

# Electricity Specification 400C20

Issue 5      October 2021

## Cable Cleats and Clips



## Amendment Summary

ISSUE NO. DATE	DESCRIPTION
<b>Issue 5</b>	New template applied throughout.
<b>October 2021</b>	Prepared by: D M Talbot  Approved by: Policy Approval Panel and signed on its behalf by Steve Cox, Engineering and Technical Director

## Contents

1	Introduction	4
2	Scope	4
3	Definitions	4
4	General Requirements for Approvals and Testing	5
4.1	Product not to be Changed	5
4.2	Electricity North West Technical Approval	5
4.3	Quality Assurance	5
4.4	Formulation	6
4.5	Identification Markings	6
4.6	Minimum Life Expectancy	6
4.7	Product Conformity	6
4.8	Confirmation of Conformance	6
5	Requirements for Type and Routine Testing	6
5.1	Requirement for Type Tests at Suppliers Premises	7
5.2	Requirement for Routine Tests at the Supplier's Premises	7
6	Constructional Requirements	7
7	Documents Referenced	8
8	Keywords	8
	Appendix A – Schedule of All Cable Cleats and Clips	9
	Appendix B – Conformance Declaration	19

All Rights Reserved

The copyright of this document, which contains information of a proprietary nature, is vested in Electricity North West Limited. The contents of this document may not be used for purposes other than that for which it has been supplied and may not be reproduced, either wholly or in part, in any way whatsoever. It may not be used by, or its contents divulged to, any other person whatsoever without the prior written permission of Electricity North West Limited.

## 1 Introduction

This Specification comprises general requirements for the Approval and testing of cable cleats and clips employed on the electricity distribution network owned by Electricity North West Limited (Electricity North West) as Distribution Licensee. Also included are technical particulars relating to the constructional requirements and a schedule of all cable cleats and clips in alphanumeric order ([Appendix A](#)).

## 2 Scope

This Specification covers all cable cleats and clips required for use on Electricity North West's overhead line and underground cable network.

## 3 Definitions

<b>Approval</b>	Sanction by the Electricity North West Overhead Line Circuits Manager that specified criteria have been satisfied
<b>Contract</b>	The agreement between Electricity North West and the Contractor for the execution of the Works including therein all documents to which reference may properly be made in order to ascertain the rights and obligations of the parties under the said agreement.
<b>Contractor</b>	The person or person's firm or company, including personal representatives, successors and permitted assigns, who's Tender has been accepted by Electricity North West.
<b>Specification</b>	The Specifications and schedules (if any) agreed by the parties for the purpose of the Contract.
<b>Sub-Contractor</b>	Any person (other than the Contractor) named in the Contract for any part of the Works or any person to whom any part of the Contract has been sub-let with the consent in writing of the Electricity North West Overhead Line Circuits Manager, and the legal representatives, successors and assigns of such person.
<b>Supplier</b>	Any person or person's firm or company who supplies goods to Electricity North West or to its Contractor.
<b>Tender</b>	An offer in writing to execute work or supply goods at a fixed price.

**Tenderer**

The person or person's firm or company, including personal representatives, successors and permitted assigns, invited by Electricity North West to submit a Tender.

## 4 General Requirements for Approvals and Testing

### 4.1 Product not to be Changed

No change in the product, packaging or labelling shall be made after Approval has been granted without prior notice to the Electricity North West Overhead Line Circuits Manager, and receipt of a written agreement to the proposed change from the Electricity North West Overhead Line Circuits Manager.

### 4.2 Electricity North West Technical Approval

The Tenderer shall submit, with this Tender, proposals for testing which will demonstrate, to the satisfaction of the Electricity North West Overhead Line Circuits Manager, compliance with this Specification. Such tests shall be carried out without expense to Electricity North West.

Alternatively, technical reports and other data may be submitted that the Tenderer considers will demonstrate, to the satisfaction of the Electricity North West Overhead Line Circuits Manager, compliance with this Specification. Acceptance of this evidence shall be at the discretion of the Electricity North West Overhead Line Circuits Manager but will not be unreasonably withheld.

