

# Berk-Tek LANmark-A921 Cat 5e Solid CMR-CMX Outdoor PVC



Berk-Tek LANmark Industrial Light-Duty (LD) Ethernet Cables enable the expansion and integration of Ethernet into the Industrial environment. With over 50 years of manufacturing expertise, you can be sure these Industrial Cables will perform both mechanically and electrically. With its industrial PVC jacket, cold-bend performance, and resistance to sunlight and oil, this cable is suitable for light to medium duty, static, industrial applications. This Cat 5e compliant product offers best-in-class electrical performance. It is rated CMR and CMX Outdoor, so it easily transitions from indoor to outdoor environments. It is also suitable for cable tray installations.

## DESCRIPTION

### Construction

23 AWG solid bare copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair, Four such pairs and a cross filler form the basic unit, enclosed by polypropylene tape contained within an industrial PVC jacket.

### Related Standards

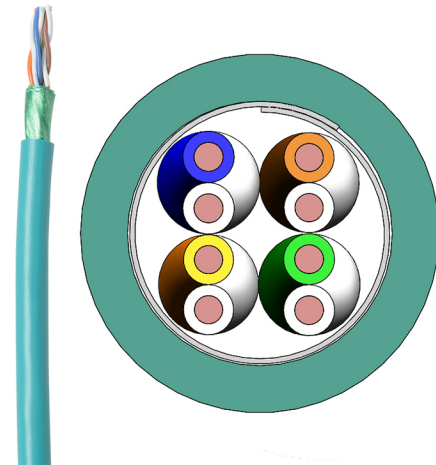
Low Voltage - EU Directive 2014/35/EU, CE Approved

RoHS - EU Directive 2011/65/EU

PoE+ - Type 2 (802.3at)

Ratings		
Description	Method	
Listed Type	UL1666	CMR
Listed Type	UL444	CMX Outdoor
Oil Resistance	UL 1581 50.182	60°C
Sunlight Resistance	UL444 7.22	Yes (720 hrs)

Attributes		
Description	Method	
Cold Bend	UL444 7.10	-40°C
Installation Pull Tension (Max):		
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 0.952 inch	TIA 568-C.0	25 lbs.



**EtherNet/IP™**  
ODVA Compliant

## STANDARDS

**International** ISO/IEC 11801;  
ODVA EtherNet/IP Compliant

**National** ANSI/TIA-568.2-D;  
UL 444

## CHARACTERISTICS

### Construction characteristics

Conductor material	23 AWG Solid Bare Copper
Insulation	HDPE
Jacket Material	PVC
Core Tape	Foamed polypropylene

### Dimensional characteristics

Insulated conductor diameter (Nominal)	0.036 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.238 in
Nominal cable weight	26 lb/kft
Length per reel	1000.0 ft

### Electrical characteristics

Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity of propagation	70 %



### Transmission characteristics

Skew (max.)	45 ns/100m
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### Usage characteristics

Minimum Bending Radius - Install	2.58 in
Recommended installation temperature range	-20 .. 75 °C
Recommended operating temperature range	-40 .. 75 °C
Recommended storage temperature range	-40 .. 75 °C

## PRODUCT LIST

Part Number	Description	Packaging	Colour
 11102423	LANmark-A921 Cat 5e Solid CMR-CMX Outdoor PVC	Reel	Teal
☎ = Make to order,  = In stock			

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## LANMARK-A921 - TECHNICAL INFORMATION

### Electrical Characteristics

FQ = Frequency (MHz) / TIA = TIA Spec / PG = Product Guarantee

FQ	RL (dB)	NEXT (dB)	PSNEXT (dB)	ACRF (dB)	LCL/TCL
	TIA / PG	TIA / PG	TIA / PG	TIA / PG	PG
1	20.00 / 20.00	65.30 / 70.30	62.30 / 68.30	63.80 / 66.80	40.00
4	23.00 / 23.30	56.30 / 61.30	53.30 / 59.30	51.80 / 54.70	40.00
10	25.00 / 25.50	50.30 / 55.30	47.30 / 53.30	43.80 / 46.80	40.00
16	25.00 / 25.50	47.20 / 52.30	44.20 / 50.30	39.70 / 42.70	38.00
20	25.00 / 25.50	45.80 / 50.80	42.80 / 48.80	37.80 / 40.70	37.00
31.25	23.60 / 24.40	42.90 / 47.90	39.90 / 45.90	33.90 / 36.90	35.10
62.5	21.50 / 22.70	38.40 / 43.40	35.40 / 41.40	27.90 / 30.80	32.00
100	20.10 / 21.40	35.30 / 40.30	32.30 / 38.30	23.80 / 26.80	30.00
150	— / 20.50	— / 37.70	— / 35.70	— / 23.30	28.20
200	— / 19.80	— / 35.80	— / 33.80	— / 20.70	27.00
250	— / 19.20	— / 34.30	— / 32.30	— / 18.80	26.00
300	— / 18.80	— / 33.20	— / 31.20	— / 17.30	25.20
350	— / 18.40	— / 32.20	— / 30.20	— / 15.90	24.60
400	— / 18.10*	— / 31.30*	— / 29.30	— / 14.70	24.00*

FQ	IL (dB/100 m)	ACR (dB/100 m)	PSACR (dB/100 m)	PSACRF (dB/100 m)	EL TCTL
	TIA / PG	TIA / PG	TIA / PG	TIA / PG	PG
1	2.00 / 2.00	63.30 / 68.30	60.30 / 66.30	60.80 / 63.80	35.00
4	4.10 / 4.00	52.20 / 57.30	49.20 / 55.30	48.80 / 51.70	23.00
10	6.50 / 6.40	43.80 / 48.90	40.80 / 46.90	40.80 / 43.80	15.00
16	8.20 / 8.10	39.00 / 44.10	36.00 / 42.10	36.70 / 39.70	10.90
20	9.30 / 9.20	36.50 / 41.60	33.50 / 39.60	34.80 / 37.70	9.00
31.25	11.70 / 11.60	31.20 / 36.30	28.20 / 34.30	30.90 / 33.90	5.10
62.50	17.00 / 16.80	21.40 / 26.60	18.40 / 24.60	24.90 / 27.80	—
100	22.00 / 21.70	13.30 / 18.60	10.30 / 16.60	20.80 / 23.80	—
150	— / 27.20	— / 10.40	— / 8.40	— / 20.30	—
200	— / 32.10	— / 3.70	— / 1.70	— / 17.70	—
250	— / 36.50	— / -2.10	— / -4.10	— / 15.80	—
300	— / 40.50	— / -7.40	— / -9.40	— / 14.30	—
350	— / 44.40	— / -12.20	— / -14.20	— / 12.90	—
400	— / 48.00*	— / -16.80*	— / -18.80*	— / 11.70*	—

\*Values provided for reference only

### Transmission Characteristics

#### Description

ISO/IEC 11801	Category 5e
ANSI/TIA-568.2-D	Category 5e
ODVA EtherNet/IP™ Compliant	Category 5e

#### Color Code

Pair-1	White/Blue	Blue
Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown