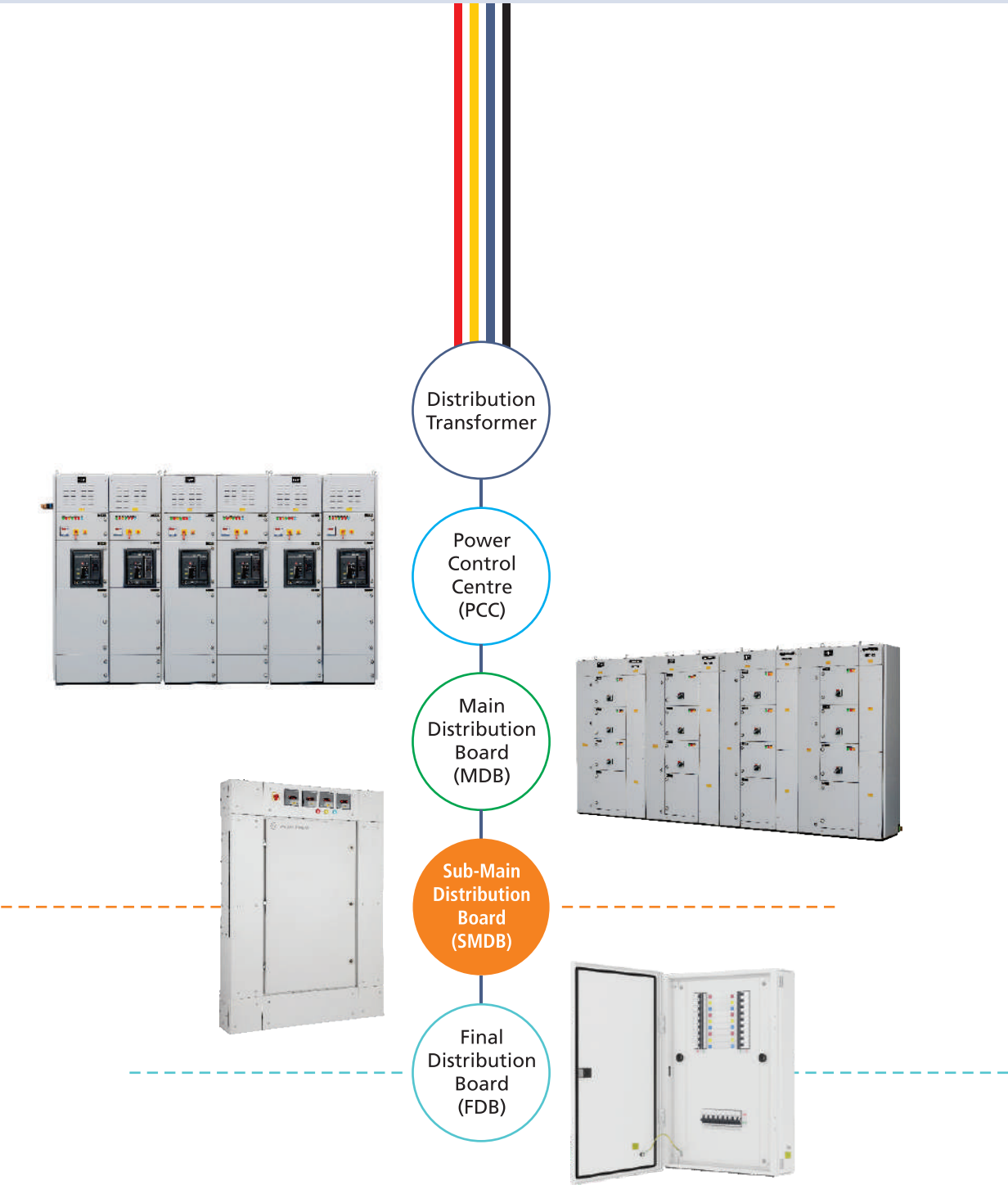
400A Incomer MCCB & 100A Outgoing MCCBs (8 Nos.)

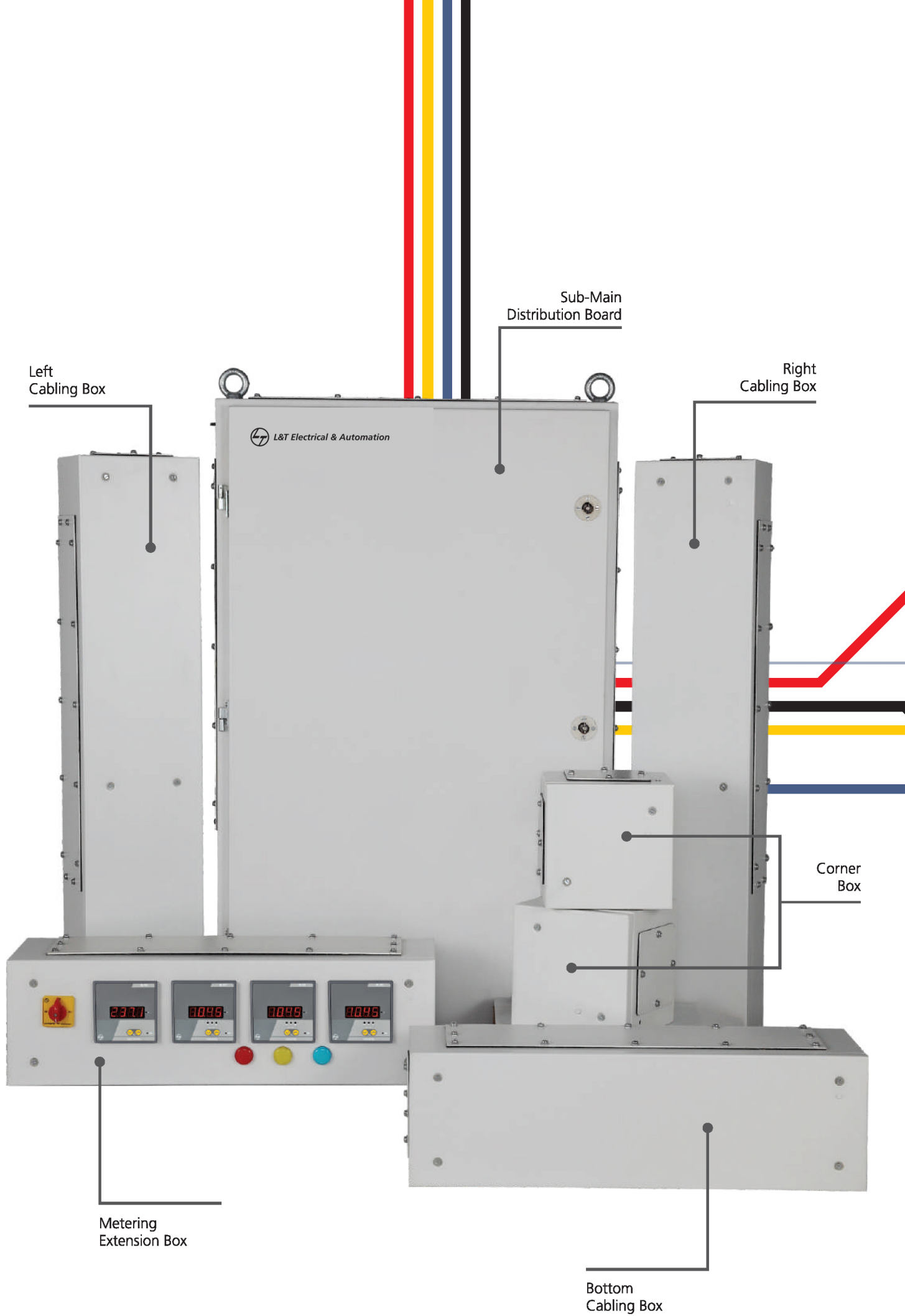
L&T Electrical & Automation (E&A) is a market leader for electrical distribution, monitoring and control solutions in the low voltage category.

