a world class African city

| TITLE SPECIFICATION FOR COPPER BUSBARS | REFERENCE | REV |
|---|---|---|
| | **CP_TSSPEC_062** | **1** |
| | DATE: | **OCTOBER 2022** |
| | PAGE: **1** OF **28** | |

## TABLE OF CONTENTS

## FOREWORD

This specification was prepared by the following work group members:

Vijay Rampersad Research and Development

The Emergency study committee was appointed by the Technology Services, which at the time of approval comprised of the following members:

| **Names** | **Department** |
|---|---|
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| Katlego Mogale | Maintenance (Engineering Operations) |
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Recommendations for corrections, additions or deletions shall be addressed to the:

Chief Engineer
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2016

## INTRODUCTION

This specification covers those copper busbars intended for use as electrical conductors

## 1 SCOPE

This specification covers City Power's requirements for copper busbars.

## 2 NORMATIVE REFERENCES

The following documents contain provisions that, through reference in the text, constitute requirements of this specification. At the time of publication, the editions indicated were valid. All standards and specifications are subject to revision, and parties to agreements based on this specification are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

SABS 1195: 2021, Busbars.

SABS 804: 2008, Electrolytic tough pitch high conductivity copper.

## 3 CONSTRUCTIONAL REQUIREMENTS

### 3.1 Material

The copper busbar shall:

3.1.1 Conform to SABS 1195;

3.1.2 Be electrolytic tough pitch (ETP) high conductivity copper that complies with the requirements of SABS 804;

3.1.3 Be clean and free from any defects that may have a detrimental effect on its performance in service;

3.1.4 Be free from any projections that are sharp and rough on the edges and corners; and

3.1.5 Bear the SABS 1195 mark of approval.

### 3.2 Temper

The copper busbar shall be supplied in the condition of temper of designation type H2, complying with SABS 1195.

| Designation | Meaning |
|---|---|
| M | As manufactured, i.e. the condition of a busbar that has acquired some temper from shaping processes in which there was no special control over thermal treatment or amount of strain hardening. |
| O | Annealed. Applies to a busbar that is fully annealed to obtain the lowest strength conditions. |
| H2 | Half-hard, i.e. the condition of a busbar that has been subjected to cold working after annealing (or hot forming) or to a combination of cold working and partial annealing/stabilizing in order to produce the required tensile properties. |
| TF | Solution heat treated and precipitation treated, i.e. the condition of a busbar that received no cold working (other than that required to flatten or straighten it) after solution heat treatment, and that was then subjected to precipitation treatment. |

Designation and meanings extracted from SANS 1195:2021

## 3.3 Form of busbars

The copper busbar shall be in the form of a rectangular bar.

## 3.4 Lengths

3.4.1 The copper busbars shall be supplied in linear lengths of 3 m.

3.4.2 Coiled lengths shall not be accepted.

## 3.5 Dimensions

The following dimensions shall apply to this specification as per SANS 10142: 2021, clause 6.6.2 which is 2 A/mm$^2$:

| ITEM | WIDTH (mm) | THICKNESS (mm) | LENGTH (m) | CURRENT RATING (A/mm$^2$) |
|---|---|---|---|---|
| 1 | 25 | 3 | 3 | 150 |
| 2 | 25 | 6 | 3 | 300 |
| 3 | 30 | 6 | 3 | 360 |
| 4 | 40 | 6 | 3 | 480 |
| 5 | 40 | 12 | 3 | 960 |
| 6 | 50 | 3 | 3 | 300 |
| 7 | 50 | 6 | 3 | 600 |
| 8 | 50 | 10 | 3 | 1000 |
| 9 | 65 | 6 | 3 | 780 |

# 4 ELECTRICAL AND PHYSICAL REQUIREMENTS

The electrical and physical requirements shall comply with the relevant tables of SABS 1195.

# 5 TESTS

## 5.1 Routine test (Inspection)

The inspection test shall comply with SABS 1195.

## 5.2 Type test

The type test shall comply with the requirements of SABS 1195.

# 6 MARKING, PACKING AND DOCUMENTATION

## 6.1 Marking

Each package shall bear the following information legibly and indelibly marked on a label that is securely attached to the package:

a) Manufacturer's name or trademark or trade name (or any combination of these);

b) Description of contents (type of material, temper, form, and cross-sectional area dimensions);

c) The nominal length per bar in metres;

d) The quantity;

e) Net mass of contents in kilograms; and

f) City Power's SAP number.

## 6.2 Packing

The busbars shall be so packed, in an acceptable manner, as to protect them from damage during normal transportation.

