

Uppgjord (även faktaansvarig om annan) - Prepared (also subject responsible if other)		Nr - No.		1301-TEL 301 6005/004 Uen	
ECA/I/TK ECAHN		Datum - Date		Rev	File
Dokansv/Godk - Doc respons/Approved		2001-10-26		A	=/LZB 101 01/10B
ECA/I/TKC (Mattias Andersson)		Kontr - Checked			

COMMUNICATIONS CABLE

1 GENERAL

1.1 PRODUCT IDENTIFICATION

Ericsson product code: *TEL 301 6005/004.*

1.2 FIELD OF APPLICATION

100Ω symmetrical pair cable specified to 100 MHz.
The cable is halogen-free and intended for outdoor use.

1.3 SAFETY REQUIREMENTS

The following requirement(s) must be fulfilled:

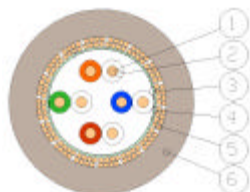
- UL-listed.
- Flammability class VW-1.

1.4 PRODUCT CHANGES

Product changes must not be introduced without previous confirmation by the subject responsible.

2 MATERIALS

Pos	Description	Material
1	Conductor	Tinned and annealed solid copper wire.
2	Insulation	PE solid colours according to clause 6.
3	Wrapping	Plastic foil.
4	HF-screen	Al-plastic-Al foil .
5	LF-screen	Tinned copper braid.
6	Sheath	TPU Halogen-free, colour black.



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DIMENSIONS AND MECHANICAL PROPERTIES

Purchase code TEL3016005/004	Test method	Clause	Limit value
Number of pairs			4
Diameter of conductor 26 AWG			Nom 0.4 mm (0.016 inch)
Diameter of insulation	IEC 60189-1	2.2.3	Nom 0.80 mm (0.031 inch)
Stripping force of insulation	IEC 60189-1	3.4.2	5 to 10 N
Diameter of single braid wire			Nom 0.15 mm (0.006 inch)
Coverage of braid	IEC 60096-0-1		Min 60 %
Wall thickness of sheath	IEC 60189-1	2.2.1	Nom 0.8 mm (0.031 inch)
Outer diameter of sheath			5.5±0.5 mm (0.216 inch)
Net weight			Nom 42 kg/km
Bending radius			Min 22 mm (0.866 inch)
Pulling force			Max 50 N

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ELECTRICAL CHARACTERISTICS

Characteristic	Test method	Clause	Limit value
Characteristic Impedance (Zc) 1-100 MHz	IEC 61156-1	3.3.6	100 ± 10 Ω
Transfer impedance (Zt) at 100 MHz	IEC 61196-1	12.1	Max 20 mΩ/m
Attenuation			
1 MHz	IEC 61156-1	3.3.2	Max 3.2 dB/100m
4 MHz	IEC 61156-1	3.3.2	Max 6.5 dB/100m
10 MHz	IEC 61156-1	3.3.2	Max 10 dB/100m
16 MHz	IEC 61156-1	3.3.2	Max 13 dB/100m
31.2 MHz	IEC 61156-1	3.3.2	Max 17 dB/100m
62.5 MHz	IEC 61156-1	3.3.2	Max 23 dB/100m
100 MHz	IEC 61156-1	3.3.2	Max 30 dB/100m
Near end crosstalk			
1 MHz	IEC 61156-1	3.3.4	Min 62 dB
4 MHz	IEC 61156-1	3.3.4	Min 53 dB
10 MHz	IEC 61156-1	3.3.4	Min 47 dB
16 MHz	IEC 61156-1	3.3.4	Min 44 dB
31.2 MHz	IEC 61156-1	3.3.4	Min 40 dB
62.5 MHz	IEC 61156-1	3.3.4	Min 35 dB
100 MHz	IEC 61156-1	3.3.4	Min 32 dB
Differential delay skew	U.C	U.C	U.C
Delay skew	U.C	U.C	U.C
Propagation delay	IEC 61156-1	3.3.1	Min 4.75 ns/m Max 5.05 ns/m
Mutual capacitance	IEC 60189-1	5.4	Nom 53 nF/km
Capacitance unbal. pair-pair.	IEC 60189-1	5.5	Max 150 pF/500 m
Capacitance earth unbalance.	IEC 60189-1	5.5	Max 1600 pF/km
DC resistance conductor	IEC 60189-1	5.1	Max 153 Ω/km
Resistance unbalance conductor	IEC 60708-1	24	Max 4 %
DC resistance screen	IEC 60189-1	5.1	Max 15 mΩ/m
Dielectric strength cond-cond.	IEC 60189-1	5.2	Min 2.5 kV DC 2 sec
cond-shield.	IEC 60189-1	5.2	Min 2.5 kV DC 2 sec
Insulation resistance	IEC 60189-1	5.3	Min 5000 MΩkm
Operating voltage			Max 100 V

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ENVIROMENTAL PROPERTIES

Object	Characteristic	Test method	Clause	Limit value
Finished cable	Temperature range			-20 to +75 °C.
	Resistance to flame propagation	UL 1581-1080		VW-1

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6 COLOURS OF INSULATION ACCORDING TO IEC 60189-2

Colours shall be readily identifiable and correspond reasonably with the standard colours shown in IEC Publication 60304.

Pair no	Colours in pairs	
	A-core	B-core
1	White	Blue
2	White	Orange
3	White	Green
4	White	Brown

7 SHEATH MARKING

7.1 The completed cable shall have the following text along the outside of the sheath twice per metre if not otherwise is stated below the table:

<p>ERICSSON NETWORK TECHNOLOGIES XXXX YYWW TEL 301 6005/004 (UL) 4 PR 26 AWG VW-1 Max75°C Max100V LLLLL M</p>
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- XXXX = Identification code.
- YYWW = Year and week of manufacture, e.g. 0003. once per metre.
- LLLLL = Sequential length markers once per metre, continuous length marking is allowed.

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8 REFERENCE STANDARDS

This specification is based on the following standards.

8.1 ERICSSON DOCUMENTS.

8.1.1 ECA 105 49-001: Communications Cable.

8.2 IEC PUBLICATIONS.

8.2.1 60096: Radio-frequency cables

8.2.2 60189: Low-frequency cables and wires with PVC Insulation and PVC Sheath. - Part 1: General Test and Measuring Methods. - Part 2: Cables in Pairs, Triples, Quads and Quintuples for inside installations.

8.2.3 60304: Standard colours for insulation for low-frequency cables and wires

8.2.4 60708: Low-frequency cables with polyolefin insulation and moisture barrier polyolefin sheath - Part 1: General design details and requirements.

8.2.5 61156: Multicore and symmetrical pair/quad cables for digital communications.

8.2.6 61196: Radio-frequency cables

8.3 UL STANDARDS.

8.3.1 1581: Reference Standard for Electrical Wires, Cables, and Flexible Cords