

We touch your **electricity** everyday!



Busbar Trunking System

LB-Lighting Trunking (25 to 40Amps)



C&S Electric Ltd.



OUR MISSION

- To create a unique alchemy of outstanding products, operational excellence, path breaking customer service, and compelling marketing.
- To create and relish a vibrant workplace where employees are empowered, cared for, developed, and most of all, provided unlimited opportunity to discover their full potential.
- To continuously enhance our core technologies, and develop new world class technologies and products to expand our offering to customers.
- To consolidate and strengthen our position as India's largest exporter of Industrial power distribution and control equipment.
- To earn a healthy return on investment for the shareholders.
- To everyday experience, the sheer joy of delighting our internal and external customers, and to relish the thrill of participation in India's infrastructure boom.

OUR VISION

- C&S shall be the most trusted, respected and preferred brand, for electrical and electronic equipment that finds application in power generation, distribution, control and final consumption.
- In its major businesses C&S shall not only command a domestic market share ranging from 12% to 50% or more, but be known widely as the company "**closest to its Customers**"
- C&S products shall be used to manage power in india's biggest industries, in its highest buildings, in its most critical infrastructure and in millions of its homes.
- The C&S name shall be recognized widely as a benchmark, and shall serve as a role model and an inspiration to other Indian engineering products companies.
- C&S shall be cited as a company that played an important role in making "**Made in India**" a label that is trusted and respected the world over.



