



TITLE	SPECIFICATION FOR END CONNECTORS AND INSULATING SLEEVES	REFERENCE	CP_TSSPEC_101	REV	0
		DATE:		DECEMBER 2003	
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**SPECIFICATION FOR END CONNECTORS
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FOREWORD

Recommendations for corrections, additions or deletions should be addressed to the:

Technology Services Manager
City Power Johannesburg (Pty) Ltd
P O Box 38766
Booyens
2016

INTRODUCTION

In order to provide a quick and electrically sound way of connecting cable cores together and insulating them the use of end connectors and insulating sleeves shall be specified for this use.

1 SCOPE

This specification covers City Power's requirements for end connectors and insulating sleeves.

2 CONSTRUCTIONAL REQUIREMENTS

2.1 End connector

2.1.1 The end connector shall be:

- a) Of a standard size as to accommodate the cables used,
- b) Of a non-corrosive metal construction,
- c) Clean and free from any defects that may have a detrimental effect on its performance in service,
- d) Free from any projections that are sharp and rough on the edges and corners, and
- e) Re-usable.

2.1.2 The conductor shall be clamped by the use of a socket head grub screw.

2.1.3 The grub screw shall accommodate a size 4 Allen key.

2.2 Insulating sleeve

2.2.1 The insulating sleeve shall:

- a) Be of a high quality non-flammable, non-toxic rubber,
- b) Be red or black in colour,
- c) Have an easy but tight fit over the connector and cables used, and
- d) Be re-usable.

2.3 Size

The following size conductors, as per table 1, shall apply to this connector and insulating sleeve:

ITEM (Annex D)	CONDUCTOR (mm ²)	CORES	KEY SIZE
1	16	2	4
1	16	4	4
3	25	4	4

Table 1: Basic conductor sizes

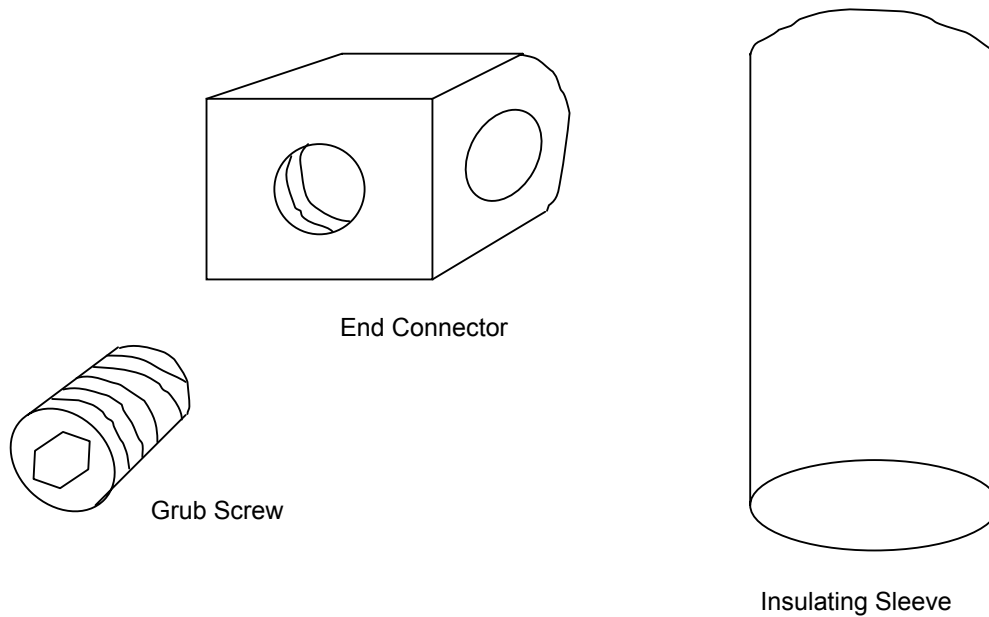


Figure 1: Typical arrangement of an end connector and insulating sleeve.

