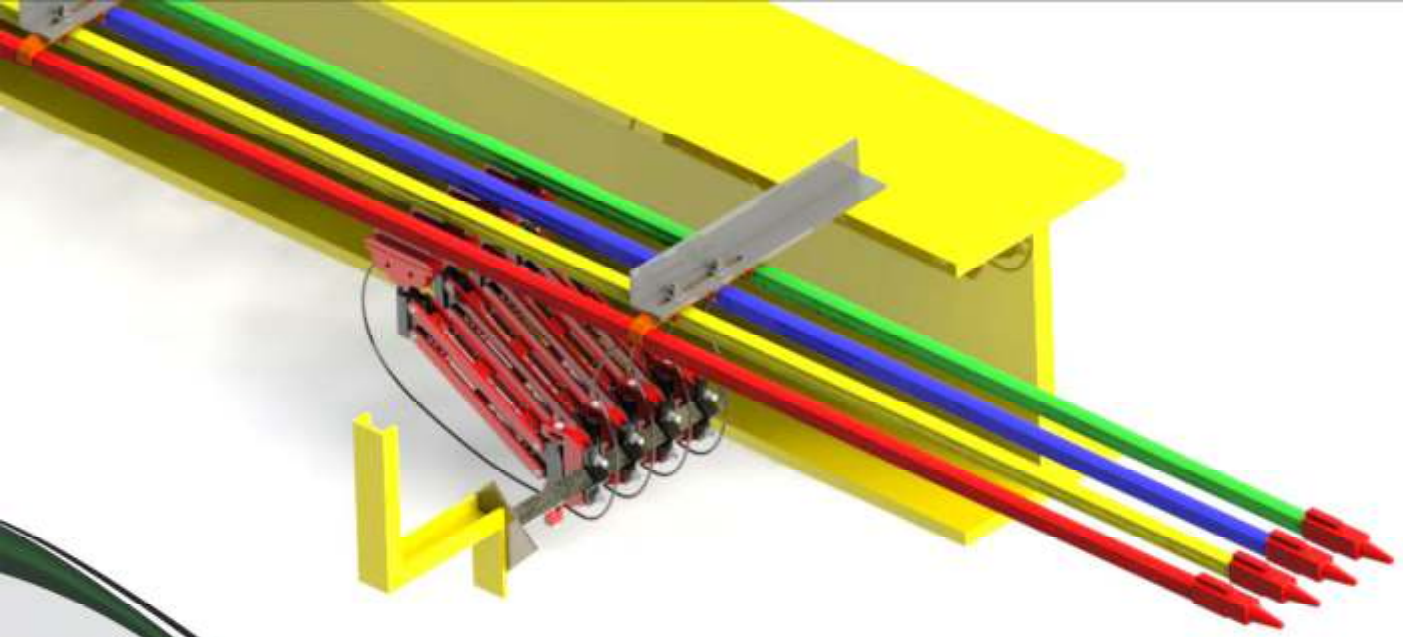
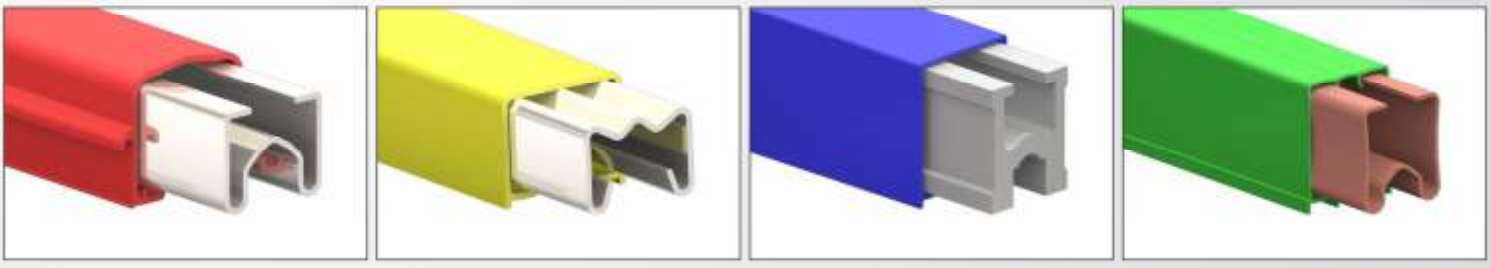


