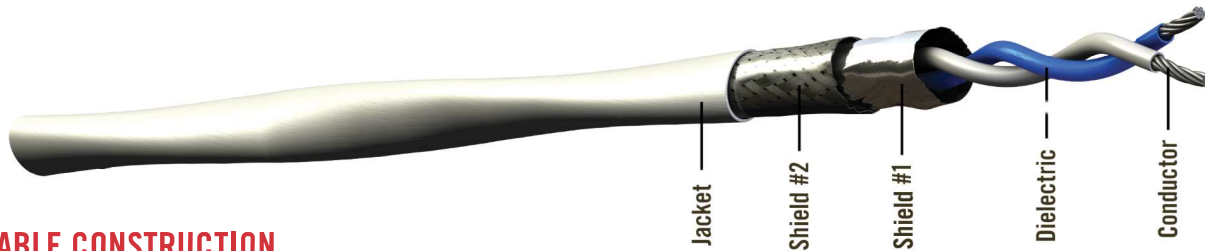


E1G4222



CABLE CONSTRUCTION

Conductors: Silver-Plated Copper

Dielectric: FEP

Shield #1: Aluminum/Polyester Foil

Shield #2: Silver-Plated Copper Braid

Jacket: ETFE, White (Laser Markable)

COLOR CODES

Pair #1: White/Blue

The E1G4222 is a 1000Base-T1 Single Pair Ethernet cable engineered specifically for aerospace applications. Featuring a shielded 22 AWG twisted pair, it ensures superior signal integrity and supports run lengths up to 40 meters with four in-line connectors, meeting IEEE 802.3bp, Type B standards. The stranded conductors are designed to withstand vibration and flexing, while the dual shielding construction offers excellent protection across a wide range of frequencies. The compact, lightweight single-pair design significantly reduces space and weight requirements, offering a clear advantage over traditional 1000Base-T four-pair Ethernet cables.

PHYSICAL DATA

Conductor:	22 AWG Stranded SPC
Shield Coverage:	100% (Foil), 90% (Braid)
Operating Temperature:	-55 to +200°C
Outer Diameter: in (mm)	0.183 (4.65)
Minimum Bend Radius: in (mm)	0.92 (23.37)
Weight: lbs/100 ft (kg/100 m)	2.3 (3.4)

ELECTRICAL DATA

Impedance:	100 ohms
Capacitance: pF/ft (m)	13.0 (42.6)
Velocity of Propagation:	80%
Dielectric Voltage Rating: (kV, RMS)	0.9
DC Resistance: ohms/1000 ft (m)	17.5 (57.4)
Max Distance*: ft (m)	139.8 (42.6)

ENVIRONMENTAL DATA

Skydrol Resistant:	YES, SAE AS4373E, Method 601
RoHS Compliant:	YES, RoHS Directive 2015/863
Flame / Smoke Requirements:	FAR Part 25.869 (a) App. F, Part 1, (a)(3)
Berry Specialty Metals Compliance:	Complies with DFARS 252.225-7014, Alt 1

ATTENUATION DATA

Frequency	Nom / Max dB/100 ft	Nom / Max (dB/100 m)
@100 MHz	5.8/6.1	(19.0/20.0)
@250 MHz	9.1/9.6	(29.9/31.5)
@500 MHz	12.8/13.5	(42.0/44.3)
@600 MHz	14.0/14.7	(45.9/48.2)

* Maximum distance assumes no in-linebreaks.

All values nominal, unless otherwise noted

E1G4222 SINGLE PAIR ETHERNET CABLE

QUALIFICATION TEST RESULTS

Requirement	Requirement Description	Result
802.3-2022 97.6.2.1	Insertion Loss	Pass
802.3-2022 97.6.2.3	Return Loss	Pass
802.3-2022 97.6.2.4	Delay Constraints	Pass
802.3-2022 97.6.2.5	Coupling Attenuation	*
802.3-2022 97.6.4.2	Power Sum Alien Near-End Crosstalk	*
802.3-2022 97.6.4.4	Power Sum Attenuation to Crosstalk Ratio Far-End	*

*Tests are connector dependent. For optimal results; it is recommended that the cable be terminated with IEC series connectors