Approval shall be 'factory specific' and is not transferable to another factory without the written Approval of the Electricity North West Overhead Line Circuits Manager.

The Supplier and product shall comply with all the relevant requirements of Electricity North West documents EPD311 and CP311.

### 4.3 Quality Assurance

The Tenderer shall confirm whether or not Approval is held in accordance with a quality assurance scheme accredited under ISO 9000. If not, the Tenderer shall submit a statement of the quality assurance procedures employed to control the quality of the product, including the performance of Suppliers and Sub-Contractors.

The right is reserved for the repeat of such tests, from time to time, that the Electricity North West Overhead Line Circuits Manager may deem to be reasonably necessary to demonstrate continued compliance with the Specification.

The Tenderer shall submit, with the Tender, a list of tests and inspections which are carried out on the product prior to despatch which shall demonstrate, to the satisfaction of the Electricity North West Overhead Line Circuits Manager, fitness for installation and service.

The Tenderer shall provide free of charge to Electricity North West such samples as may, in the opinion of the Electricity North West Overhead Line Circuits Manager, be reasonably required for inspection and/or retention as quality control samples. The Electricity North West Overhead Line Circuits Manager will confirm the requirement for samples at the time of Tendering.

The right is reserved for inspections to be made of Tenderer's facilities, from time to time, as deemed reasonably necessary by the Electricity North West Overhead Line Circuits Manager to ensure compliance with this Specification and any Contract of which it forms a part.

The Tenderer shall submit, with the Tender, such details of product packaging disposal, as will enable Electricity North West to comply with the requirements of BS EN ISO 14001 - Environmental Management Systems.

#### **4.4 Formulation**

The Tenderer shall submit, with the Tender, such details of the formulation and use of the product and associated substances as will enable Electricity North West to comply with the obligations of the Health and Safety at Work Act 1974 and the Control of Substances Hazardous to Health Regulations 2002, in the use, storage and disposal of the product. The Tenderer may stipulate, prior to submission of such information, that it is to remain confidential, and the Electricity North West Overhead Line Circuits Manager will, if requested, confirm agreement to this prior to receipt of the information.

#### **4.5 Identification Markings**

The Tenderer shall submit, with the Tender, details of markings which it is proposed to apply to the product or packaging to identify manufacturing batches or items. The forms and content of such markings shall be subject to the Approval of the Electricity North West Overhead Line Circuits Manager and shall in all cases include the Electricity North West approved description and commodity code number.

The Tenderer shall submit, with the Tender, such details of marking gross weight on components, assemblies and packages, as will enable Electricity North West to comply with the Health and Safety Manual Handling Operation Regulations 1992, for components, assemblies and packages supplied with a gross weight over 1kg. The forms and content of such markings shall be subject to the Approval of the Electricity North West Overhead Line Circuits Manager.

#### **4.6 Minimum Life Expectancy**

The minimum life expectancy of all products covered by this Specification is 60 years.

#### **4.7 Product Conformity**

Preference will be given to those Suppliers who can provide suitable product conformity certification to a recognised or specified standard, or an equivalent certification.

#### **4.8 Confirmation of Conformance**

The Tenderer shall complete the conformance declaration sheets in [Appendix B](#). Failure to complete these declaration sheets may result in an unacceptable bid.

### **5 Requirements for Type and Routine Testing**

The Electricity North West Overhead Line Circuits Manager shall set out the requirement of the following tests to be carried out by the Supplier at the Supplier's cost.

## 5.1 Requirement for Type Tests at Suppliers Premises

These are a series of one-off type tests, which are carried out to ensure the satisfactory performance of the product design, under extremes of operating stresses, and of endurance, as may be appropriate, to be determined by the Electricity North West Overhead Line Circuits Manager.

These may or may not be destructive tests.

