



SUB-MAIN DISTRIBUTION BOARD



With a deep national presence and one of the largest electrical distribution networks, comprising over 1500 partners across the country, we are committed to driving excellence and delivering superior products and solutions that power

India's growth journey.



SMDB with all accessories



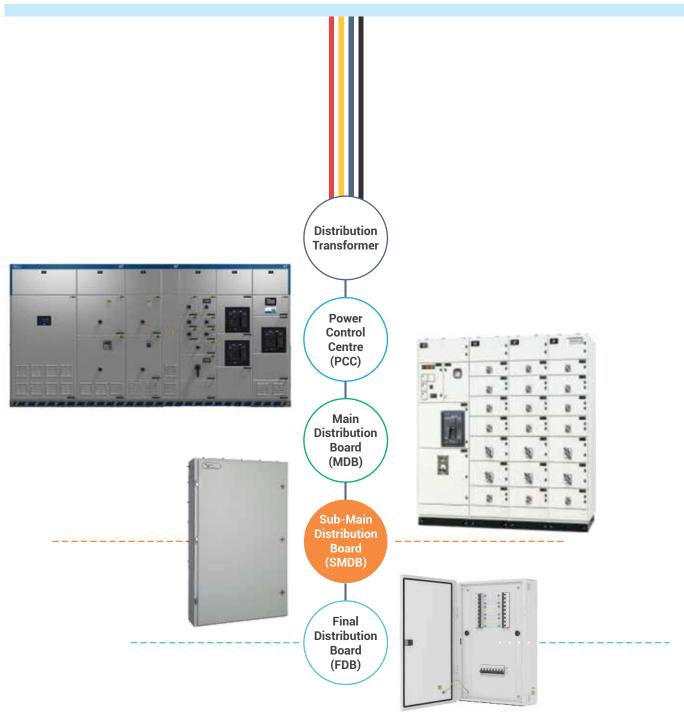
Double Door Construction with Protective Shield

