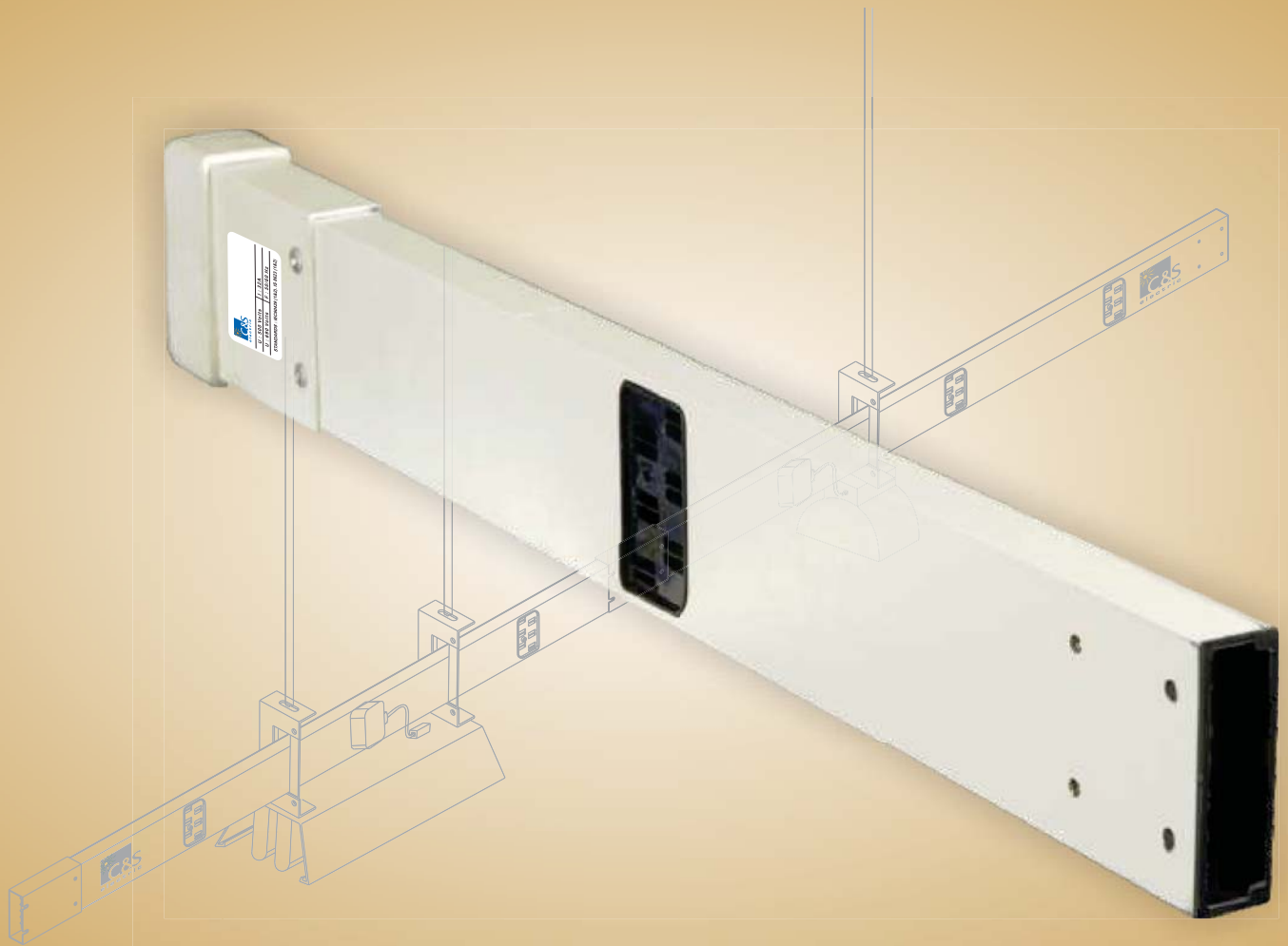
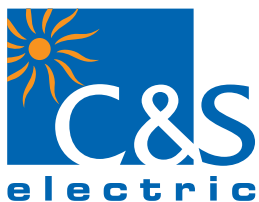


We touch your **electricity** everyday!