Popular among customers as L&T Switchgear, E&A offers a wide range of low and medium voltage switchgear, motor starters, electrical systems, industrial automation, building electrical solutions, energy management solutions, electrical modernization solutions and metering solutions. Its products and solutions cater to key sectors of economy like industries, utilities, infrastructure, building and agriculture.

E&A's manufacturing operations at Navi Mumbai, Ahmednagar, Vadodara, Coimbatore and Mysuru in India adhere to global practices of excellence and receive support from well-equipped in-house design and development centres as well as tooling facilities that contribute to precision in manufacturing.

Discover how E&A's range of Sub-Main Distribution Boards and accessories can add value to your facility or enterprise.





SMDBs finds its applications in various segments with its distinct advantages like ready to use, compact in size and reliability.

Hospitals



Commercial Complexes



Shopping Malls



Educational Institutes



Hotels

Incomer MCCB rating	Outgoing MCCBs rating
250A	100A
400A	100A
630A	100A; 250A; Combination of 100A & 250A

ENERSYS-S

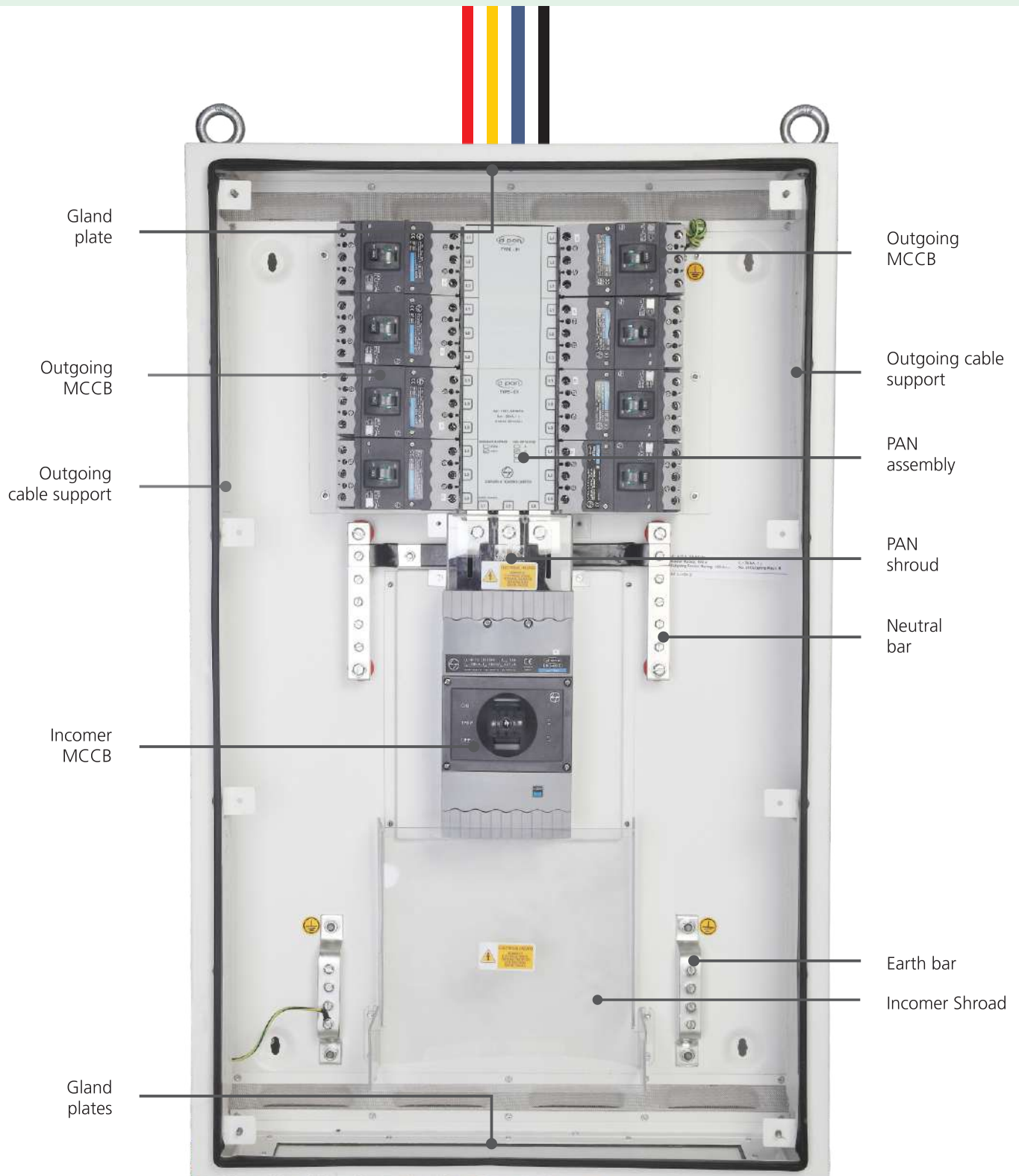
Sub-Main Distribution Board

Energys-S Power Distribution Boards from E&A meet the demands of commercial buildings, educational establishments, hospitals, government buildings, manufacturing facilities and other applications that require safe, reliable and high performance protection of their electrical sub-distribution systems.