MANUFACTURERS OF

- PVC Insulated busbar (DSL) system
- C - Rail(Festoon) system
- Current collector for DSL
- Cable Trolley
- I-Beam cable carrier

nbm industries

An ISO 9001:2008 certified company



nbm industries

PVC INSULATED BUSBAR SYSTEM

NBM Industries is very well equipped manufacturers of PVC Insulated Busbar System (DSL), C-rail (Festooning) System & Forming Products in Rajkot based established in 2005, and is engaged in the development and production of Vertical mounting & Horizontal mounting PVC Insulated Busbar System for finger safe, Festooning System & Forming Products which are used for cranes, mono rails & moving machineries. Most of our Esteemed Customers are Original Users. With the available facilities, NBM Industries can manufacture the PVC Insulated Busbar (DSL) System and Forming Products ranging from 60 to 125 Amp. In Galvanized Steel, 200 to 1200 Amp in Aluminum & 135 to 1200 Amp. In Copper model under stringent quality control at every stage.

NBM Industries possible to support current production technology and improve manufacturing processes which are critical to meet the demands of tomorrow.

Presently, we are engaged in the manufacturing, development and production of PVC Insulated Busbar System, C-rail Festooning System & Forming Products as per the customer's Requirements and specifications. We also accept orders for products of special Length and designs of Customer's requirement.

Our purpose is to ensure total customer satisfaction through development, manufacturing and delivery of world class products which are reliable and technologically advanced at competitive prices. we will achieve this by cost effective operations through a team of relevant field experienced Partner, trained, dedicated and skilled team of employees and all suppliers who are as good as part of our organization.

BHEL · Reliance Industries Limited · ADANI · TATA · JINDAL STAINLESS · JSW · Surya Global · ADITYA BIRLA NUVO · ESSAR · WELSPUN Dare to Commit · AMW BUILT TO WIN · JAYPEE GROUP · bilt · The Sirpur Paper Mills Ltd. · PARRYS

Our expertise in this domain has enabled us to garner a rich client base for ourselves across the country. With the help of our consistent quality delivery of Busbar System and C-Rail Festoon System, we have become one of the preferred choices amongst our valued clients.

Following are some of the key factors which are responsible for our success in this competitive industry:

why DSL?

- Advanced technology.
- Cost Effective
- Easy to Installation
- Low maintenance
- Finger safe
- Individual Phase
- Multiple crane move on one bay length
- Curved path available
- No breakdown
- Individual Accessories parts available

why C-Rail?

- Hard-wearing, corrosion-resistant section rails with high rigidity and low dead weight
- Trolleys with plastic or steel wheels mounted on anti-friction bearings, lubricated for life
- Suspension fittings for all types of ceiling and roof structure
- Low-noise operation
- Load capacities of up to 100 kg per cable trolley.
- Particularly suitable for do-it-yourself assembly of small crane systems, monorails and festoon-cable supply lines on cranes, automatic loading machines and machine tools.

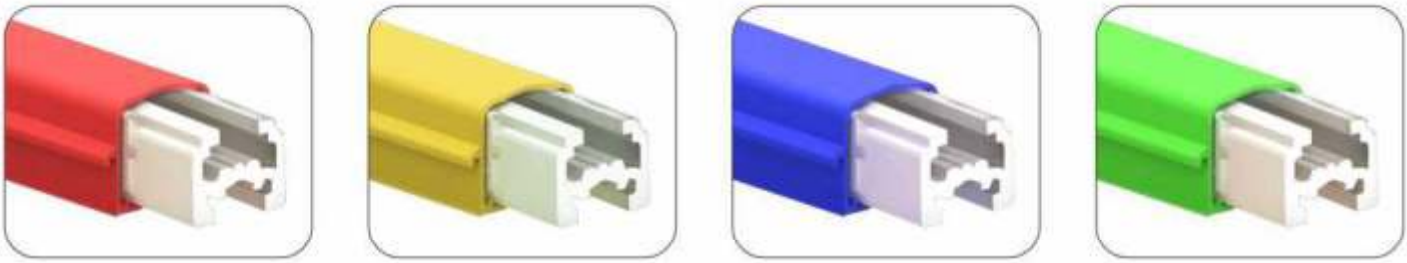
nbm industries
PVC INSULATED BUSBAR SYSTEM