## Busbar Trunking System LB-Lighting Trunking (25 to 40Amps)



metabar

## Vision & Mission



## 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 Facilities at Haridwar



## Major Manufacturing Facilities

CNC TURRET PUNCH PRESS



BUSBAR CUTTING MACHINE



POWDER COATING PLANT



BUSBAR SLEEVING MACHINE

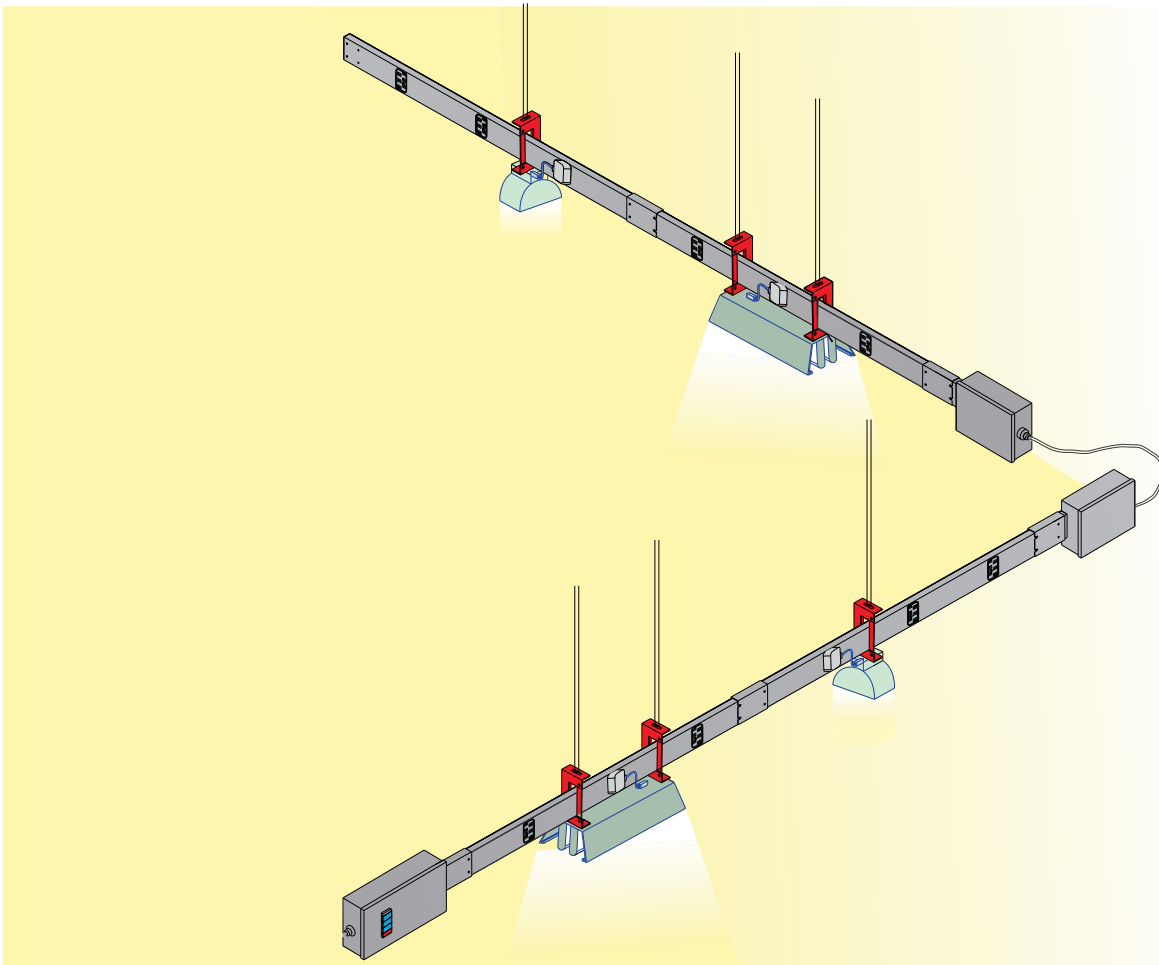


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<b>Major Manufacturing Facilities</b>	.....	(iii)
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<b>Specifications</b>	.....	(2)
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## Lighting Trunking System (LB)

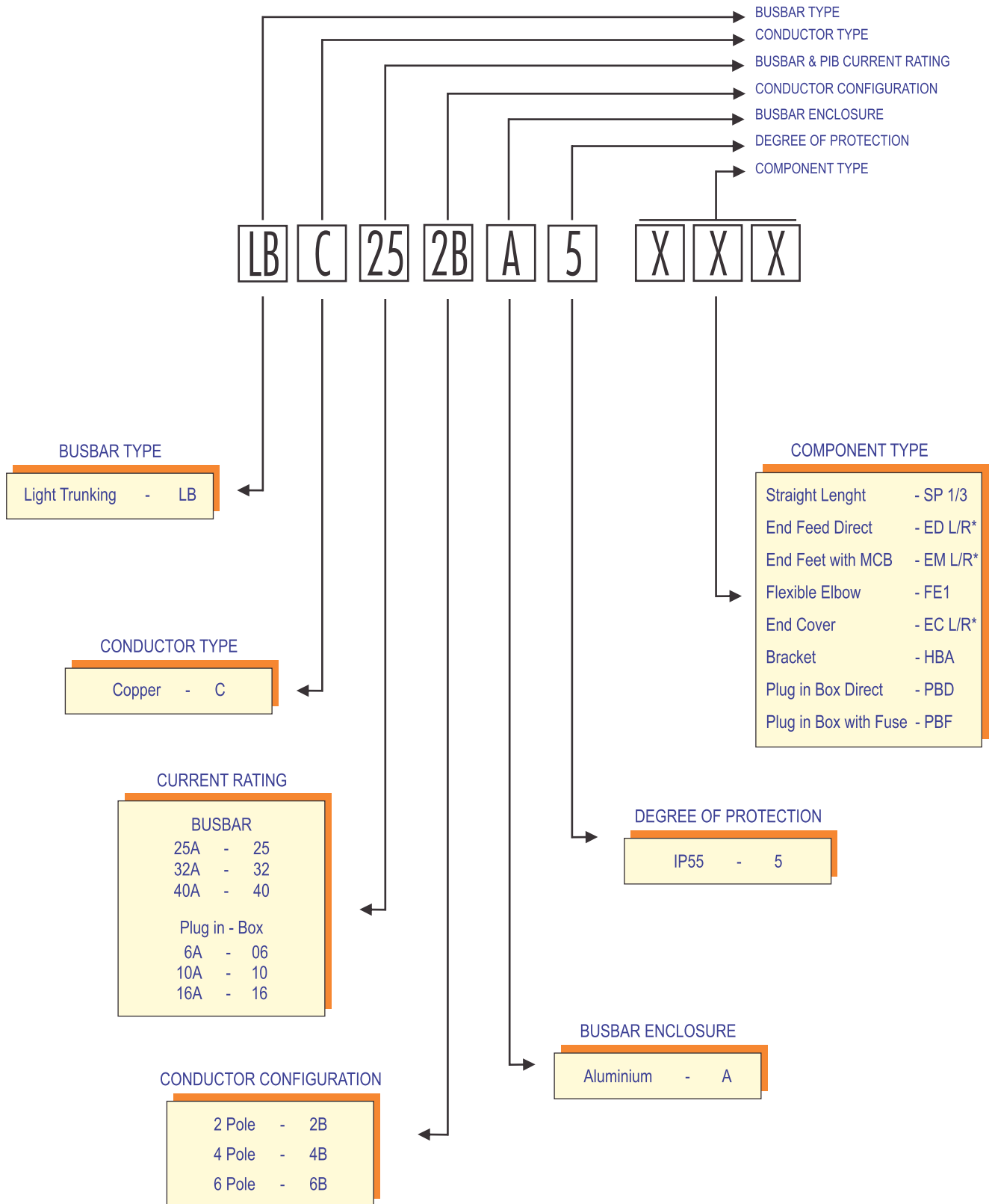
- The Lighting Trunking (LB) system is the ideal solution for the lighting and low power distribution mainly for industrial and commercial applications
- LB systems simplify the accurate and uniform installation of continuous lighting layouts. Their high degree of flexibility, low fire load and uniform 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.



