



SPECIFICATION CONTROL DRAWING

TECC0018C7-XL

Issue 2
14-Apr-21
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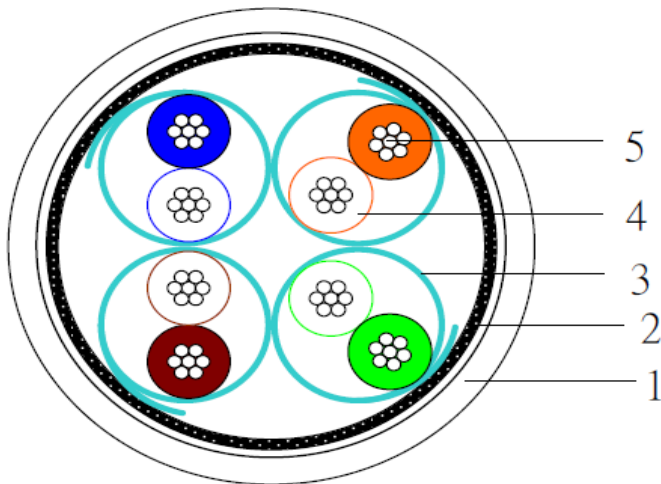
COMMUNICATION CABLE - FOUR PAIR 26AWG S/FTP CAT7 LSZH - EM104 RADIATION CROSS-LINKED

The complete requirements for procuring the wire described herein shall consist of this document and the issue in effect of the referenced specifications. This document takes precedence over documents referenced herein.

PRODUCT DETAILS

DESCRIPTION	PHYSICAL CHARACTERISTICS	
Application: 100Base-T4, 100Base-TX, 100VG-AnyLAN, 1000Base-T, 1000Base-TX 155Mbps ATM, 622Mbps ATM, 10 Gb Ethernet	Structure	Construction S/FTP Number of Pairs 4 Pairs
Rated temperature: 80°C	Conductor	AWG 26 AWG Conductor material Stranded Tinned Copper Conductor dimension(mm) (7/0.155) ± 0.02mm
Reference Standard: 61156-6, ISO/IEC 11801	Insulation	Insulation material Foam PE Insulation dimension(mm) 0.99 ± 0.05 mm Nom. Thickness (mm) 0.28 mm
Flammability Rating: IEC 60332-3-25 & IEC 60332-1-2	Cabling	Twisting lay length ≤ 30 mm Cabling lay length ≤ 200 mm
Stranded Tinned Copper Conductor	Filler	Material N/A
Colour-coded PE Insulation	Wrap	Material Optional
XL-LSZH Jacket	Shield	Individual shield & material AL-Foil Primary overall shield & material Tinned Copper Wire Shield nom. Coverage 35% Min. Drainwire N/A
Packaging: Per customer request	Outer Jacket	Outer Jacket material XL-LSZH Outer Jacket Thickness (mm) 0.80 mm Nom Overall Nom Dimension (mm) 7.2 ± 0.3mm Outer Jacket Rip cord N/A Outer Jacket Colour Per Customer Request

CROSS SECTION



1	Jacket
2	Braid
3	AL-Foil
4	Insulation
5	Conductor
5	Tape

MECHANICAL CHARACTERISTICS

Outer Jacket	Operating Temp Range Bulk Cable weight Max. recommended pulling tension Min. bend radius (Install) Tensile Strength Elongation Ageing Condition After Ageing Tensile Strength After Ageing Elongation Cold Bend	-40°C to +80°C 54 kg/km 80 N 8 x O.D. ≥ 10 Mpa ≥ 125% 120°C x 240hrs ± 30% of Unaging ± 30% of Unaging No cracks -40°C/4hrs
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ELECTRICAL CHARACTERISTICS

Finished Cable	Nom. mutual capacitance Pair-ground capacitance unbalance Nominal velocity of propagation Max. delay skew Max. Conductor DC resistance Max. Conductor resistance unbalance Min. insulation resistance Max. operating voltage - UL	≤ 5.6 nF/100m (@1kHz) ≤ 160 pF/100m 65% 25 ns/100m 145 Ω/km (@ 20°C) 2% 5000 MΩ·km 300 V
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"TE CONNECTIVITY - TECC0018C7-XL - 4PR 24AWG S/FTP CAT 7 CABLE EM104 - YEAR OF MANUFACTURE - BATCH NUMBER - METRE MARK"

