

**COMPLIANCE TESTING REPORT FOR  
AUSTRALIAN STANDARD AS/CA S008:2010  
INCLUDING AMENDMENT No 1/2014  
REQUIREMENTS FOR CUSTOMER CABLING PRODUCTS**

Client:	Siemens Limited
Address:	885 Mountain Highway, Bayswater, Victoria 3153, Australia
Report Number:	1128SIEDCS16_S008
Date of Testing:	14 November to 17 November 2017
File Number:	SIE171023
Product Name:	Elevator Cable
Brand Name	SIEMENS
Product Model No:	DCS16 (106188332)
Product Description:	4 (4x2x0.14) (CAT 6-7)
Result:	<b>Complies</b>
Compiled by:	Zhimou Qin Testing Engineer
Approved by:	Nina Rodoreda Lab supervisor
Date of Issue	28 November 2017

Results appearing herein relate only to the sample(s) tested.  
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**\* Refer to summary page for any conditions.**

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53 Latitude Blvd, Thomastown Victoria 3074 Australia. Ph: +613 9464 4016



**SUMMARY OF COMPLIANCE WITH AUSTRALIAN STANDARD  
 AS/CA S008:2010 (Including Amendment No 1/2014)**

The Elevator Cable, model number: DCS16 (106188332) was supplied for AS/CA S008:2010 testing by Siemens Limited of 885 Mountain Highway, Bayswater, Victoria 3153, Australia.

The Equipment Under Test (EUT) consisted of a length of Elevator Cable. The cable consisted of four sets of four twisted pair data elements, and two strain bearing members. Only the data elements were tested. Each data element pair was individually shielded with aluminium/PET foil. The entire data element was shielded with tinned copper braid. The conductors were stranded copper consisting of 7 strands of 0.16mm diameter copper. The conductors were insulated with Foam-Polyethylene (PE). The entire cable assembly was covered with PVC jacket. Please also refer to the photo in Appendix B and Product Specifications in Appendix C, at the rear of the report.

The EUT had the following sheath markings:  
 Siemens Australia (106188332)-DCS16-Flat PVC Cable-4(4x2x0.14-100)(CAT6-7) Steel Supports 0020M

The requirements for labelling cable and cable products are specified in the ACMA Telecommunications Cabling (Customer Equipment and Customer Cabling) Notice.

The Elevator Cable, model number: DCS16 (106188332) **COMPLIES** with the tested clauses of AS/CA S008:2010.

**SPECIAL CONDITIONS FOR COMPLIANCE:**

**The cable must comply with Clause 5.6.3 requirements for insulation and sheath materials.**

This cable is compliant for indoor use only.

**Possible Test Case Verdicts:**

- test case does not apply to the test object .....N(.A)
- test object does meet the requirements .....P(ass)
- test object does not meet the requirements .....F(ail)
- testing was not performed.....NT
- noted.....ND

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AS/CA S008:2010			
Clause	Requirement - Test	Result - Remark	Verdict
5.	REQUIREMENTS		P
5.1	GENERAL Cabling products shall be physically distinguishable from products used for distribution or connection of AC mains supply.		P
5.2	MARKINGS		P
5.2.1	Labelling Notice		ND
5.2.2	Inappropriate markings Cabling products intended solely for telecommunications use shall not bear markings indicating hazardous services.		P
5.2.3	Additional markings (excluding cable markings)		N
5.2.3.1	International protection (IP) rating		N
5.2.3.2	Multidiscipline telecommunications connecting hardware		N
5.3	UNDERGROUND CONDUIT		N
5.4	CABLE DISTRIBUTION DEVICES		N
5.5	OPTICAL FIBRE DISTRIBUTION DEVICES AND ENCLOSURES Optical fire distribution devices and splice enclosures shall comply with AS/NZS 2211.1		N

