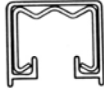
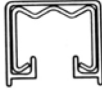
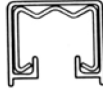







COMPACT
SHROUDED
CONDUCTOR
SYSTEM

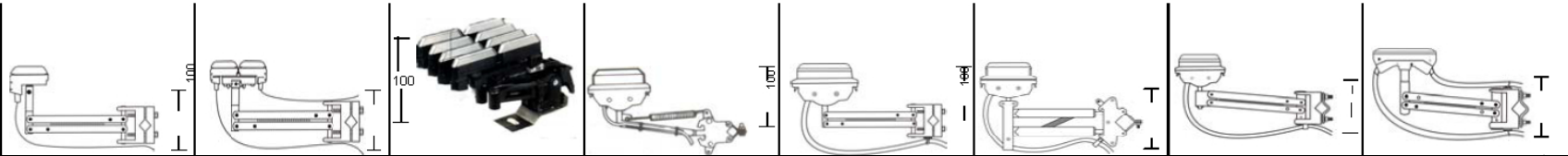
Safetrack

| SafeTrack₁ SHROUDED CONDUCTOR TECHNICAL DATA SHEET | |  |  |  | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------|-------------------------|
| CONDUCTOR | | SF1-40A | SF1-100A | SF1-125A | SF1-250A | SF1-315A |
| Material | | Stainless Steel | Galvanised Steel | | Copper | |
| Cross Sectional Area (Thickness) | | 50.4 (1mm) | 50.4 (1mm) | 63 (1.2mm) | 50.4 (1mm) | 63 (1.2mm) |
| Impedence milli Ohms/M +35 °C | | 12.95 | 2.9 | 2.5 | 0.345 | 0.335 |
| DC Resistance milli Ohms/M +35 °C | | 12.88 | 2.86 | 2.45 | 0.333 | 0.333 |
| Co eff. Of Expansion / °C | | 1.8 x 10 ⁻⁵ | 1.26 x 10 ⁻⁵ | 1.26 x 10 ⁻⁵ | 1.62 x 10 ⁻⁵ | 1.62 x 10 ⁻⁵ |
| Conductor Rating At +35 °C CDF 100% | | 40A | 100A | 125A | 250A | 315A |
| | | 43A | 112A | 139A | 280A | 352A |
| | | 46A | 123A | 152A | 307A | 385A |
| | | 50A | 135A | 160A | 315A | 400A |
| Conductor Rating at 100% CDF At +35 °C | | 40A | 100A | 125A | 250A | 315A |
| | | 40A | 100A | 125A | 240A | 300A |
| | | 38A | 95A | 115A | 225A | 280A |
| | | 35A | 90A | 110A | 210A | 260A |
| | | 32A | 80A | 100A | 190A | 240A |
| Standard Conductor Length | | 4 Mtrs | 4 Mtrs | | 4 Mtrs | |
| Track Configuration straight / curved | | 1000 mm | 1000 mm | | 1000 mm | |
| Bending radius minimum Horz/ Vert | | | | | | |
| Conductor Joint | | PIN JOINT | PIN JOINT | | PIN JOINT | |
| INSULATION | | | | | | |
| Standard Insulation | | PVC | PVC | | PVC | |
| System working Temperature* | | 80 °C | 80 °C | | 80 °C | |
| Flame Test | | Self Extinguishing | Self Extinguishing | | Self Extinguishing | |
| Insulation Cover | | RYBG | RYBG | | RYBG | |
| Protection Class (Finger Safe) | | IP21 | IP21 | | IP21 | |
| Maximum System Voltage | | 500VAC 600VDC | 500V AC / 600V DC | | 500V AC / 600V DC | |
| High Voltage withstand For 1min / Flashover Test | | 2.5KV / 7.5KV | 2.5KV / 7.5KV | | 2.5KV / 7.5KV | |
| INSTALLATION | | | | | | |
| Support Pitch Standard | | 1000 mm | 1000 mm | | 1000 mm | |
| Lateral | | 1000 mm | 1000 mm | | 1000 mm | |
| On curved path | | 500 mm | 500 mm | | 500 mm | |
| Hanger Clamps | | 1pole special | 1pole / 4pole | | 1pole / 4pole | |
| Minimum Pitch Centre 4P HC Fixed | | NA | 43 mm | | 43 mm | |
| 1P HC | | 50 mm | 40 mm min | | 40 mm min | |
| Max distance between Anchor points | | 75 Mtrs | 75 Mtrs | | 75 Mtrs | |
| Power Feeding | | At joint or at any location | At joint or at any location | | At joint or at any location | |
| Expansion section required for bay lengths more than | | 150 Mtrs | 200 Mtrs | | 150 Mtrs | |
| In Expn Tandem Collectors Required | | Yes | Yes | | Yes | |
| Site Crimping (Tool Supplied) | | N.A | N.A | | Required | |
| Installation suitable for | | Indoor / outdoor | Indoor / outdoor | | Indoor / outdoor | |
| OTHER ACCESSORIES | | | | | | |
| Transfer Guides / Isolating Sections | | Available | Available | | Available | |
| *High Temp. Sleeves For 120 °C | | | | | | |
| APPLICATIONS | | | | | | |
| Shrouded DSL installations for EOT Cranes, Electric Hoists, Straight / Curved Monorails, Conveyors, Amusement Drives, Electric Trolleys, Transfer Cars, Automated storage systems, Material handling systems etc. SS Conductors for Corosive atmosphere. | | | | | | |

