

> IP68 - RESIN CAST

 **ENTRACO BKS**
BUS DUCTS PVT. LTD.

An Indo-Swiss Venture



ENTRACO BKS
bus ducts pvt. ltd.

An Indo-Swiss Venture

EntracoBKS offers world's pioneering super compact bus duct with a full range of Low voltage & Medium voltage. Our premium IP68 resin cast bus duct has a line of satisfied fans worldwide.

Along with our smart bus ducts, EntracoBKS offers value added services such as engineering, implementation and commissioning – a complete package.

EntracoBKS is a joint venture between Entraco Power Systems, India and BKS Stormschienen AG, Switzerland.



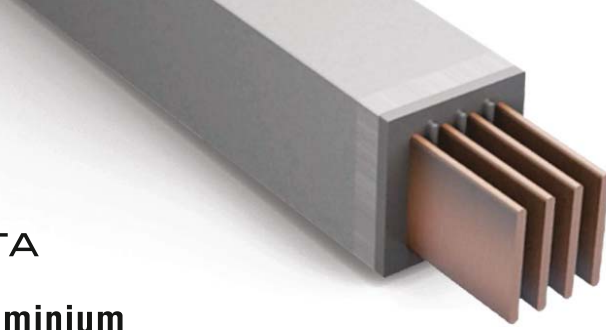
- ITS THE LIFELINE FOR YOUR PROJECTS

EntracoBKS bus ducts are proud to present the cutting edge Swiss technology bus duct that is second to none in the world. Our approach to design is revealed in the beautiful simplicity of our products.

EntracoBKS bus ducts are the lifeline for every major project from Residential towers to Nuclear plants, IT Parks to Chemical factories, Manufacturing units to Oil refineries, Airports to Seaports, Hospitals to Commercial Malls and much more.

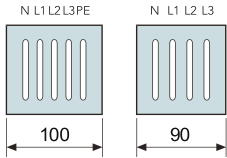
EntracoBKS team and its bus ducts work with the stakeholders to make these projects successful to its fullest potential. Our approach is revealed in the beautiful simplicity of our products that are smart, easy to install and maintenance free.

Let us know how we can help you.



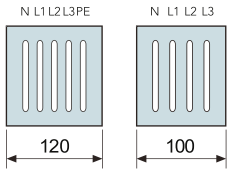
TECHNICAL DATA

SB [single bar] - Aluminium



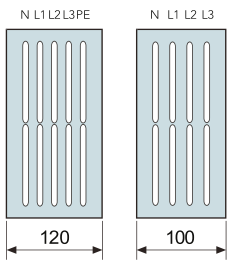
| Type | H mm | In A | Area mm ² | I _k 1 sec. | I _k dyn. | R ₂₀ μΩ | R _t μΩ | X μΩ | Z μΩ | IP Class | Wt. kg/mtr. |
|---------------------|---------|---------|-------------------------|--------------------------|------------------------|-----------------------|----------------------|---------|---------|-------------|----------------|
| SB-60 | | | | | | | | | | | |
| SC-R / SB 060-03 AL | 90 | 400 | 178 | 23 | 48 | 161.11 | 176.43 | 49.90 | 178.34 | 68 | 21 |
| SC-R / SB 060-04 AL | 90 | 630 | 237 | 23 | 48 | 120.83 | 141.96 | 41.55 | 151.16 | 68 | 22 |
| SC-R / SB 060-06 AL | 90 | 800 | 352 | 38 | 80 | 80.56 | 96.35 | 25.71 | 101.91 | 68 | 22 |