Manufacturing Plant at Hardwar



CNC TURRET PUNCH PRESS



BUSBAR CUTTING MACHINE



POWDER COATING PLANT



BUSBAR SLEEVING MACHINE

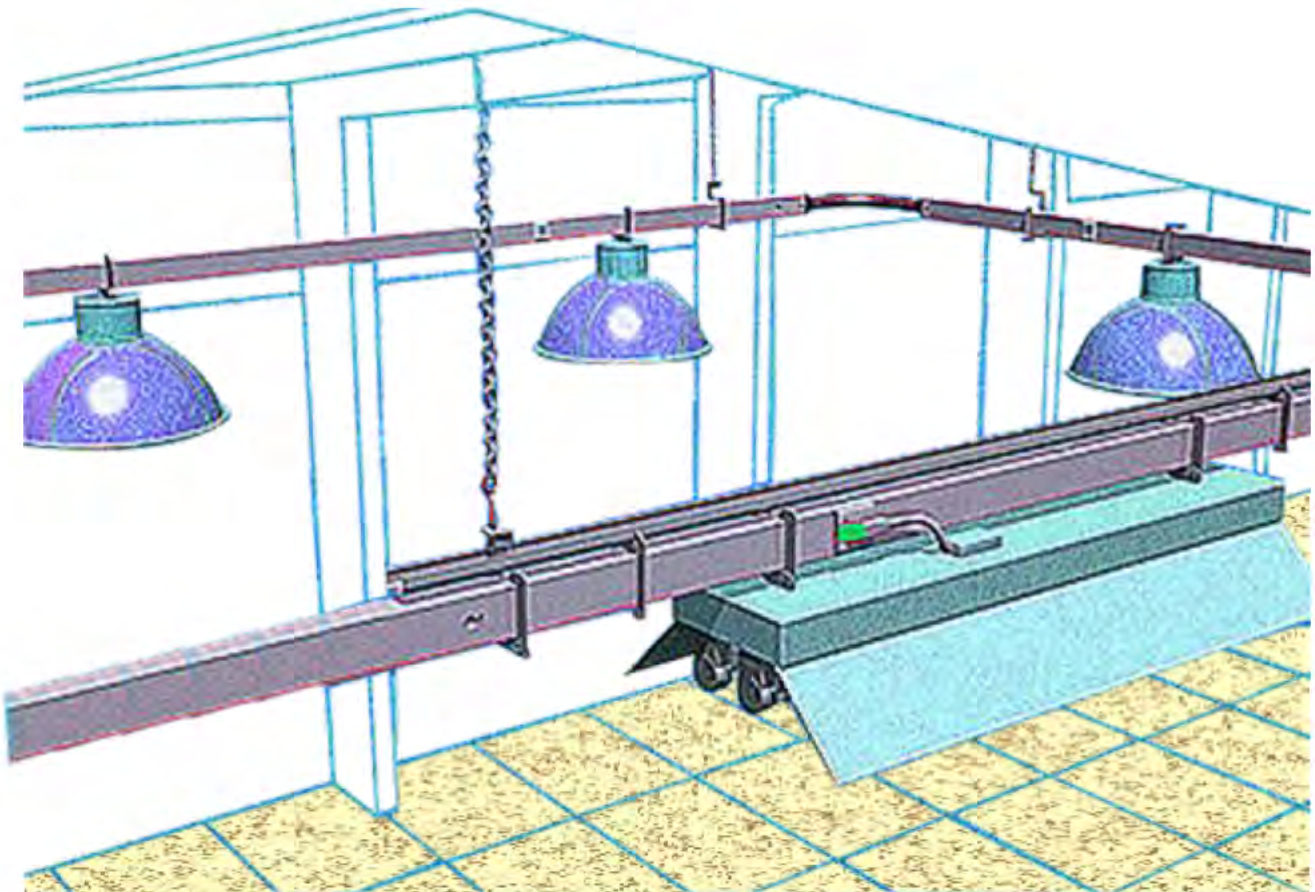




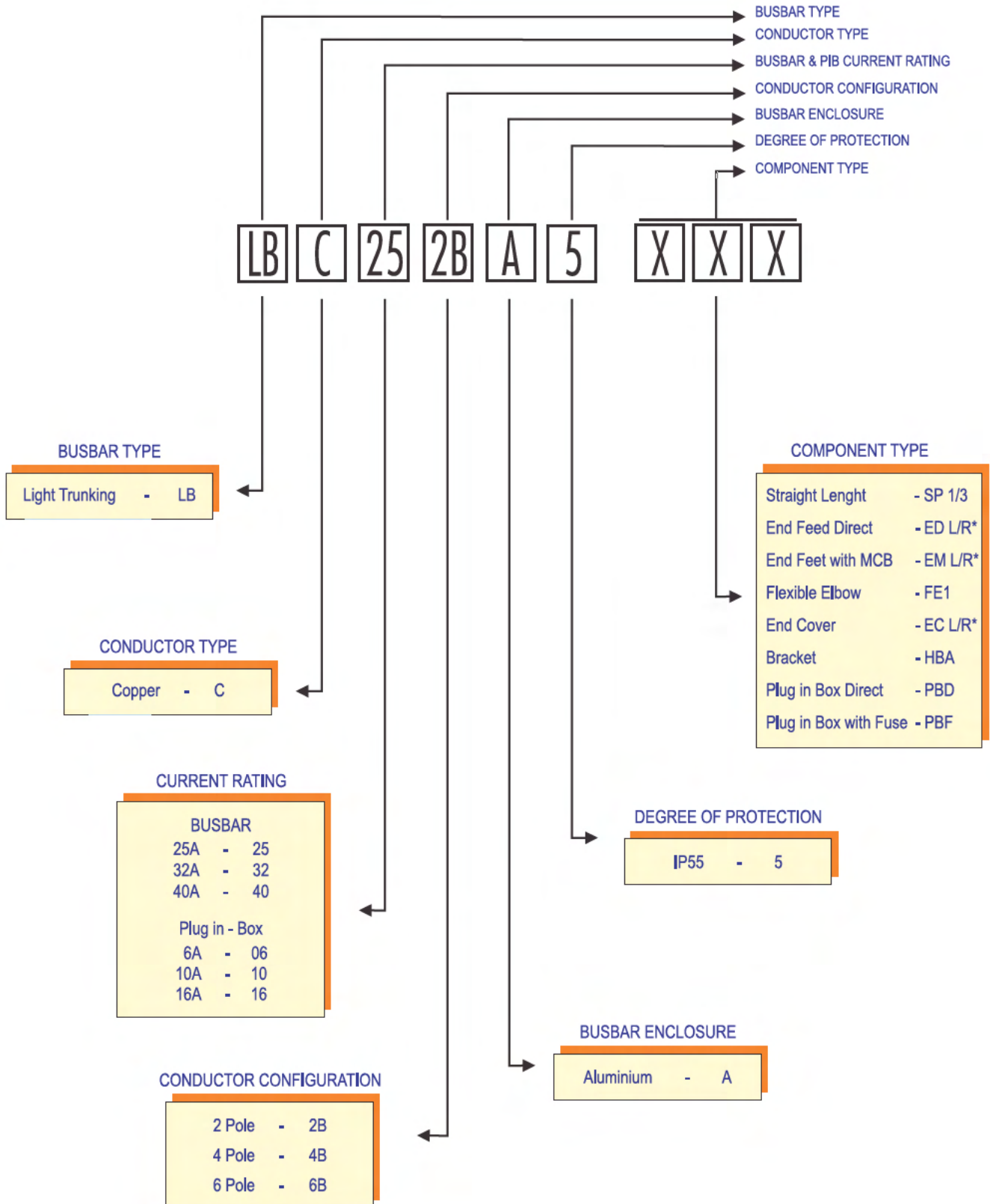
Contents

Vision & Mission	.....	(i)
Manufacturing Plant	.....	(ii)
Major Manufacturing Facilities	.....	(iii)
Lighting Trunking System (LB)	.....	(1)
Specifications	.....	(2)
Order Code System	.....	(3)
Technical Data	.....	(4)
LB Overview	.....	(5-6)
Components		
■ Straight Length	.....	(7)
■ End Feed Unit	.....	(8)
■ Flexible Elbow & End Cover	.....	(9)
■ Bracket & Plug in Box	.....	(10)
Applications	.....	(11)
Installation Instructions	.....	(12)
CPRI Certificate	.....	(13)
Other Products	.....	(14)

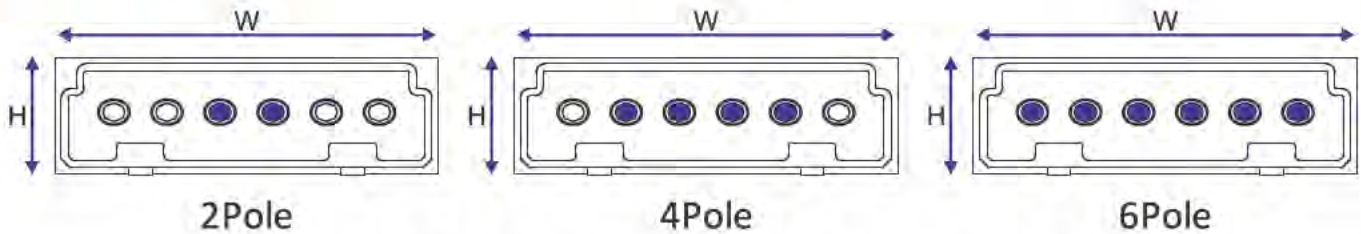
- The Lighting Trunking (LB) system is the ideal solution for the lighting and low power distribution mainly for industrial and commercial applications
- LB systems simplify the accurate and uniform installation of continuous lighting layouts. Their high degree of flexibility, low fire load and uniform appearance speak for themselves.
- LB is extremely easy and quick to be installed and shows its flexibility during the planning of its installation, during the installation and in the everyday usage.
- LB is optimum solution for fixing the trunking elements to raised floors, over head and false ceiling due to its IP 55 protection degree.
- C&S LB systems are manufactured using the latest production technologies available worldwide according to ISO standards and the product is designed as per the IEC 60439 (1&2) and IS 8623 (1&2).
- LB system can be mounted edgewise or flat wise, horizontally or vertically in any direction.



