



Indoor/Outdoor Hybrid Distribution Cables Revision Number: 4 Revision Date: 1.14.20

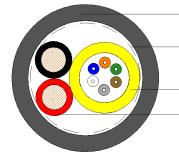
Fiber *Express* (FX) Hybrid Copper-Fiber Cables allow endusers to take advantage of DC power and fiber in one cable to safely deliver low-voltage power and data over long distances to remote locations where standard power is unavailable or too costly to install. Hybrid cable technology offers installation 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 $+70^{\circ}$ C -40° F to $+158^{\circ}$ F							
Installation	-10° C to $+60^{\circ}$ C 14° F to $+140^{\circ}$ F	0^{0} C to +60 ⁰ C 32 ⁰ F to +140 ⁰ F							



OUTER JACKET ARAMID YARNS & WATERBLOCKING TAPE

-FIBER CABLE -CONDUCTOR

Glass Type	Fiber Grade Code (x)	Subunit Color	Operating Wavelength (nm)	Wavelength Attenuation Bandwidth		Min. Laser Bandwidth (MHz-km)	I 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 avai	ilable upon Requ	iest						

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			Riser - UL Ty	pe CL3R-OF			
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	HDxD0020212RJ	Black	0.364 (9.2)	95 (141)	600 (2700)	180 (810)
12	4	HDxD0040212RJ	Black	0.382 (9.7)	99 (147)	600 (2700)	180 (810)
12	6	HDxD0060212RJ	Black	0.433 (11.0)	105 (156)	600 (2700)	180 (810)
14	2	HDxD0020214RJ	Black	0.364 (9.2)	75 (112)	600 (2700)	180 (810)
14	4	HDxD0040214RJ	Black	0.382 (9.7)	79 (118)	600 (2700)	180 (810)
14	6	HDxD0060214RJ	Black	0.402 (10.2)	82 (122)	600 (2700)	180 (810)
1 Substitute (x) w	rith Fiber Grade Co	de					

			Riser - UL Ty	pe CMR-OF			
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	HDxD0020216RJ	Black	0.350 (8.9)	65 (97)	600 (2700)	180 (810)
16	4	HDxD0040216RJ	Black	0.367 (9.3)	68 (101)	600 (2700)	180 (810)
16	6	HDxD0060216RJ	Black	0.387 (9.8)	72 (107)	600 (2700)	180 (810)
18	2	HDxD0020218RJ	Black	0.340 (8.6)	59 (88)	600 (2700)	180 (810)
18	4	HDxD0040218RJ	Black	0.355 (9.0)	62 (92)	600 (2700)	180 (810)
18	6	HDxD0060218RJ	Black	0.373 (9.5)	65 (97)	600 (2700)	180 (810)
20	2	HDxD0020220RJ	Black	0.333 (8.5)	52 (77)	600 (2700)	180 (810)
20	4	HDxD0040220RJ	Black	0.349 (8.9)	55 (82)	600 (2700)	180 (810)
20	6	HDxD0060202RJ	Black	0.369 (9.4)	59 (88)	600 (2700)	180 (810)
1 Substitute (x) with 1	Fiber Grade Code						

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	Riser - UL Type CL3R-OF - Aluminum Interlocking 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	HDxD0020212FJ	Black	0.614 (15.6)	193 (287)	600 (2700)	180 (810)						
12	4	HDxD0040212FJ	Black	0.634 (16.1)	201 (299)	600 (2700)	180 (810)						
12	6	HDxD0060212FJ	Black	0.684 (17.4)	216 (321)	600 (2700)	180 (810)						
14	2	HDxD0020214FJ	Black	0.614 (15.6)	173 (257)	600 (2700)	180 (810)						
14	4	HDxD0040214FJ	Black	0.634 (16.1)	181 (269)	600 (2700)	180 (810)						
14	6	HDxD0060214FJ	Black	0.654 (16.6)	187 (278)	600 (2700)	180 (810)						
1 Substitute (x) w	rith Fiber Grade Coo	le											

		Riser - UL Type	e CMR-OF - A	luminum Interle	ocking 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	HDxD0020216FJ	Black	0.604 (15.3)	161 (240)	600 (2700)	180 (810)
16	4	HDxD0040216FJ	Black	0.624 (15.8)	168 (250)	600 (2700)	180 (810)
16	6	HDxD0060216FJ	Black	0.644 (16.4)	175 (260)	600 (2700)	180 (810)
18	2	HDxD0020218FJ	Black	0.594 (15.1)	153 (228)	600 (2700)	180 (810)
18	4	HDxD0040218FJ	Black	0.614 (15.6)	160 (238)	600 (2700)	180 (810)
18	6	HDxD0060218FJ	Black	0.624 (15.8)	165 (246)	600 (2700)	180 (810)
20	2	HDxD0020220FJ	Black	0.584 (14.8)	144 (214)	600 (2700)	180 (810)
20	4	HDxD0040220FJ	Black	0.604 (15.3)	151 (225)	600 (2700)	180 (810)
20	6	HDxD0060202FJ	Black	0.624 (15.8)	159 (237)	600 (2700)	180 (810)
1 Substitute (x) with	Fiber Grade Code						