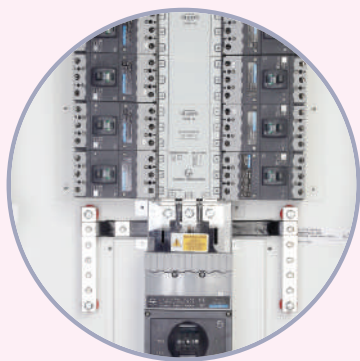
Energys-S is a NABL tested Sub-Main Distribution Board (also known as MCCB panel board) used for power distribution. It has MCCBs as incoming and outgoing switching-cum-protection devices.

It complies with IEC61439-2 and has been designed for easy handling and quick, simple installation. Compact MCCB design ensures maximum cabling area within the enclosures.

Removable top and bottom gland plates are provided for ease of installation and cabling. Removable gland plates allow fitting of additional items such as bottom cabling boxes and metering extension boxes.



SMDB after removing shield



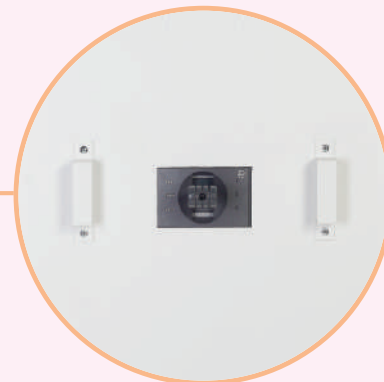
Moulded busbar housing

The busbar assembly is fully enclosed behind the moulded busbar housing, providing increased safety. A shroud at the incoming side prevents accidental contact with live parts.



Protection from risk of shock

Separate earthing for enclosure ensures operator safety



IP 20 protection

The unique construction of the enclosure offers IP 20 protection even after opening the door. This prevents accidental contact with the live parts.



Total safety

Convenience



Off-the-shelf assembly

Energys-S is a ready-to-use solution for any power distribution need.



Ease of termination

Energys-S facilitates separate earth and neutral bars on both the sides with the required number of cable termination points.



Range of accessories

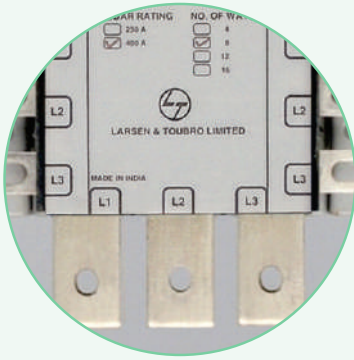
A range of accessories, such as metering and cabling boxes can be offered separately providing flexibility to customers.





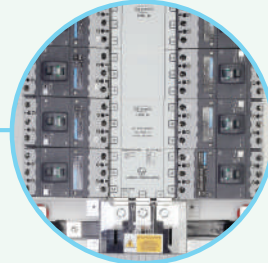
Higher ingress protection

Energys-S is designed with Ingress protection of IP 43 which ensures protection against dust, water and pollution.



Higher conductivity

Tin-plated electrolytic grade copper busbars not only ensure better conductivity but also improve corrosion resistance.



Higher withstand capacity

The robust design of PAN system assures reliable performance even at 36 kA 1s and 20kA 3s fault condition.



Enhanced Reliability

Smart Space Management



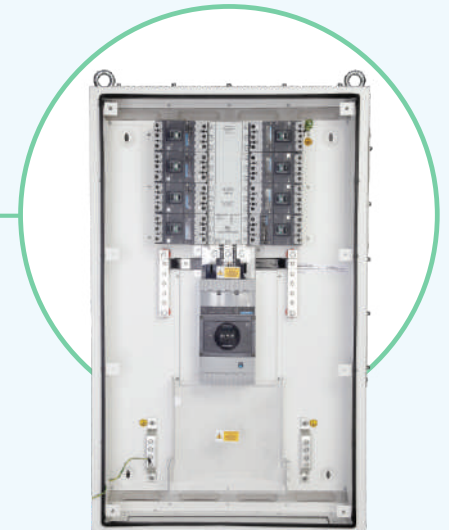
In-built outgoing support

Provision for in-built cable support ensures clutter-free wiring. A cabling box can be added separately, if required.



Compact solution

Energys-S saves almost 30% of floor space over conventional panels due to its compact PAN system and MCCBs.



Global validation

Our Enersys-S low voltage switchgear system is subjected to extensive design verifications in compliance with IEC 61439, at reputed international third-party laboratories to assure you best-in-class products.