3 MARKING, PACKING AND DOCUMENTATION

3.1 Marking

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

- a) Brand name or trade mark,
- b) Description of contents,
- c) All end connectors shall have the connector size number indelibly marked on the connector,
- d) All insulating sleeves shall have the connector size number indelibly marked on the sleeve,
- e) The quantity, and
- f) City Power's SAP number.

3.2 Packing

The end connectors and insulating sleeves shall be so packed as to protect them from damage during normal transportation.

3.3 Documentation

3.3.1 Documentation shall be submitted in a technical catalogue format.

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

4 QUALITY MANAGEMENT

4.1 The supplier (deemed to be an organization that undertakes any manufacturing or assembly operation) shall have a formally documented and implemented quality management system (QMS), that as a minimum meets with the requirements of the international code of practice for quality systems ISO 9002. City Power reserves the right to audit quality management systems for suitability and effectiveness, and to verify all goods for conformance prior to delivery.

4.2 Foreign, and third party manufacturers, shall, in addition, hold valid certification of their quality management system. Such certification shall be from a national quality systems certification body (Registrar), duly accredited by a QMS accreditation body, which is signatory to a mutual recognition agreement with South Africa.

5 TRAINING

The supplier shall provide the following details with regard to certified staff training offered:

- a) the available training courses and their duration;
- b) the cost per delegate;
- c) the minimum number of delegates required;
- d) the certification of delegates;
- e) on-site training, and
- f) training course content.

Annex A - Bibliography

None

Annex B - Revision information

DATE	REV. NO.	NOTES
Dec. 2003	0	First issue

Annex C - Item 1: END CONNECTOR NO. 2 – SAP NO. 5510

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Subclause of CP_TSSPEC_101	Description		Schedule A	Schedule B
1		Manufacturer		xxxx	
2	2.1.6	Grub screws supplied with each connector	Yes/No	Yes	
3	3.1	Is the connector marked with the size?	Yes/No	Yes	
4	3.1	Does the marking comply with this specification?	Yes/No	Yes	
5	3.1	Brand name or trade mark marked on the connector?	Yes/No	Yes	
6	3.2	Does the labelling comply with this specification?	Yes/No	Yes	
7	3.3	Does the packing comply with this specification?	Yes/No	Yes	
8		Installation instructions	Yes/No	Yes	
9	3.3	Technical catalogue provided	Yes/No	Yes	
10	5	Training provided	Yes/No	Yes	

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

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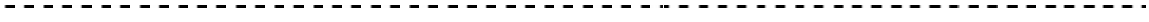
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Item 1: END CONNECTOR NO. 2 – SAP NO. 5510

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_101	Proposed deviation

Tender Number: _____

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

Full name of company: _____

Annex C - Item 2: END CONNECTOR SLEEVE NO. 2 – SAP NO. 5511

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Subclause of CP_TSSPEC_101	Description	Schedule A	Schedule B
1		Manufacturer	xxxx	
2	2.2.1	Material of insulating sleeve	Rubber	
3	2.2.2	Colour	Red / Black	xxx
4	3.1	Is the sleeve marked with the size?	Yes/No	Yes
5	3.1	Does the marking comply with this specification?	Yes/No	Yes
6	3.1	Brand name or trade mark marked on the sleeve?	Yes/No	Yes
7	3.2	Does the labelling comply with this specification?	Yes/No	Yes
8	3.3	Does the packing comply with this specification?	Yes/No	Yes
9		Installation instructions	Yes/No	Yes
10	3.3	Technical catalogue provided	Yes/No	Yes
11	5	Training provided	Yes/No	Yes

Tender Number: _____

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

Full name of company: _____

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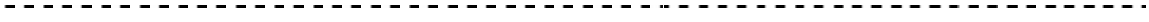
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Item 2: END CONNECTOR SLEEVE NO. 2 – SAP NO. 5511