• Compliance of Standard	IEC 60439 (1&2) & IS 8623 (1&2)
• Independent Certification Authority	Central Power Research Institute (CPRI)
• Busbar Ratings	25A,32A,40A
• Busbar Configuration	2P- L1/N/PE (Housing) 4P- L1/L2/L3/N/PE (Housing) 6P- L1/L2/L3/N1/N2/E/PE (Housing) 6P- L1/L2/L3/L4/L5/N/PE (Housing) 6P- L1/N1/L2/N2/L3/N3/PE (Housing)
• Rated Operational Voltage (Ue)	500 Volt, AC
• Rated Insulation Voltage (Ui)	690 Volt, AC
• Rated Dielectric Voltage	2.5 KV r.m.s
• Rated Frequency	50 / 60 Hz
• Enclosure Material	Aluminum (Thickness 1.0 mm)
• Surface Coating on Enclosure	Epoxy polyester powder coated (RAL-7032)
• Busbar Material (Phase/Neutral)	ETP grade copper 99.9% Pure (Tin Plated)
• Integral Earth (PE)	Aluminum Housing (170 mm ²)
• Busbar Insulation	Flame Retardant PVC (Class 'A'-105 Deg C)
• Insulation Thickness	1.0 mm
• Joint	Inbuilt push fit joint, fitted at either end, (comprises of silver plated copper contacts with pressure clip.)
• Plug In Box rating	6A,10A, 16A (with/without fuse)
• Plug In outlet spacing	at every 1000 mm
• Plug In Box Contacts	Silver Plated Copper Contacts Plug In Type with pressure clips.
• Degree of Protection	IP 55/IP 54