## Specifications

- **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<sup>2</sup> )
- **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

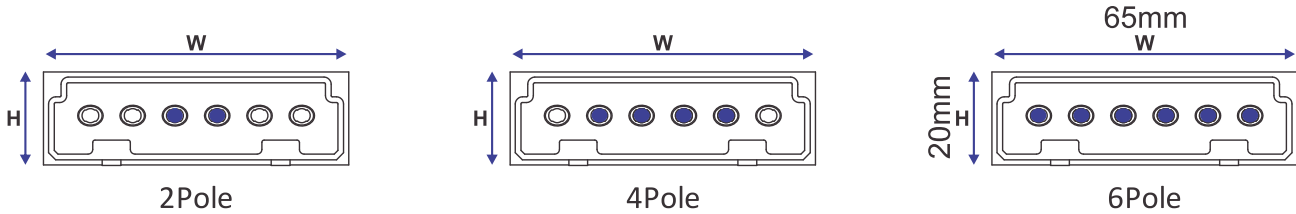
# Order Code System



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



# Technical Data



## 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 <sup>2</sup>	2.5 mm <sup>2</sup>	4.0 mm <sup>2</sup>	6.0 mm <sup>2</sup>
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
<b>Approximate Weight of Bustrunking</b>				
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
<b>Electrical Characteristics for 50 Hz</b>				
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
<b>Electrical Characteristics for 60 Hz</b>				
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

## LB Overview



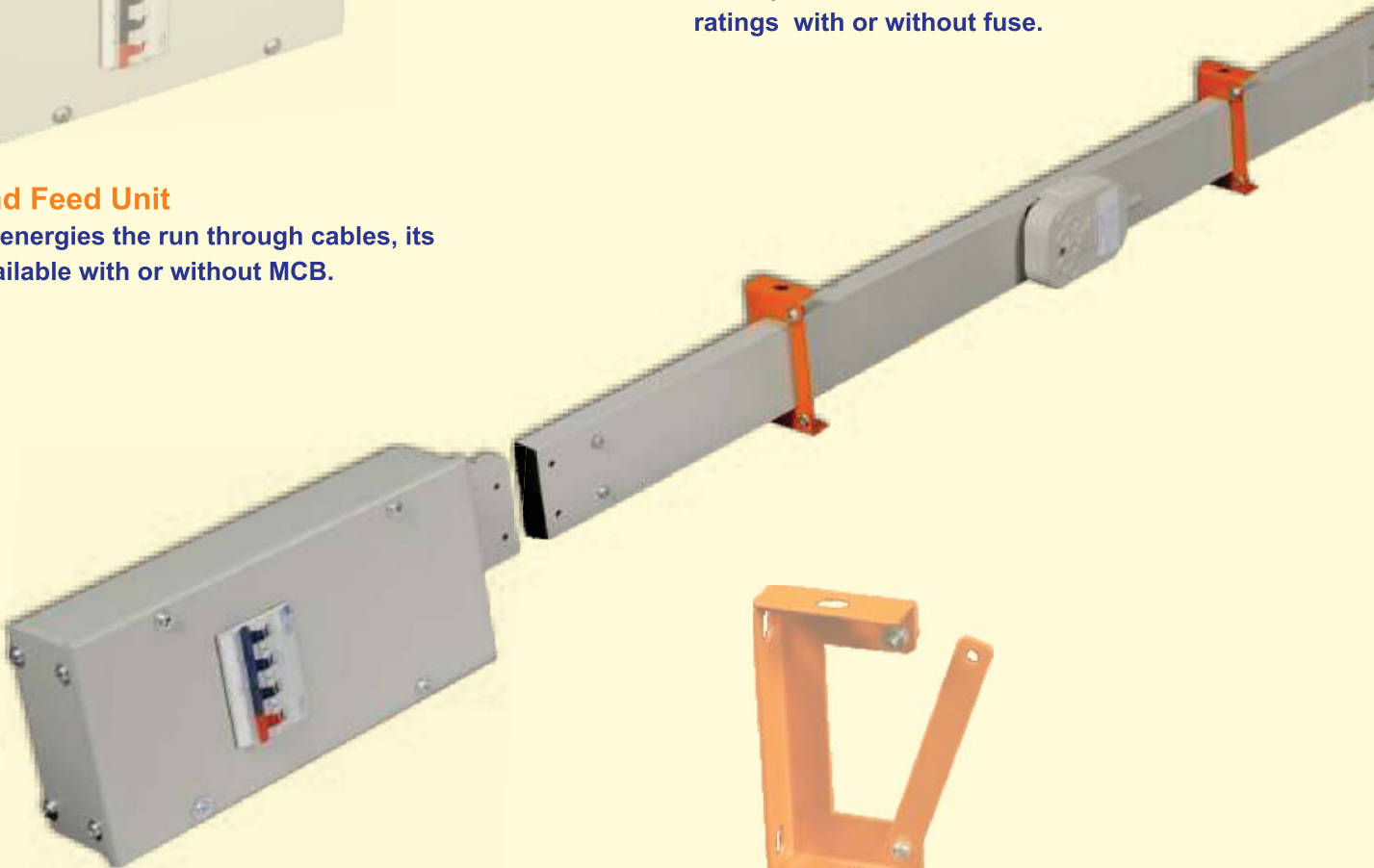
### End Feed Unit

To energize the run through cables, its available with or without MCB.