## 6.3 Documentation

6.3.1 Documentation shall be submitted in a technical catalogue format.

6.3.2 The technical catalogue shall specify the sizes, dimensions, reference numbers, and if applicable, the complete range of other products and accessories available.

# 7 QUALITY MANAGEMENT

A quality management system shall be set up in order to assure the quality during manufacture, installation, removal, transportation and disposal of scrap material/Waste/E-waste .Guidance on the requirements for a quality management system may be found in the following standards: ISO 9001:2015. The details shall be subject to agreement between the purchaser and supplier

## 8 HEALTH AND SAFETY

A health and safety plan shall be set up in order to ensure proper management and compliance during manufacture, installation, removal, transportation and disposal of scrap material/Waste/E-waste. Guidance on the requirements of a health and safety plan shall be found in ISO 45001:2018 standards. The details shall be subject to agreement between City Power and the Supplier.

## 9 ENVIRONMENTAL MANAGEMENT

An environmental management plan shall be set up in order to ensure the proper environmental management and compliance is adhered to during manufacture, installation, removal, transportation and disposal of scrap material/Waste/E-waste. Guidance on the requirements for an environmental management system shall be found in ISO 14001:2015 standards. The details shall be subject to agreement between City Power and the Supplier. This is to ensure that the asset created conforms to environmental standards and City Power SHERQ Policy.

## Annex A - Bibliography

None

## Annex B - Revision information

| DATE | REV. NO. | NOTES |
|---|---|---|
| Sept. 2003 | 0 | First issue |
| October 2022 | 1 | General editing, included SHERQ clauses, 3.2 included information table, edited technical schedules |

## Annex C - Item 1: BUSBAR CU 25MM X 3MM X 3M – SAP NO. 11439

**Schedule A: Purchaser's specific requirements**
**Schedule B: Guarantees and technical particulars of equipment offered**

| Item | Subclause of CP_TSSPEC_062 | Description | | Schedule A Required | Schedule B |
|---|---|---|---|---|---|
| **1** | 3.1 | Comply to SABS | Yes/No | Yes | |
| **2** | 3.2 | Condition of temper | M/ O/ H2 | H2 | |
| **3** | 3.3 | Does the form of the busbar comply? | Yes/ No | Yes | |
| **4** | 3.5 | Do the dimensions comply? | Yes/No | Yes | |
| **5** | 3.5 | Current carrying capacity | A | 150 | |
| **6** | 4 | Do the electrical and physical requirements comply with SABS 1195? | Yes/No | Yes | |
| **7** | 5.2 | Type test certificates | Yes/No | Yes | |
| **8** | 6.1 | Do the markings comply? | Yes/No | Yes | |
| **9** | 6.3 | Technical catalogue provided? | Yes/No | Yes | |
| **10** | 6.2 | Packing | Yes/No | Yes | |

**Note: Ticks, Cross [√, X], Astrick [*], Word [Noted] or TBA ["To Be Advice"] shall not be accepted**

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Item 1: BUSBAR CU 25MM X 3MM X 3M – SAP NO. 11439

### Deviation schedule

| **Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.** | | |
|---|---|---|
| **Item** | **Subclause of CP_TSSPEC_062** | **Proposed deviation** |
| | | |

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Annex C - Item 2: BUSBAR CU 25MM X 6MM X 3M – SAP NO. 11440

**Schedule A: Purchaser's specific requirements**
**Schedule B: Guarantees and technical particulars of equipment offered**

| Item | Subclause of CP_TSSPEC_062 | Description | | Schedule A Required | Schedule B |
|---|---|---|---|---|---|
| **1** | 3.1 | Comply to SABS | Yes/No | Yes | |
| **2** | 3.2 | Condition of temper | M/ O/ H2 | H2 | |
| **3** | 3.3 | Does the form of the busbar comply? | Yes/ No | Yes | |
| **4** | 3.5 | Do the dimensions comply? | Yes/No | Yes | |
| **5** | 3.5 | Current carrying capacity | A | 300 | |
| **6** | 4 | Do the electrical and physical requirements comply with SABS 1195? | Yes/No | Yes | |
| **7** | 5.2 | Type test certificates | Yes/No | Yes | |
| **8** | 6.1 | Do the markings comply? | Yes/No | Yes | |
| **9** | 6.3 | Technical catalogue provided? | Yes/No | Yes | |
| **10** | 6.2 | Packing | Yes/No | Yes | |

**Note: Ticks, Cross [√, X], Astrick [*], Word [Noted] or TBA ["To Be Advice"] shall not be accepted**

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Item 2: BUSBAR CU 25MM X 6MM X 3M – SAP NO. 11440

### Deviation schedule

| **Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.** | | |
|---|---|---|
| **Item** | **Subclause of CP_TSSPEC_062** | **Proposed deviation** |
| | | |

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Annex C - Item 3: BUSBAR CU 30MM X 6MM X 3M – SAP NO. 11445

**Schedule A: Purchaser's specific requirements**
**Schedule B: Guarantees and technical particulars of equipment offered**

| Item | Subclause of CP_TSSPEC_062 | Description | | Schedule A Required | Schedule B |
|---|---|---|---|---|---|
| **1** | 3.1 | Comply to SABS | Yes/No | Yes | |
| **2** | 3.2 | Condition of temper | M/ O/ H2 | H2 | |
| **3** | 3.3 | Does the form of the busbar comply? | Yes/ No | Yes | |
| **4** | 3.5 | Do the dimensions comply? | Yes/No | Yes | |
| **5** | 3.5 | Current carrying capacity | A | 360 | |
| **6** | 4 | Do the electrical and physical requirements comply with SABS 1195? | Yes/No | Yes | |
| **7** | 5.2 | Type test certificates | Yes/No | Yes | |
| **8** | 6.1 | Do the markings comply? | Yes/No | Yes | |
| **9** | 6.3 | Technical catalogue provided? | Yes/No | Yes | |
| **10** | 6.2 | Packing | Yes/No | Yes | |

**Note: Ticks, Cross [√, X], Astrick [*], Word [Noted] or TBA ["To Be Advice"] shall not be accepted**

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Item 3: BUSBAR CU 30MM X 6MM X 3M – SAP NO. 11445

### Deviation schedule

| **Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.** | | |
|---|---|---|
| **Item** | **Subclause of CP_TSSPEC_062** | **Proposed deviation** |
| | | |

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Annex C - Item 4: BUSBAR CU 40MM X 6MM X 3M – SAP NO. 11441

**Schedule A: Purchaser's specific requirements**
**Schedule B: Guarantees and technical particulars of equipment offered**

| Item | Subclause of CP_TSSPEC_062 | Description | | Schedule A Required | Schedule B |
|---|---|---|---|---|---|
| **1** | 3.1 | Comply to SABS | Yes/No | Yes | |
| **2** | 3.2 | Condition of temper | M/ O/ H2 | H2 | |
| **3** | 3.3 | Does the form of the busbar comply? | Yes/ No | Yes | |
| **4** | 3.5 | Do the dimensions comply? | Yes/No | Yes | |
| **5** | 3.5 | Current carrying capacity | A | 480 | |
| **6** | 4 | Do the electrical and physical requirements comply with SABS 1195? | Yes/No | Yes | |
| **7** | 5.2 | Type test certificates | Yes/No | Yes | |
| **8** | 6.1 | Do the markings comply? | Yes/No | Yes | |
| **9** | 6.3 | Technical catalogue provided? | Yes/No | Yes | |
| **10** | 6.2 | Packing | Yes/No | Yes | |

**Note: Ticks, Cross [√, X], Astrick [*], Word [Noted] or TBA ["To Be Advice"] shall not be accepted**

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Item 4: BUSBAR CU 40MM X 6MM X 3M – SAP NO. 11441

## Deviation schedule

| **Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.** | | |
|---|---|---|
| **Item** | **Subclause of CP_TSSPEC_062** | **Proposed deviation** |
| | | |

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Annex C - Item 5: BUSBAR CU 40MM X 12MM X 3M – SAP NO. 11601

**Schedule A: Purchaser's specific requirements**
**Schedule B: Guarantees and technical particulars of equipment offered**

| Item | Subclause of CP_TSSPEC_062 | Description | | Schedule A Required | Schedule B |
|---|---|---|---|---|---|
| **1** | 3.1 | Comply to SABS | Yes/No | Yes | |
| **2** | 3.2 | Condition of temper | M/ O/ H2 | H2 | |
| **3** | 3.3 | Does the form of the busbar comply? | Yes/ No | Yes | |
| **4** | 3.5 | Do the dimensions comply? | Yes/No | Yes | |
| **5** | 3.5 | Current carrying capacity | A | 960 | |
| **6** | 4 | Do the electrical and physical requirements comply with SABS 1195? | Yes/No | Yes | |
| **7** | 5.2 | Type test certificates | Yes/No | Yes | |
| **8** | 6.1 | Do the markings comply? | Yes/No | Yes | |
| **9** | 6.3 | Technical catalogue provided? | Yes/No | Yes | |
| **10** | 6.2 | Packing | Yes/No | Yes | |