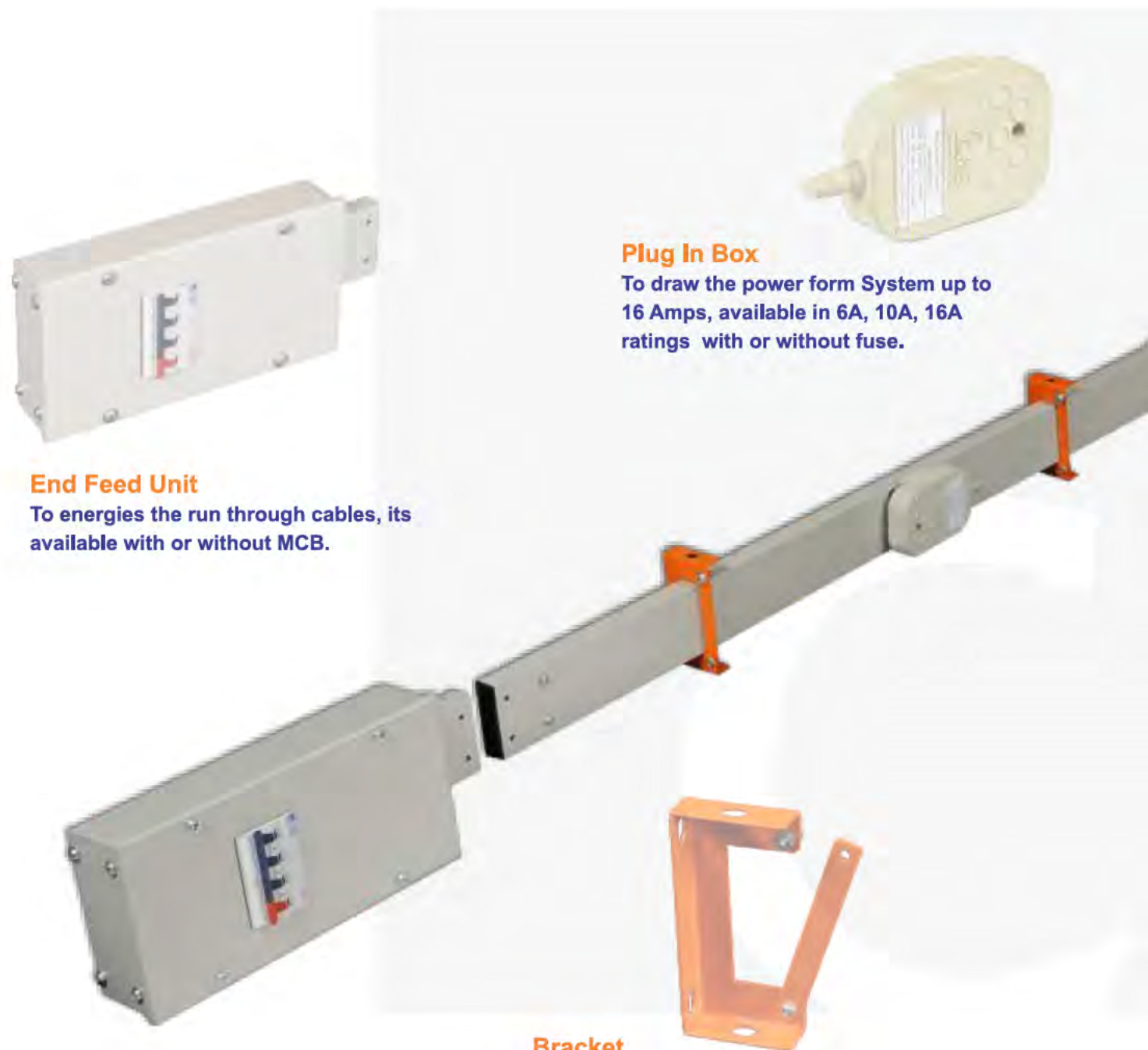


* L - Left hand side or R - Right hand side



TECHNICAL PARAMETERS OF LIGHTING BUS TRUNKING

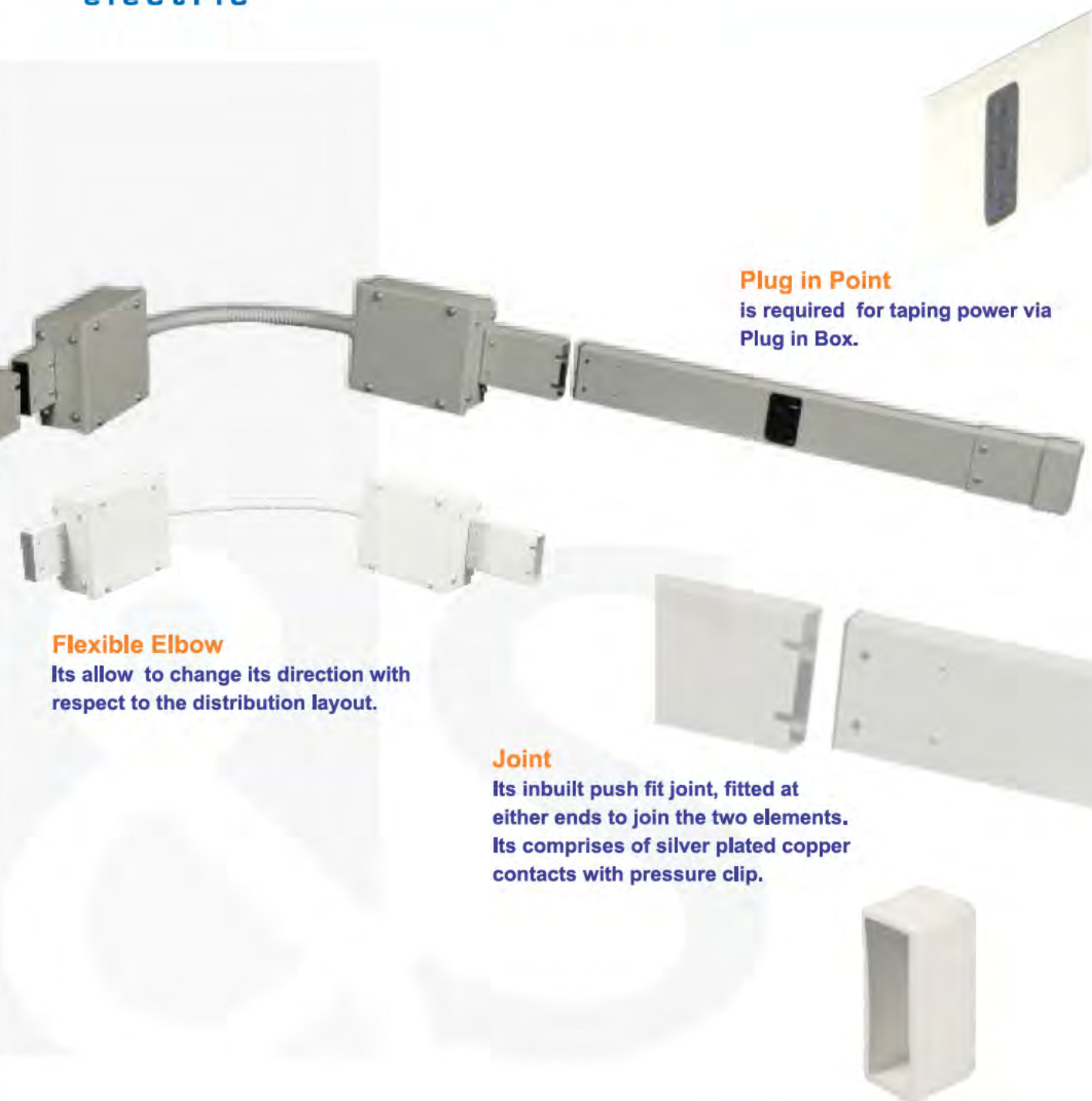
Rated Current (In)	Amps	25A	32A	40A
Product Code	—	LB C25	LB C32	LB C40
Phase/neutral cross section	mm ²	2.5 mm ²	4.0 mm ²	6.0 mm ²
Overall Dimension (WxH)	mm	65x20	65x20	65x20
Rated Three Phase RMS Short Time Current (Icw)	kA	2.0	2.3	3.3
Rated Three phase Peak short time current (Ipk)	kA	3.0	3.6	5.0
Rated Single Phase RMS Short Time Current for (Icw)	kA	1.2	1.4	2.0
Rated Single phase Peak short time current (Ipk)	kA	2.4	2.8	4.0
Approximate Weight of Bustrunking				
2 Pole (Phase+Neutral)	kg/mtr.	0.908	0.985	1.062
4 Pole (3 Phase+ 100% Neutral)	kg/mtr.	1.108	1.172	1.324
6 Pole (3Phase+100% Neutral+200% Earth)	kg/mtr.	1.127	1.358	1.586
Electrical Characteristics for 50 Hz				
AC Resistance at 20°C (R20)	ohms /mtr.	7.108	4.442	2.962
Reactance (X)	ohms /mtr.	1.2800	0.9000	0.6667
Impedance at thermal conditions (Z)	ohms /mtr.	7.2223	4.5327	3.0358
Voltage drop with distributed load (ΔV)	mV/mtr./A at 0.7 P.F.	10.2010	6.4993	4.4153
	mV/mtr./A at 0.8 P.F.	11.1793	7.0910	4.7966
	mV/mtr./A at 0.9 P.F.	12.0478	7.6054	5.1206
	mV/mtr./A at 1.0 P.F.	12.3111	7.6944	5.1296
Electrical Characteristics for 60 Hz				
AC Resistance at 20°C (R20)	milliohms /mtr.	7.1082	4.4427	2.9618
Reactance (X)	milliohms /mtr.	1.5360	1.0800	0.8000
Impedance at thermal conditions (Z)	milliohms /mtr.	7.2722	4.5721	3.0680
Voltage drop with distributed load (ΔV)	mV/mtr./A at 0.7 P.F.	10.5178	6.7222	4.5805
	mV/mtr./A at 0.8 P.F.	11.4456	7.2783	4.9354
	mV/mtr./A at 0.9 P.F.	12.2413	7.7415	5.2215
	mV/mtr./A at 1.0 P.F.	12.3114	7.6947	5.1299



End Feed Unit
To energise the run through cables, its available with or without MCB.

Plug In Box
To draw the power form System up to 16 Amps, available in 6A, 10A, 16A ratings with or without fuse.

Bracket
To support the run & luminaries in the system by surface mounting or overhead suspension.



Flexible Elbow
Its allow to change its direction with respect to the distribution layout.