| Safetrack 2 SHROUDED CONDUCTOR TECHNICAL DATA SHEET | |  | | |  | | |  | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------|-------------------------|-------------------------|------------------------------------------------------------------------------------|-------------------------|-------------------------|-------------------------------------------------------------------------------------|-------------------------|
| CONDUCTOR | | SF2-60A | SF2-100A | SF2-125A | SF2-160A | SF2-250A | SF2-400A | SF2-200A | SF2-315A |
| Material | | Galvanised Steel | | | Copper | | | Aluminium with SS | |
| Cross Sectional Area (Thickness) | | 53 (0.8) | 66 (1.0) | 100(1.6) | 53 (0.8) | 66 (1.0) | 100(1.6) | 104 | 120 |
| Impedence milli Ohms/M +35 °C | | 3.55 | 2.86 | 1.92 | 0.36 | 0.30 | 0.22 | 0.32 | 0.29 |
| DC Resistance milli Ohms/M +35 °C | | 3.52 | 2.84 | 1.92 | 0.35 | 0.27 | 0.18 | 0.30 | 0.26 |
| Co eff. Of Expansion / °C | | 1.26 x 10 ⁻⁵ | 1.26 x 10 ⁻⁵ | 1.26 x 10 ⁻⁵ | 1.62 x 10 ⁻⁵ | 1.62 x 10 ⁻⁵ | 1.62 x 10 ⁻⁵ | 2.38 x 10 ⁻⁵ | 2.38 x 10 ⁻⁵ |
| Conductor Rating At +35 °C CDF 100% | | 60A | 100A | 125A | 160A | 250A | 400A | 200 | 315 |
| 80% | | 68A | 112A | 139A | 180A | 280A | 445A | 222 | 348 |
| 60% | | 80A | 130A | 162A | 210A | 325A | 520A | 258 | 405 |
| 40% | | 97A | 160A | 200A | 255A | 400A | 635A | 316 | 496 |
| Conductor Rating at 100% CDF At +35 °C | | 60A | 100A | 125A | 160A | 250A | 400A | 200 | 315 |
| +40 °C | | 58A | 97A | 121A | 149A | 233A | 372A | 184 | 290 |
| +45 °C | | 56A | 94A | 117A | 140A | 218A | 348A | 162 | 255 |
| +50 °C | | 54A | 91A | 113A | 131A | 205A | 328A | 152 | 240 |
| +55 °C | | 52A | 88A | 110A | 125A | 195A | 312A | 136 | 215 |
| Standard Conductor Length | | 4.5 Mtrs | | | 4.5 Mtrs | | | 4.5 Mtrs | |
| Track Configuration straight / curved | | 1500 mm (Horz.only) | | | 1500 mm (Horz.only) | | | N.A | |
| Bending radius minimum Horizontal | | | | | | | | | |
| Conductor Joint | | Bolted Type | | | Bolted Type | | | Bolted Type | |
| INSULATION | | | | | | | | | |
| Standard Insulation | | PVC | | | PVC | | | PVC | |
| System working Temperature* | | 80 °C | | | 80 °C | | | 80 °C | |
| Flame Test | | Self Extinguishing | | | Self Extinguishing | | | Self Extinguishing | |
| Insulation Cover | | RYBG | | | RYBG | | | RYBG | |
| Protection Class (Finger Safe) | | IP21 | | | IP21 | | | IP21 | |
| Maximum System Voltage | | 500V AC / 600V DC | | | 500V AC / 600V DC | | | 500VAC / 600V DC | |
| High Voltage withstand For 1min Flashover Test | | 2.5KV / 7.5KV | | | 2.5KV / 7.5KV | | | 2.5KV / 7.5KV | |
| INSTALLATION | | | | | | | | | |
| Support Pitch | | Standard | | | Standard | | | Standard | |
| | | 1000 mm | | | 1000 mm | | | 1000 mm | |
| | | Lateral | | | Lateral | | | Lateral | |
| | | 1000 mm | | | 1000 mm | | | 1000 mm | |
| On curved path | | 500 mm | | | 500 mm | | | 500 mm | |
| Hanger Clamps | | 1pole / 4pole | | | 1pole / 4pole | | | 1pole / 4pole | |
| Minimum Pitch Centre 4P HC Fixed | | 43 mm | | | 43 mm | | | 43 mm | |
| 1P HC | | 40 mm min | | | 40 mm min | | | 40 mm min | |
| Max distance between Anchor points | | 75 Mtrs | | | 75 Mtrs | | | 75 Mtrs | |
| Power Feeding | | At joint or at any location | | | At joint or at any location | | | At joint or at any location | |
| Expansion section required for bay lengths more than | | 150 Mtrs | | | 150 Mtrs | | | 150 Mtrs | |
| Installation suitable for | | Indoor / outdoor | | | Indoor / outdoor | | | Indoor / outdoor | |
| OTHER ACCESSORIES | | | | | | | | | |
| Transfer Guides / Isolating Sections | | Available | | | Available | | | Available | |
| *High Temp. Sleeves For 120 °C | | | | | | | | | |
| APPLICATIONS | | | | | | | | | |
| Shrouded DSL installations for EOT Cranes, Electric Hoists, Straight / Curved Monorails, Conveyors, Amusement Drives, Electric Trolleys, Transfer Cars, Automated storage systems, Material handling systems etc. Aluminium / SS Conductors for Corrosive atmosphere. | | | | | | | | | |