Down Shop Lead System (DSL) Conductor bar – track are super finished and cross section is maintained to achieve required ampere. The material for track is copper, Aluminum & Galvanize. Conductors shall be accurately aligned to ensure positive electrical contact between the collector and the conductor. Separate conductors shall be provided for each phase. Insulation cover shall be rigid PVC, self extinguishing, with a heat distortion point of 70°c at 260psi. These conductors are compact, insulated & touch proof. Do not expose live parts. Standard length 4.5 Mtr.

Bolt Jointed Type Busbar

NBM-1

NBM-2



Galvanize: 80 to 125 Amp. | Copper : 135 to 315 Amp. | Aluminum : 200 to 350 Amp.

Accessories

Hanger Clamp

Snap fit type hanger clamp with hardware, required per meter. The conductors bars are clipped in to the hanger clamp. We offer Single Pole, 3 Pole & 4 Pole Hanger clamps.

Anchor Clamp

Fall proof protection to the busbar. Required at each 50 Mtr.

Conductor Joint

Bolted type jointer provide at each conductor joints. We offer four bolted type jointer with 80mm Length to perfect joint of conductors.

Conductor Joint Cover

Conductor Joints are covered with joint cover, snap fitting with locking arrangement. Required on each conductor Joints.

End Power Feed

This accessories for incoming power and is a fully insulated simple clamp type is easily installed at the end of the busbar.

Center Power Feed

This accessories for incoming power easily installed anywhere in the system for incoming power to the conductor rails joint. One or more power feed points are possible to reduce voltage drop.

End Cap

Used to close the end of the conductors, to cover exposed conductor and avoid live contact.

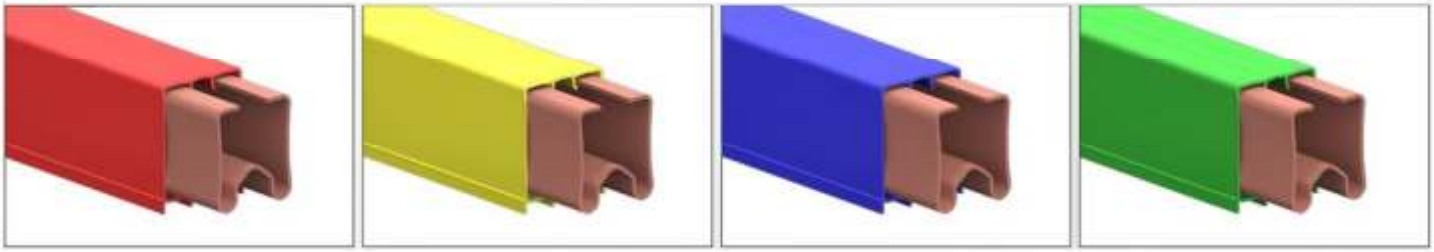
Expansion Joint

In order to accommodate the effects of temperature change. It is necessary to provide expansion joints. This accessories are required in a single bay length area is more then 150 Mtr. And above. Maximum gap of the expansion joint is 50mm.

nbm industries
PVC INSULATED BUSBAR SYSTEM

Down Shop Lead System (DSL) Conductor bar – track are super finished and cross section is maintained to achieve required ampere. The material for track is copper, Aluminum & Galvanize. Conductors shall be accurately aligned to ensure positive electrical contact between the collector and the conductor. Separate conductors shall be provided for each phase. Insulation cover shall be rigid PVC, self extinguishing, with a heat distortion point of 70°c at 260psi.
These conductors are compact, insulated & touch proof. Do not expose live parts. Standard length 4.5 Mtr.

Bolt Jointed Type Busbar NBM - 4



Galvanize: 80 to 125 Amp. | Copper : 135 to 1200 Amp | Aluminium : 200 to 1200 Amp.