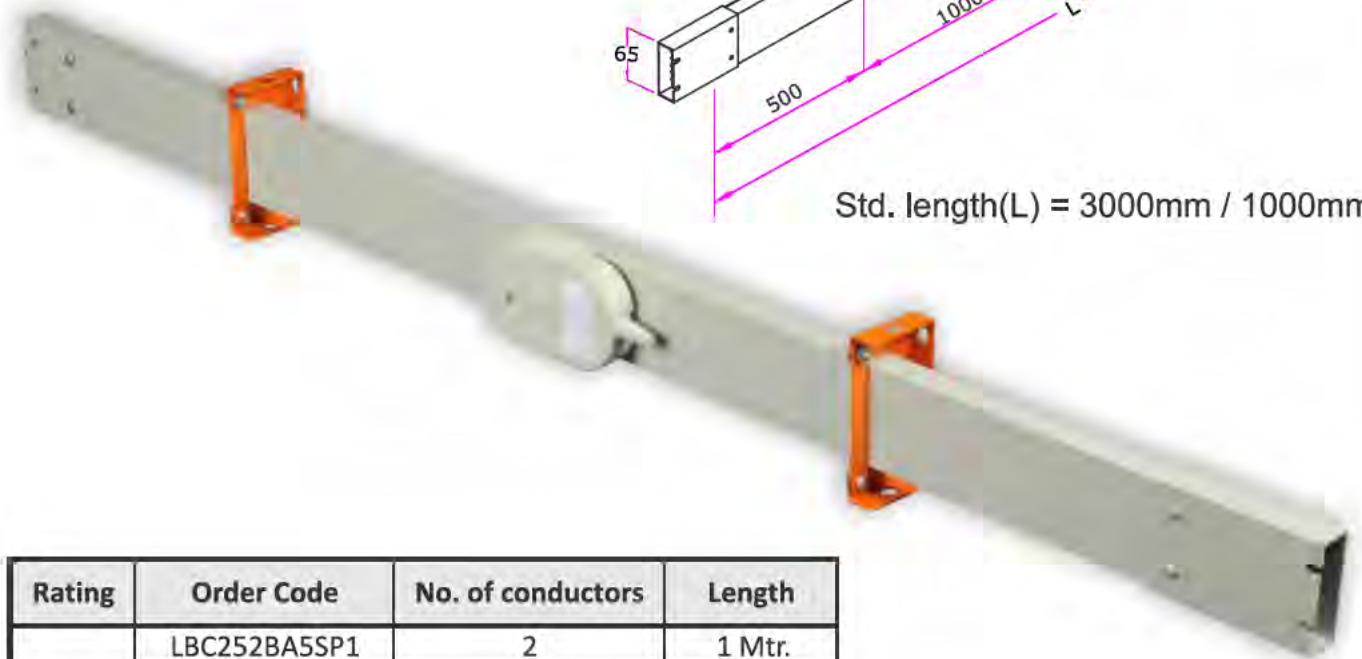
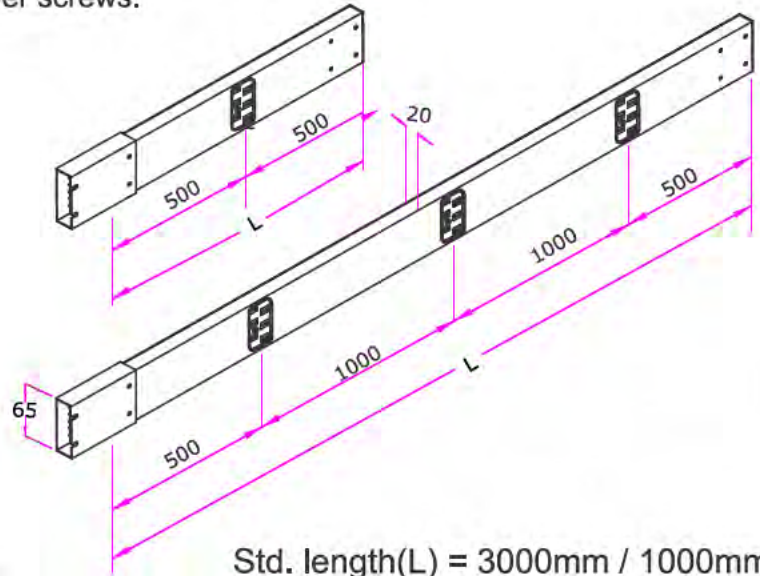
Joint
Its inbuilt push fit joint, fitted at either ends to join the two elements. Its comprises of silver plated copper contacts with pressure clip.

End Cover
Its is used to close the end of run and it can be remove easy for further expansion of run, common for all ratings.

Plug in Point
is required for taping power via Plug in Box.

The LB line includes end feed units, straight lengths, flexible elbows, and Plug-in point and plug in Box with or without fuses, bracket for support run, and End Cover.

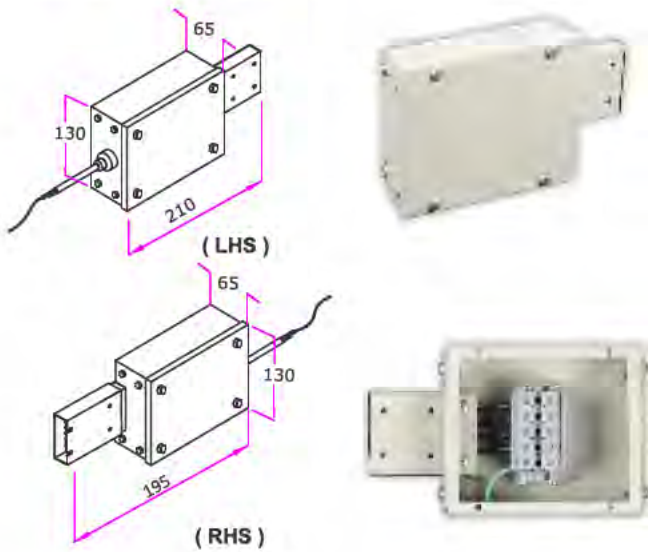
- Aluminum enclosure 1.0 mm thick serves as a protective earthing.
- Joint between two section is made through push fit joints ensure electrical continuity (PE) after tightening 2 joint cover screws.