Safetrack

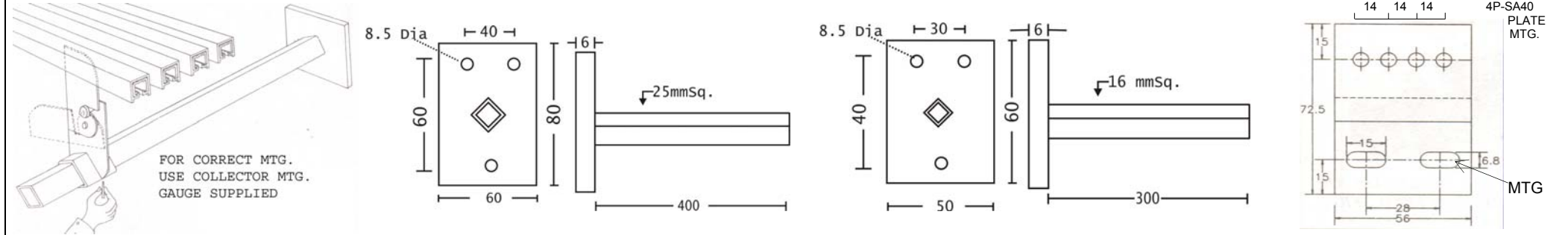
CURRENT COLLECTORS DATA SHEET

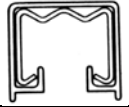


| | | | | | | | | |
|-----------------------------------------------------------------|------------------------|-----------------|------------------|----------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------|-----------------|-----------------|
| Type | MACC 20 | MACC 40 | SA 40 | SACC 50 | MMACC 60 | DACC 125 | MACC 125 | MACC 250 |
| Current Rating | 20A | 40A | 40A | 50A | 60A | 125A | 125A | 250A |
| Collector movement | Horizontal Vertical | ±125 ±50 | ±125 ±50 | ±15 ±15 | ±45 ±35 | ±125 ±50 | ±50 ±60 | ±200 ±60 |
| Mounting Bracket | 16sqmm bar | 16sqmm bar | Plate | 16sqmm bar | 16sqmm bar | 25sqmm bar | 25sqmm bar | 25sqmm bar |
| Mounting Distance from conductor contact surface | 100mm | 100mm | 100mm | 100mm | 100mm | 127mm | 127mm | 127mm |
| Construction | 1Pole | 1Pole | 2/3/4/6/8/10/12P | 1Pole | 1Pole | 1Pole | 1Pole | 1Pole |
| Spring Loaded Contacts with springs Of non rusting | Stainless Steel | Stainless Steel | Stainless Steel | Stainless Steel | Stainless Steel | Stainless Steel | Stainless Steel | Stainless Steel |
| Sintered Copper Shoe | 20A | 2x20A | 2x20A | 125A | 125A | 125A | 125A | 250A |
| Shoe Holder | Nylon | Nylon | Nylon | Nylon | Nylon | Nylon | Nylon | ABS |
| Structure | Metalic | Metalic | Moulded | Moulded | Metalic | Moulded | Metalic | Metalic |
| Suitable to use on Safetrack Conductor system On Straight Track | SFS (35 / 95A) | | | SFS (35 / 95A) SF1 (100 / 125 / 250 / 315A) SF2 (60 / 100 / 125 / 160 / 250 / 400A) | | SF1 (100 / 125 / 250 / 315A) SF2 (60 / 100 / 125 / 160 / 250 / 400 / 200 / 315A) SF3 (500/800/100A) | | |