## 5.2 Requirement for Routine Tests at the Supplier's Premises

These tests may be required to be carried out on every individual unit or component, as specified, or at some regular frequency to be determined by the Electricity North West Overhead Line Circuits Manager.

The results of these tests may be required to be supplied to Electricity North West with each unit purchased or retained for inspection, at a period to be determined by the Electricity North West Overhead Line Circuits Manager.

# 6 Constructional Requirements

All cable cleats and clips covered by this Specification are listed in [Appendix A](#).

Cable cleats and clips shall conform to all requirements of this Specification and the requirements BS EN 50368 for the following Classification (according to Clause 6 of BS EN 50368):

- According to material: non-metallic.
- According to resistance to impact: medium.
- According to resistance to electromechanical forces: resistant to electromechanical forces: capable of withstanding one short-circuit.
- According to temperature, Table 1 – Temperature for permanent application:
  - A. Maximum temperature: +60°C.
  - B. Minimum temperature: -5°C.
- According to flame application time, Table 2 – Flame application time: 60 seconds.

Cleats and clips shall be manufactured from black polypropylene, unless stated otherwise.

**NOTE:** that some cable cleats shall have angled fixing plates, designed to lie flat on a wood pole of 200mm diameter. These cleats are identified by the term “radiused” within the description.

“Cable cleat, pole/wall, stand-off, polypropylene, ABC, 2x35mm<sup>2</sup>/4x95mm<sup>2</sup> + 1x25mm<sup>2</sup>” shall comply with ENA TS 43-14.

“Cable cleat, wall, stand-off, polypropylene, ABC...” series of cleats, for running ABC along walls, shall comply with ENA TS 43-14.

## 7 Documents Referenced

DOCUMENTS REFERENCED	
<b>Health and Safety at Work Act 1974</b>	
<b>Control of Substances Hazardous to Health Regulations 2002</b>	
<b>Manual Handling Operations Regulations 1992</b>	
<b>BS EN ISO 9000:</b>	Quality management systems.
<b>BS EN ISO 14001:</b>	Environmental management systems. Requirements with guidance for use.
<b>BS EN 50368: 2003:</b>	Cable cleats for electrical installations.
<b>ENA TS 43-14:</b>	Conductor Fittings and Associated Apparatus for use with LV Aerial Bundled Conductors.
<b>CP311:</b>	Equipment Approval Policy and Process

## 8 Keywords

None applicable.