**Note: Ticks, Cross [√, X], Astrick [*], Word [Noted] or TBA ["To Be Advice"] shall not be accepted**

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Item 5: BUSBAR CU 40MM X 12MM X 3M – SAP NO. 11601

### Deviation schedule

| **Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.** | | |
|---|---|---|
| **Item** | **Subclause of CP_TSSPEC_062** | **Proposed deviation** |
| | | |

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Annex C - Item 6: BUSBAR CU 50MM X 3MM X 3M – SAP NO. 11607

**Schedule A: Purchaser's specific requirements**
**Schedule B: Guarantees and technical particulars of equipment offered**

| Item | Subclause of CP_TSSPEC_062 | Description | | Schedule A Required | Schedule B |
|---|---|---|---|---|---|
| **1** | 3.1 | Comply to SABS | Yes/No | Yes | |
| **2** | 3.2 | Condition of temper | M/ O/ H2 | H2 | |
| **3** | 3.3 | Does the form of the busbar comply? | Yes/ No | Yes | |
| **4** | 3.5 | Do the dimensions comply? | Yes/No | Yes | |
| **5** | 3.5 | Current carrying capacity | A | 300 | |
| **6** | 4 | Do the electrical and physical requirements comply with SABS 1195? | Yes/No | Yes | |
| **7** | 5.2 | Type test certificates | Yes/No | Yes | |
| **8** | 6.1 | Do the markings comply? | Yes/No | Yes | |
| **9** | 6.3 | Technical catalogue provided? | Yes/No | Yes | |
| **10** | 6.2 | Packing | Yes/No | Yes | |

**Note: Ticks, Cross [√, X], Astrick [*], Word [Noted] or TBA ["To Be Advice"] shall not be accepted**

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Item 6: BUSBAR CU 50MM X 3MM X 3M – SAP NO. 11607

## Deviation schedule

| **Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.** | | |
|---|---|---|
| **Item** | **Subclause of CP_TSSPEC_062** | **Proposed deviation** |
| | | |

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Annex C - Item 7: BUSBAR CU 50MM X 6MM X 3M – SAP NO. 11442

**Schedule A: Purchaser's specific requirements**
**Schedule B: Guarantees and technical particulars of equipment offered**

| Item | Subclause of CP_TSSPEC_062 | Description | | Schedule A Required | Schedule B |
|---|---|---|---|---|---|
| **1** | 3.1 | Comply to SABS | Yes/No | Yes | |
| **2** | 3.2 | Condition of temper | M/ O/ H2 | H2 | |
| **3** | 3.3 | Does the form of the busbar comply? | Yes/ No | Yes | |
| **4** | 3.5 | Do the dimensions comply? | Yes/No | Yes | |
| **5** | 3.5 | Current carrying capacity | A | 600 | |
| **6** | 4 | Do the electrical and physical requirements comply with SABS 1195? | Yes/No | Yes | |
| **7** | 5.2 | Type test certificates | Yes/No | Yes | |
| **8** | 6.1 | Do the markings comply? | Yes/No | Yes | |
| **9** | 6.3 | Technical catalogue provided? | Yes/No | Yes | |
| **10** | 6.2 | Packing | Yes/No | Yes | |

**Note: Ticks, Cross [√, X], Astrick [*], Word [Noted] or TBA ["To Be Advice"] shall not be accepted**

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Item 7: BUSBAR CU 50MM X 6MM X 3M – SAP NO. 11442

### Deviation schedule

| **Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.** | | |
|---|---|---|
| **Item** | **Subclause of CP_TSSPEC_062** | **Proposed deviation** |
| | | |

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Annex C - Item 8: BUSBAR CU 50MM X 10MM X 3M – SAP NO. 11602

**Schedule A: Purchaser's specific requirements**
**Schedule B: Guarantees and technical particulars of equipment offered**

| Item | Subclause of CP_TSSPEC_062 | Description | | Schedule A Required | Schedule B |
|---|---|---|---|---|---|
| **1** | 3.1 | Comply to SABS | Yes/No | Yes | |
| **2** | 3.2 | Condition of temper | M/ O/ H2 | H2 | |
| **3** | 3.3 | Does the form of the busbar comply? | Yes/ No | Yes | |
| **4** | 3.5 | Do the dimensions comply? | Yes/No | Yes | |
| **5** | 3.5 | Current carrying capacity | A | 1000 | |
| **6** | 4 | Do the electrical and physical requirements comply with SABS 1195? | Yes/No | Yes | |
| **7** | 5.2 | Type test certificates | Yes/No | Yes | |
| **8** | 6.1 | Do the markings comply? | Yes/No | Yes | |
| **9** | 6.3 | Technical catalogue provided? | Yes/No | Yes | |
| **10** | 6.2 | Packing | Yes/No | Yes | |