Rating	Order Code	No. of conductors	Length
25A	LBC252BA5SP1	2	1 Mtr.
	LBC252BA5SP3	2	3 Mtr.
	LBC254BA5SP1	4	1 Mtr.
	LBC254BA5SP3	4	3 Mtr.
	LBC256BA5SP1	6	1 Mtr.
	LBC256BA5SP3	6	3 Mtr.
32A	LBC322BA5SP1	2	1 Mtr.
	LBC322BA5SP3	2	3 Mtr.
	LBC324BA5SP1	4	1 Mtr.
	LBC324BA5SP3	4	3 Mtr.
	LBC326BA5SP1	6	1 Mtr.
	LBC326BA5SP3	6	3 Mtr.
40A	LBC402BA5SP1	2	1 Mtr.
	LBC402BA5SP3	2	3 Mtr.
	LBC404BA5SP1	4	1 Mtr.
	LBC404BA5SP3	4	3 Mtr.
	LBC406BA5SP1	6	1 Mtr.
	LBC406BA5SP3	6	3 Mtr.

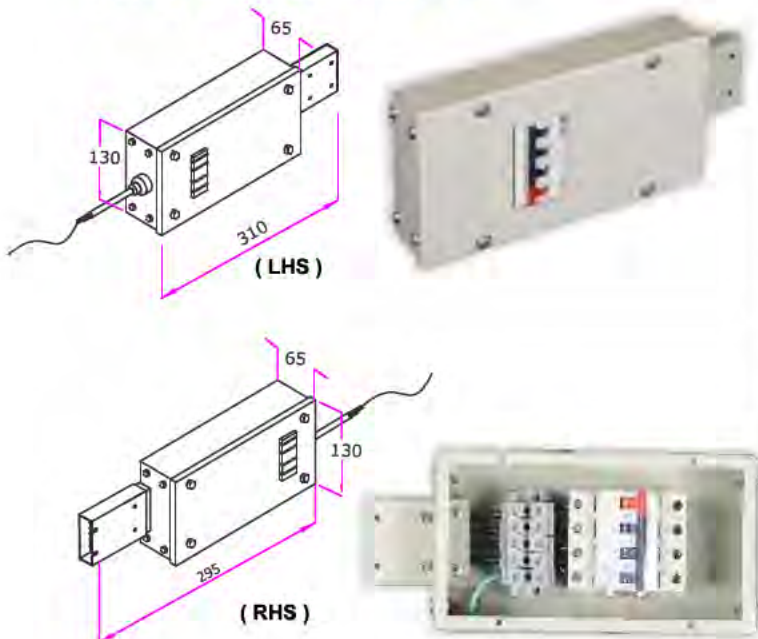
- End feed units are required to feed power to LB trunking system through cable.
- End feed units have terminals for connection of flexible copper cable up to 16sq. mm.
- Bolted Cover
- Detachable gland plate for cable entry.

End Feed Direct



Rating	Order Code	No. of conductors	Type
25A	LBC252BA5EDL	2	LHS
	LBC252BA5EDR	2	RHS
	LBC254BA5EDL	4	LHS
	LBC254BA5EDR	4	RHS
	LBC256BA5EDL	6	LHS
	LBC256BA5EDR	6	RHS
32A	LBC322BA5EDL	2	LHS
	LBC322BA5EDR	2	RHS
	LBC324BA5EDL	4	LHS
	LBC324BA5EDR	4	RHS
	LBC326BA5EDL	6	LHS
	LBC326BA5EDR	6	RHS
40A	LBC402BA5EDL	2	LHS
	LBC402BA5EDR	2	RHS
	LBC404BA5EDL	4	LHS
	LBC404BA5EDR	4	RHS
	LBC406BA5EDL	6	LHS
	LBC406BA5EDR	6	RHS