### Plug In Box

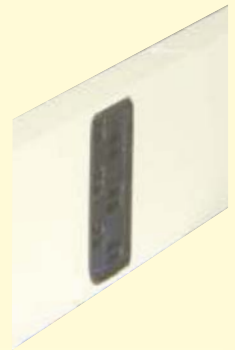
To draw the power from System up to 16 Amps, available in 6A, 10A, 16A ratings with or without fuse.



### Bracket

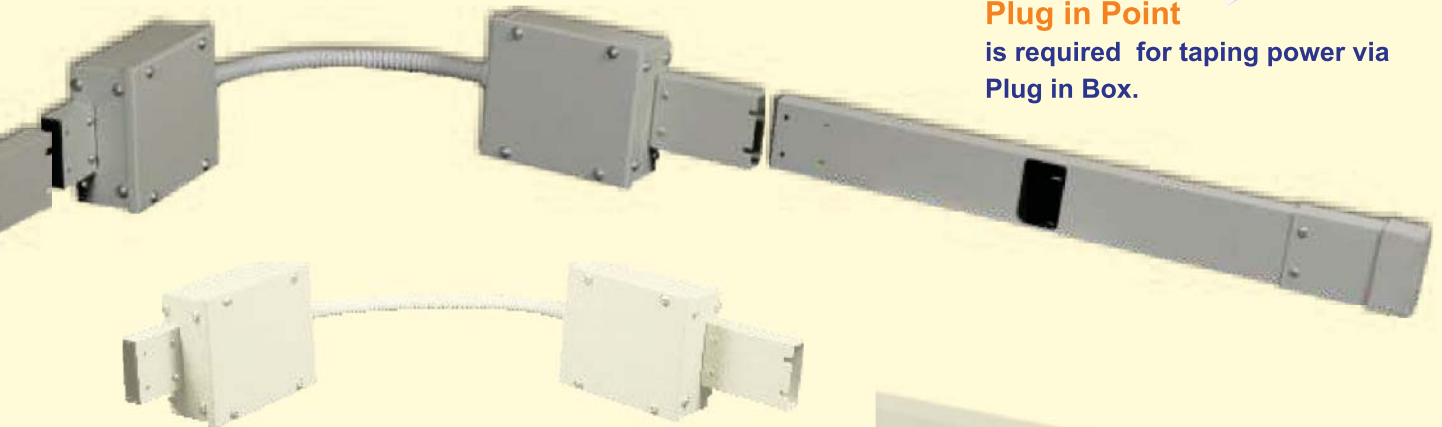
To support the run & luminaries in the system by surface mounting or overhead suspension.

The LB line includes end feed units, straight lengths, flexible elbows, and Plug-in



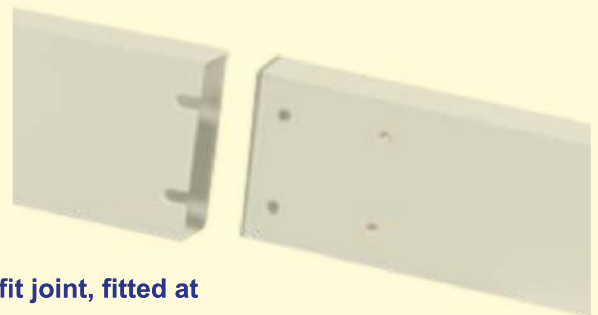
**Plug in Point**

is required for taping power via Plug in Box.



