

# Berk-Tek LANmark-B587 Cat 5e 2-Pr Shielded PVC

Berk-Tek LANmark Industrial Medium-Duty 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 600V AWM design, PVC jacket, cold-bend performance, and resistance to oil, this cable is suitable for medium-duty, industrial applications. This product has both a foil shield and a braid to protect against low- and high-frequency noise on the factory floor. Additionally, the stranded conductors also help maintain performance in a high-vibration environment. It is rated CMR and CMX Outdoor, so it easily transitions from indoor to outdoor environments and is also suitable for cable tray installations.

## DESCRIPTION

### Construction

24 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and two such pairs to form the basic unit, enclosed by polypropylene tape, an aluminum/polyester tape shield and 38 AWG braid with 75% optical coverage and PVC jacket.

### Related Standards

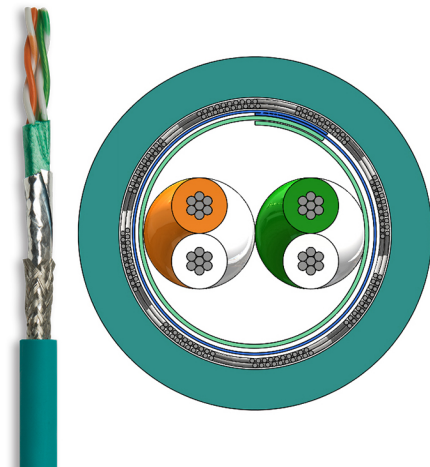
Low Voltage - EU Directive 2014/35/EU, CE Approved

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	UL1277 11.2	I (60°C)
Sunlight Resistance	UL444 7.12	Yes (300 hrs)

Attributes		
Description	Method	
AWM Style	UL758	2463 (600V, 80°C)
Cold Bend	UL444 7.10	-40°C
Installation Pull Tension (Max):		
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.04 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/1.5 lb. load



## STANDARDS

**International** ISO/IEC 11801

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

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## CHARACTERISTICS

### Construction characteristics

Conductor material	24 AWG Stranded Tinned Copper (7/32)
Insulation	HDPE
Jacket Material	PVC
Braid	Tinned copper - 75% optical coverage
Shielding	Aluminum/Polyester
Core Tape	Foamed polypropylene

### Dimensional characteristics

Insulated conductor diameter (Nominal)	0.048 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.26 in
Nominal cable weight	34 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	68 %
Maximum pair to ground unbalance	330 pF/100m



### Transmission characteristics



Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2

### Usage characteristics

Minimum Bending Radius - Install	2.08 in
Recommended installation temperature range	-20 .. 80 °C
Recommended operating temperature range	-40 .. 80 °C
Recommended storage temperature range	-40 .. 80 °C
Maximum cable length	83 m
Cold Bend	-40 °C
Weld spatter resistance	Yes

## PRODUCT LIST

Part Number	Description	Packaging	Colour
 11099203	LANmark-B587 Cat 5e 2-Pr Shielded PVC	Reel	Teal
 11102377	LANmark-B587 Cat 5e 2-Pr Shielded PVC	Reel	Black

 = Make to order,  = In stock

## LANMARK-B587 - TECHNICAL INFORMATION

Electrical Characteristics		
Parameter	Frequency	Equation
RL (dB)	1-10 MHz	$20+5*\text{Log}(F)$
	10-20 MHz	25
	20-100 MHz	$25-7*\text{Log}(F/20)$
Insertion Loss (dB/100m)	1-100 MHz	$(1.967*\sqrt{F}+0.023*F+0.050/\sqrt{F})*1.2$
NEXT (dB)	1-100 MHz	$35.3-15*\text{Log}(F/100)$
PS-NEXT (dB)	1-100 MHz	$32.3-15*\text{Log}(F/100)$
ACR (dB/100m)	1-100 MHz	NEXT - Insertion Loss
PS-ACR	1-100 MHz	PS-NEXT - Insertion Loss
ACRF (dB)	1-100 MHz	$23.8-20*\text{Log}(F/100)$
PSACRF (dB)	1-100 MHz	$20.8-20*\text{Log}(F/100)$
Propagation Delay	1-100 MHz	$534+(36/\sqrt{F})$
Max Transfer Impedance (mΩm)	1; 10; 30; 100 MHz	50; 100; 200; 1000
Min Coupling Attenuation (dB/100m)	30-100 MHz	55
Transmission Characteristics		
Description		
ISO/IEC 11801		Category 5
ANSI/TIA-568.2-D		Category 5e
Coupling Attenuation	IEC 61156-5	Type II
Transfer Impedance	IEC 61156-5	Grade 2
Color Code		
Pair-1	White/Orange	Orange
Pair-2	White/Green	Green