

2x2x22AWG Industrial Ethernet Cable Profinet

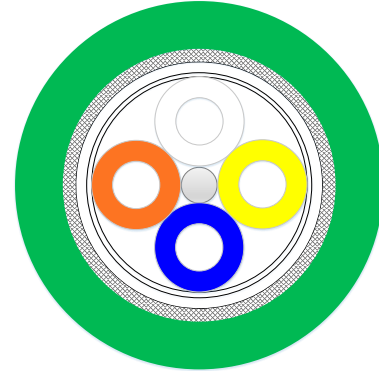
Profinet Type A, For Fixed Installation

Solid Bare Copper Wires



PRODUCT DATA SHEET

Profinet Type A Category 5e Solid Conductor SF/UTP Copper Cable provides reliability and high performance as an integral component of the end to end solution for industrial PROFINET based communications networks. Category 5e rated cable is suitable for transmission of high performance 10BASE-T, 100BASE-T and 1000BASE-T uplinks featuring up to gigabit data transmission from the control panel to the consolidation point.



CONSTRUCTION

Conductor	Solid bare copper
Conductor Size	22AWG
Insulation Material	High Density Polyethylene
Core Diameter	Nom.1.5mm
Filler in the center (optional)	Solid PE bar
Stranding	4 cores twisted in star quad construction
Wrapping	Plastic tape (overlapping)
Inner Sheath Material (optional)	Polyvinyl Chloride, natural
Inner Diameter	Nom. 4.0mm
Screen	Aluminium foil (overlapping)
Braid	Tinned copper wire, coverage min 80%
Outer Sheath Material	Polyvinyl Chloride
Outer Diameter	6.5±0.3mm
Outer Sheath Color	Matt Green (Similar RAL 6018)

Print Legend

ASCENT E478021 ** (UL) CM 2x2x22AWG INDUSTRIAL ETHERNET CABLE
PROFINET TYPE A CAT5E 75°C CE XXXXXM

Note: "***" is factory code

MECHANICAL & PHYSICAL PROPERTIES

Operating Temperature (°C) -40°C to +80°C (Fixed installation)
-20°C to +75°C (Flexing)

Flame Retardant IEC 60332-1-2

Min. Bending Radius Fixed 10 x OD
Flexing 15 x OD

Certification E478021 UL CM 75°C acc. to UL 444

Reference Standard TIA-568.2-D, ISO/IEC 11801

RoHS Compliant

CE Compliant

COLOR CODE

Pair 1: White, Blue

Pair 2: Yellow, Orange

ELECTRICAL PROPERTIES

Peak Operating Voltage	100V (not for power purposes)
Dielectric Strength	Cond. to Cond. 2000V Cond. to Screen 2000V
Conductor Resistance@20°C	62 Ω/km Max.
Insulation Resistance@20°C	5000 MΩ.km Min.
Characteristic Impedance	100±15 Ω (1~100MHz)
Propagation Delay	555 ns/100m Max.
Delay Skew	20 ns/100m Max.
Velocity of Propagation	67%

TRANSMISSION PERFORMANCE

FLUKE PROFINET CHANNEL CAT5E 100M TEST

Freq.	ATT	RL	NEXT	PSNEXT	ELFEXT	PSELFEXT
MHz	Max.	Min.	Min.	Min.	Min.	Min.
	dB	dB	dB	dB	dB	dB
4	4.5	17.0	53.5	50.5	45.4	42.4
8	6.3	17.0	48.6	45.6	39.3	36.3
10	7.1	17.0	47.0	44.0	37.4	34.4
16	9.1	17.0	43.6	40.6	33.3	30.3
20	10.2	17.0	42.0	39.0	31.4	28.4
25	11.4	16.0	40.3	37.3	29.4	26.4
31.25	12.9	15.1	38.7	35.7	27.5	24.5
62.5	18.6	12.1	33.6	30.6	21.5	18.5
100	24.0	10.0	30.1	27.1	17.4	14.4

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Design Number	10814
Part Number	32181094
Revision History	
00	2023/07/07 Initial Release
Created L. Jian	Approved A. Huang

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