SB [single bar] - Aluminium



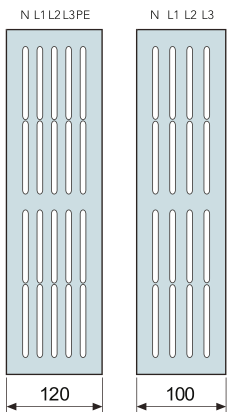
| Type | H mm | In A | Area mm ² | I _k 1 sec. | I _k dyn. | R ₂₀ μΩ | R _t μΩ | X μΩ | Z μΩ | IP Class | Wt. kg/mtr. |
|------------------|---------|---------|-------------------------|--------------------------|------------------------|-----------------------|----------------------|---------|---------|-------------|----------------|
| SB | | | | | | | | | | | |
| SC-R / SB 080 AL | 110 | 1000 | 472 | 38 | 80 | 60.42 | 74.35 | 54.65 | 93.80 | 68 | 29 |
| SC-R / SB 100 AL | 130 | 1250 | 592 | 65 | 140 | 48.33 | 58.86 | 50.57 | 78.64 | 68 | 34 |
| SC-R / SB 120 AL | 150 | 1400 | 712 | 65 | 140 | 40.28 | 49.59 | 41.79 | 65.80 | 68 | 39 |

DB [double bar] - Aluminium



| Type | H mm | In A | Area mm ² | I _k 1 sec. | I _k dyn. | R ₂₀ μΩ | R _t μΩ | X μΩ | Z μΩ | IP Class | Wt. kg/mtr. |
|------------------|---------|---------|-------------------------|--------------------------|------------------------|-----------------------|----------------------|---------|---------|-------------|----------------|
| DB | | | | | | | | | | | |
| SC-R / DB 080 AL | 190 | 1600 | 945 | 65 | 140 | 30.21 | 36.27 | 45.90 | 58.91 | 68 | 48 |
| SC-R / DB 100 AL | 230 | 2000 | 1185 | 65 | 140 | 24.17 | 29.48 | 31.38 | 43.32 | 68 | 58 |
| SC-R / DB 120 AL | 270 | 2500 | 1425 | 65 | 140 | 20.14 | 25.62 | 29.18 | 38.30 | 68 | 68 |

QB [quadruple bar] - Aluminium



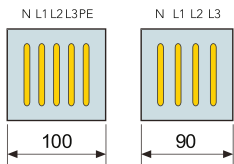
| Type | H mm | In A | Area mm ² | I _k 1 sec. | I _k dyn. | R ₂₀ μΩ | R _t μΩ | X μΩ | Z μΩ | IP Class | Wt. kg/mtr. |
|------------------|---------|---------|-------------------------|--------------------------|------------------------|-----------------------|----------------------|---------|---------|-------------|----------------|
| QB | | | | | | | | | | | |
| SC-R / QB 080 AL | 380 | 3200 | 1889 | 100 | 220 | 15.10 | 19.03 | 23.93 | 30.69 | 68 | 95 |
| SC-R / QB 100 AL | 460 | 4000 | 2369 | 100 | 220 | 12.08 | 15.24 | 25.68 | 29.73 | 68 | 115 |
| SC-R / QB 120 AL | 540 | 5000 | 2849 | 100 | 220 | 10.07 | 12.70 | 23.07 | 26.47 | 68 | 135 |

* PER 100 METER

• Bus duct drawings not to the exact proportion.

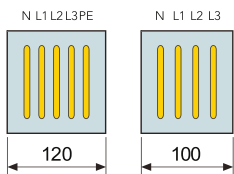
TECHNICAL DATA

SB [single bar] - Copper



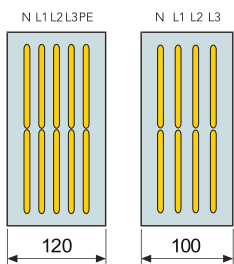
| Type | H mm | In A | Area mm ² | I _k 1 sec. | I _k dyn. | R ₂₀ μΩ | R _t μΩ | X μΩ | Z μΩ | IP Class | Wt. kg/mtr. |
|---------------------|---------|---------|-------------------------|--------------------------|------------------------|-----------------------|----------------------|---------|---------|-------------|----------------|
| SC-R / SB 060-03 Cu | 90 | 630 | 178 | 23 | 48 | 99 | 119 | 106 | 159 | 68 | 26 |
| SC-R / SB 060-04 Cu | 90 | 800 | 237 | 23 | 48 | 74 | 93 | 85 | 126 | 68 | 28 |
| SC-R / SB 060-06 Cu | 90 | 1000 | 352 | 38 | 80 | 49 | 62 | 69 | 92 | 68 | 31 |