Global Validation

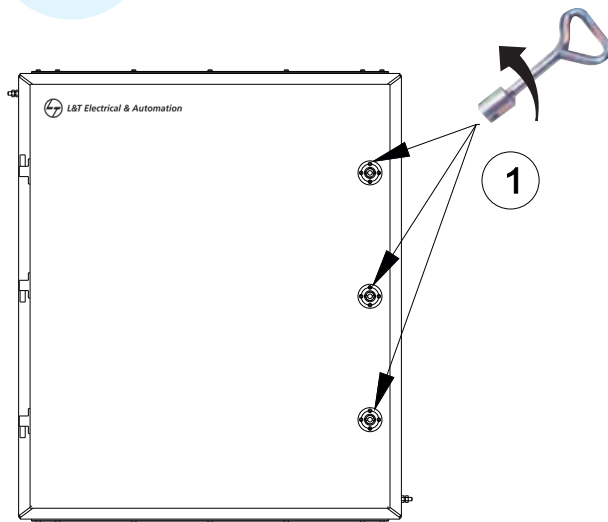
Technical Details



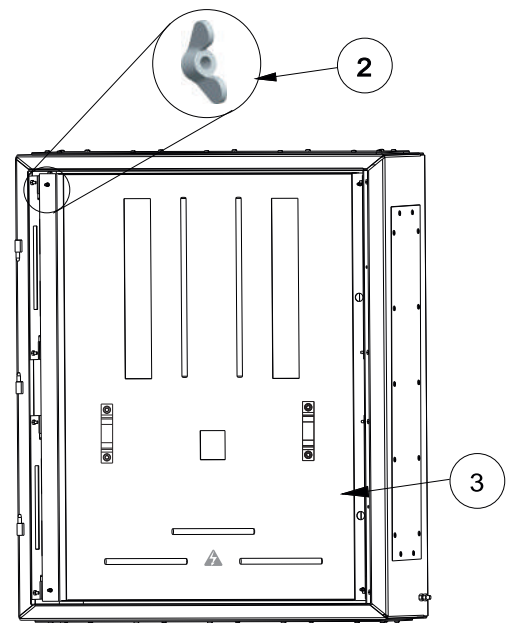
Constructional characteristics	Enersys-S Verified
Strength of material and parts	
- Resistance to corrosion	✓
- Thermal stability of enclosures	✓
- Glow wire test	✓
- Lifting	✓
- Marking	✓
Degree of protection of assemblies	✓
Clearance and creepage distances	✓
Performance characteristics	
Verification of temperature rise	✓
Short circuit withstand test	
- Test at rated short time withstand current (Icw)	✓
- Test at rated conditional short circuit current (Icc)	✓
Dielectric properties	
- Impulse withstand voltage	✓
- Power frequency withstand voltage	✓

Attributes		Specifications
Busbar ratings (In)	(A)	250, 400, 630
Rated operational voltage (Ue)	(Vac)	415
Rated frequency (fn)	(Hz.)	50
Reference temperature	(°C)	40
Rated insulated voltage (Ui)	(Vac)	830
Rated impulse voltage (Uimp)	(kV)	8
Busbar short circuit withstand strength (Icw)	(kA)	250A & 400A SMDB - 36 kA 1s 630A SMDB - 50 kA 1s
Busbar conditional short circuit rating (Icc)	(kA)	36
Neutral & earth bar rating		N : 100% of Ph. E : 50% of Ph.
Busbar material		Tinned Copper
Type of construction		Form 2
Type of connection		3-phase 4-wire with Earthing
Incomer (IC) & Outgoing (OG) Device		 MCCB
Incomer MCCB Ratings	(A)	250A, 400A, 630A
Incomer breaking capacity (Icu)	(kA)	36 kA - 250A, 400A 36 kA - 630A
IC & OG feeder no. of poles		3
Outgoing feeder - No. of ways		4, 8, 12 & 16
Applicable standard		IEC 61439-2
Application		Indoor
Mounting		Wall mounting - Up to 630A

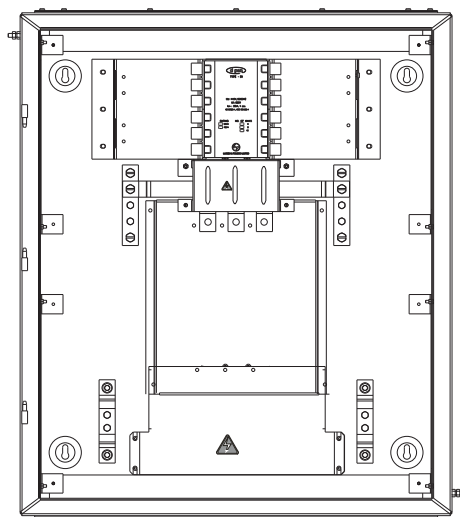
Installation guidelines for Enersys-S SMDB



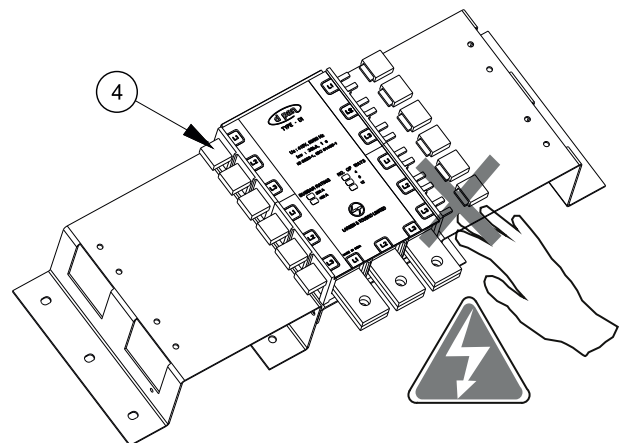
1. Open door lock using lock key



2. Remove wing nut at 4 places
3. Remove cover using handle with care



Basic assembly of SMDB

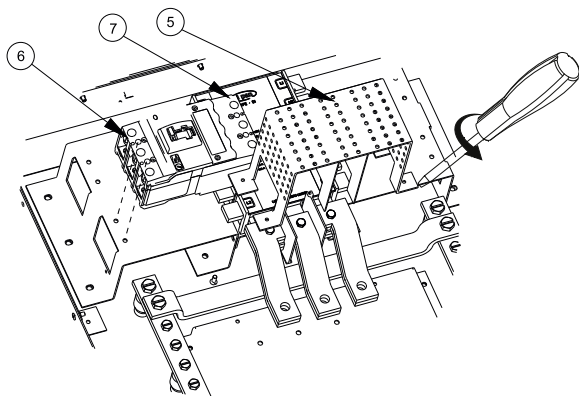


4. Remove terminal caps for mounting MCCBs
(Don't remove terminal caps on unused phase bars)
Do not leave it exposed

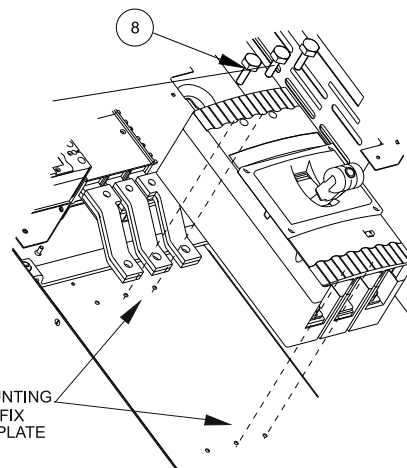


Keep fingers away from moving mechanical parts of the mechanism as this may cause serious injury