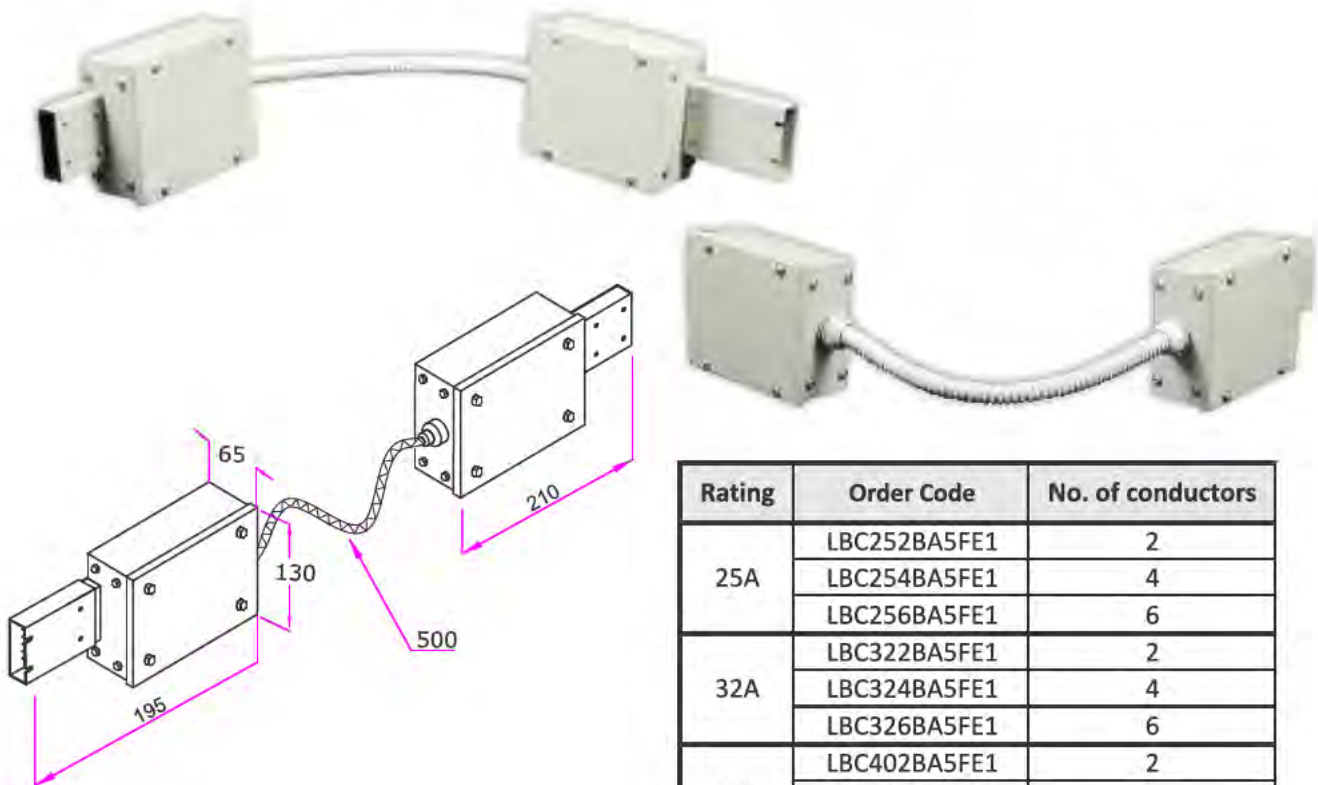
End Feed with MCB



Rating	Order Code	No. of conductors	Type
25A	LBC252BA5EML	2	LHS
	LBC252BA5EMR	2	RHS
	LBC254BA5EML	4	LHS
	LBC254BA5EMR	4	RHS
	LBC256BA5EML	6	LHS
	LBC256BA5EMR	6	RHS
32A	LBC322BA5EML	2	LHS
	LBC322BA5EMR	2	RHS
	LBC324BA5EML	4	LHS
	LBC324BA5EMR	4	RHS
	LBC326BA5EML	6	LHS
	LBC326BA5EMR	6	RHS
40A	LBC402BA5EML	2	LHS
	LBC402BA5EMR	2	RHS
	LBC404BA5EML	4	LHS
	LBC404BA5EMR	4	RHS
	LBC406BA5EML	6	LHS
	LBC406BA5EMR	6	RHS

FLEXIBLE ELBOW

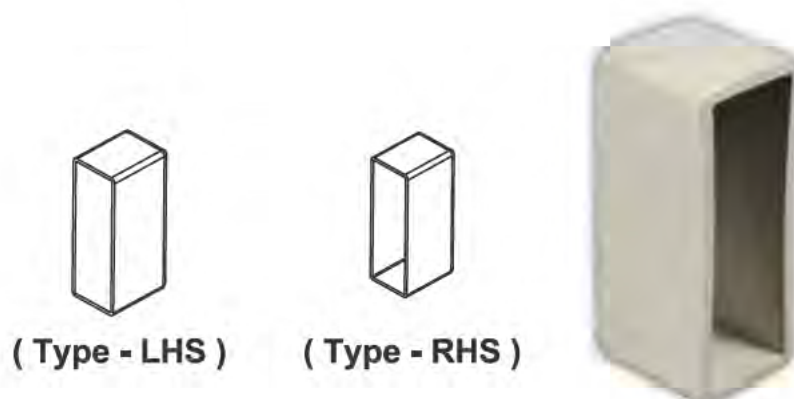
- Flexible elbow used in LB trunking to change or move the run in any direction.
- Standard length of flexible cable is 500mm.



Rating	Order Code	No. of conductors
25A	LBC252BA5FE1	2
	LBC254BA5FE1	4
	LBC256BA5FE1	6
32A	LBC322BA5FE1	2
	LBC324BA5FE1	4
	LBC326BA5FE1	6
40A	LBC402BA5FE1	2
	LBC404BA5FE1	4
	LBC406BA5FE1	6

END COVER

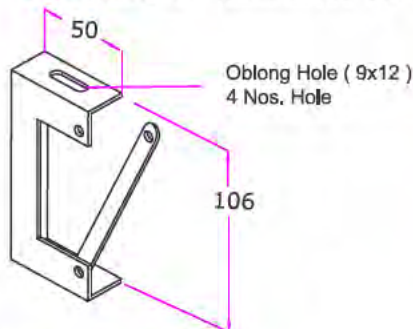
- The EPDM end cover ensures the IP protection at the end of run.



Order Code	Type
LB00000A5ECL	LHS
LB00000A5ECR	RHS

Bracket

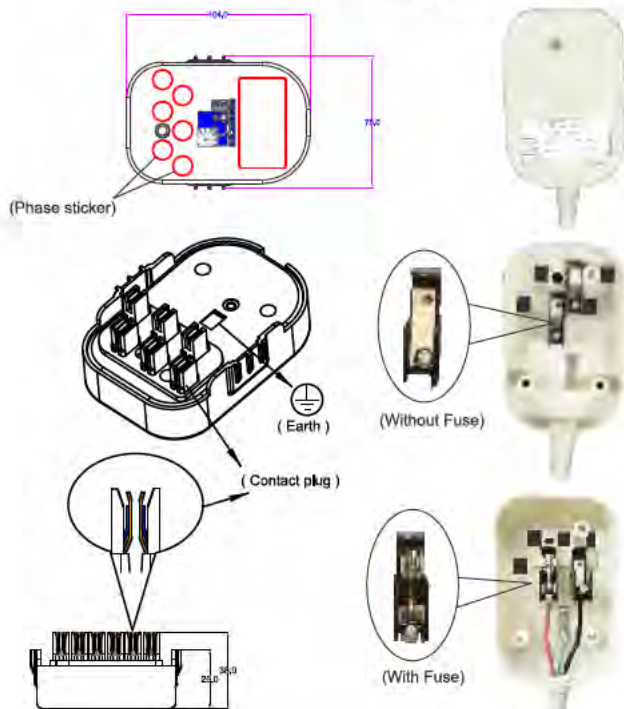
- 1.0 mm GI Powder coated bracket with fit and lock arrangement.
- Permissible load of one bracket is 50kg.
- LB trunking system need to be supported through bracket at every 2-3 mtr depending on luminaries to be hanged on the trunking.



Order Code	Type
LB00000A5HBA	Type A

PLUG IN BOX

- Available in 3 rating 06A,10A,16A
- With fuse and without fuse
- Automatically ensures matching of polarity with main trunking.
- Phase can be selected through repositionable contact plug.
- Earth contact make first and break last
- Housing made of Nylon FR.