**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.



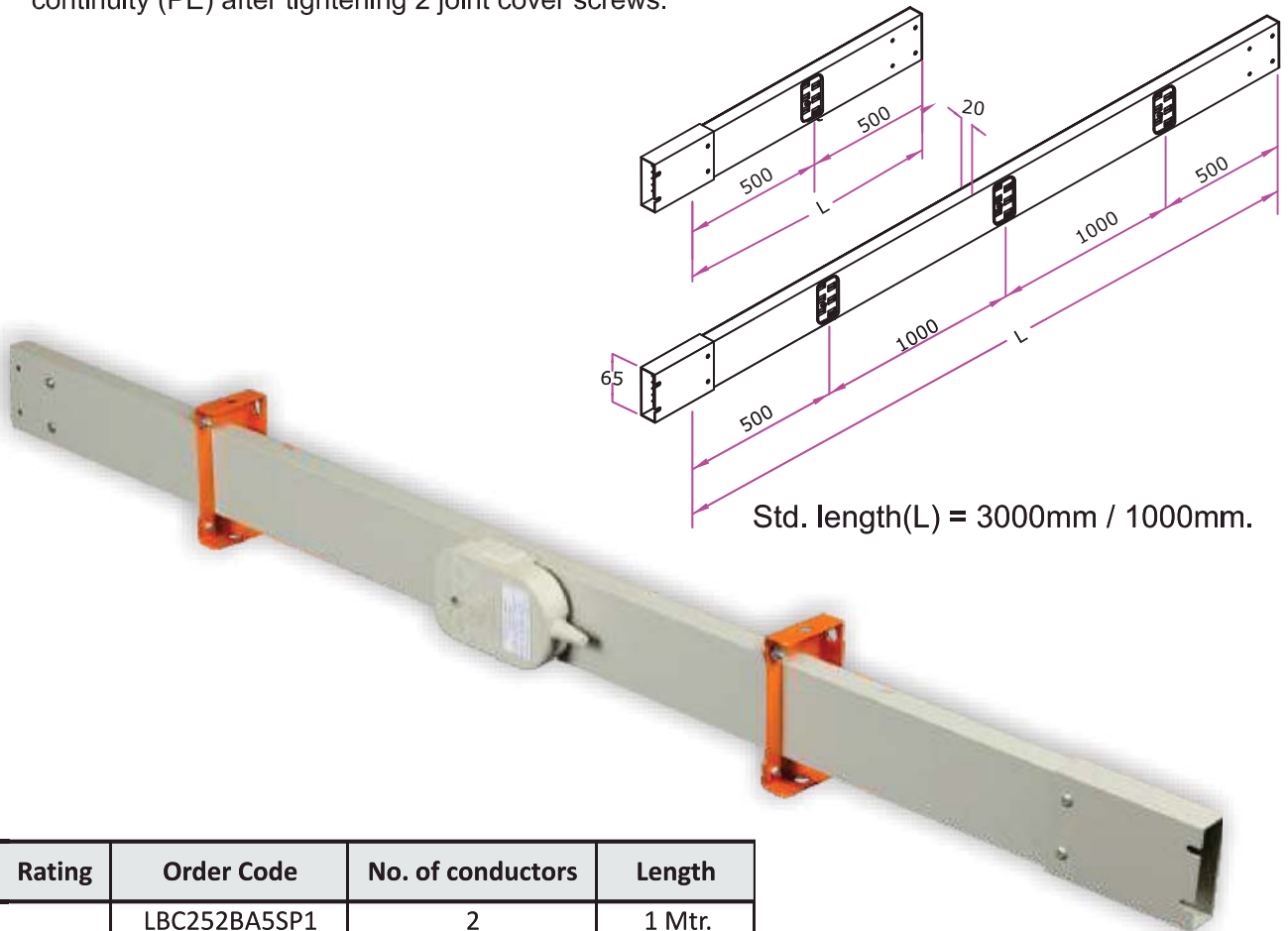
**End Cover**

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

point and plug in Box with or without fuses, bracket for support run, and End Cover.

## Straight Length

- 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.

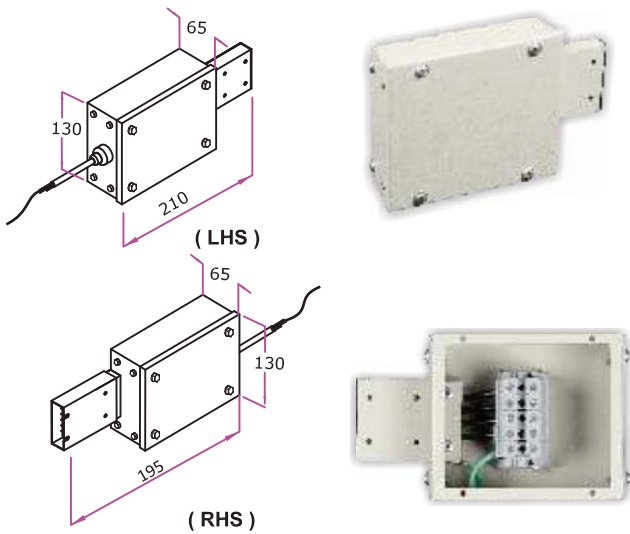


Rating	Order Code	No. of conductors	Length
25A	LBC252BA5SP1	2	1 Mtr.
	LBC252BA5SP3	2	3 Mtr.
	LBC254BA5SP1	4	1 Mtr.
	LBC254BA5SP3	4	3 Mtr.
	LBC256BA5SP1	6	1 Mtr.
	LBC256BA5SP3	6	3 Mtr.
32A	LBC322BA5SP1	2	1 Mtr.
	LBC322BA5SP3	2	3 Mtr.
	LBC324BA5SP1	4	1 Mtr.
	LBC324BA5SP3	4	3 Mtr.
	LBC326BA5SP1	6	1 Mtr.
	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 Unit

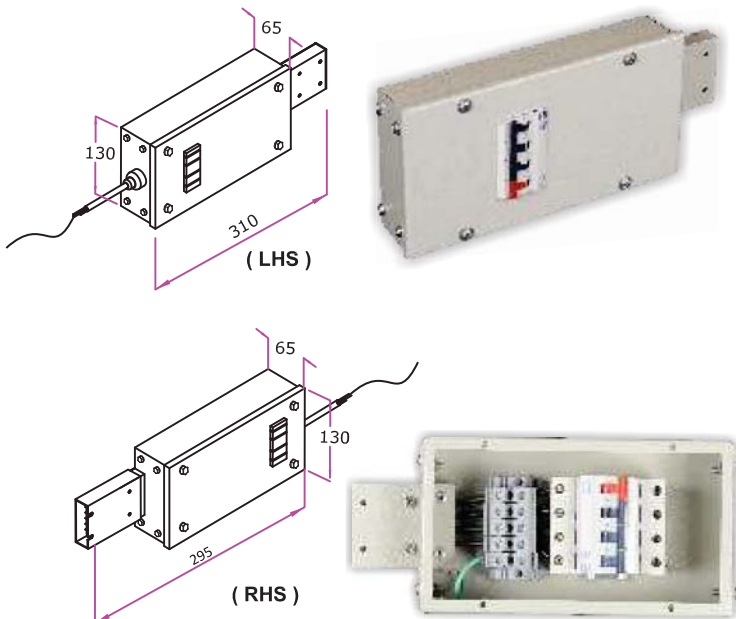
- End feed units are required to feed power to LB trunking system through cable.
- End feed units have terminals for connection of flexible copper cable up to 16sq. mm.
- Bolted Cover
- Detachable gland plate for cable entry.