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AS/CA S008:2010			
Clause	Requirement - Test	Result - Remark	Verdict
5.6	CABLES		P
5.6.1	General A customer cable shall meet the requirements of Clauses 5.6.2 to 5.6.9 where specified in Clauses 5.6.10 to 5.6.18 of this Standard.		P
5.6.2	Conductor and optical fibre identification Shall use a system of identification such that all conductors, coaxial tubes or optical fibres within the cable are readily distinguishable visually from one another.	4 twisted pairs. Pairs are identified as: Blue, orange, green and brown. The matching mate in the twisted pair is white insulation.	P
5.6.3	Insulation and sheath material		NT
	(a) shall use insulation and sheath materials suitable for telecommunications purposes;	Foam-PE insulation PVC sheath	ND
	(b) Where PVC insulation or sheath materials are used, they shall comply with the requirements of Table 1 or 2, as applicable: and		NT
	Table 1 - PVC Insulation Requirements Tensile strength (unaged): 13 MPa Elongation (unaged): 100% Elongation (Aged): 50% of initial after 100C at 120h Volatile Loss: 20 g/m <sup>2</sup> after 80C aging for 120h Volume Resistivity: 400GΩ m at 23C, 0.4GΩ m at 60C		N
	Table 2 - PVC Sheath Requirements Tensile strength (unaged): 12 MPa Elongation (Unaged): 100% Elongation (Aged): 50% of initial after 100C at 120h Volatile Loss: 20 g/m <sup>2</sup> after 80C aging for 120h		NT
	(c) Where non-PVC insulation or sheath materials are used, they shall comply with the requirements of AS 1049 for-		NT
	(i) Tensile Strength Test (Aged/Unaged);		NT
	(ii) Elongation Test (Aged/Unaged); and		NT
	(iii) Shrinkback Tests for that particular type of insulation and sheath.		NT

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AS/CA S008:2010			
Clause	Requirement - Test	Result - Remark	Verdict
5.6.4	Flammability A cable that is required to comply with this Clause shall pass the combustion propagation test of Method 5.6 including Appendix A and B of AS 1660.5.6.	Refer to table in Appendix A.	P
5.6.5	UV resistance Requirements of AS 1049 for cables exposed to UV radiation.		N
5.6.6	Metallic conductors		P
5.6.6.1	Conductor composition Any metallic conductors, other than copper-clad steel used as an inner conductor in coaxial cable, or copper-clad aluminium with a centre conductor greater than 2mm used as an inner conductor in coaxial cable- (1) shall be either plain or plated copper; (2) may be either a single, solid conductor or multi-stranded; (3) the DC resistance shall be less than the values given in Table 3; and (4) the conductor finish should be plain or tinned	Requirement: 156.25 $\Omega$ /km max. Measured: 134.15 $\Omega$ /km All pairs measured and average calculated.	P
5.6.6.2	Electrical withstand voltage A multi-conductor cable that is required to comply with this Clause by any of Clauses 5.6.10 to 5.6.18 of this Standard, when tested at a frequency of 50 Hz on at least 1 m length; (a) shall be able to withstand the appropriate AC voltage levels and test method listed in Table 4, without breakdown for a period of 60 s or a period of 2 s as stated; and (b) for Test 2 and 3, all cables/cordages shall comply to the Table 4 limits using the test specified in AS/NZS 3191 Table 2.1, test number 8(a), and using test method referred in Clause 3.5.1 of AS/NZS 1660.3.		P
5.6.6.3	Mutual capacitance (a) The maximum mutual capacitance between the two wires forming a pair measured at any frequency in the range 800 Hz to 1000 Hz shall not exceed the relevant value given in table 5. (b) The measurement, referred to in Clause 5.6.6.3 (a) shall be performed on a minimum cable length of 100m (c) The mutual capacitance shall be corrected to a length of 1000m	Requirement: 120 nF/km max. Measured: 45.33 nF/km	P

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 TEST LABORATORY  
 CERT #2765.01