**Note: Ticks, Cross [√, X], Astrick [*], Word [Noted] or TBA ["To Be Advice"] shall not be accepted**

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Item 8: BUSBAR CU 50MM X 10MM X 3M – SAP NO. 11602

## Deviation schedule

| **Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.** | | |
|---|---|---|
| **Item** | **Subclause of CP_TSSPEC_062** | **Proposed deviation** |
| | | |

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Annex C - Item 9: BUSBAR CU 65MM X 6MM X 3M – SAP NO. 11443

**Schedule A: Purchaser's specific requirements**
**Schedule B: Guarantees and technical particulars of equipment offered**

| Item | Subclause of CP_TSSPEC_062 | Description | | Schedule A Required | Schedule B |
|---|---|---|---|---|---|
| **1** | 3.1 | Comply to SABS | Yes/No | Yes | |
| **2** | 3.2 | Condition of temper | M/ O/ H2 | H2 | |
| **3** | 3.3 | Does the form of the busbar comply? | Yes/ No | Yes | |
| **4** | 3.5 | Do the dimensions comply? | Yes/No | Yes | |
| **5** | 3.5 | Current carrying capacity | A | 780 | |
| **6** | 4 | Do the electrical and physical requirements comply with SABS 1195? | Yes/No | Yes | |
| **7** | 5.2 | Type test certificates | Yes/No | Yes | |
| **8** | 6.1 | Do the markings comply? | Yes/No | Yes | |
| **9** | 6.3 | Technical catalogue provided? | Yes/No | Yes | |
| **10** | 6.2 | Packing | Yes/No | Yes | |

**Note: Ticks, Cross [√, X], Astrick [*], Word [Noted] or TBA ["To Be Advice"] shall not be accepted**

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Item 9: BUSBAR CU 65MM X 6MM X 3M – SAP NO. 11443

## Deviation schedule

| **Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.** | | |
|---|---|---|
| **Item** | **Subclause of CP_TSSPEC_062** | **Proposed deviation** |
| | | |

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

## Annex D – Stock Items

## Material Group : CONT- BUSB

| Item | SAP No. | SAP Short Description | SAP Long Description |
|---|---|---|---|
| 1 | 11439 | BUSBAR CU 25 MM X 3 MM X 3M | BUSBAR, COPPER, 25 MM X 3 MM WITH A TOTAL LENGTH OF 3M. ITEM SPECIFICATION NO. CP_TSSPEC_062 |
| 2 | 11440 | BUSBAR CU 25 MM X 6 MM X 3M | BUSBAR, COPPER, 25 MM X 6 MM WITH A TOTAL LENGTH OF 3M. ITEM SPECIFICATION NO. CP_TSSPEC_062 |
| 3 | 11445 | BUSBAR CU 30 MM X 6 MM X 3M | BUSBAR, COPPER, 30 MM X 6 MM WITH A TOTAL LENGTH OF 3M. ITEM SPECIFICATION NO. CP_TSSPEC_062 |
| 4 | 11441 | BUSBAR CU 40 MM X 6 MM X 3M | BUSBAR, COPPER, 40 MM X 6 MM WITH A TOTAL LENGTH OF 3M. ITEM SPECIFICATION NO. CP_TSSPEC_062 |
| 5 | 11601 | BUSBAR CU 40 MM X 12 MM X 3M | BUSBAR, COPPER, 40 MM X 12 MM WITH A TOTAL LENGTH OF 3M. ITEM SPECIFICATION NO. CP_TSSPEC_062 |
| 6 | 11607 | BUSBAR CU 50 MM X 3 MM X 3M | BUSBAR, COPPER, 50 MM X 3 MM WITH A TOTAL LENGTH OF 3M. ITEM SPECIFICATION NO. CP_TSSPEC_062 |
| 7 | 11442 | BUSBAR CU 50 MM X 6 MM X 3M | BUSBAR, COPPER, 50 MM X 6 MM WITH A TOTAL LENGTH OF 3M. ITEM SPECIFICATION NO. CP_TSSPEC_062 |
| 8 | 11602 | BUSBAR CU 50 MM X 10 MM X 3M | BUSBAR, COPPER, 50 MM X 10 MM WITH A TOTAL LENGTH OF 3M. ITEM SPECIFICATION NO. CP_TSSPEC_062 |
| 9 | 11443 | BUSBAR CU 65 MM X 6 MM X 3M | BUSBAR, COPPER, 65 MM X 6 MM WITH A TOTAL LENGTH OF 3M. ITEM SPECIFICATION NO. CP_TSSPEC_062 |