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#### At a Glance...

- ▶ Supports PoE+ to Extended Distances
- ▶ Ideal for IP Cameras, Wireless Access Points, and other ESS Devices
- ▶ Multiple Loose Tube or Tight Buffer Fibers for Indoor/Outdoor Environments
- ▶ Multiple Stranded THWN Copper Conductors
- ▶ Combining Control and Communications in One Cable, One Pathway
- ▶ Armor Option Adds Crush Resistance and Protection from Rodent Attacks

## One Pathway. One Pull. One Solution.

Introducing the Berk-Tek Composite Copper/Fiber all-in-one control and communications security cable. With this new cable solution and the proper conductor size, your security system can now be installed at well over 100 meters—up to several thousand feet—all while providing high-bandwidth data transfer speeds and the power you need to keep your security system up and running in areas where electrical access is not readily available.

*For more information on Berk-Tek's new Composite Copper/Fiber security cable, call 1-800-BERK-TEK or visit [www.berktek.com](http://www.berktek.com). Search Term: COMPOSITE*

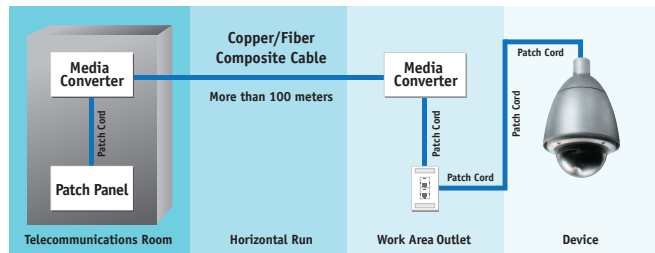
COMPOSITE COPPER/FIBER SECURITY CABLE



**Berk-Tek**<sup>®</sup>  
A NEXANS COMPANY

[www.berktek.com](http://www.berktek.com)

**THE BERK-TEK COMPOSITE COPPER/FIBER CABLE** incorporates high-bandwidth optical fibers (up to 12 tight buffered or 24 loose tube) with up to 7 insulated stranded THWN (Thermoplastic Heat and Water Resistant, Nylon coated) conductors ranging from 12 to 20 AWG. Listed as CL3R-OF/PLTC-OF, these cables extend the distance of PoE devices significantly beyond the 100-meter limitations of Category 5e or 6 twisted pair cable, making it ideal for IP cameras, wireless access points or other BAS applications.



## CONSTRUCTION

Each cable consists of multiple THWN copper conductors and multiple fibers cabled together within an outer jacket. Cable design accommodates from 2 to 7 conductors and 2 to 24 fibers.

- ▶ Fibers can be tight buffered or in a loose tube
- ▶ Cable is dry water-blocked for outdoor installations
- ▶ Aluminum (standard) or steel interlock armored cables available

## APPLICATIONS

Berk-Tek's Composite cables are suitable for all power limited applications where optical fibers are needed. Specific applications include (but not limited to):

- ▶ Power over Ethernet (PoE+) length extension
- ▶ Combining control and communications in industrial pathways
- ▶ Common pathway for fiber backbone and Class 2 and 3 power supplies
- ▶ 10BASE-FL
- ▶ 100BASE-SX/100BASE-FX

## FEATURES

- ▶ Multimode, single-mode, and GIGAlite™ fibers
- ▶ CL3R-OF, wet and dry rated
- ▶ Aluminum or steel interlock armored designs available
- ▶ Oil resistant designs available
- ▶ Indoor/Outdoor dry water-blocked design

## BENEFITS

- ▶ Enables PoE+ equipment to be located more than 100 meters from the switch
- ▶ Cost savings versus installation of a new electrical outlet
- ▶ CL3R-OF/PLTC-OF allows cable to be installed in communications pathways
- ▶ Ease of installation
- ▶ Broad design selection allows for mix and match of copper and fiber components for specific networking applications
- ▶ Armor option adds crush resistance and protection from rodent attacks

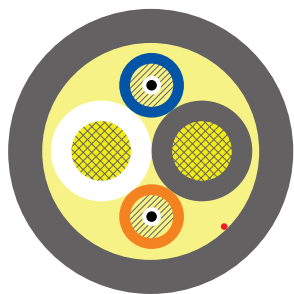
**Berk-Tek®**  
A N E X A N S C O M P A N Y

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## COMPOSITE COPPER/FIBER CABLE

(cross-sectional view)

HDC002



Illustrations enlarged for detail.

## FIBER CHARACTERISTICS

Fiber Type	ISO-TIA Standard	Effective Modal BW @ 850 nm	Overfilled Launch BW @ 850 nm	Attenuation @ 850 nm	Attenuation @ 1300 nm	Attenuation @ 1550 nm	Sheath Color
AB	OS1/2	NS*	NS*	NS*	0.7 dB/km	0.7 dB/km	Black
CB	OM1	200 MHz-km	200 MHz-km	3.5 dB/km	1.0 dB/km	NS*	Black
GB	OM1	500 MHz-km	350 MHz-km	3.5 dB/km	1.0 dB/km	NS	Black
ZB	OM2	500 MHz-km	500 MHz-km	3.5 dB/km	1.5 dB/km	NS	Black
LB	OM2+	950 MHz-km	700 MHz-km	3.0 dB/km	1.0 dB/km	NS	Black
EB	OM3	2000 MHz-km	1500 MHz-km	3.0 dB/km	1.0 dB/km	NS	Black
FB	OM4	4700 MHz-km	3500 MHz-km	3.0 dB/km	1.0 dB/km	NS	Black
XB	OM4+	4900 MHz-km	3675 MHz-km	3.0 dB/km	1.0 dB/km	NS	Black

\*Not Specified

## EXAMPLE PRODUCT LIST

Part Number	# Fibers	Conductor Size	# Conductors	Diameter		Weight		Min. Bend Radius				Max. Distance			
								Install.		Long Term		PoE		PoE+	
				in.	mm	lb./kft.	kg/km	in.	cm	in.	cm	ft.	m	ft.	m
HDC002-002X18AWG	2	18 AWG	2	0.300	7.6	49	72	4.5	11.4	3.0	7.6	1000	304	650	198
HDC002-002X12AWG	2	12 AWG	2	0.360	9.1	93	138	5.4	13.7	3.6	9.1	3850	1173	2500	762
LTRC06B012-002X18AWG	12	18 AWG	2	0.319	8.1	49	73	4.8	12.1	3.2	8.1	1000	304	650	198
LTRC012-002X12AWG	12	12 AWG	2	0.371	9.4	87	129	5.6	14.1	3.7	9.4	3850	1173	2500	762
OPRC06B012-002X18AWG	12	18 AWG	2	0.319	8.1	51	76	4.8	12.1	3.2	8.1	1000	304	650	198
OPRC012-002X12AWG	12	12 AWG	2	0.371	9.4	88	131	5.6	14.1	3.7	9.4	3850	1173	2500	762

**Max Loading Install** 300 lbs/1335 N  
**Max Loading Long Term** 90 lbs/400 N  
**Operating Temperature** -40°C to +75°C  
**Installation Temperature** HDR = -10°C to +70°C  
 LTR/OPR = -20°C to +60°C

**Compression (crush)** 220 N/cm  
**Impact** 2 impacts at 5.88 N  
**Cable Flex** 500 cycles  
**Qualifications** UL13, GR409, ICEA 696