AS/CA S008:2010			
Clause	Requirement - Test	Result - Remark	Verdict
5.6.6.4	Capacitance unbalance (a) The maximum capacitance unbalance between pairs measured at any frequency in the range 800 Hz to 1000 Hz shall not exceed the relevant value given in Table 5. (b) During the measurement referred to in Clause 5.6.6.4 (a), all conductors, other than those under test and the metallic shield (where applicable) shall be connected to earth. (c) The measurement shall be performed on a minimum cable length of 100m. (d) The capacitance unbalance between two pairs of wires with one pair designated 'A' and 'B' and the second pair designated 'C' and 'D'. (e) The capacitance unbalance shall be corrected to a length of 500m.	Requirement: 300 pF per 500m max.  Measured: -44.35 pF per 500m	P
5.6.6.5	Insulation resistance (a) shall not be less than the relevant value given in Table 5; (b) the measurement shall be made on a minimum length of 100m of cable or cordage at a potential of 500Vd.c. $\pm$ 50Vd.c. and the reading taken after the application of the voltage for 60s; and (c) the insulation resistance shall be corrected to a length of 1000m.	Requirement: 1000 M $\Omega$ /km min Measured: > 1000 M $\Omega$ /km	P
5.6.7	Metallic shield (a) any shield provided in the cable shall be electrically continuous; and (b) Where a foil shield is employed, a drain wire shall be placed in continuous contact with the metallic surface of the shield.	Foil shield and Braid provided	P P P
5.6.8	Water penetration test Water Penetration specified in Clause 25, Method-F5B of IEC 60794-1-2.		N
5.6.9	Integral bearer or strengthener		N
5.6.10	Cable with specific attributes Where a cable is claimed to have specific attributes, such as rodent or termite resistance or armouring strength, evidentiary documentation shall be made available on request to support the claim.		N

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AS/CA S008:2010			
Clause	Requirement - Test	Result - Remark	Verdict
5.6.11	Metallic paired cable		P
5.6.11.1	General requirements Metallic paired cable, other than cordage, a cord or a special application cable, shall comply with the following Clauses: 5.6.2, 5.6.3, 5.6.4, 5.6.5, 5.6.6.1, 5.6.6.2, 5.6.6.3, 5.6.6.4, 5.6.6.5, 5.6.7, 5.6.8 and 5.6.9.		P
5.6.11.2	Construction A cable intended to carry a frequency of 300 Hz or greater shall be shielded or of twisted pair construction.		P
5.6.12	Cordage with metallic conductors		N
5.6.13	Cords with metallic conductors		N
5.6.14	Metallic jumper wire and jumper cable		N
5.6.15	Coaxial cable		N
5.6.16	Optical fibre cable		N
5.6.17	Blown fibre tube systems		N
5.6.18	Special application cables		N
5.7	CONNECTING HARDWARE, INCLUDING PLUGS AND SOCKETS OF ALL DESIGNS		N
5.8	CABLING PRODUCTS FOR UNDERGROUND AND AERIAL INSTALLATIONS		N

\*\*\*\* END OF REPORT BODY \*\*\*\*

**Appendix A – Additional Test Data**

**Appendix B – Photographic Record of Sample**

**Appendix C – Product Specifications provided by the client**

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### Appendix A – Additional Test Data

5.6.4		TABLE: Flammability Test								P
No	Object	Duration of application of flame (S)	Time object remained alight after removal of flame (S)	Time until ignition of tissue paper (S)	Time until ignition of particle board (S)	Ignition of tissue paper	Particle board scorching	Extent of burning upwards (mm)*	Extent of burning downwards (mm)*	Result
1	DCS16	120 sec	5 sec	NI	NI	NI	NI	200 mm	510 mm	Pass

\* Measured from lower edge of upper clamp. Start of burn was 475 mm from upper clamp. Limit for upward burn is > 50 mm and limit for downward burn is <540 mm from upper clamp (AS 1660.5.6).