Accessories

Hanger Clamp

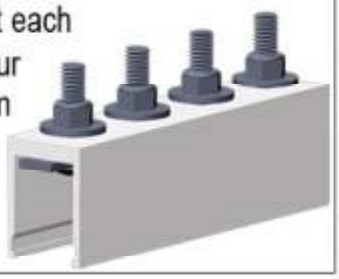
Snap fit type hanger clamp with hardware, required per meter. The conductors bars are clipped in to the hanger clamp. We offer single pole hanger clamps.

Anchor Clamp

Fall proof protection to the busbar.
Required at each 50 Mtr.

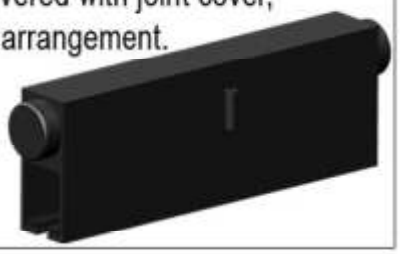
Conductor Joint

Bolted type jointer provide at each conductor joints. We offer four bolted type jointer with 80mm Length to perfect joint of conductors.



Conductor Joint Cover

Conductor Joints are covered with joint cover, snap fitting with locking arrangement.
Required on each conductor Joints.

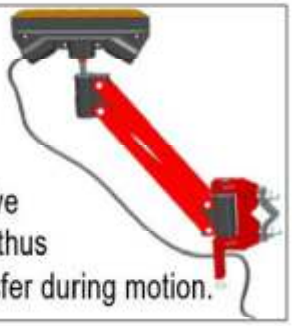


End Cap

Used to close the end of the conductors, to cover exposed conductor and avoid live contact.

CURRENT COLLECTOR

Heavy duty double arm current collector provides multi axis degree of flexible movement, spring loaded, unit provide positive pressure contact with conductors thus ensure un-interrupted power transfer during motion.



Towing Arm

The Towing arm can carry maximum 4 double current collectors.
For higher loads please contact us.

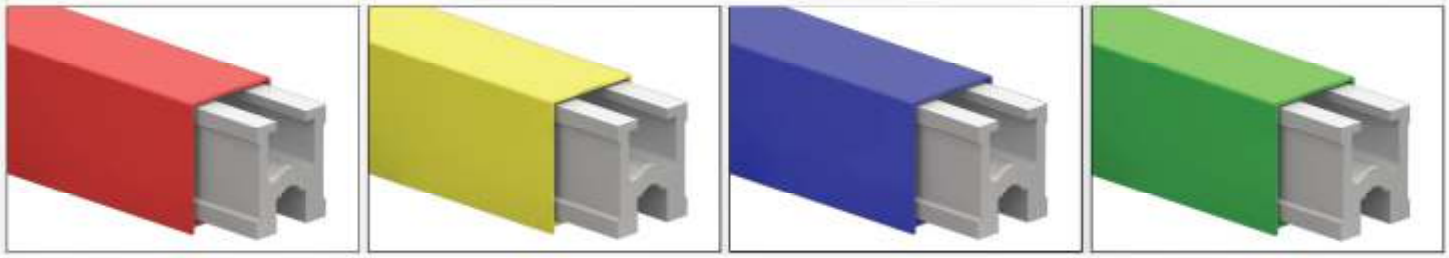
Busbar Mounting Bracket

MS Angle with slotted hole for mounting of hanger clamp.
Size : 50 x 50 x 6mm x 500mm.

nbm industries
PVC INSULATED BUSBAR SYSTEM

Down Shop Lead System (DSL) Conductor bar – track are super finished and cross section is maintained to achieve required ampere. The material for track is copper, Aluminum & Galvanize. Conductors shall be accurately aligned to ensure positive electrical contact between the collector and the conductor. Separate conductors shall be provided for each phase. Insulation cover shall be rigid PVC, self extinguishing, with a heat distortion point of 70°c at 260psi. These conductors are compact, insulated & touch proof. Do not expose live parts. Standard length 4.5 Mtr.

Bolt Jointed Type Busbar [NBM-5]



| Aluminium : 200 to 1200 Amp. |

Accessories

Hanger Clamp

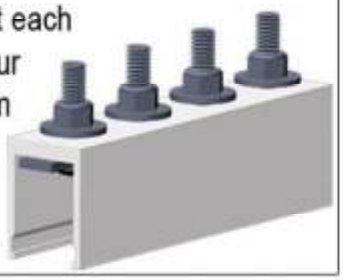
Snap fit type hanger clamp with hardware, required per meter. The conductors bars are clipped in to the hanger clamp. We offer single pole hanger clamps.