### 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

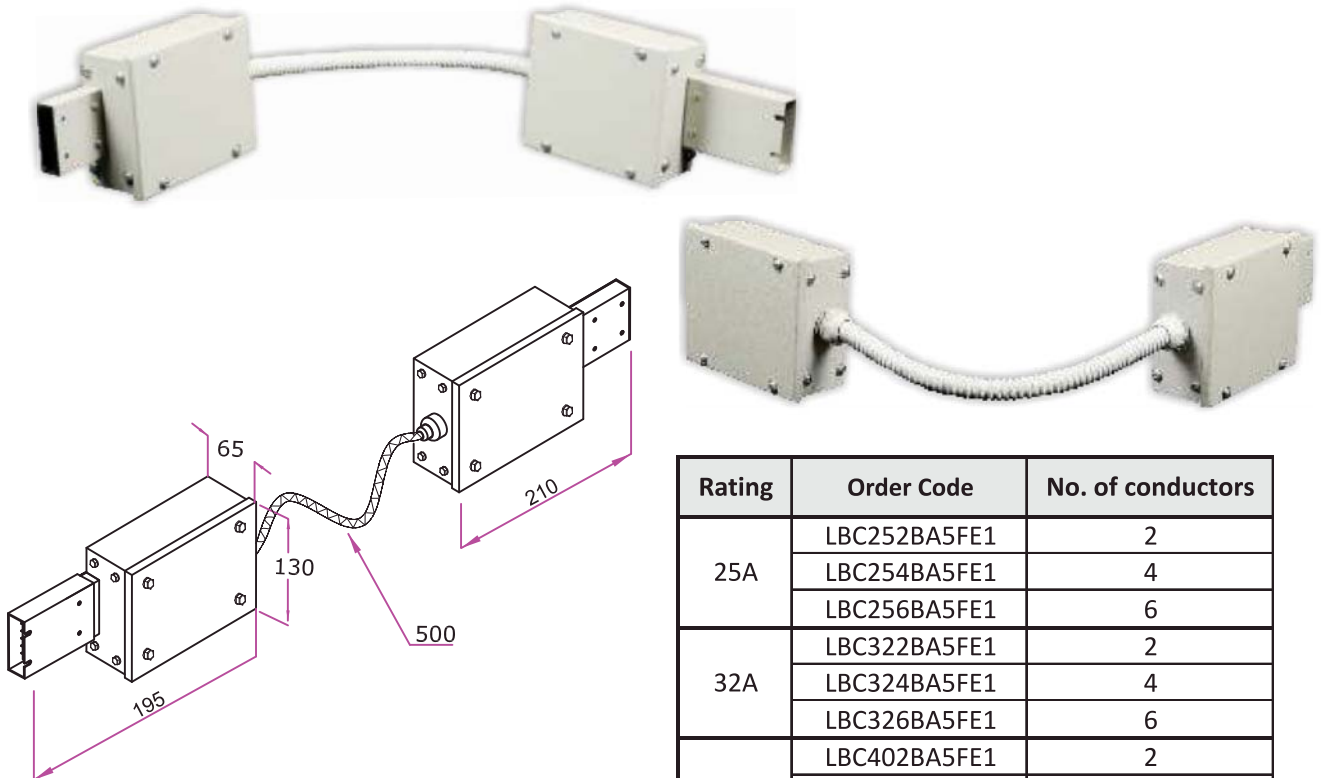
### End Feed with MCB



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 & End Cover

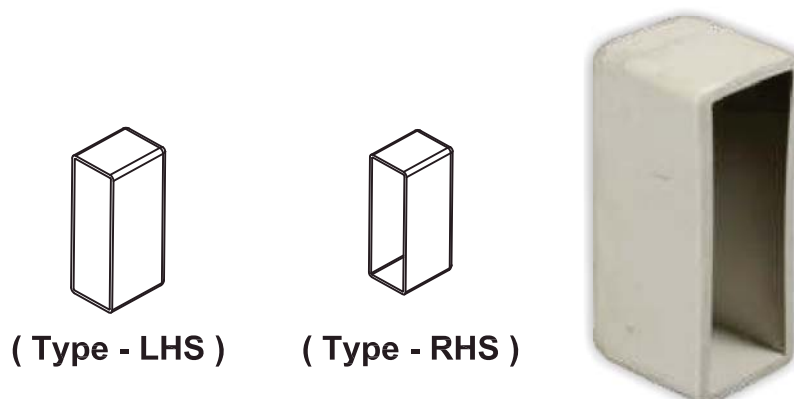
- Flexible elbow used in LB trunking to change or move the run in any direction.
- Standard length of flexible cable is 500mm.



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.