SB [single bar] - Copper



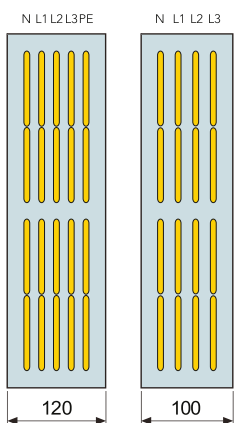
| Type | H mm | In A | Area mm ² | I _k 1 sec. | I _k dyn. | R ₂₀ μΩ | R _t μΩ | X μΩ | Z μΩ | IP Class | Wt. kg/mtr. |
|------------------|---------|---------|-------------------------|--------------------------|------------------------|-----------------------|----------------------|---------|---------|-------------|----------------|
| SC-R / SB 080 Cu | 110 | 1250 | 472 | 38 | 80 | 36.46 | 49.74 | 67.95 | 77.13 | 68 | 41 |
| SC-R / SB 100 Cu | 130 | 1600 | 592 | 65 | 140 | 29.17 | 35.70 | 58.07 | 68.58 | 68 | 48 |
| SC-R / SB 120 Cu | 150 | 1700 | 712 | 65 | 140 | 26.00 | 31.00 | 38.00 | 49.00 | 68 | 56 |

DB [double bar] - Copper



| Type | H mm | In A | Area mm ² | I _k 1 sec. | I _k dyn. | R ₂₀ μΩ | R _t μΩ | X μΩ | Z μΩ | IP Class | Wt. kg/mtr. |
|------------------|---------|---------|-------------------------|--------------------------|------------------------|-----------------------|----------------------|---------|---------|-------------|----------------|
| SC-R / DB 080 Cu | 190 | 2000 | 945 | 65 | 140 | 18.23 | 22.49 | 28.60 | 36.38 | 68 | 72 |
| SC-R / DB 100 Cu | 230 | 2500 | 1185 | 65 | 140 | 14.58 | 17.62 | 24.51 | 29.89 | 68 | 87 |
| SC-R / DB 120 Cu | 270 | 3200 | 1425 | 65 | 140 | 12.15 | 15.11 | 17.90 | 23.58 | 68 | 103 |

QB [quadruple bar] - Copper



| Type | H mm | In A | Area mm ² | I _k 1 sec. | I _k dyn. | R ₂₀ μΩ | R _t μΩ | X μΩ | Z μΩ | IP Class | Wt. kg/mtr. |
|------------------|---------|---------|-------------------------|--------------------------|------------------------|-----------------------|----------------------|---------|---------|-------------|----------------|
| SC-R / QB 080 Cu | 380 | 4000 | 1889 | 100 | 220 | 9.11 | 11.30 | 16.66 | 22.24 | 68 | 142 |
| SC-R / QB 100 Cu | 460 | 5000 | 2369 | 100 | 220 | 7.29 | 8.83 | 17.09 | 20.08 | 68 | 174 |
| SC-R / QB 120 Cu | 540 | 6300 | 2849 | 100 | 220 | 6.08 | 7.58 | 17.81 | 19.37 | 68 | 205 |

* PER 100 METER

• Bus duct drawings not to the exact proportion.

NON-STANDARD ELEMENTS

Expansion - element

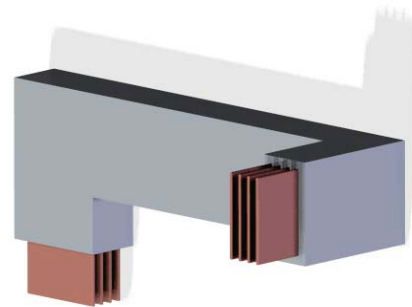
The expansions joint element must be insert in long straight line 1 every - 35/40 mtr.