Anchor Clamp

Fall proof protection to the busbar. Required at each 50 Mtr.

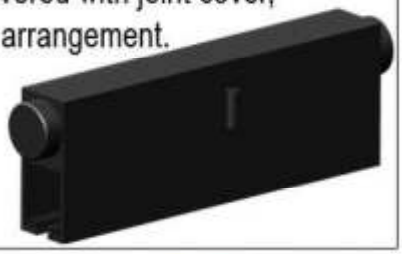
Conductor Joint

Bolted type jointer provide at each conductor joints. We offer four bolted type jointer with 80mm Length to perfect joint of conductors.



Conductor Joint Cover

Conductor Joints are covered with joint cover, snap fitting with locking arrangement. Required on each conductor Joints.



End Cap

Used to close the end of the conductors, to cover exposed conductor and avoid live contact.

CURRENT COLLECTOR

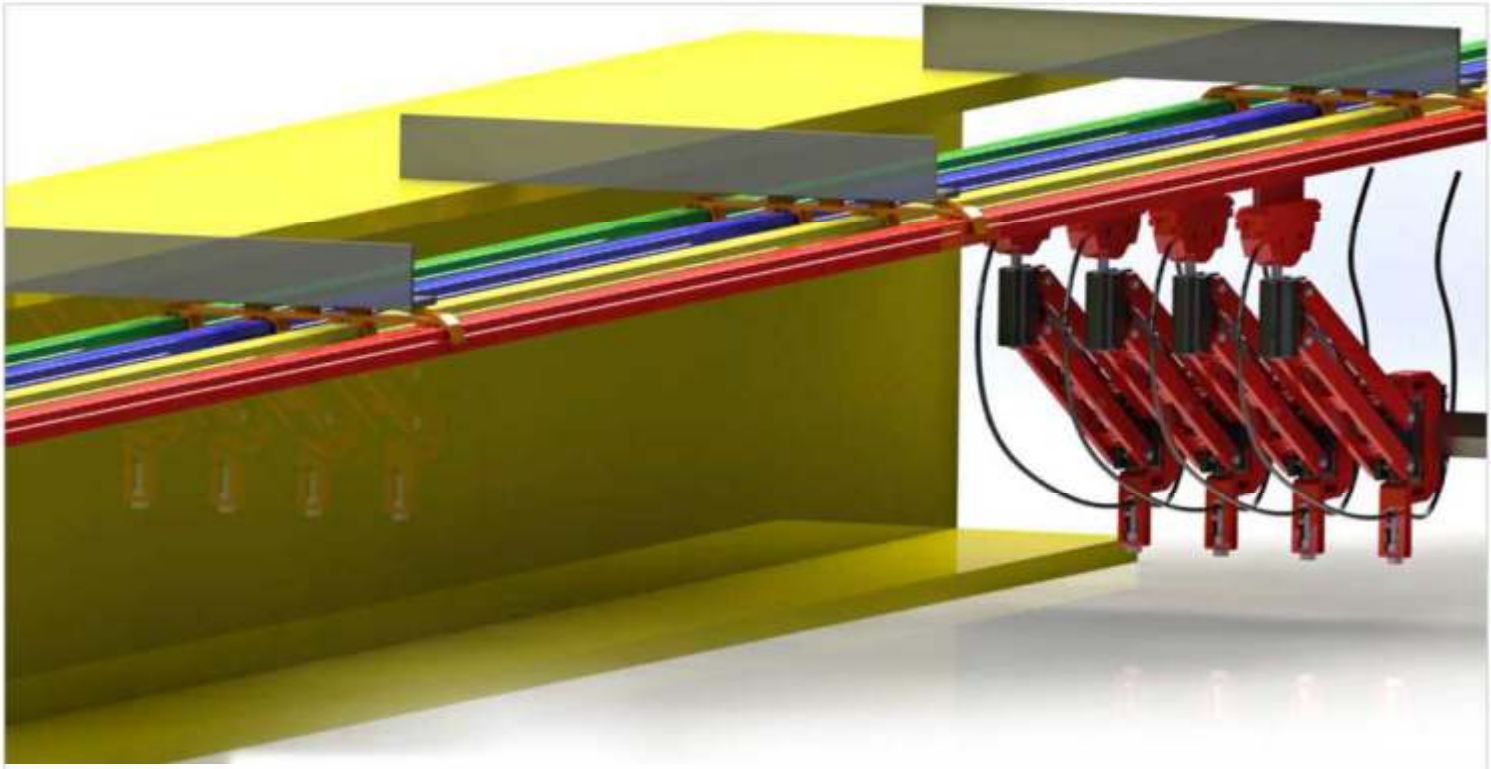
Heavy duty double arm current collector provides multi axis degree of flexible movement, spring loaded, unit provide positive pressure contact with conductors thus ensure un-interrupted power transfer during motion.