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_101	Proposed deviation

Tender Number: _____

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

Full name of company: _____

Annex C - Item 3: END CONNECTOR NO. 3 – SAP NO. 6233

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Subclause of CP_TSSPEC_101	Description		Schedule A	Schedule B
1		Manufacturer		xxxx	
2	2.1.6	Grub screws supplied with each connector	Yes/No	Yes	
3	3.1	Is the connector marked with the size?	Yes/No	Yes	
4	3.1	Does the marking comply with this specification?	Yes/No	Yes	
5	3.1	Brand name or trade mark marked on the connector?	Yes/No	Yes	
6	3.2	Does the labelling comply with this specification?	Yes/No	Yes	
7	3.3	Does the packing comply with this specification?	Yes/No	Yes	
8		Installation instructions	Yes/No	Yes	
9	3.3	Technical catalogue provided	Yes/No	Yes	
10	5	Training provided	Yes/No	Yes	

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

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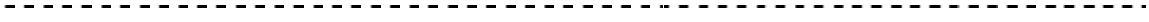
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Item 3: END CONNECTOR NO. 3 – SAP NO. 6233

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_101	Proposed deviation

Tender Number: _____

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

Full name of company: _____

Annex C - Item 4: END CONNECTOR SLEEVE NO. 3 – SAP NO. 6234

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Subclause of CP_TSSPEC_101	Description	Schedule A	Schedule B
1		Manufacturer	xxxx	
2	2.2.1	Material of insulating sleeve	Rubber	
3	2.2.2	Colour	Red / Black	xxxx
4	3.1	Is the sleeve marked with the size?	Yes/No	Yes
5	3.1	Does the marking comply with this specification?	Yes/No	Yes
6	3.1	Brand name or trade mark marked on the sleeve?	Yes/No	Yes
7	3.2	Does the labelling comply with this specification?	Yes/No	Yes
8	3.3	Does the packing comply with this specification?	Yes/No	Yes
9		Installation instructions	Yes/No	Yes
10	3.3	Technical catalogue provided	Yes/No	Yes
11	5	Training provided	Yes/No	Yes

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

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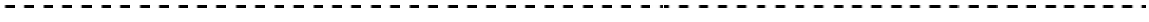
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Item 4: END CONNECTOR SLEEVE NO. 3 – SAP NO. 6234

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_101	Proposed deviation

Tender Number: _____

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

Full name of company: _____

Annex D – Stock Items

Material Group : ELEC-ACCS

Item	SAP No.	SAP Short Description	SAP Long Description
1	5510	END CONNECTOR NO 2	END CONNECTOR. METAL WITH A SOCKET HEAD GRUB SCREW. TO BE USED WITH A NO. 4 ALLEN KEY. SUITABLE FOR CONNECTING COPPER CONDUCTORS UP TO 2 X 16 MM SQ PLUS 1 X 4 MM SQ. ITEM SPECIFICATION NO. CP_TSSPEC_101
2	5511	END CONNECTOR SLEEVE NO 2	END CONNECTOR. INSULATING SLEEVE. RED. SUITABLE FOR CONNECTING FOR INSULATING THE NO. 2 END CONNECTOR. ITEM SPECIFICATION NO. CP_TSSPEC_101
3	6233	END CONNECTOR NO 3	END CONNECTOR. METAL WITH A SOCKET HEAD GRUB SCREW. TO BE USED WITH A NO. 4 ALLEN KEY. SUITABLE FOR CONNECTING COPPER CONDUCTORS UP TO 2 X 35 MM SQ PLUS 1 X 16 MM SQ. ITEM SPECIFICATION NO. CP_TSSPEC_101
4	6234	END CONNECTOR SLEEVE NO 3	END CONNECTOR. INSULATING SLEEVE. RED. SUITABLE FOR CONNECTING FOR INSULATING THE NO. 3 END CONNECTOR. ITEM SPECIFICATION NO. CP_TSSPEC_101