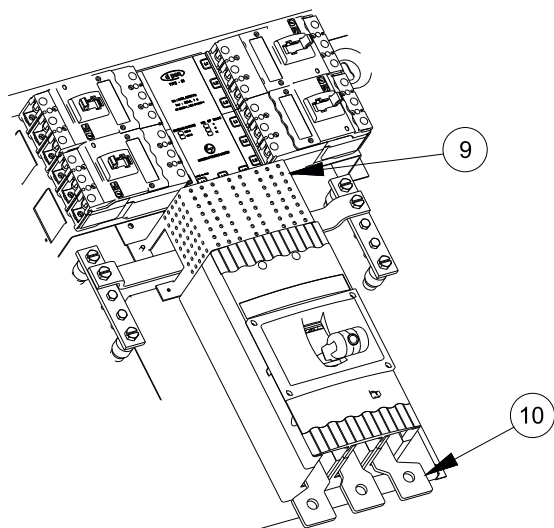
Installation guidelines for Enersys-S SMDB



- 5. Remove both shrouds
- 6. Mount outgoing MCCB using captive hardware as shown
- 7. Assemble the outgoing MCCBs

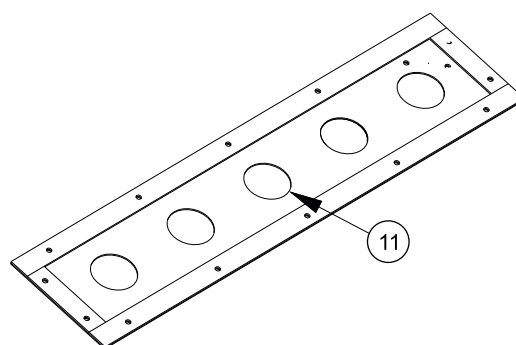


- 8. Fix Incomer MCCB on mounting plate



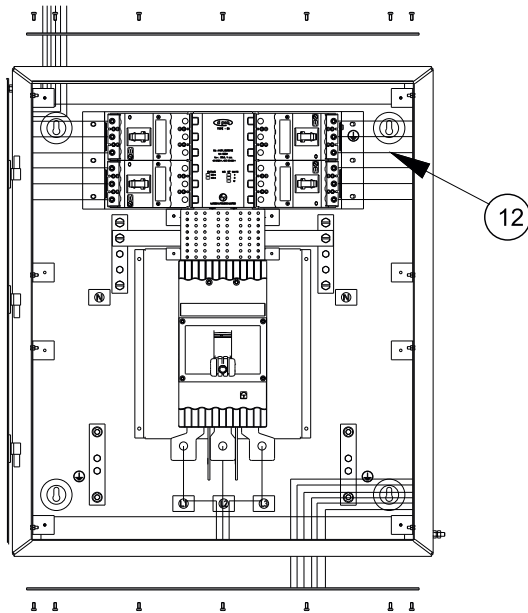
- 9. Assemble the safety shroud again
- 10. Assemble the incomer MCCB spreader link for cable termination

NOTE: tightening torques of all mounting MCCB hardware must be as per the MCCB installation kit.



- 11. Punch holes only of required sizes and Numbers on the gland plate for cable entry

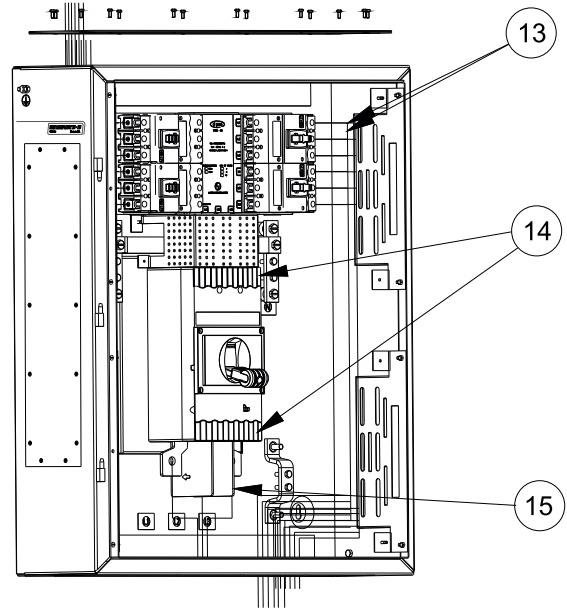
Installation guidelines for Enersys-S SMDB



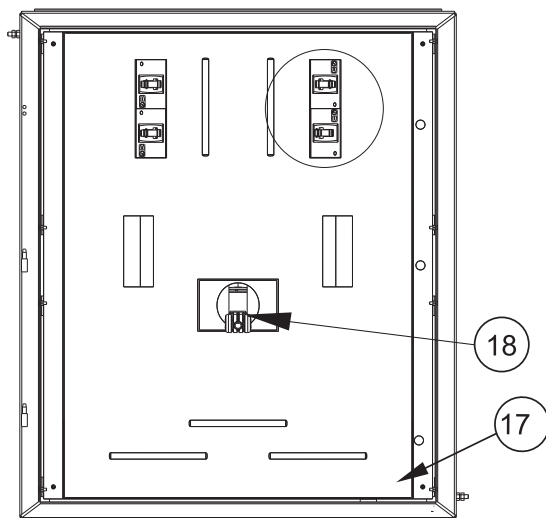
12. Choose cable cross section as per current ratings of MCCBs

NOTE: Close the top & bottom ends of enclosure by gland plate if external accessory is not connected

