

Report No.: TN20-2932

Sample No.: CN20-3231

Page 1 of 4

Contract No.: ISTCW19-1350

## Test Report

Consigner Caledonian Cables Limited  
1/F, CMA Building, 64-66 Connaught Road Central, Hong Kong

Sample Name Copper-Aluminum Connecting Terminal

Type and Size 16mm<sup>2</sup>

Kind of test Commission test

Sample Received Date July 29th, 2020

Test Duration July 29th, 2020 – August 18th, 2020

Test Conclusion The mechanical test of the samples comply with the requirement of IEC61238-1-3: 2018, Class 1.

Authorized by  
Shanghai Intelligent Service and Technology Co., Ltd.

李骥 Li Ji



Issue date

2020-08-18

Testing Engineer: 贾欣 Jia Xin

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16mm <sup>2</sup>
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## 1 Sample Description

Manufacturer	Caledonian Cables Limited
Type and Size	16mm <sup>2</sup>
Quantity	3 sets
Marking	DTL-F-16mm <sup>2</sup>
Color	/
Source	Sent by the consigner
Status	Normal appearance

## 2 Testing and Verdict Standards

### 2.1 Testing Standards

IEC 61238-1-3: 2018 Compression and mechanical connectors for power cables —  
Part 1-3: Test methods and requirements for compression and mechanical  
connectors for power cables for rated voltages above 1kV ( $U_m=1.2kV$ ) up to  
30kV ( $U_m=36kV$ ) tested on non-insulated conductors

### 2.2 Verdict Standards

IEC 61238-1-3: 2018 Compression and mechanical connectors for power cables —  
Part 1-3: Test methods and requirements for compression and mechanical  
connectors for power cables for rated voltages above 1kV ( $U_m=1.2kV$ ) up to  
30kV ( $U_m=36kV$ ) tested on non-insulated conductors

## 3 Other Information

### 3.1 Illustration

The sample's name, type and manufacturer are provided by the consigner.

### 3.2 Symbol definition

Requirement: / not required by standard

Verdict: P complying with requirement/Pass  
F not complying with requirement/Fail  
N not required

**16mm<sup>2</sup>****4 Test Item****4.1 Mechanical test**

According to IEC 61238-1-3: 2018, clause 7.

Test method: IEC 61238-1-3: 2018, clause 7.2

Test parameters

Total tensile force: 640 N

Load rate:  $\leq 10$  N/(s·mm<sup>2</sup>)

Duration: 1 min

Test Item	Unit	Requirement	Test Result			Verdict
			1#	2#	3#	
- Slippage	mm	$\leq 3$	<3	<3	<3	P

16mm <sup>2</sup>
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**Appendix A: Conductor structure for the tests and installation information****Appendix A.1 Conductor structure**

Nominal section area	Material	Type	Outer diameter	The number of single wires	Structure
16mm <sup>2</sup>	Al	Compacted circle, stranded	Φ5.0	7	2 layers 1+6

**Appendix A.2 Parameters of the pressure clamp**

Terminal type & size	Clamp type	Working pressure	Stamper type & size	Diagonal line length	Shape of stamper
16mm <sup>2</sup>	PP230	230kN	L12	10mm	Hexagon confining pressure

**Appendix A.3 Distance between the compressions**

There are 1 compression in the center part of the terminal cylinder. The impression width is 26mm. The distance between the impression and the terminal cylinder end is 17mm.

- The End -