



Indoor/Outdoor Hybrid Breakout Cables

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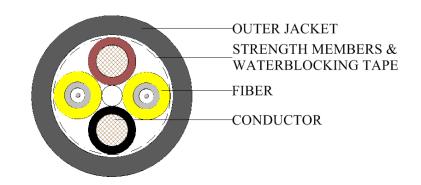


Fiber Express (FX) Hybrid Copper-Fiber Cables allow endusers to take advantage of DC power and fiber in one cable to safely deliver low-voltage power and data over long distances to remote locations where standard power is unavailable or too costly to install. Hybrid cable technology offers installation and labor savings by requiring just a single cable pull. Various cable constructions offer unlimited application flexibility.

Standards:

- ICEA S-120-742
- RoHS
- ANSI/TIA-568-C.3

	Temperature Rang	ge						
	Riser Plenum							
Operating	-40° C to $+70^{\circ}$ C -40° F to $+158^{\circ}$ F	-40°C to +70°C -40°F to +158°F						
Storage	-40° C to $+70^{\circ}$ C -40° F to $+158^{\circ}$ F	-40°C to +70°C -40°F to +158°F						
Installation	-10^{0} C to $+60^{0}$ C 14^{0} F to $+140^{0}$ F	0^{0} C to $+60^{0}$ C 32^{0} F to $+140^{0}$ F						



Glass Type	Fiber Grade Code (x)	Subunit Color	Operating Wavelength (nm)	Max Attenuation (dB/km)	Min. OFL Bandwidth (MHz-km)	Min. Laser Bandwidth (MHz-km)	1 Gigabit Ethernet Min. Link Length (meters)	10 Gigabit Ethernet Min. Link Length (meters)
OM3 - 50/125mm Multi-Mode	3	Aqua	850/1300	3.0/1.0	1500/500	2000/-	1000/550	300/-
OM4 - 50/125mm Multi-Mode	4	Erika Violet	850/1300	3.0/1.0	3500/500	4700/-	1100/550	400/-
OS2 - Single Mode	S	Yellow	1310/1550	0.5/0.5	-	-	5000/-	10,000/40,000
OM2 Fiber ava	ilable upon Requ	est						

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Indoor/Outdoor Hybrid Breakout Cables

	Riser - UL Type CL3R-OF – 3mm Sub Units										
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)				
12	2	HDxB0020212RC	Black	0.351 (8.9)	84 (125)	300 (1330)	90 (400)				
14	2	HDxB0020214RC	Black	0.351 (8.9)	59 (88)	300 (1330)	90 (400)				
1 Substitute (x) with	Fiber Grade Code										

Riser - UL Type CMR-OF – 3mm Sub Units										
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)			
16	2	HDxB0020216RC	Black	0.324 (8.2)	51 (76)	300 (1330)	90 (400)			
18	2	HDxB0020218RC	Black	0.324 (8.2)	46 (68)	300 (1330)	90 (400)			
20	2	HDxB0020220RC	Black	0.342 (8.7)	41 (61)	300 (1330)	90 (400)			
1 Substitute (x) with	Fiber Grade Code									

	Riser - UL Type CL3R-OF – 3mm Sub Units - Aluminum Interlocked Armor										
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)				
12	2	HDxB0020212FC	Black	0.604 (15.3)	180 (268)	300 (1330)	90 (400)				
14	2	HDxB0020214FC	Black	0.604 (15.3)	155 (231)	300 (1330)	90 (400)				
1 Substitute (x) with	Fiber Grade Code										

Riser - UL Type CMR-OF – 3mm Sub Units - Aluminum Interlocked Armor										
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)			
16	2	HDxB0020216FC	Black	0.574 (14.6)	141 (210)	300 (1330)	90 (400)			
18	2	HDxB0020218FC	Black	0.574 (14.6)	136 (202)	300 (1330)	90 (400)			
20	2	HDxB0020220FC	Black	0.594 (15.1)	135 (201)	300 (1330)	90 (400)			
1 Substitute (x) with	Substitute (x) with Fiber Grade Code									





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	Riser - UL Type CL3R-OF – 2mm Sub Units										
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)				
12	2	HDxB0020212RB	Black	0.328 (8.3)	72 (107)	300 (1330)	90 (400)				
14	2	HDxB0020214RB	Black	0.282 (7.2)	50 (74)	300 (1330)	90 (400)				
1 Substitute (x) with	Fiber Grade Code										

Riser - UL Type CMR-OF – 2mm Sub Units										
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)			
16	2	HDxB0020216RB	Black	0.276 (7)	42 (63)	300 (1330)	90 (400)			
18	2	HDxB0020218RB	Black	0.261 (6.6)	34 (51)	300 (1330)	90 (400)			
20	2	HDxB0020220RB	Black	0.244 (6.2)	29 (43)	300 (1330)	90 (400)			
1 Substitute (x) with	Fiber Grade Code									

	Riser - UL Type CL3R-OF – 2mm Sub Units - Aluminum Interlocked Armor										
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)				
12	2	HDxB0020212FB	Black	0.584 (14.8)	164 (244)	300 (1330)	90 (400)				
14	2	HDxB0020214FB	Black	0.534 (13.6)	133 (198)	300 (1330)	90 (400)				
1 Substitute (x) with	Fiber Grade Code										