Towing Arm

The Towing arm can carry maximum 4 double current collectors. For higher loads please contact us.

Busbar Mounting Bracket

MS Angle with slotted hole for mounting of hanger clamp.
Size : 50 x 50 x 6mm x 550mm.



Pin Jointed Type Busbar

NBM-3

| Galvanize: 80 to 125 Amp. |

Accessories

Hanger Clamp

Snap fit type hanger clamp with hardware, required per meter. The conductors bars are clipped in to the hanger clamp. We offer Single Pole & 4 Pole Hanger clamps.

Anchor Clamp

Fall proof protection to the busbar. Required at each 50 Mtr.

End Cap / End Power Feed

This accessories for incoming power and is a fully insulated simple bolted type is easily installed at the end of the busbar. Used to close the end of the conductors, to cover exposed conductor and avoid live contact.

Center Power feed

This accessories for incoming power easily installed anywhere in the system for incoming power to the conductor rails joint. One or more power feed points are possible to reduce voltage drop.

Conductor Joint Cover

Conductor Joints are covered with joint cover, Required on each conductor Joints.

Current Collector For DSL

Down Shop Lead System (DSL) Conductor bar – track are super finished and cross section is maintained to achieve required ampere. The material for track is G.I., Aluminum & copper. Conductors shall be accurately aligned to ensure positive electrical contact between the collector and the conductor. Separate conductors shall be provided for each phase. Insulation cover shall be rigid PVC, self extinguishing, with a heat distortion point of 70°c at 260psi.

NBM CC 20AMP.

NBM CC 125AMP.

NBM CC 125AMP.

NBM CC 250AMP.

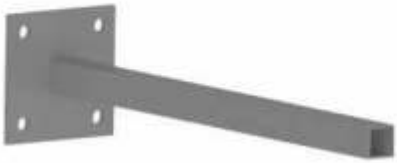
NBM CC 250AMP.

Current Collector For Angle Type DSL

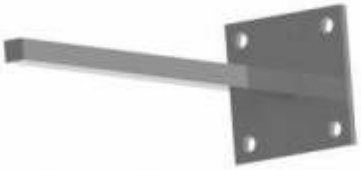
NBM CCAT 125AMP.

NBM CCAT 250AMP.

Towing Arm & Busbar Mounting Brackets



NBM TABMB 25mm.



NBM TABMB 12mm.

This is an attachment for incoming power and is a fully insulated simple clamp type is easily installed anywhere on the system for incoming power to the conductor rails.

C-Rail [Festoon] System

Festoon System are used to electrify various types of mobile equipment. They can be designed not only to support and protect flat and round electrical cables, but air and water hoses as well. Systems can be pre-assembled at the factory to ease installation and reduce time. Festoon systems are typically used on overhead cranes, port cranes and other material handling applications. We also have a solution for extremely corrosive environments. Our product range includes as well as accessories for the various cable management systems. Standard length 4.5 Mtr.

Hanger Clamp

Jointer

Cable Trolley

Starting Trolley

End Cap

Bracket Set

Trolley

NBM Make offer superior quality overhead C-Rail & I-beam trolleys that are expandable to various I-beam sizes, in various load capacity. It consists of a carriage with four wheels containing anti-friction bearings, which are rigidly connected to I-Beam.