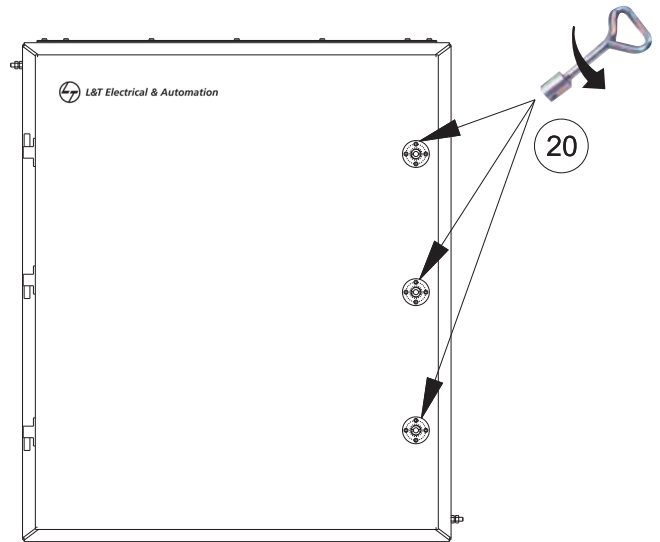
NOTE: For higher size cable termination, appropriate narrow palm width lugs should be used



13. Route cables along the length of the side channels (Use tie knot to tie cables to side channels)
14. Assemble phase barriers
15. Put incomer termination shroud again
16. For earthing connection use earth conductor



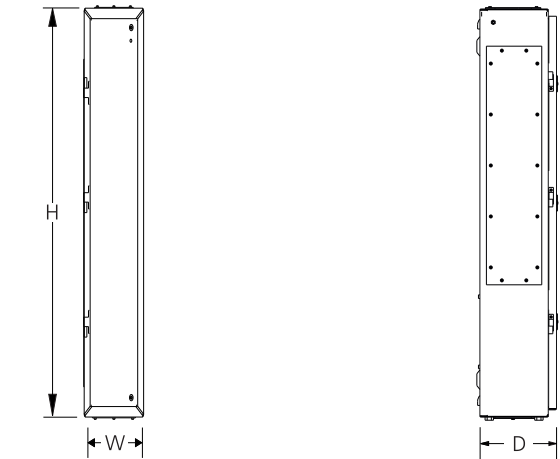
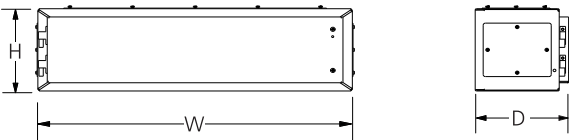
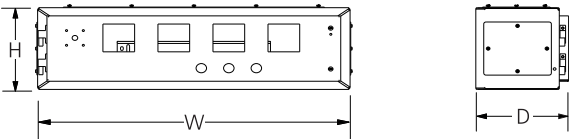
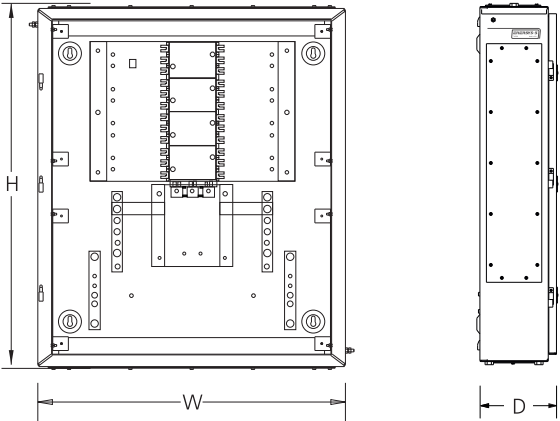
17. Mount the cover again on the enclosure and fix wing nut at four corners
18. Switch on the incomer MCCB
19. Switch on the required number of outgoing MCCBs



20. Close the door of SMDB

NOTE: In case of Aluminum termination, it is recommended to use cabling boxes which will provide additional cable bending space

Dimensional Details



EnerSys-S SMDB

Cat. No.	Dimensions (mm)		
	Height (H)	Width (W)	Depth (D)
DA20D1044CZZ0	637	670	208.5
DA20D1084CZZ0	787	670	208.5
DA20D1124CZZ0	937	670	208.5
DA20D1164CZZ0	1087	670	208.5
DA40D1044CZZ0	937	670	208.5
DA40D1084CZZ0	1087	670	208.5
DA40D1124CZZ0	1237	670	208.5
DA40D1164CZZ0	1387	670	208.5
DA60D1084CZZ0	1287	870	208.5
DA60D1124CZZ0	1507	870	208.5
DA60D1164CZZ0	1507	870	208.5
DA62D1044CZZ0	1067	870	208.5
DA62D1084CZZ0	1287	870	208.5
DA62D1124CZZ0	1507	870	208.5
DA62D1164CZZ0	1727	870	208.5
DA6AD1044CZZ0	1067	870	208.5
DA6AD1084CZZ0	1287	870	208.5
DA6AD1124CZZ0	1507	870	208.5
DA6AD1164CZZ0	1507	870	208.5

Accessories

Metering Extension Box			
Cat. No.	Dimensions (mm)		
	Height (H)	Width (W)	Depth (D)
CM9043900P0	200	670	208.5
CM9106400T0	200	870	208.5

Bottom Cabling Box			
Cat. No.	Dimensions (mm)		
	Height (H)	Width (W)	Depth (D)
CM904370000	200	670	208.5
CM910620000	200	870	208.5

Side Cabling Box				
Cat. No.		Dimensions (mm)		
Left	Right	Height (H)	Width (W)	Depth (D)
CM910850D00	CM910860D00	637	200	208.5
CM910850F00	CM910860F00	787	200	208.5
CM910850H00	CM910860H00	937	200	208.5
CM910850K00	CM910860K00	1087	200	208.5
CM910870D00	CM910880D00	937	200	208.5
CM910870F00	CM910880F00	1087	200	208.5
CM910870H00	CM910880H00	1237	200	208.5
CM910870K00	CM910880K00	1387	200	208.5
CM911200D00	CM911210D00	1067	200	208.5
CM911200F00	CM911210F00	1287	200	208.5
CM911200H00	CM911210H00	1507	200	208.5
CM911200K00	CM911210K00	1727	200	208.5

Ordering Details

Energysys-S SMDBs

- Comprises of enclosures & PAN assembly
- Supplied without incoming and outgoing MCCBs