Double elbow flat + dihedral

SB , DB Type Length each axis
min : 300 & max 600

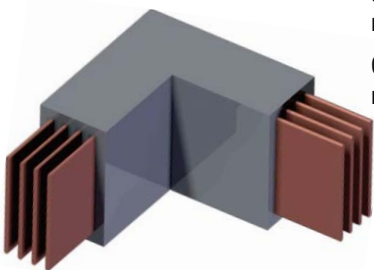
QB Type Length each axis
min : 500 & max 600



Dihedral elbow

SB , DB Type Length each axis
min : 300 & max 600

QB Type Length each axis
min : 500 & max 600



Double dihedral elbow

SB , DB Type Length each axis
min : 300 & max 600

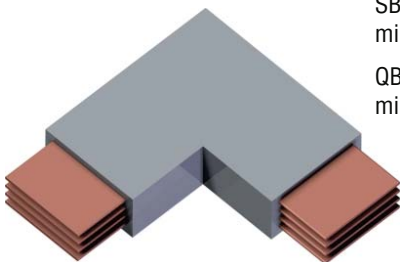
QB Type Length each axis
min : 500 & max 600



Flat elbow

SB , DB Type Length each axis
min : 300 & max 600

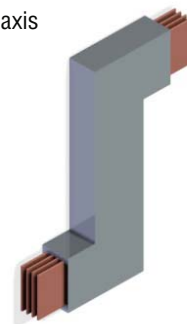
QB Type Length each axis
min : 500 & max 600



Double flat elbow

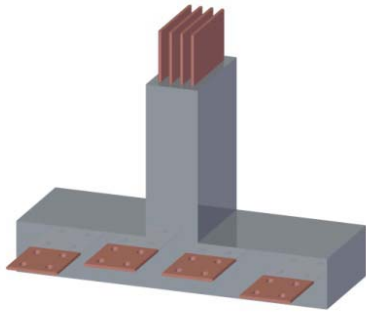
SB , DB Type Length each axis
min : 300 & max 600