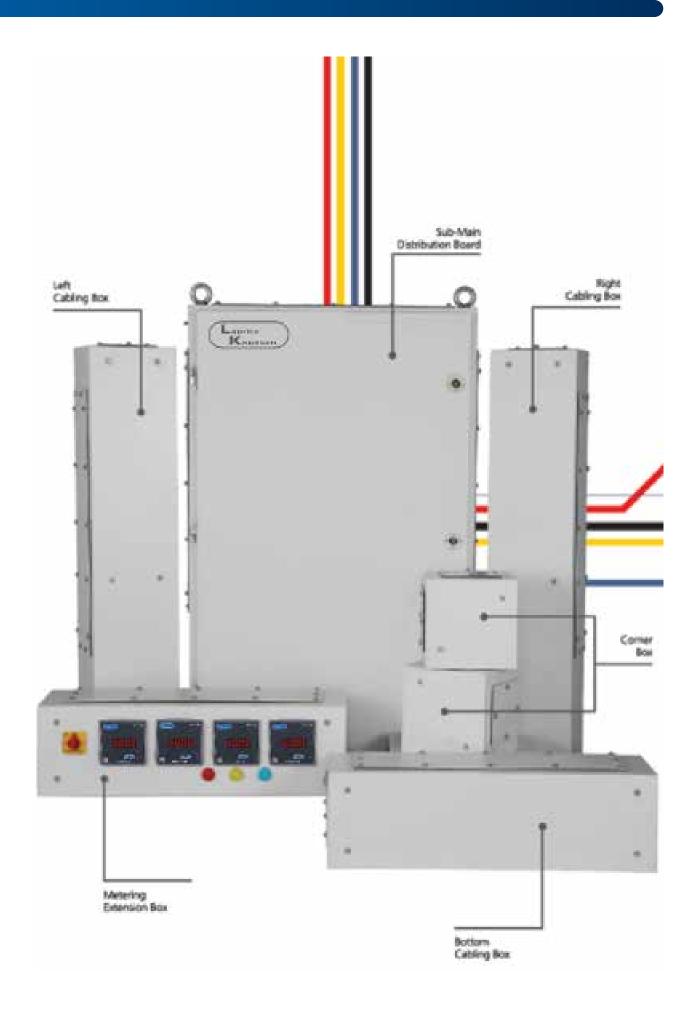


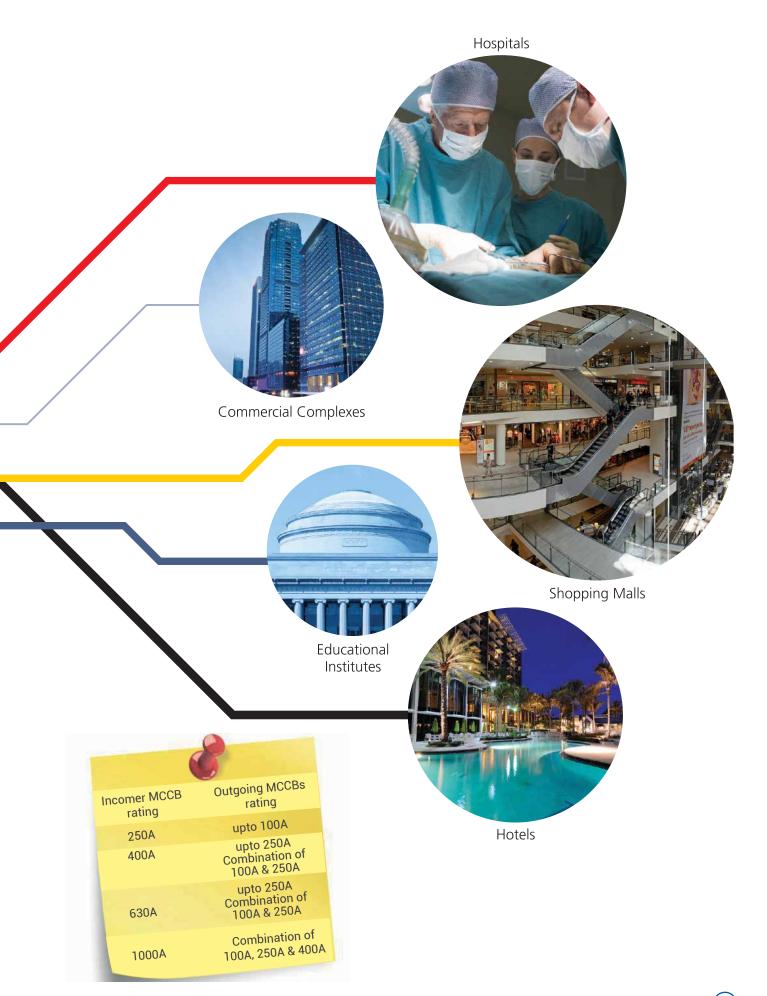
400A Incomer MCCB & 100A outgoing MCCBs (8 nos.)

Lauritz Knudsen Electrical and automation (E&A) is a market leader for electrical distribution, monitoring and control solutions in the low voltage category. Popular among customers as Lauritz Knudsen Electrical and automation 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. It 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 wellequipped 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.







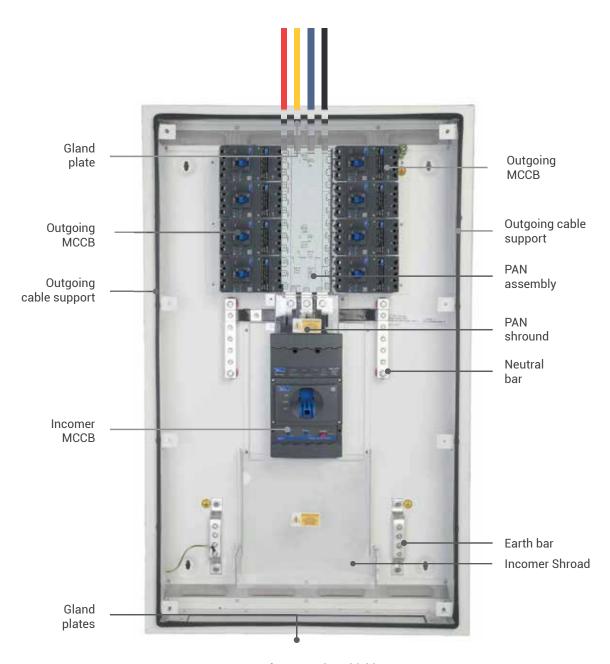
ENERSYS-SSub-Main Distribution Board

Enersys-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.