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TE Connectivity is a trading name of Tyco Electronics UK Ltd, Which is registered in England and Wales, number 550926. Registered office: Faraday Road, Dorcan, Swindon, SN3 5HH Website: www.te.com

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ELECTRICAL CHARACTERISTICS CONTINUED

Frequency	Impedance Upper Limit	Impedance Lower Limit	ATT	RL	NEXT	PS NEXT	FEXT	PD
(MHz)	Zu (Ω)	Zl (Ω)	(Db/100m)	(dB Min)	(dB Min)	(dB Min)	(dB Min)	(ns/100m Max)
1	-	-	3.0	23.0	78.0	75.0	70.0	570.0
4	115.2	86.8	5.6	23.0	78.0	75.0	70.0	552.0
8	112.6	88.8	7.9	24.5	78.0	75.0	70.0	546.7
10	111.9	89.4	8.8	25.0	78.0	75.0	70.0	545.4
16	111.9	89.4	11.1	25.0	78.0	75.0	70.0	543.0
20	111.9	89.4	12.4	25.0	78.0	75.0	70.0	542.0
25	113.2	88.3	13.9	24.2	78.0	75.0	70.0	541.2
31.25	114.6	87.2	15.6	23.3	78.0	75.0	70.0	540.4
62.5	120.2	83.2	22.3	20.7	75.5	72.5	70.0	538.6
100	125.3	79.8	28.5	19.0	72.4	69.4	70.0	537.6
200	135.7	73.7	41.2	16.4	67.9	64.9	70.0	536.5
250	140.0	71.4	46.5	15.6	66.4	63.4	70.0	536.3
300	139.8	71.5	51.3	15.6	65.2	62.2	70.0	536.1
600	139.8	71.5	75.1	15.6	60.7	57.7	70.0	535.5

Remark : Cable that meet the requirements of the template are not required to be measured for return loss; alternately cables that meet the return loss requirements are not required to be measured for characteristic impedance.
If FEXT loss is greater than 70dB, ACR-F loss may not be measured.

Mechanical performance Requirements for the tests for outer jacket.

Test	Type of compound		test method
Hot set test	(200±3) °C/15Min/20N/cm ²	elongation under load ≤100% elongation after unloading ≤25%	EN 60811-2-1 9
Ozone resistance			
Method A	(0.025-0.03%)(25±2)°C/24h	No Crack	EN50305 7.4.2
Method B	(0.00015-0.00025%)(40±2)°C	No Crack	
Mineral oil resistance	IRM902/(100±2)°C/72h	Tensile strength Variation ≤±30%. Elongation at break Variation ≤±40%.	EN 60811-2-1 10
Fuel resistance	IRM903/(70±2)°C/168h	Tensile strength Variation ≤±30%. Elongation at break Variation ≤±40%.	
Acid resistance	N oxalic acid solution/(23±2) °C/168h	Tensile strength Variation ≤±30%. Elongation at break Variation ≥100%.	
alkaline resistance	N-sodium-hydroxide solution/(23±2)°C/168h	Tensile strength Variation ≤±30%. Elongation at break Variation ≥100%.	
Hot pressure	(125 ± 2)°C/4h,	tear strength ≤50%	EN 60811--1-3 9.2
Cold bend	- (40 ± 2) °C,8D	No Crack	EN 60811-1-4 8.1
Impact test	- (25±2) °C	No Crack	EN 50305 5.1
Assessment of halogens	HCl and HBr	≤0.5%	EN50267-2-1
	HF	≤0.1%	EN 60684-2
	pH	≥4.3	EN50267-2-2
	Conductivity	≤10μS/mm	
Reaction to fire	Single vertical flame	IEC 60332-1-2	IEC 60332-1-2
	Bunched cable flame	IEC 60332-3-25	IEC 60332-3-25
	Smoke emission	>=70%	EN 61034-2
	Toxicity index	ITC ≤=3	EN 50305 9.2
Water absorp	70±2°Cx168hrs	Weight increase ≤=15mg/cm ²	EN 60811-1-3

Approval Electronic sign off - no signatures will appear.

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