QB Type Length each axis
min : 500 & max 600

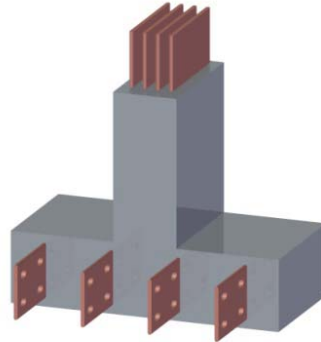


NON-STANDARD ELEMENTS

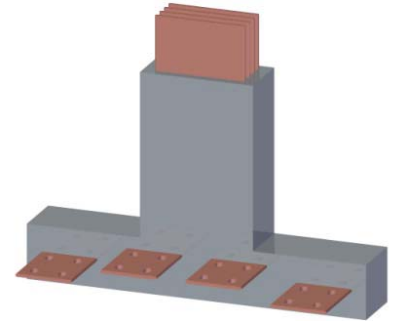
Terminal - element



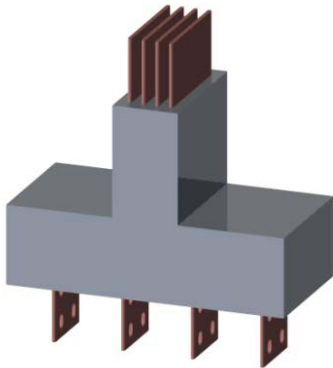
TE-TM



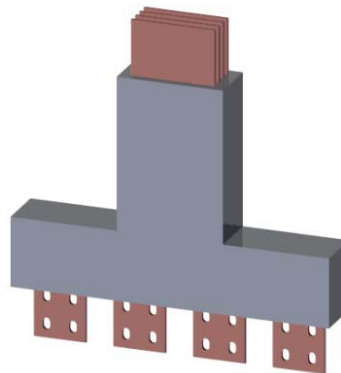
TE-TG



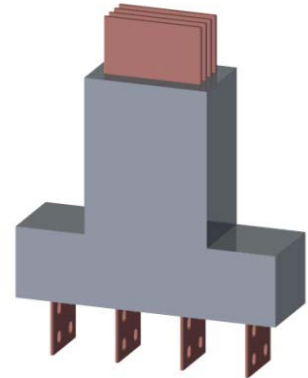
TE-TK



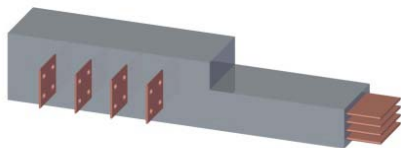
TE-TO



TE-TX



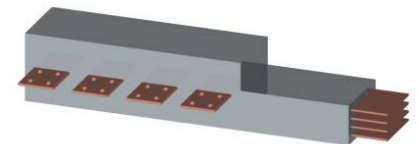
TE-TOF



TE-TE



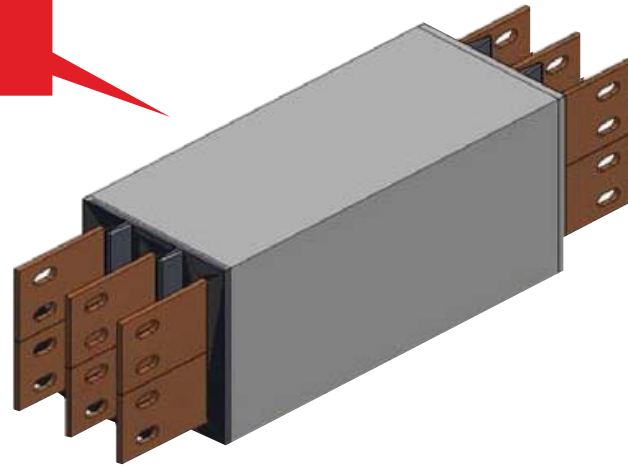
TE-TC



TE-TD

MONO MV - BUSDUCT

NEW COMPACTED RANGE



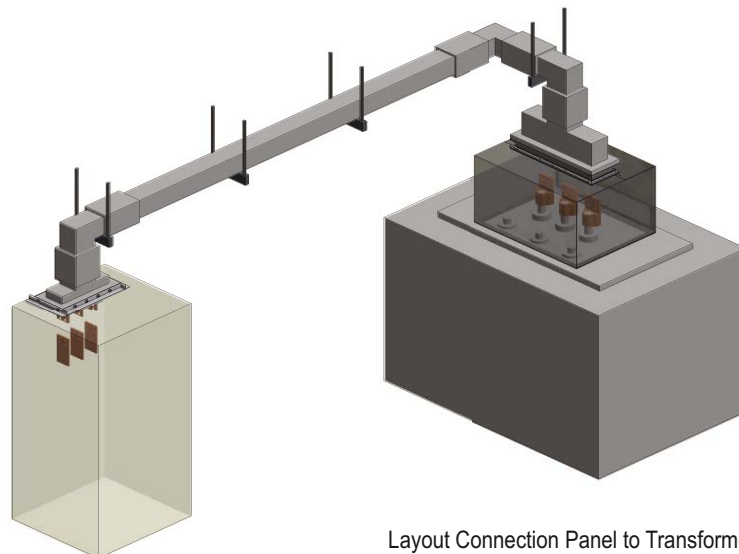
Technical Data Cu - conductors

| Type | Rating Ampere | H mm | micro ohm/m / 50Hz | | | kA | |
|----------------|---------------|------|--------------------|------|-------|-----------|-------|
| | | | Ra 20 | Rt | X | Icw/1sec. | Idyn. |
| MV-R/MB 060-1K | 1000 | 100 | 49,0 | 64,7 | 109,7 | 38 | 80 |
| MV-R/MB 080-1K | 1250 | 120 | 36,6 | 49,1 | 95,1 | 38 | 80 |
| MV-R/MB 100-1K | 1600 | 140 | 29,2 | 39,7 | 84,0 | 65 | 140 |
| MV-R/MB 080-2K | 2000 | 200 | 18,3 | 25,2 | 62,6 | 65 | 140 |
| MV-R/MB 100-2K | 2500 | 240 | 14,6 | 20,3 | 53,7 | 80 | 176 |
| MV-R/MB 120-2K | 3200 | 280 | 12,2 | 16,9 | 47,1 | 80 | 176 |