SMDB Type	Incomer Rating	No. of outgoing ways		Cat. No.
		250A	100A	
TN250D	250	-	4	DA20D1044CZZ0
		-	8	DA20D1084CZZ0
		-	12	DA20D1124CZZ0
		-	16	DA20D1164CZZ0
TN400D	400A	-	4	DA40D1044CZZ0
		-	8	DA40D1084CZZ0
		-	12	DA40D1124CZZ0
		-	16	DA40D1164CZZ0
TN630D	630A	-	8	DA60D1084CZZ0
		-	12	DA60D1124CZZ0
		-	16	DA60D1164CZZ0
		4	-	DA62D1044CZZ0
		8	-	DA62D1084CZZ0
		12	-	DA62D1124CZZ0
		16	-	DA62D1164CZZ0
		2	2	DA6AD1044CZZ0
		2	6	DA6AD1084CZZ0
		2	10	DA6AD1124CZZ0
		2	14	DA6AD1164CZZ0

Incomer MCCB

- Select appropriate Incomer MCCB device from table below

SMDB Type	Description	Cat. No.
TN250D	DN1-250N 3 Pole MCCB - 160A	CM9860800MO
	DN1-250N 3 Pole MCCB - 200A	CM9860800NO
	DN1-250N 3 Pole MCCB - 250A	CM9860800PO
TN400D	DN3-400D 3 Pole MCCB - 320A	CM9400500Q1OG
	DN3-400D 3 Pole MCCB - 400A	CM9400500R1OG
TN630D	DN3-630D 3 Pole MCCB - 500A	CM9400600S1OG
	DN3-630D 3 Pole MCCB - 630A	CM9400600T1OG

Outgoing MCCB

- Selection of MCCBs to be done in accordance with IEC61439 guidelines

SMDB Type	Description	Cat. No.
TN250D TN400D & TN630D	DN0-100D 3 Pole MCCB - 20A	CM9789300C2OG
	DN0-100D 3 Pole MCCB - 25A	CM9789300D2OG
	DN0-100D 3 Pole MCCB - 32A	CM9789300E2OG
	DN0-100D 3 Pole MCCB - 40A	CM9789300F2OG
	DN0-100D 3 Pole MCCB - 50A	CM9789300G2OG
	DN0-100D 3 Pole MCCB - 63A	CM9789300H2OG
	DN0-100D 3 Pole MCCB - 80A	CM9789300J2OG
	DN0-100D 3 Pole MCCB - 100A	CM9789300K2OG
	DN1-250N 3 Pole MCCB - 160A	CM9860800MO
TN630D	DN1-250N 3 Pole MCCB - 200A	CM9860800NO
	DN1-250N 3 Pole MCCB - 250A	CM9860800PO

SMDB Accessories

Metering, Bottom Cabling and Corner Box

- Metering extension box comprises enclosure with provision for mounting ammeter, voltmeter, selector switch and indicating lamps
- Bottom cabling box comprises bare enclosure

SMDB Type	Description	Cat. No.
TN250D & TN400D	Metering extension Box Bottom Cabling Box	CM9043900PO CM904370000
TN630D	Metering extension Box Bottom Cabling Box	CM9106400TO CM910620000
TN250D, TN400D & TN630D	Corner Box Mounting base	CM910890000 CM702600000

Note: Mounting base to be used without bottom cabling box.





Side Cabling box

- For extra cable bending space side wise

SMDB Type	No. of ways	Left Side Extension Cat. No.	Right Side Extension Cat. No.
TN250D	- 4	CM910850DOO	CM910860DOO
	- 8	CM910850FOO	CM910860FOO
	- 12	CM910850HOO	CM910860HOO
	- 16	CM910850KOO	CM910860KOO
TN400D	- 4	CM910870DOO	CM910880DOO
	- 8	CM910870FOO	CM910880FOO
	- 12	CM910870HOO	CM910880HOO
	- 16	CM910870KOO	CM910880KOO
TN630	- 8	CM911200FO	CM911210FO
	- 12	CM911200HO	CM911210HO
	- 16	CM911200HO	CM911210HO
	4 -	CM911200DO	CM911210DO
	8 -	CM911200FO	CM911210FO
	12 -	CM911200HO	CM911210HO
	16 -	CM911200KO	CM911210KO
	2 2	CM911200DO	CM911210DO
	2 6	CM911200FO	CM911210FO
	2 10	CM911200HO	CM911210HO
	2 14	CM911200HO	CM911210HO

Metering Extension accessories

Digital meters	Cat. No.
1Ph LED Ammeter CI 1	WL1110100000
1Ph LED Voltmeter CI 1	WL1120100000
3Ph LED Ammeter CI 1	WL1310100000
3Ph LED Voltmeter CI 1	WL1320100000

Indicating lamps	Cat. No.
Indicating lamps 22.5 mm Red	EPLR240A
Indicating lamps 22.5 mm Yellow	EPLY240A
Indicating lamps 22.5 mm Green	EPLG240A
Indicating lamps 22.5 mm White	EPLW240A

Selector Switch	Cat. No.
Voltage between Phases & Individual Phases to Neutral with OFF(6 A)	61313SAB13TDYR.
Voltage between Phases & Individual Phases to Neutral with OFF(10 A)	61313SBB13TDYR.
Voltage between Phases to Neutral(6 A)	61311SAB13TDYR.
Voltage between Phases to Neutral(10 A)	61311SBB13TDYR.