Enersys-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-cumprotection 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.

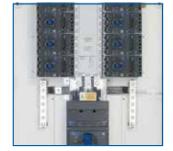


SMDB after removing shield

Total Safety

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.



Convenience

Off-the-shelf assembly

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



Ease of termination

Enersys-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.



Enhanced Reliability

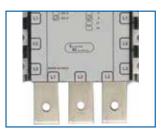
Higher ingress protection

Enersys-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.



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

Enersys-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.

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	✓





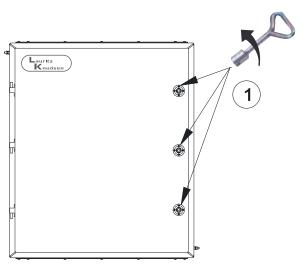
Performance characteristics	Enersys-S Verified			
Verification of temperature rise	✓			
Short circuit withstand test				
Test at rated short time withstand current (Icw)	✓			
Test at rated conditional short circuit current (Icc)	✓			
Dielectric properties				
› Impulse withstand voltage	✓			
> Power frequency withstand voltage	✓			

Technical Details

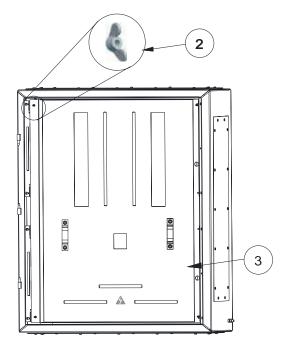
Attributes		Specifications
Busbar ratings (In)	А	250, 400, 630
Rated operational voltage (Ue)	(Vac	415
Rated frequency (fn)	(Hz.)	50
Reference temperature	(°C)	40
Rated insulated voltage (Ui)	(Vac)	830
Rated impulse voltage (Uimp)	(kV)	8
Busbar short circuit withstand strength (Icw)	(kA)	250A & 400A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

^{*} Alternative thickness 2mm available on request. ** Other Paint Shade available on request.

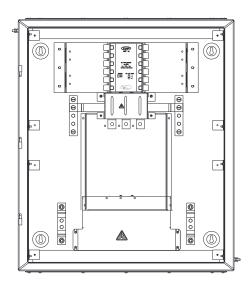
Installation guidelines for Enersys-S SMDB



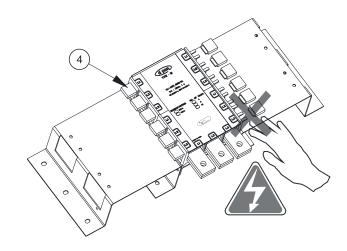
1. Open door lock using lock key



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



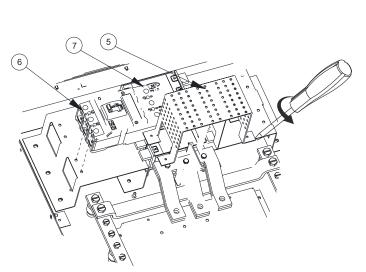
Basic assembly of SMDB



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



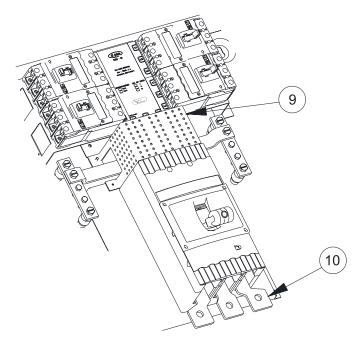
Installation guidelines for Enersys-S SMDB



USE MCCB MOUNTING. HARDWARE TO FIX ON MOUNTING PLATE

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

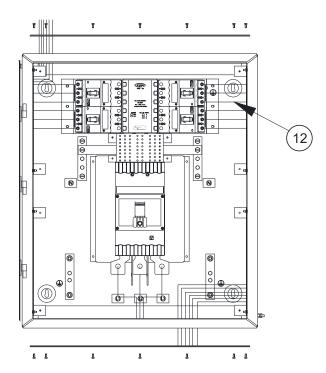
8. Fix Incomer MCCB on mounting plate



- 9. Assemble the safety shroud again 10. Assemble the incomer MCCB spreader link for cable termination
- 11. Punch holes only of required sizes and Numbers on the gland plate for cable entry