Rating	Order Code	No. of conductors	Type
6A	LB0062BP5PBD	2	Direct
	LB0062BP5PBF	2	Fuse
	LB0064BP5PBD	4	Direct
	LB0064BP5PBF	4	Fuse
	LB0066BP5PBD	6	Direct
	LB0066BP5PBF	6	Fuse
10A	LB0102BP5PBD	2	Direct
	LB0102BP5PBF	2	Fuse
	LB0104BP5PBD	4	Direct
	LB0104BP5PBF	4	Fuse
	LB0106BP5PBD	6	Direct
	LB0106BP5PBF	6	Fuse
16A	LB0162BP5PBD	2	Direct
	LB0162BP5PBF	2	Fuse
	LB0164BP5PBD	4	Direct
	LB0164BP5PBF	4	Fuse
	LB0166BP5PBD	6	Direct
	LB0166BP5PBF	6	Fuse

Some major application area of Lighting Trunking :-

- Production and storage spaces in Industries.
- Workshops
- IT Parks & Data centers
- Car Parkings
- Commercial Complexes.
- Logistical storages or warehouses
- Shopping malls
- Airports
- Railways stations
- Exhibition Halls





- a.** Match two section of the LB trunking with same polarity and insert the male side in to the female side.
- b.** Complete the joint assembly by tightening the screw

- a.** Open the End feed Unit by loosen up the screw of top cover & gland plates
- b.** Connect the cables to the MCB/Connector and join End Feed with trunking



- a.** To open the plug in box loosen the screw.
- b.** Connect the cables with the respective phases and close it

- a.** Insert the plug in box into the Plug in point and
- b.** After fixing the plug in box to the trunking properly, tighten the locking screw



Placed the bracket at every 2-3 meters of the trunking depending upon the weight of the luminaries on the trunking

Fix the End cover at the end of the run.





CPRI

Central Power Research Institute
(Member of STL)
SWITCHGEAR TESTING & DEVELOPMENT STATION
GOVINDPURA, BHOPAL-462023, INDIA

Phone: +91(0)755 2586682 Fax: +91(0)755 2587774

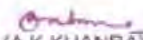
Certificate No. T-0011



TEST REPORT

Sheet 1 of 5

Test Report Number	S2101380	Date : 11.8 DEC 2010
Name & address of the Customer	M/s C & S Electric Ltd., (Bustrunking Division), Plot No. 1A, Sector - 8C, Integrated Industrial Estate (IIE), Sidcul, Haridwar - 249 403 (Uttarakhand)	
Name & address of the Manufacturer	M/s C & S Electric Ltd., (Bustrunking Division), Plot No. 1A, Sector - 8C, Integrated Industrial Estate (IIE), Sidcul, Haridwar - 249 403 (Uttarakhand)	
Particulars of sample tested	Lighting Trunking	
Condition of sample on Receipt	New	
Type	LB Series	
Designation	LBC 32	
Serial number	Nil	
Number of samples tested	One	
Date(s) of Test(s)	16 th December, 2010	
CPRI sample code no.	STDSST210S1858/2	
Particulars of tests conducted	Verification of the short circuit withstand strength	
Test in accordance with Standard/specification	As per cl.8.2.3 of IEC 60439-2, 2005 & IS 8623 (Part-2), 1993	
Sampling plan	Not applicable	
Customer's requirement	Nil	
Deviations if any	Nil	
Name of the Witnessing persons		
Customer's representative	Shri Nadeem Khan (Sr. Manager - R & D), Shri Santosh Kumar Gupta (Dy. Manager-Q A.)	
Other than Customer's representatives	Nil	
Test subcontracted with	None	
Address of the laboratory		
Documents constituting this report (in words)		
Number of sheets	Five	
Number of oscillograms	Two	
Number of graphs	Nil	
Number of photos	One	
Number of Test circuit diagrams	Two	
Number of drawings	Two	


(A.K.KHANRA)
TEST ENGINEER




(ANUPAM AWASTHI)
JOINT DIRECTOR

AUTHORISED SIGNATORIES



Isolated Phase Busducts

(11- 36KV up to 28,000 Amps)

Segregated / Non-Segregated
Phase Busduct

(415 - 33KV up to 5000 Amps.)



Sandwich Busbar Trunking System

(Low - Impedance)

(400 ~ 6600 Amps)

Air Insulated
Busbar Trunking System

(125~2000 Amps.)





C&S Electric Ltd.

Corporate Office :

222, Okhla Industrial Estate, New Delhi - 110 020

Tel. : +91-11-30884912, 30887520-29

Fax: +91-11-2684 8241, 2684 7342

email : yashwant.sarath@cselectric.co.in

abhishek.anand@cselectric.co.in

Website: www.cselectric.co.in

Northern Region

222, Okhla Industrial Estate,
New Delhi - 110 020, India.

Tel. : +91-11-30887520-29

Fax: +91-11-2684 8241, 2684 7342

email : yamuna.sharma@cselectric.co.in

Western Region

#A 301 / 302, 3rd floor, Nav Bharat Estate,
Zakaria Bunder Road, Sweri (West),
Mumbai - 400 015, Maharashtra, India.

Tel. : +91-22- 24114727, 24114728

Fax: +91-22-241137858, 24114704

email : venkatesh.s1@cselectric.co.in

Southern Region

#N607, North Block, Rear Wing,
Manipal Center, 47, Dickenson Road,
Bangalore -560 042, Karnataka, India.

Tel. : +91-80- 30570359,340

Fax: + 91-80- 25584839

email : roopkumar.k@cselectric.co.in

Eastern Region

24, Park Street, Development House,
4th Floor, Kolkata-700016

Tel. : +91-033-40011417

Fax: +91-033-22275849/40011417

email : anoop.krishna@cselectric.co.in



C&S Electric Ltd.

Works : Plot No. 1A, Sector 8C, Integrated Industrial Estate (SIDCUI)
Ranipur, Haridwar, Uttarakhand - 249403 Tel.: 01334-239212, 01334-239217

Website: www.cselectric.co.in