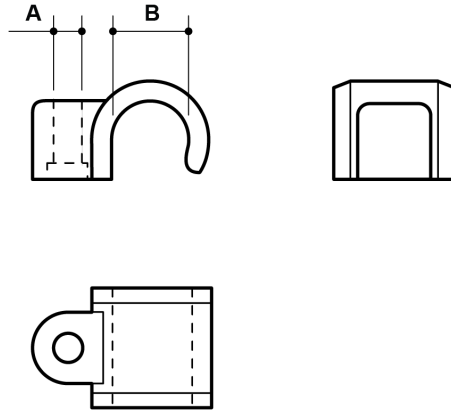


## Appendix A – Schedule of All Cable Cleats and Clips

ITEM NO	APPROVED DESCRIPTION (FOR PURCHASING AND PRODUCT LABELLING)	CC NO	DRAWING REF
1.	Cable cleat, 1-way, 9.0mm cable diameter, flame-retardant polypropylene, 1-fixing (3mm), pack of 500	157694	I-400C20-CLT-001
2.	Cable cleat, 1-way, 10.6mm cable diameter, flame-retardant polypropylene, 1-fixing (4mm), pack of 500	157686	I-400C20-CLT-001
3.	Cable cleat, 1-way, 11.7mm cable diameter, flame-retardant polypropylene, 1-fixing (4mm), pack of 500	115622	I-400C20-CLT-001
4.	Cable cleat, 1-way, 13.5mm cable diameter, flame-retardant polypropylene, 1-fixing (4mm), pack of 500	157716	I-400C20-CLT-001
5.	Cable cleat, 1-way, 14.2mm cable diameter, flame-retardant polypropylene, 1-fixing (4mm), pack of 500	157546	I-400C20-CLT-001
6.	Cable cleat, 1-way, 16.5mm cable diameter, flame-retardant polypropylene, 1-fixing (4mm), pack of 200	115789	I-400C20-CLT-001
7.	Cable cleat, 1-way, 18.2mm cable diameter, flame-retardant polypropylene, 1-fixing (4mm), pack of 500	115681	I-400C20-CLT-001
8.	Cable cleat, 1-way, 21.1mm cable diameter, flame-retardant polypropylene, 1-fixing (6mm), pack of 200	115746	I-400C20-CLT-001
9.	Cable cleat, 1-way, 24.8mm cable diameter, flame-retardant polypropylene, 4-fixings (6mm), pack of 200	157708	I-400C20-CLT-001
10.	Cable cleat, 2-way, 9.4mm cable diameter, polypropylene, 1-fixing (4mm), pack of 500	115800	I-400C20-CLT-002
11.	Cable cleat, 2-way, 13.5mm cable diameter, polypropylene, 1-fixing (6mm), pack of 500	995201	I-400C20-CLT-002
12.	Cable cleat, 2-way, 14.2mm cable diameter, polypropylene, 1-fixing (6mm), pack of 200	995202	I-400C20-CLT-002
13.	Cable cleat, 2-way, stacking pair, 6.35 – 12.0mm cable diameter, polypropylene, 1-fixing, (6.63mm), pack of 400 pairs	115738	I-400C20-CLT-003

14.	Cable cleat, 2-way, stacking pair, 11.1 – 19.1mm cable diameter, polypropylene, 1-fixing, (10mm), pack of 200 pairs	115703	I-400C20-CLT-003
15.	Cable cleat, 2-way, stacking spacer, 11.1 – 19.1mm cable diameter, polypropylene, 1-fixing, (10mm), pack of 200	115649	I-400C20-CLT-003
16.	Cable cleat, pole, 1-way, 36.0mm cable diameter, polypropylene, 2-fixings (8mm), radiused, pack of 100	115819	I-400C20-CLT-004
17.	Cable cleat, pole, 1-way, 41.5mm cable diameter, polypropylene, 2-fixings (8mm), radiused, pack of 100	115835	I-400C20-CLT-004
18.	Cable cleat, pole, 1-way, 53.5mm cable diameter, polypropylene, 2-fixings (8mm), radiused, pack of 50	115851	I-400C20-CLT-004
19.	Cable cleat, pole, 1-way, 61.6mm cable diameter, polypropylene, 2-fixings (11mm), radiused, pack of 50	115797	I-400C20-CLT-004
20.	Cable cleat, pole, 2-way, 13.2mm cable diameter, polypropylene, 2-fixings (4mm), radiused, pack of 200	115886	I-400C20-CLT-005
21.	Cable cleat, pole, 2-way, 16.5mm cable diameter, polypropylene, 2-fixings (4mm), radiused, pack of 200	115894	I-400C20-CLT-005
22.	Cable cleat, pole, 3-way, 13.2mm cable diameter, polypropylene, 2-fixings (6.35mm), radiused, pack of 200	115657	I-400C20-CLT-006
23.	Cable cleat, pole, 3-way, 16.5mm cable diameter, polypropylene, 2-fixings (6.35mm), radiused, pack of 200	115665	I-400C20-CLT-006
24.	Cable cleat, pole, 3-way, 21.7mm cable diameter, polypropylene, 2-fixings (6.35mm), radiused, pack of 200	115908	I-400C20-CLT-006
25.	Cable cleat, pole, triplex cable, 185mm <sup>2</sup> /300mm <sup>2</sup> , c/w pole fixing	115653	Not applicable
26.	Cable cleat, pole, triplex cable, 95mm <sup>2</sup> , c/w pole fixing	115651	Not applicable
27.	Cable cleat, pole/wall, stand-off, polypropylene, ABC, 2x35mm <sup>2</sup> /4x95mm <sup>2</sup> + 1x25mm <sup>2</sup> , c/w pole fixing	110647	Not applicable
28.	Cable cleat, wall, stand-off, polypropylene, ABC, 50x59x37	110650	Not applicable
29.	Cable cleat, wall, stand-off, polypropylene, ABC, 100x72x43	110651	Not applicable