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

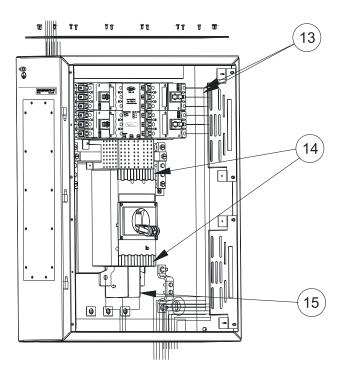
Installation guidelines for Enersys-S SMDB



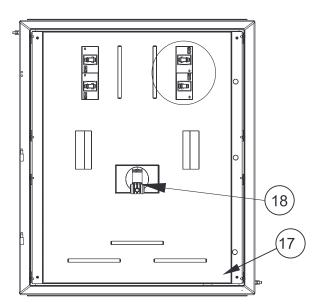
12. Choose cable cross section as per current ratings of MCCBs

 $\ensuremath{\mathsf{NOTE}}\xspace$ Close the top & bottom ends of enclosure by gland plate if external accessory is not connected

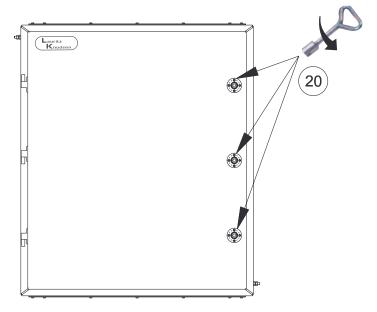
NOTE: For higher size cable termination, appropriate narrow palm width lugs should be used



- 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



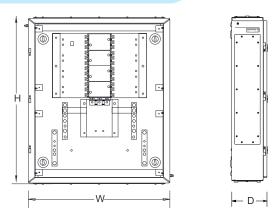
- 17. Mount the cover again on the enclosure and fix wing nut at four corners
- 18. Switch on the incomer MCCB
- 19. Switch on the required number of outgoing MCCBs



20. Close the door of SMDB

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

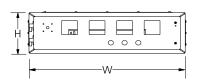
Dimensional Details

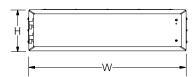


Enersys - S SMDB

Cat. No.	Dimensions (mm)		
	Height (H)	Width (W)	Depth (D)
DA20D1044CZZO	637	670	208.5
DA20D1084CZZO	787	670	208.5
DA20D1124CZZO	937	670	208.5
DA20D1164CZZO	1087	670	208.5
DA40D1044CZZO	937	670	208.5
DA40D1084CZZO	1087	670	208.5
DA40D1124CZZO	1237	670	208.5
DA40D1164CZZO	1387	670	208.5
DA60D1084CZZO	1287	870	208.5
DA60D1124CZZO	1507	870	208.5
DA60D1164CZZO	1507	870	208.5
DA62D1044CZZO	1067	870	208.5
DA62D1084CZZO	1287	870	208.5
DA62D1124CZZO	1507	870	208.5
DA62D1164CZZO	1727	870	208.5
DA6AD1044CZZO	1067	870	208.5
DA6AD1084CZZO	1287	870	208.5
DA6AD1124CZZO	1507	870	208.5
DA6AD1164CZZO	1507	870	208.5

Accessories







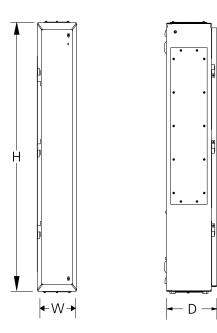


(Metering Extension Box)

Cat. No.	Dimensions (mm)		
	Height (H)	Width (W)	Depth (D)
CM9043900PO	200	670	208.5
CM9106400TO	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.	Dim	ensions (ı	mm)	
Left	Right	Height (H)	Width (W)	Depth (D)
CM910850D00	CM910860D00	637	670	208.5
CM910850F00	CM910860F00	787	670	208.5
CM910850H00	СМ910860НОО	937	670	208.5
CM910850KOO	CM910860K00	1087	670	208.5
CM910870D00	CM910880D00	937	670	208.5
CM910870F00	CM910880F00	1087	670	208.5
СМ910870Н00	CM910880H00	1237	670	208.5
CM910870K00	CM910880K00	1387	670	208.5
CM9112000DO	CM9112100D0	1067	870	208.5
CM9112000FO	CM9112100F0	1287	870	208.5
СМ9112000НО	СМ9112100НО	1507	870	208.5
СМ9112000КО	СМ9112100КО	1727	870	208.5