MCBs	Cat. No.
10 A MCB B curve single pole	BB10100B
10 A MCB C curve single pole	BB10100C
10 A MCB D curve single pole	BB10100D

Electrical Standard Products (ESP) Offices:

HEAD OFFICE

L&T Electrical & Automation
L&T Business Park, TC 2, Tower 'B'
3rd Floor, Gate No 5
Saki Vihar Road, Powai
Mumbai 400 072
Tel: 022-67052874 / 2737 / 1156
e-mail: cic@LNTTEBG.com

BRANCH OFFICES

L&T Electrical & Automation
501, Sakar Complex I
Opp. Gandhigram Rly. Station
Ashram Road
Ahmedabad 380 009
Tel: 079 4900 4000 / 4010
e-mail: esp-ahm@LNTTEBG.com

L&T Electrical & Automation
No 38, Cubbon Road
Bengaluru 560 001
Tel: 080-46136103 / 100
e-mail: esp-blr@LNTTEBG.com

L&T Electrical & Automation
131/1, Zone II, Maharana Pratap Nagar
Bhopal 462 011
e-mail: esp-bho@LNTTEBG.com

L&T Electrical & Automation
Plot No. 559, Annapurna Complex, 2nd Floor
Lewis Road
Bhubaneswar 751 014
Tel: 0674-2436690 / 9437453579 / 9437284376
e-mail: esp-bsr@LNTTEBG.com

L&T Electrical & Automation
Aspire Towers, 4th Floor
Plot No. 55, Phase-I
Industrial & Business Park
Chandigarh 160 002
Tel: 0172-4646840 / 41 / 42 / 44 / 53
e-mail: esp-chd@LNTTEBG.COM

L&T Electrical & Automation
L&T Construction Campus
TC-1 Building, II Floor
Mount-Poonamallee Road
Manapakkam
Chennai 600 089
Tel: 044-2270 6800
e-mail: esp-maa1@LNTTEBG.com

L&T Electrical & Automation
Electrical Standard Products
Manufacturing Facility
L&T Bypass Road, Malumichampatti
Coimbatore 641 050
Tel: 0422-6683031
e-mail: esp-cbe@LNTTEBG.com

L&T Electrical & Automation
3rd Floor, 1&2 Vijay Park,
Main Chakrata road
Ballapur Chowk
Dehradun 248001
Tel: +91 9582252411

L&T Electrical & Automation
Khairasol, Degaul Avenue
Durgapur 713 212
Tel: 0343-2540448 / 2540449 / 2540443
e-mail: esp-dgp@LNTTEBG.com

L&T Electrical & Automation
5, Milanpur Road, Bamuni Maidan
Guwahati 781 021
Tel: +91 8876554417
e-mail: esp-ghy@LNTTEBG.com

L&T Electrical & Automation
2nd Floor, Vasantha Chambers
5-10-173, Fateh Maidan Road
Hyderabad 500 004
Tel: 040-67015052
e-mail: esp-hyd@LNTTEBG.com

L&T Electrical & Automation
Monarch Building, 1st Floor
D-236 & 237, Amrapali Marg
Vaishali Nagar
Jaipur 302 021
Tel: 0141-4385914 to 18
e-mail: esp-jai@LNTTEBG.com

L&T Electrical & Automation
Akashdeep Plaza, 2nd Floor
P. O. Golmuri
Jamshedpur 831 003
Jharkhand
Tel: 0657-2340502 / 08
e-mail: esp-jam@LNTTEBG.com

L&T Electrical & Automation
Skybright Bldg; M. G. Road
Ravipuram Junction, Ernakulam
Kochi 682 016
Tel: 0484-4409420 / 4 / 5 / 7
e-mail: esp-cok@LNTTEBG.com

L&T Electrical & Automation
3-B, Shakespeare Sarani
Kolkata 700 071
Tel: 033-48006001
e-mail: esp-kol@LNTTEBG.com

L&T Electrical & Automation
No. 10, Fortuna Tower, 2nd Floor
Rana Pratap Marg, Near NBRI
Lucknow 226001
e-mail: esp-lko@LNTTEBG.com

L&T Electrical & Automation
No: 73, Karpaga Nagar, 8th Street
K. Pudur
Madurai 625007
Tel: 0452-2567405 / 2561068 / 2561657
e-mail: esp-mdu@LNTTEBG.com

L&T Electrical & Automation
L&T Business Park, TC 2, Tower 'B'
3rd Floor, Gate No 5
Saki Vihar Road, Powai
Mumbai 400 072
Tel: 022-67052874 / 2737 / 1156
e-mail: esp-bom@LNTTEBG.com

L&T Electrical & Automation
Unnati Building, 2nd Floor
Automation Campus
A-600, TTC Industrial area
Shil-Mahape road, Mahape
Navi Mumbai 400710
Tel: +91 22 67226502 / 67226300

L&T Electrical & Automation
12, Shivaji Nagar
North Ambajhari Road
Nagpur 440 010
Tel: 0712-2260012 / 6606421
e-mail: esp-nag@LNTTEBG.com

L&T Electrical & Automation
A-25, Imperia Complex, First Floor,
Mohan Cooperative Industrial Estate,
Near Sarita Vihar Metro Station,
Mathura Road
New Delhi 110 044
Tel: 011-41419514 / 5 / 6
e-mail: esp-del@LNTTEBG.com

L&T Electrical & Automation
Grand Chandra, 2nd Floor
Fraser Road
Opposite Doordarshan Kendra
Patna 800001
e-mail: esp-patna@LNTTEBG.com

L&T Electrical & Automation
L&T House
P. O. Box 119
191/1, Dhole Patil Road
Pune 411 001
Tel: 020-48544395 / 48544279
e-mail: esp-pnq@LNTTEBG.com

L&T Electrical & Automation
Crystal Tower,
4th Floor, G. E. Road
Telibandha
Raipur 492 006
Tel: +91 9755508228
e-mail: esp-raipur@LNTTEBG.com

L&T Electrical & Automation
3rd Floor
Vishwakarma Chambers
Majura Gate, Ring Road
Surat 395 002
Tel: 0261-2473726
e-mail: esp-sur@LNTTEBG.com

L&T Electrical & Automation
Radhadaya Complex
Old Padra Road
Near Charotar Society
Vadodra 390 007
Tel: 0265-6613610 / 1 / 2
e-mail: esp-bar@LNTTEBG.com

L&T Electrical & Automation
Door No. 49-38-14/3/2, 1st floor,
NGGO's Colony, Akkayyapalem,
Visakhapatnam 530 016
Tel: 0891-2791126 / 2711125
e-mail: esp-viz@LNTTEBG.com

Product improvement is a continuous process. For the latest information and special application, please contact any of our offices listed here. Product photographs shown for representative purpose only.



L&T Electrical & Automation, Electrical Standard Products

L&T Business Park, TC-2, Tower B, 3rd Floor, Gate No. 5, Saki Vihar Road, Powai,
Mumbai - 400 072, INDIA www.Lntebg.com

Customer Interaction Center (CIC)

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