| On Curved Track | SFS (35 / 95A) | | | SFS (35 / 95A) For Radius >4M SF1 (100 / 125 / 250 / 315A) SF2 (60 / 100 / 125 / 160 / 250 / 400A) | | SF1 (100 / 125 / 250 / 315A) SF2 (60 / 100 / 125 / 160 / 250 / 400 A) | | |

Higher Currents

Two Collectors in Tandem To be used for Higher Current requirements and for Expansion assemblies





VOLTAGE DROP

A.C $V_d = \sqrt{3} \cdot l \cdot I_{total} \cdot Z_{ac}$

D.C $V_d = 2 \cdot l \cdot I_{total} \cdot R_{dc}$

- V_d = Voltage Drop in Volts
- I_{total} = Total Current in Amps
- Z_{ac} = Impedence in Ohms/Mtr
- R_{dc} = Resistance in Ohms/Mtr
- l = Effective Length in Mtrs
- L = System length in Mtrs
- = Power Feed
- = Collector

| CONDUCTOR | 40 A | 100A | 125A | 250A | 315A |
|-----------------------------------|-----------------|------------------|------|--------|-------|
| Material | Stainless Steel | Galvanised Steel | | Copper | |
| Impedence milli Ohms/M +35 °C | 12.95 | 2.9 | 2.5 | 0.345 | 0.335 |
| DC Resistance milli Ohms/M +35 °C | 12.88 | 2.86 | 2.45 | 0.333 | 0.333 |

| Power Feed Position | Schematic Diagram . Collector Symbol Indicates Position Of Maximum Voltage Drop | Effective Length l for voltage drop calculation |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------|
| End Feed | | $l = L$ |
| Centre Feed | | $l = \frac{L}{2}$ |
| Two Power Feed at both ends | | $l = \frac{L}{4}$ |
| Two Power Feeds at $\frac{L}{6}$ from each end of system | | $l = \frac{L}{6}$ |
| Three power feeds at $\frac{L}{10}$ from each end and one at centre | | $l = \frac{L}{10}$ |