30.	Cable cleat, wall, stand-off, polypropylene, ABC, 125x80x48	110652	Not applicable
31.	Clip, saddle, 31.7mm inside diameter, polypropylene, 2-fixings (5.0mm), pack of 200	116394	I-400C20-CLT-007
32.	Clip, saddle, 38.1mm inside diameter, polypropylene, 2-fixings (5.0mm), pack of 100	116335	I-400C20-CLT-007
33.	Clip, saddle, 42.0mm inside diameter, polypropylene, 2-fixings (5.0mm), pack of 200	116327	I-400C20-CLT-007
34.	Clip, saddle, 44.4mm inside diameter, polypropylene, 2-fixings (5.0mm), pack of 100	116343	I-400C20-CLT-007
35.	Clip, saddle, 53.9mm inside diameter, polypropylene, 2-fixings (5.0mm), pack of 100	116351	I-400C20-CLT-007
36.	Clip, zip tie, stand-off, ABC, 12mm 	261474	-
37.	Clip, zip tie, stand-off, ABC, 32mm (Looks like CC 261463 shown above.)	261465	-



CC NO	FIXING HOLE DIA A (mm)	CABLE DIA B (mm)
157694	3	9.0
157686	4	10.6
115622	4	11.7
157716	4	13.5
157546	4	14.2
115789	4	16.5
115681	4	18.2
115746	6	21.1
157708	6	24.8

TYPICAL CABLE CLEAT  
1 – WAY  
1 – FIXING

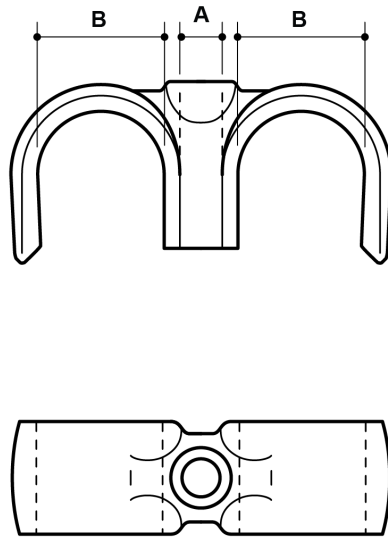
Change information for this issue  
N/A

Appears in  
ES400C20

**electricity  
north west**

I-400C20-CLT-001 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



CC NO	FIXING HOLE DIA A (mm)	CABLE DIA B (mm)
115800	4	9.4
995201	6	13.5
995202	6	14.2

TYPICAL CABLE CLEAT  
2 – WAY  
1 – FIXING

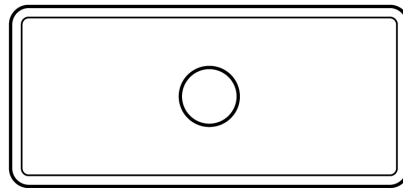
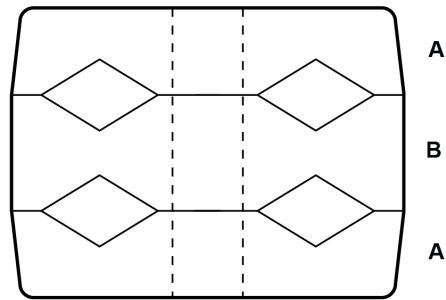
Change information for this issue  
N/A