LEGEND	
P	Pass
F	Does not comply
NA	Not applicable
NI	No ignition

**NOTE:**

**INDIVIDUAL ITEMS OF THIS TEST REPORT SHOULD NOT BE QUOTED IN ISOLATION AS PROOF OF PRODUCT ACCEPTABILITY NOR APPLIED TO DIRECTLY ASSESS PERFORMANCE UNDER CONDITIONS OTHER THAN AS ENVISAGED BY THE REFERENCE SPECIFICATION, E.G. INDIVIDUAL FIRE TESTS TO PROVE AN OVERALL ACCEPTABLE FIRE HAZARD LEVEL.**



### Appendix B – Photographic Record of Sample



Cable



Sheath marking

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## Appendix C – Product Specifications provided by the client



Difficult just got easy

We provide the industry with high-quality elevator cables, backed by decades of experience in the Australian market.

Our cables have been developed to provide optimum performance, maximum safety and extended life for applications requiring power and control.

Features include ease of installation for high levels of efficiency, and options for maintenance, service and modernisation.

For more information visit:  
[www.siemens.com.au/auto-cables](http://www.siemens.com.au/auto-cables)

### DCS16 CAT 7- PVC Flat Travelling Cable

- Compatible with all current cat 7 compliant connecting hardware
- Industry compatible construction and design
- Applications such as CCTV, swipe cards, security, card readers, telephone and display screens
- Capacity to provide application to multiple devices in one single cable
- Adheres to CAT 6 and CAT 7 wiring codes

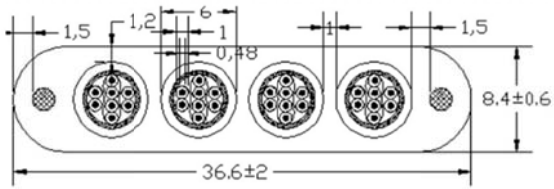
[www.siemens.com.au/auto-cables](http://www.siemens.com.au/auto-cables)

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**Appendix C – Product Specifications provided by the client**

Siemens Part Number	106188332	
Cable	DCS16	
Suspension Device	FCSD-3 100205441	

Flat cable suspension device to suit DCS16

<b>Specification</b>		DCS16 - 4 (4x2x0.14) + steel support	
<b>Standard reference</b>		EN 50214-2006, GB/T5023.6-2006, IEC /EN60227-6	
<b>Strain bearing member</b>		2x1.8mm steel rope	
<b>Data elements</b>	Type		Cat.7
	Quantity		4
	Conductor	mm <sup>2</sup>	0.14
	Loop resistance	Ω/km	Max 250 @20°C
	Insulation		Foam-PE
	Colour		Pair 1:white-blue, pair 2:white-orange Pair 3:white-green, pair 4:white-brown
	Shield		AL/PET foil around each pair, Tinned copper braid overall pairs.
	Mutual capacitance	nF/km	Nom. 43 @ 800 MHz
	Characteristic impedance	Ω	(100 ± 15) @ (1-100 MHz)
Velocity of propagation	%	approx. 79	
<b>Jacketing</b>	Material		PVC
<b>Jacketing Completed cable</b>	Normal thickness		See drawing
	Approximate weight	kg/km	415
<b>Completed cable</b>	Free suspension length	m	≤80
	Max. travelling height	m	≤150
	Max. travelling speed	m/s	≤6.3 (Acc. EN50214)
	Nominal diameter	mm	36.6 x8.4
	Min. Bending radius	mm	Static application 10x cable thickness
	Bending Test		Min 30000 bending cycles according to EN50214
	Test voltage		750V for data elements
	Operating temperature	°C	-20 to +70
Acceleration	m/s <sup>2</sup>	< 1.2	

 Melbourne Head Office  
 Sydney Office  
 Brisbane Office  
 Perth Office  
 Adelaide Office

 885 Mountain Highway, Bayswater, VIC 3153, Australia  
 160 Herring Road, Macquarie Park, NSW 2113, Australia  
 Citylink Business Centre, 153 Campbell Street, Bowen Hills, QLD 4006, Australia  
 185 Great Eastern Hwy, Belmont, WA 6104, Australia  
 27 Greenhill Road, Wayville SA 5034, Australia

 National Contact Number  
 Cables: 131 773 (opt 1)

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