Technical Data Al - conductors

| Type | Rating Ampere | H mm | micro ohm/m / 50Hz | | | kA | |
|----------------|---------------|------|--------------------|-------|-------|-----------|-------|
| | | | Ra 20 | Rt | X | Icw/1sec. | Idyn. |
| MV-R/MB 060-1A | 800 | 100 | 80,5 | 103,1 | 110,0 | 27 | 56 |
| MV-R/MB 080-1A | 1000 | 120 | 60,4 | 77,8 | 95,5 | 27 | 56 |
| MV-R/MB 100-1A | 1250 | 140 | 48,3 | 62,5 | 84,5 | 53 | 117 |
| MV-R/MB 080-2A | 1600 | 200 | 30,2 | 39,5 | 63,2 | 53 | 117 |
| MV-R/MB 100-2A | 2000 | 240 | 24,2 | 31,8 | 54,2 | 65 | 142 |
| MV-R/MB 120-2A | 2500 | 280 | 20,1 | 26,5 | 47,5 | 65 | 143 |

* at 60Hz all X values are 20% higher



Layout Connection Panel to Transformer

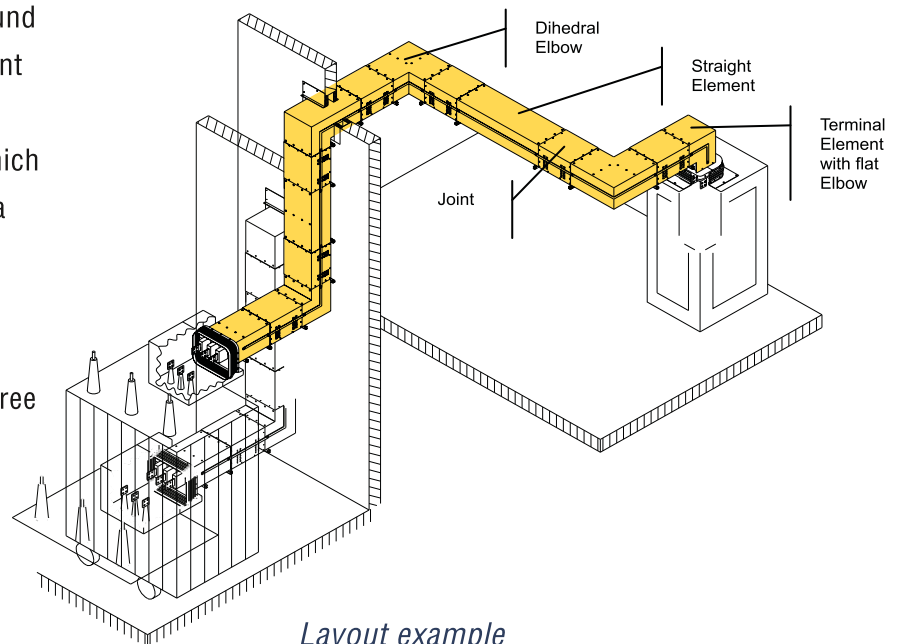


Major advantages

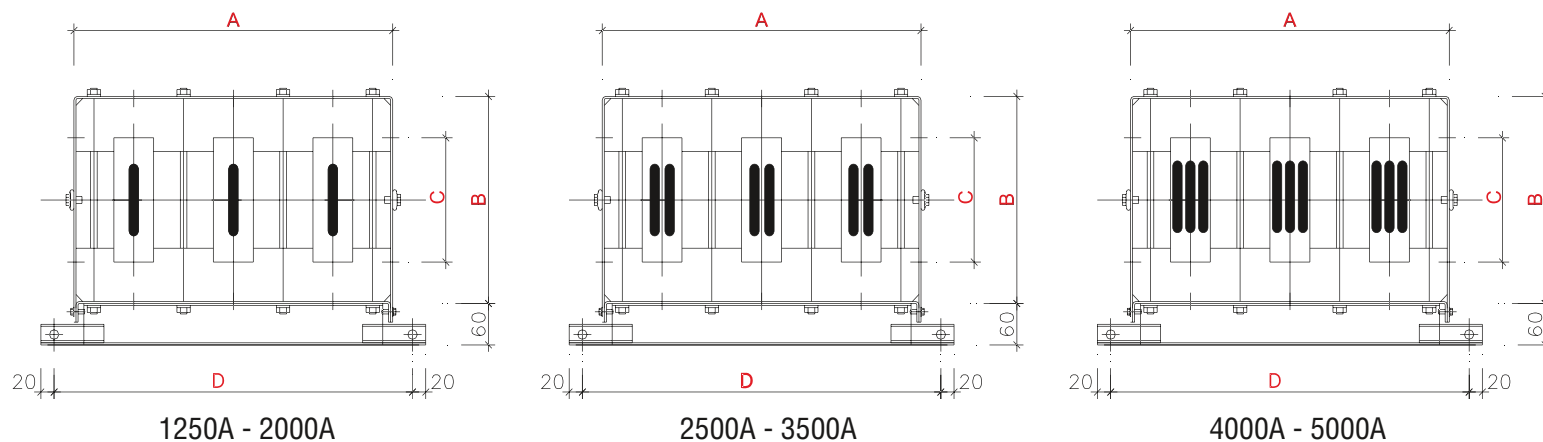
- Wide range from 1250A - 5000A
- Outdoor IP68
- High short-circuit withstand
- Fully insulated with cast resin
- Electro erosion resistant
- Low voltage drop
- Tailor made terminal-elements
- High mechanical strength
- Very compact dimensions
- Air & watertight wall bushings
- Chemical resistant
- Fungi, insects and rodents resistant
- UV resistant
- Self-extinguishing insulation
- Fire retarding wall bushings F120
- Non chimney effect
- Tropical resistant
- Simple erection
- Maintenance free

