24AWG 2 Pair Industrial Ethernet Cable

Cat 5e. CM. CMX. AWM Style 2463. 75°C. Sunlight Resistance. Outdoor Rated. RoHS-2



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 24AWG, stranded, tinned copper per ASTM B33 and B174
2. **Insulation:** High Density Polyethylene (HDPE)
3. **Pairs:** Color coded singles twisted into pairs
4. **Color Code:** 1PR - White/Green, Green; 2PR - White/Orange, Orange
5. **Assembly:** Twisted pairs cabled together with filler and wrapped with clear polyester tape to form a round cable
6. **Jacket:** Teal, Thermoplastic Elastomer (TPE)

APPLICATIONS AND FEATURES:

Unshielded Ethernet Cat 5e cable designed for the harsh industrial environment and suitable for continuous flexing cable track and torsion applications. For use for wiring network interconnections. Industrial strength jacket provides excellent resistance to low temperatures (-40°C), common oils and chemicals, flame, UV and weather exposure.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B174 Standard Specification for Bunch-Stranded Copper
- UL 758 Standard for Appliance Wiring Material Style 2463 (80C, 600V)
- UL 2250 Instrumentation Tray Cable
- CSA C22.2 No.214 Communications cables
- RoHS-2 (European Directive 2011/65/EU)
- CE/RoHS-2 – The CE Marking has been applied solely to express the conformance to the material restrictions identified in the RoHS-2 (2011/65/EU) Directive

SAMPLE PRINT LEGEND:

Southwire Industrial Ethernet Cat 5e Flexing 2 PR 24AWG U/UTP P/N XXXXX EXXXXXX C(UL)US TYPE CMX OUTDOOR - CM SUN RES 75C OR AWM 2463 80C 600V -- CE RoHS-2 -- (Lot Designator) (Sequential Footage) Made in USA

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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Number of Pairs	Cond. Strands	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	DC Resistance @ 25°C	Max Plug to Plug Transmission Distance + POE
	AWG/ Kcmil	pair	strand	mil	mil	inch	lb/1000ft	Ω/1000ft	meter
648565	24	2	7	8	32	0.240	21.9	14	85

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

ELECTRICAL CHARACTERISTICS (For 100m of Cable)

Mutual Capacitance:	13.5 PF/FT at 1 MHz	
Dielectric Withstanding:	2000V RMS	
Impedance:	100 ± 15 Ω 1-100 MHz	
SRL:	23dB 1 - 20 MHz	23 - 10LOG(f/20)dB 20 - 100 MHz
Return Loss:	1 ≤ f < 10 MHz 10 ≤ f < 20MHz 20 ≤ f ≤ 100MHz	20 + 5 LOG(f) dB MIN* 25 dB MIN 25 - 8.6LOG(f/20) dB MIN
NEXT:	1 ≤ f ≤ 100MHz	67 -15 LOG(f/.772) MIN
ELFEXT:	1 ≤ f ≤ 100MHz	66 -20 LOG(f/.772) MIN
Insertion Loss:	1 ≤ f ≤ 100MHz	1.2[1.967 SQRT(f) + 0.023(f) + 0.050/SQRT(f)] dB MAX
Delay:	1 ≤ f ≤ 100MHz	534 + 36/SQRT(F) ns MAX
Delay Skew:	1 ≤ f ≤ 100MHz	<25 ns
TCL:	1 ≤ f ≤ 100MHz	≥ 30 - 10LOG(f/100) dB; 40 dB Max
ELTCTL:	1 ≤ f ≤ 30MHz	≥ 35 - 20LOG(f/100) dB

Note: All testing is conducted off the reel

PERFORMANCE CHARACTERISTICS

Flex Life:	(126 cycles/minute @ 20°C)	1 million cycle test (10x Cable OD, minimum radius) 10 million cycle test (20x Cable OD, minimum radius)
Torsion Test:	(1lb load, 360°, 71 Cycles/min @ 20°C)	3 million cycle test