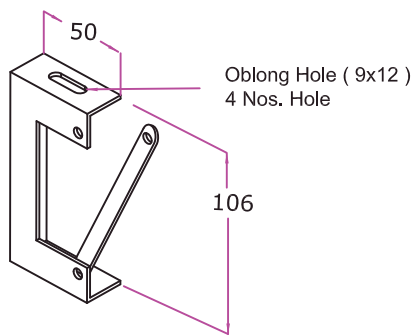


Order Code	Type
LB00000A5ECL	LHS
LB00000A5ECR	RHS

# Bracket & Plug in Box

## Bracket

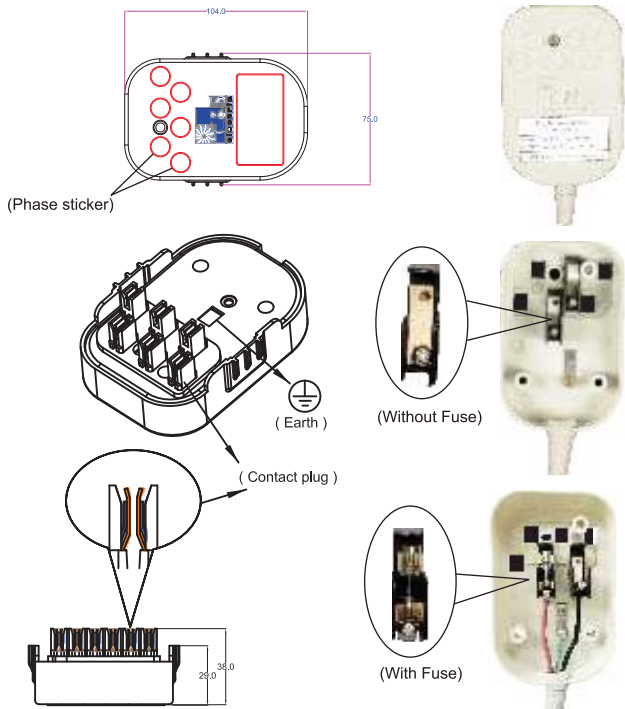
- 1.0 mm GI Powder coated bracket with fit and lock arrangement.
- Permissible load of one bracket is 50kg.
- LB trunking system need to be supported through bracket at every 2-3 mtr depending on luminaries to be hanged on the trunking.



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

## Application

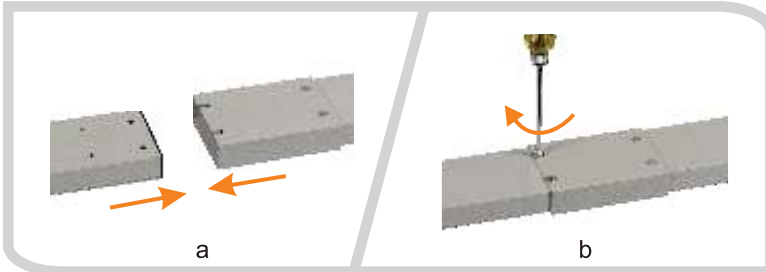
### Some major application area of Lighting Trunking :-

- 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
- Tunnels



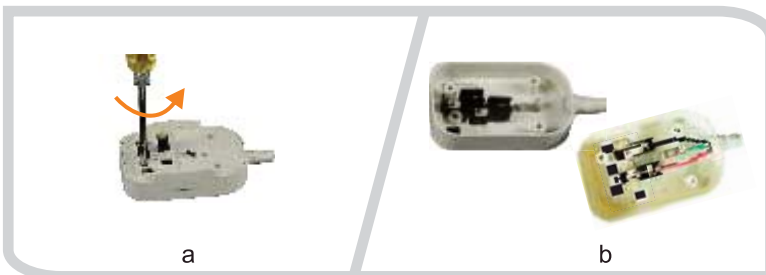
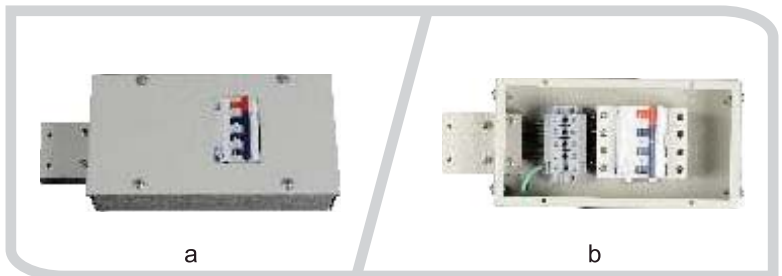


# Installation Instructions



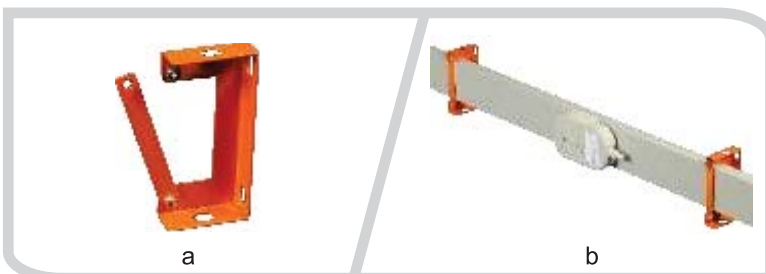
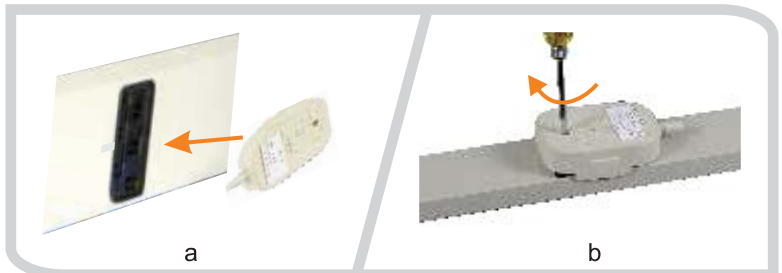
- a.** Match two section of the LB trunking with same polarity and insert the male side in to the female side.
- b.** Complete the joint assembly by tightening the screw

- 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



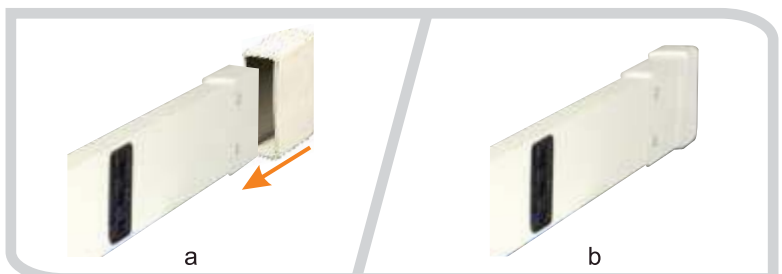
- a.** To open the plug in box loosen the screw.
- b.** Connect the cables with the respective phases and close it

- 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



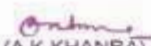




Placed the bracket at every 2-3 meters of the trunking depending upon the weight of the luminaries on the trunking

Fix the End cover at the end of the run.