Appears in  
ES400C20



I-400C20-CLT-002 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011

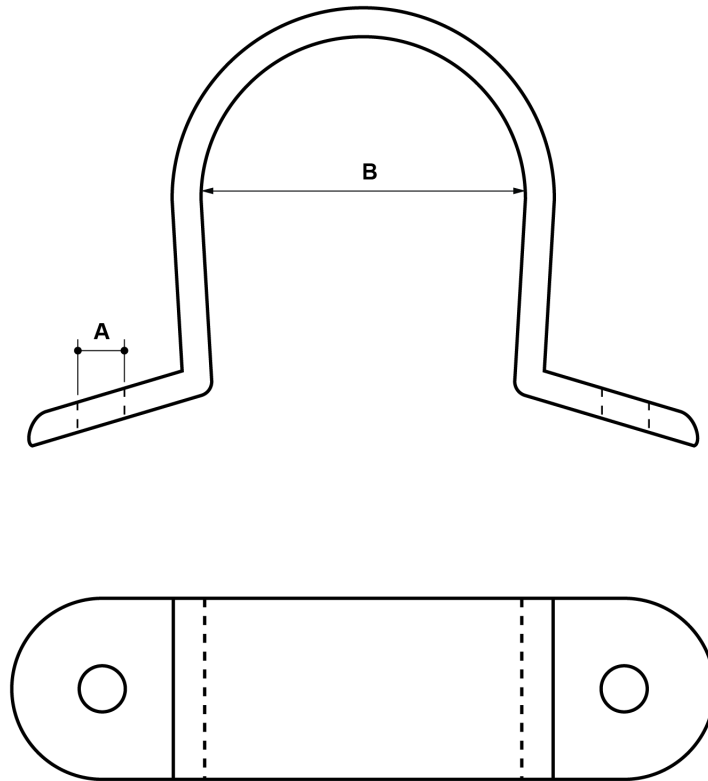


CC NO	TYPE	CABLE DIA RANGE (mm)	FIXING HOLE DIA (mm)
115738	STACKING PAIR <b>A</b>	6.35 - 12.0	6.63
115703	STACKING PAIR <b>A</b>	11.1 - 19.1	10
115649	STACKING SPACER <b>B</b>	11.1 - 19.1	10