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	Plenum - UL Type CL3P-OF												
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	HDxD0020212PJ	Black	0.389 (9.9)	90 (134)	600 (2700)	180 (810)						
12	4	HDxD0040212PJ	Black	0.380 (9.7)	88 (131)	600 (2700)	180 (810)						
12	6	HDxD0060212PJ	Black	0.396 (10.1)	90 (134)	600 (2700)	180 (810)						
14	2	HDxD0020214PJ	Black	0.358 (9.1)	68 (101)	600 (2700)	180 (810)						
14	4	HDxD0040214PJ	Black	0.35 (8.9)	66 (98)	600 (2700)	180 (810)						
14	6	HDxD0060214PJ	Black	0.361 (9.2)	68 (101)	600 (2700)	180 (810)						
1 Substitute (x) w	ith Fiber Grade Coo	le											

			Plenum - UL T	Cype CMP-OF			
AWG Size	Fiber Count	Part Number ¹	Jacket Color	Nom. Jacket Dia. in (mm)	Weight Ibs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)
16	2	HDxD0020216PJ	Black	0.345 (8.8)	58 (86)	600 (2700)	180 (810)
16	4	HDxD0040216PJ	Black	0.336 (8.5)	56 (83)	600 (2700)	180 (810)
16	6	HDxD0060216PJ	Black	0.349 (8.9)	58 (86)	600 (2700)	180 (810)
18	2	HDxD0020218PJ	Black	0.333 (8.5)	52 (77)	600 (2700)	180 (810)
18	4	HDxD0040218PJ	Black	0.324 (8.2)	50 (74)	600 (2700)	180 (810)
18	6	HDxD0060218PJ	Black	0.341 (8.7)	52 (77)	600 (2700)	180 (810)
20	2	HDxD0020220PJ	Black	0.325 (8.3)	45 (67)	600 (2700)	180 (810)
20	4	HDxD0040220PJ	Black	0.316 (8.0)	43 (64)	600 (2700)	180 (810)
20	6	HDxD0060220PJ	Black	0.332 (8.4)	45 (67)	600 (2700)	180 (810)
1 Substitute (x) with I	Fiber Grade Code						

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		Plenum - UL Typ	be CL3P-OF - A	Aluminum Inter	locking Armo	r	
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	HDxD0020212AJ	Black	0.644 (16.4)	193 (287)	600 (2700)	180 (810)
12	4	HDxD0040212AJ	Black	0.634 (16.1)	190 (283)	600 (2700)	180 (810)
12	6	HDxD0060212AJ	Black	0.654 (16.6)	195 (290)	600 (2700)	180 (810)
14	2	HDxD0020214AJ	Black	0.614 (15.6)	166 (247)	600 (2700)	180 (810)
14	4	HDxD0040214AJ	Black	0.604 (15.3)	162 (241)	600 (2700)	180 (810)
14	6	HDxD0060214AJ	Black	0.614 (15.6)	166 (247)	600 (2700)	180 (810)
1 Substitute (x) w	vith Fiber Grade Co	de					

		Plenum - UL Ty	pe CMP-OF - A	Aluminum Inter	locking Armor	•	
AWG Size	Fiber Count	Part Number ¹	Part Number ¹ Jacket Color Nom. J Dia. in		Weight lbs/1000ft (kg/km)	Max. Install Load lbs (N)	Max. Long Term Load lbs (N)
16	2	HDxD0020216AJ	Black	0.604 (15.3)	161 (240)	600 (2700)	180 (810)
16	4	HDxD0040216AJ	Black	0.594 (15.1)	157 (234)	600 (2700)	180 (810)
16	6	HDxD0060216AJ	Black	0.604 (15.3)	161 (240)	600 (2700)	180 (810)
18	2	HDxD0020218AJ	Black	0.584 (14.8)	151 (225)	600 (2700)	180 (810)
18	4	HDxD0040218AJ	Black	0.574 (14.6)	147 (219)	600 (2700)	180 (810)
18	6	HDxD0060218AJ	Black	0.594 (15.1)	153 (228)	600 (2700)	180 (810)
20	2	HDxD0020220AJ	Black	0.584 (14.8)	144 (214)	600 (2700)	180 (810)
20	4	HDxD0040220AJ	Black	0.574 (14.6)	140 (208)	600 (2700)	180 (810)
20	6	HDxD0060220AJ	Black	0.584 (14.8)	144 (214)	600 (2700)	180 (810)
1 Substitute (x) with	Fiber Grade Code						

		-				-		STAN	DARD	-		-	· · · · ·	-	
I	X Fiber Cable		Fiber Type	Family		Fiber Count		Conductor Count		Copp	per Type	Flammability		Su	bunit Type / Configuration
HD	Indoor/Outdoor Hybrid Cable	3	ОМЗ	D	Distribution	002	2 Fibers	02	2 Conductors	12	12 AWG	Ρ	Plenum (OFNP)	J	COPPER: Stranded or Category Cable FIBER: Up to 6 x 900um Fibers / Sub
		4	OM4			004	4 Fibers			14	14 AWG	R	Riser (OFNR)		
		s	OS2 (G.657.A1)			006	6 Fibers			16	16 AWG	F	Riser Interlocked Aluminum Armor (OFCR)		
										18	18 AWG 20 AWG	A	Plenum Interlocked Aluminum Armor		

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