# Certificate

 <b>CPRI</b>	<b>Central Power Research Institute</b> <b>(Member of STL)</b> SWITCHGEAR TESTING & DEVELOPMENT STATION GOVINDPURA, BHOPAL-462023, INDIA Phone: +91(0)755 2586682 Fax: +91(0)755 2587774	 Certificate No. T-0011
<b>TEST REPORT</b>		
		Sheet 1 of 5
<b>Test Report Number</b>	S2101380	<b>Date:</b> 118 JAN 2011
<b>Name &amp; address of the Customer</b>	M/s C & S Electric Ltd., (Bustrunking Division), Plot No. 1A, Sector - 8C, Integrated Industrial Estate (IIE), Sidcul, Haridwar - 249 403 (Uttarakhand)	
<b>Name &amp; address of the Manufacturer</b>	M/s C & S Electric Ltd., (Bustrunking Division), Plot No. 1A, Sector - 8C, Integrated Industrial Estate (IIE), Sidcul, Haridwar - 249 403 (Uttarakhand)	
<b>Particulars of sample tested</b>	Lighting Trunking	
<b>Condition of sample on Receipt</b>	New	
<b>Type</b>	LB Series	
<b>Designation</b>	LBC 32	
<b>Serial number</b>	Nil	
<b>Number of samples tested</b>	One	
<b>Date(s) of Test(s)</b>	16 <sup>th</sup> December, 2010	
<b>CPRI sample code no.</b>	STDSST210S1858/2	
<b>Particulars of tests conducted</b>	Verification of the short circuit withstand strength	
<b>Test in accordance with Standard/specification</b>	As per cl.8.2.3 of IEC : 60439-2, 2005 & IS:8623 (Part-2), 1993	
<b>Sampling plan</b>	Not applicable	
<b>Customer's requirement</b>	Nil	
<b>Deviations if any</b>	Nil	
<b>Name of the Witnessing persons</b>		
<b>Customer's representative</b>	Shri Nadeem Khan (Sr. Manager - R & D), Shri Santosh Kumar Gupta (Dy. Manager-Q.A.)	
<b>Other than Customer's representatives</b>	Nil	
<b>Test subcontracted with</b>	None	
<b>Address of the laboratory</b>		
<b>Documents constituting this report (in words)</b>		
<b>Number of sheets</b>	Five	
<b>Number of oscillograms</b>	Two	
<b>Number of graphs</b>	Nil	
<b>Number of photos</b>	One	
<b>Number of Test circuit diagrams</b>	Two	
<b>Number of drawings</b>	Two	
 (A.K.KHANRA) TEST ENGINEER		 (ANUPAM AWASTHI) JOINT DIRECTOR
AUTHORISED SIGNATORIES		

## isobar

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



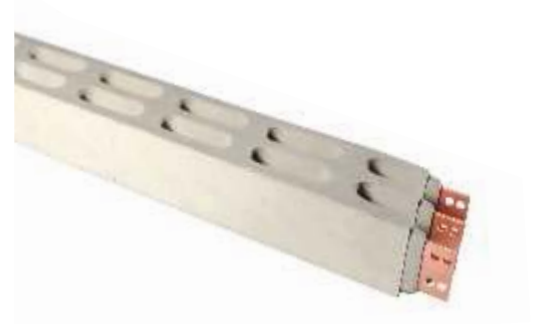
Segregated / Non-Segregated  
Phase Busduct  
(415 - 33KV up to 5000 Amps.)

## betobar

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Low Voltage



Medium Voltage

## metabar

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Sandwich Busbar Trunking System  
(Low- Impedance)  
(400~6600 Amps)



Air Insulated  
Busbar Trunking System  
(125~2000 Amps.)



Lighting Trunking System  
(25-63A)



● C&S + Ecom Installations

\*This Map is only for pictorial representation and to be scaled



## GLOBAL SPECIALIST FOR POWER BUSBARS

### India

#### Corporate Office :

222, Okhla Industrial Estate Phase - III,  
New Delhi - 110 020  
Tel.: +91-11-30884912, 30887520-29  
Fax: +91-11-26848241, 26847342  
email : info@cselectric.co.in

#### Regional Office:

##### Northern Region / Export

222, Okhla Industrial Estate,  
New Delhi - 110 020, India.  
Tel. : +91-11-30887520-29  
Fax : +91-11-2684 8241, 2684 7342  
email : info@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 : info@cselectric.co.in

##### Eastern Region

24, Park Street, Development House,  
4th Floor, Kolkata-700016  
Tel. : +91-033-40011417  
Fax : +91-033-22275849/40011417  
email : info@cselectric.co.in

##### Western Region

#A 301 / 302, 3<sup>rd</sup> 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 : info@cselectric.co.in

#### Works:

##### Noida

B1, Site IV, Surajpur, Industrial Area,  
Kasna Road, Greater Noida

##### Haridwar

Plot No. 1C, Sector 8C,  
Integrated Industrial Estate (SIDCUL)  
Ranipur, Haridwar, Uttarakhand - 249403

##### Haridwar

Plot No. 1A, Sector 8C,  
Integrated Industrial Estate (SIDCUL)  
Ranipur, Haridwar, Uttarakhand - 249403

### Europe

#### Eta-com B NV

Scheldeweg 4,  
2850, BOOM,  
Belgium  
Tel.: +32-3-880.64.00  
Fax: +32-3-844.42.50  
email: busduct@etacom.be

#### Eta-com BV

Zwarte Zee 2-6,  
3144, DE MAASSLUIS,  
The Netherlands  
Tel.: +31-1059-16422  
Fax: +31-1059-20673  
email: info@etacom.nl

#### Eta-com UK Preedcrete Ltd.

Unit 19/20, Horsham Court,  
City Business Centre, 6, Brighton Road,  
HORSHAM, West Sussex, RH13 5BB,  
United Kingdom  
Tel : +44-1-403265767,  
Fax : +44-1-403254131,  
email : busduct@eta-com.co.uk

www.cselectric.co.in  
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