

Light weight star quad inflight KL24 (F4704-19 KL24)

Cables specification: EN3375-011



Cable, Electrical for digital data transmission Designed for aerospace and other applications requiring intended for high speed (100 Mbit/s) full duplex Ethernet networks.



Cable characteristics



-65 +125°C



Excellent



FAR25_ ABD0031

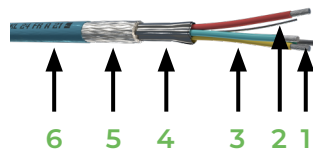
Environmental

- Operating temperature: -65°C to 125°C (ambient temperature + current heating)
- Resistant to Aircraft fluids (oils, hydrocarbons, kerosene, skydrols...), Chemical agents

Electrical

- Characteristic Impedance Zc RMS: $100 \pm 15 \Omega$ [1-100 MHz] at 20°C
- Velocity of propagation > 0,70 C
- Maximum capacity unbalance pair to ground: 330 pF max/100 m (1 pf max/ft)

Cable design



1. Stranded conductor: Silver plated copper
2. Fluoropolymer Filler
3. Insulation: Fluoropolymer
4. PET/ALU tape
5. Silver plated copper Braid
6. Fluoropolymer

Identification

- Core color:
 - Pair n°1: Core 1-R Red (Tx +)
 - Pair n°2: Core 2-Y Yellow (Rx +)
 - Core 1-B Blue (Tx -)
 - Core 2-G Green (Rx -)
- Cable color: Light blue, UV laser markable

Marking

EN KL 24 FRA xx ■ A-B xx- Manufacturing Year
1 2 3 4 5 A-B: extremity code

e.g. EN KL 24 FRA 23 ■ A-B

Specifications

Cable Specifications

EN 3375-011

Technical Specification

EN 3375-001

Compliant to ABD0031

Flammability, Smoke and Toxicity requirements and 14 CFR FAR25-1713

Transmission parameters

Frequency In MHz	Attenuation at 20°C Maximal value in dB/100m dB/100ft	Unbalance attenuation LCL Minimal value in dB	Near end crosstalk (next) Minimal value in dB/100m
1	2.1 0.65	$30-10\log(F/100)$ Calculations that result in LCL values greater than 40 dB can be revert to a requirement of 40 dB mini	68
4	4.4 1.35		59
10	6.9 2.1		53
16	8.8 2.7		50
20	9.9 3.0		48
31.25	12.5 3.8		46
62.5	18.0 5.5		41
100	23.3 7.1		38

LCTL (Min.)

$0,1 < F < 1 \text{ MHz} = 40 \text{ dB}$

$1 < F < 10 \text{ MHz} = 40 - 10 \log(F)$

$10 < F < 100 \text{ MHz} = 30 \text{ dB}$

SRL (Min.)

$1 < F < 10 \text{ MHz} = 20 + 5 \log(F)$

$10 < F < 20 \text{ MHz} = 25 \text{ dB}$

$20 < F < 100 \text{ MHz} = 25 - 7 \log(F/20) \text{ in dB}$

Transfer Impedance (Max.)

0.01MHz to 5 MHz = $2.0 \cdot 10^{-2} \Omega/\text{m}$	(0.61 $\Omega/100\text{ft}$)
at 10 MHz = $3.0 \cdot 10^{-2} \Omega/\text{m}$	(0.92 $\Omega/100\text{ft}$)
at 20 MHz = $4.5 \cdot 10^{-2} \Omega/\text{m}$	(1.37 $\Omega/100\text{ft}$)
at 50 MHz = $10 \cdot 10^{-2} \Omega/\text{m}$	(3.05 $\Omega/100\text{ft}$)
at 100 MHz = $40 \cdot 10^{-2} \Omega/\text{m}$	(12.2 $\Omega/100\text{ft}$)

Dimensional

Conductor diameter				Loop resistance max. at 20°C		Insulation diameter max.		Braided strand diameter		Cable outer diameter				Weight max.	
min.		max.						nominal		min.		max.			
mm	inch	mm	inch	Ω/km	$\Omega/1000\text{ft}$	mm	inch	mm	inch	mm	inch	mm	inch	kg/km	Lbs/1000ft
0.598	0.0235	0.656	0.02583	192	58.5	1.52	0.0598	0.08	0.0031	4.1	0.1614	4.5	0.1771	32.4	21.772

Bending radius

Permissible bend radius	AWG24
Static (installed) use	22.5 mm minimum 0.886 inch minimum
Dynamic use	45 mm minimum 1.771 inch minimum



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Head Office

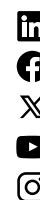
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