	Riser - UL Type CMR-OF – 2mm Sub Units - Aluminum Interlocked Armor										
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)				
16	2	HDxB0020216FB	Black	0.534 (13.6)	125 (186)	300 (1330)	90 (400)				
18	2	HDxB0020218FB	Black	0.514 (13.1)	113 (168)	300 (1330)	90 (400)				
20	2	HDxB0020220FB	Black	0.494 (12.5)	105 (156)	300 (1330)	90 (400)				
1 Substitute (x) with	Fiber Grade Code										





Indoor/Outdoor Hybrid Breakout Cables

	Plenum - UL Type CL3P-OF – 3mm Sub Units										
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)				
12	2	HDxB0020212PC	Black	0.351 (8.9)	87 (129)	300 (1330)	90 (400)				
14	2	HDxB0020214PC	Black	0.351 (8.9)	67 (100)	300 (1330)	90 (400)				
1 Substitute (x) with	Fiber Grade Code										

Plenum - UL Type CMP-OF – 3mm Sub Units										
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)			
16	2	HDxB0020216PC	Black	0.273 (6.9)	44 (65)	300 (1330)	90 (400)			
18	2	HDxB0020218PC	Black	0.273 (6.9)	39 (58)	300 (1330)	90 (400)			
20	2	HDxB0020220PC	Black	0.291 (7.4)	34 (51)	300 (1330)	90 (400)			
1 Substitute (x) with	1 Substitute (x) with Fiber Grade Code									

Plenum - UL Type CL3P-OF – 2mm Sub Units											
AWG Size	Fiber Count	iber Count Part Number ¹		Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)				
12	2	HDxB0020212PB	Black	0.277 (7.0)	63 (94)	300 (1330)	90 (400)				
14	2	HDxB0020214PB	Black	0.231 (5.9)	44 (65)	300 (1330)	90 (400)				
1 Substitute (x) with	1 Substitute (x) with Fiber Grade Code										

Plenum - UL Type CMP-OF – 2mm Sub Units												
AWG Size	Fiber Count	Part Number ¹	Part Number ¹ Jacket Color		Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)					
16	2	HDxB0020216PB	Black	0.225 (5.7)	34 (51)	300 (1330)	90 (400)					
18	2	HDxB0020218PB	Black	0.210 (5.3)	28 (42)	300 (1330)	90 (400)					
20	2	HDxB0020220PB	Black	0.193 (4.9)	21 (31)	300 (1330)	90 (400)					
1 Substitute (x) with	1 Substitute (x) with Fiber Grade Code											





Indoor/Outdoor Hybrid Breakout Cables

Plenum - UL Type CL3P-OF – 3mm Sub Units - Aluminum Interlocked Armor												
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)					
12	2	HDxB0020212AC	Black	0.604 (15.3)	190 (283)	300 (1330)	90 (400)					
14	2	HDxB0020214AC	Black	0.604 (15.3)	170 (253)	300 (1330)	90 (400)					
1 Substitute (x) with Fiber Grade Code												

Plenum - UL Type CMP-OF – 3mm Sub Units - Aluminum Interlocked Armor											
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)				
16	2	HDxB0020216AC	Black	0.524 (13.3)	131 (195)	300 (1330)	90 (400)				
18	2	HDxB0020218AC	Black	0.524 (13.3)	126 (188)	300 (1330)	90 (400)				
20	2	HDxB0020220AC	Black	0.544 (13.8)	125 (186)	300 (1330)	90 (400)				
1 Substitute (x) with Fiber Grade Code											

Plenum - UL Type CL3P-OF – 2mm Sub Units - Aluminum Interlocked Armor											
AWG Size	Fiber Count	Part Number ¹	Jacket Color Nom. Jacket Dia. in (mm)		Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)				
12	2	HDxB0020212AB	Black	0.534 (13.6)	152 (226)	300 (1330)	90 (400)				
14	2	HDxB0020214AB	Black	0.484 (12.3)	123 (183)	300 (1330)	90 (400)				
1 Substitute (x) with Fiber Grade Code											

Plenum - UL Type CMP-OF – 2mm Sub Units - Aluminum Interlocked Armor											
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)				
16	2	HDxB0020216AB	Black	0.484 (12.3)	113 (168)	300 (1330)	90 (400)				
18	2	HDxB0020218AB	Black	0.464 (11.8)	103 (153)	300 (1330)	90 (400)				
20	2	HDxB0020220AB	Black	0.444 (11.3)	92 (137)	300 (1330)	90 (400)				
1 Substitute (x) with	Fiber Grade Code										





Indoor/Outdoor Hybrid Breakout Cables

	STANDARD														
	FX Fiber Cable Fiber Type		Family Fiber Count		Count	Conductor Count		Copper Type		Flammability		Subunit Type / Configuration			
	HD		3		В	00	02	02		12		R		В	
НС	Indoor/Outdoor Hybrid Cable	3	ОМЗ	В	Breakout	001	1 Fiber	01	1 Conductor	12	12 AWG	Р	Plenum	В	COPPER: Stranded or Category Cable FIBER: 2.0mm Sub, 1 x 900um Fiber / Sub
		4	OM4			002	2 Fibers	02	2 Conductors	14	14 AWG	R	Riser	С	COPPER: Stranded or Category Cable FIBER: 3.0mm Sub, 1 x 900um Fiber / Sub
		S	OS2 (G.657.A1)							16	16 AWG	F	Riser Interlocked Aluminum Armor		
										18	18 AWG	A	Plenum Interlocked Aluminum Armor		