CONDUCTOR BAR	GALVANIZED STEEL			COPPER		
CURRENT RATING At + 35 C CDF 100%	80A	100A	125A	160A	250A	400A
CURRENT RATING At + 35 C CDF 40%	100A	140A	200A	300A	360A	580A
MAX. SYSTEM VOLTAGE	500V AC / 600V DC	500V AC / 600V DC	500V AC / 600V DC	500V AC / 600V DC	500V AC / 600V DC	500V AC / 600V DC
COEFFICIENT OF EXPANSION	0.0000122	0.0000122	0.0000122	0.0000162	0.0000162	0.0000162
IMPEDANCE IN OHMS/M	0.0030	0.0029	0.0018	0.00035	0.00030	0.00018
RESISTANCE IN OHMS/M	0.0028	0.0024	0.0020	0.00031	0.00028	0.00016
STANDARD LENGTH	4.5 Mtr.	4.5 Mtr.	4.5 Mtr.	4.5 Mtr.	4.5 Mtr.	4.5 Mtr.

Voltage Drop.

The voltage drop on our conductor system should be restricted to 2.5 to 5% of the nominal supply voltage.

Three Phase Alternating Current (3ph AC): $\Delta U = \sqrt{3} \times FL \times I_{total} \times Z$ (Volts)
Single Phase Alternating Current (AC): $\Delta U = 2 \times FL \times I_{total} \times Z$ (Volts)
Direct Current (DC): $\Delta U = 2 \times FL \times I_{total} \times R$ (Volts)

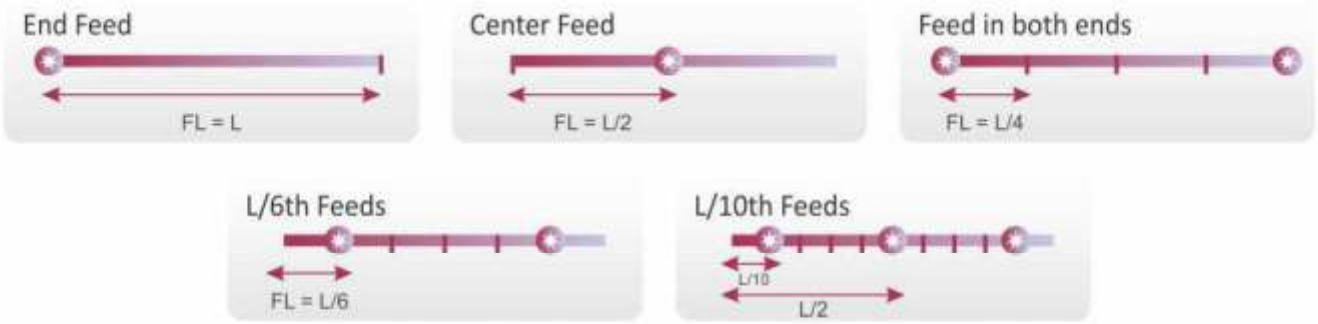
$$U\% = \frac{\Delta U}{Un} \times 100\%$$

Where U = Voltage Drop
I_{total} = Total Currents [Amps]
R = Resistance of conductor [ohms/Mtr.]
Z = Impedance of conductor [ohms/Mtr.]
FL = Feeder Length [ohms/Mtr.]
L = System Length [Metres]
Un = Operating Voltage

If the voltage drop is too high, then either the number of feed points or the cross section of the conductor rail should be increased to reduce the Voltage drop along the system.

Multiple feed-in points

The voltage drop on our conductor system should be restricted to 2.5 to 5% of the nominal supply voltage.
FL = L feed from one end
FL = L/2 feed from the center
FL = L/4 feed from the both ends
FL = L/6 two feed-in positions, L/6 from each end
FL = L/10 feed – in points in the center and at the L/10 from both ends



Other possibilities to arrange the feed positions can be selected. For very high current, cables can be connected tin parallel (booster cables).
Note:

NBM INDUSTRIES
3 Umakant Pandit Udyognagar,
B/h. Khedut Trailer,
Opp. Deepak Steel Industries,
Rajkot - 360 004 (Gujarat) INDIA

p: +91 281 301 7696
t-f: +91 281 238 8988
m: +91 932 828 7976
+91 932 779 9211
e: info@nbmindustries.com
w: www.nbmindustries.com