Ordering Details







Enersys-S SMDBs					
> Comprises of enclosures & PAN assembly > Supplied without incoming and outgoing MCCBs					
SMDB	Incomer Rating		utgoing iys	Cat. No.	
Type	natiliy	250A	100A		
		-	4	DA20D1044CZZO	
TN250D	250	-	8	DA20D1084CZZO	
TNZJUD	230	-	12	DA20D1124CZZO	
		-	16	DA20D1164CZZO	
		-	4	DA40D1044CZZO	
TN400D	400A	-	8	DA40D1084CZZO	
11N400D		-	12	DA40D1124CZZO	
		-	16	DA40D1164CZZO	
		-	8	DA60D1084CZZO	
		-	12	DA60D1124CZZO	
		-	16	DA60D1164CZZO	
		4	-	DA62D1044CZZO	
		8	-	DA62D1084CZZO	
TN630D	630A	12	-	DA62D1124CZZO	
		16	-	DA62D1164CZZO	
		-	2	DA6AD1044CZZO	
		-	6	DA6AD1084CZZO	
		-	10	DA6AD1124CZZO	
		-	12	DA6AD1164CZZO	

Incomer MCCB					
> Select appr	opriate Incomer MCCB device from	n table below			
SMDB Type	Description Cat. No.				
	DN1-250N 3 Pole MCCB - 160A	CM9860800MO			
TN250D	DN1-250N 3 Pole MCCB-200A	CM9860800NO			
	DN1-250N 3 Pole MCCB - 250A	CM9860800PO			
TN400D	DN3-400D 3 Pole MCCB - 320A	CM9400500Q10G			
1114000	DN3-400D 3 Pole MCCB - 400A	CM9400500R10G			
TN630D	DN3-630D 3 Pole MCCB-500A	CM9400600S1OG			
1100000	DN3-630D 3 Pole MCCB - 630A	CM9400600T10G			

Outgoing MCCB					
> Selection o	> Selection of MCCBs to be done in accordance with ICE61439				
SMDB Type	Description ('at No				
	DN0-100D 3 Pole MCCB - 20A	CM9789300C20G			
	DN0-100D 3 Pole MCCB - 25A	CM9789300D20G			
	DN0-100D 3 Pole MCCB - 32A	CM9789300E20G			
TN250D TN400D &	DN0-100D 3 Pole MCCB - 40A	CM9789300F20G			
TN630D	DN0-100D 3 Pole MCCB - 50A	CM9789300G20G			
	DN0-100D 3 Pole MCCB - 63A	CM9789300H2OG			
	DN0-100D 3 Pole MCCB - 80A	CM9789300J20G			
	DN0-100D 3 Pole MCCB-100A	CM9789300K20G			
	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 & Metering extension Box TN400D 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

> For extra cable bending space side wise				
SMDB		. of ays	Left Side Extension	Right Side Extension Cat.
Type	250A	100A	Cat. No.	No.
		4	CM910850D00	CM910860D00
TN250D		8	CM910850F00	CM910860F00
TINZOUD		12	CM910850H00	CM910860H00
		16	CM910850K00	CM910860K00
		4	CM910870D00	CM910880D00
TN400D		8	CM910870F00	CM910880F00
1114000		12	CM910870H00	CM910880H00
		16	CM910870K00	CM910880KOO
		8	CM9112000FO	CM9112100FO
		12		
		16	CM9112000HO	CM9112100HO
	4		CM9112000DO	CM9112100DO
	8		CM9112000FO	CM9112100FO
TN630D	12		CM9112000HO	CM9112100HO
	16		CM9112000KO	CM9112100KO
	2	2	CM9112000DO	CM9112100DO
	2	6	CM9112000FO	CM9112100FO
	2	10		
	2	14	CM9112000HO	CM9112100HO

Metering Extension accessories		
Digital meters	Cat. No.	
1Ph LED Ammeter Cl 1	WL1110100000	
1Ph LED Voltmeter CI 1	WL1120100000	
3Ph LED Ammeter Cl 1	WL1310100000	
3Ph LED Voltmeter Cl 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

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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.



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