TYPICAL CABLE CLEAT  
2 – WAY  
STACKING PAIR AND SPACER  
RANGE TAKING  
1 – FIXING

Change information for this issue  
N/A

Appears in  
ES400C20

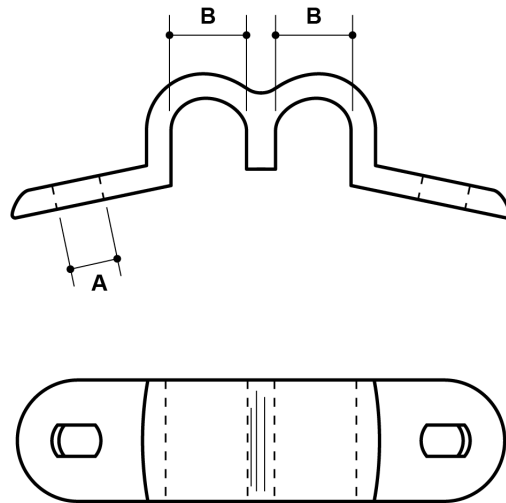


CC NO	FIXING HOLE DIA A (mm)	CABLE DIA B (mm)
115819	8	36.0
115835	8	41.5
115851	8	53.5
115797	11	61.6

TYPICAL CABLE CLEAT  
POLE, 1 – WAY  
2 – FIXINGS, RADIUSSED

Change information for this issue  
N/A

Appears in  
ES400C20



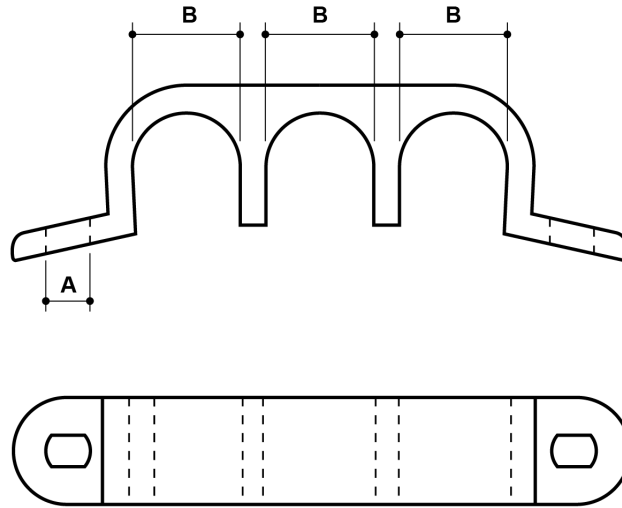
CC NO	FIXING HOLE DIA A (mm)	CABLE DIA B (mm)
115886	4	13.2
115894	4	16.5

TYPICAL CABLE CLEAT  
POLE, 2 – WAY  
2 – FIXINGS, RADIUSED

Change information for this issue  
N/A

Appears in  
ES400C20



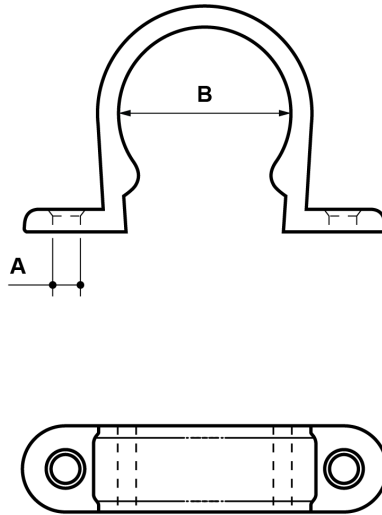


CC NO	FIXING HOLE DIA A (mm)	CABLE DIA B (mm)
115657	6.35	13.2
115665	6.35	16.5
115908	6.35	21.7

TYPICAL CABLE CLEAT  
POLE, 3 – WAY  
2 – FIXINGS, RADIUSED

Change information for this issue  
N/A

Appears in  
ES400C20



CC NO	FIXING HOLE DIA A (mm)	CABLE DIA B (mm)
116394	5	31.7
116335	5	38.1
116327	5	42.0
116343	5	44.4
116351	5	53.9

TYPICAL CLIP  
SADDLE  
2 – FIXINGS

Change information for this issue  
N/A

Appears in  
ES400C20

## Appendix B – Conformance Declaration

### SECTION-BY-SECTION CONFORMANCE WITH SPECIFICATION

The Tenderer shall declare conformance or otherwise for each product/service or range of products/services, section-by-section, using the following Conformance Declaration Codes.

#### Conformance Declaration Codes:

<b>N/A =</b>	Clause is not applicable/appropriate to the product/service.
<b>C1 =</b>	The product/service conforms fully with the requirements of this clause.
<b>C2 =</b>	The product/service conforms partially with the requirements of this clause.
<b>C3 =</b>	The product/service does not conform to the requirements of this clause.
<b>C4 =</b>	The product/service does not currently conform to the requirements of this clause, but the manufacturer proposes to modify and test the product in order to conform.

**Manufacturer:**

**Product/Service Description:**

**Product/Service Reference:**

**Name:**

**Company:**

**Signature:**

**SECTION-BY-SECTION CONFORMANCE**

Section	Section Topic	Conformance Declaration Code	Remarks * (must be completed if code is not C1)
4.1	Product not to be Changed		
4.2	Electricity North West Technical Approval		
4.3	Quality Assurance		
4.4	Formulation		
4.5	Identification Markings		
4.6	Minimum Life Expectancy		
4.7	Product Conformity		
4.8	Confirmation of Conformance		
5.1	Requirements for Type Tests at the Supplier's Premises		
5.2	Requirement for Routine Tests at the Supplier's Premises		
6	Constructional Requirements		

\* Applicable specifications shall be stated in the Remarks column where alternatives are quoted within a section. The Remarks column shall also be used to indicate cases where the products or services exceed the quoted specifications.

**Additional Notes:**