EntracoBKS MV-Resin bus duct consist of tin plated copper conductors, embedded in an enclosure of homogeneous insulation compound based on epoxy resin mixed with a high content of selected inert mineral fillers. EntracoBKS insulation compound is free of occlusions, which may cause leaks and partial discharges, with a high mechanical, chemical and fire resistance level.

EntracoBKS MV-Resin bus duct with high degree of protection IP68 is the ideal solution for outdoor installation in tropical, saline and corrosive environments. The system is simple to design, easy to install and ultimately maintenance free.



Layout example



12 kv 60Hz / 50Hz

| TYPE | RATING (A) | VOLTAGE (kV) | A | B | C | D |
|-------------|------------|--------------|-----|-----|-----|-----|
| MV-R 060-01 | 1250 | 12 | 600 | 320 | 140 | 660 |
| MV-R 080-01 | 1600 | 12 | 600 | 320 | 140 | 660 |
| MV-R 100-01 | 1750 | 12 | 600 | 360 | 180 | 660 |
| MV-R 120-01 | 2000 | 12 | 600 | 360 | 180 | 660 |
| MV-R 080-02 | 2500 | 12 | 600 | 320 | 140 | 660 |
| MV-R 100-02 | 3000 | 12 | 600 | 360 | 180 | 660 |
| MV-R 120-02 | 3500 | 12 | 600 | 360 | 180 | 660 |
| MV-R 100-03 | 4000 | 12 | 720 | 360 | 180 | 780 |
| MV-R 120-03 | 5000 | 12 | 720 | 360 | 180 | 780 |

17.5 kv 60Hz / 50Hz

| TYPE | RATING (A) | VOLTAGE (kV) | A | B | C | D |
|-------------|------------|--------------|-----|-----|-----|-----|
| MV-R 060-01 | 1250 | 17.5 | 380 | 380 | 140 | 800 |
| MV-R 080-01 | 1600 | 17.5 | 380 | 380 | 140 | 800 |
| MV-R 100-01 | 1750 | 17.5 | 420 | 420 | 180 | 800 |
| MV-R 120-01 | 2000 | 17.5 | 420 | 420 | 180 | 800 |
| MV-R 080-02 | 2500 | 17.5 | 380 | 380 | 140 | 860 |
| MV-R 100-02 | 3000 | 17.5 | 420 | 420 | 180 | 860 |
| MV-R 120-02 | 3500 | 17.5 | 420 | 420 | 180 | 860 |
| MV-R 100-03 | 4000 | 17.5 | 420 | 420 | 180 | 860 |
| MV-R 120-03 | 5000 | 17.5 | 420 | 420 | 180 | 860 |

all dimensions are in mm



An Indo-Swiss Venture

> IP68 - RESIN CAST

A 36/2, NICE Area, MIDC Satpur
Nashik, Maharashtra, India 422007

+91.2532.355083 (t)

+91.253 6698126 (t)

+91.2532.351223 (f)

info@entracogroup.com

www.entracobks.com