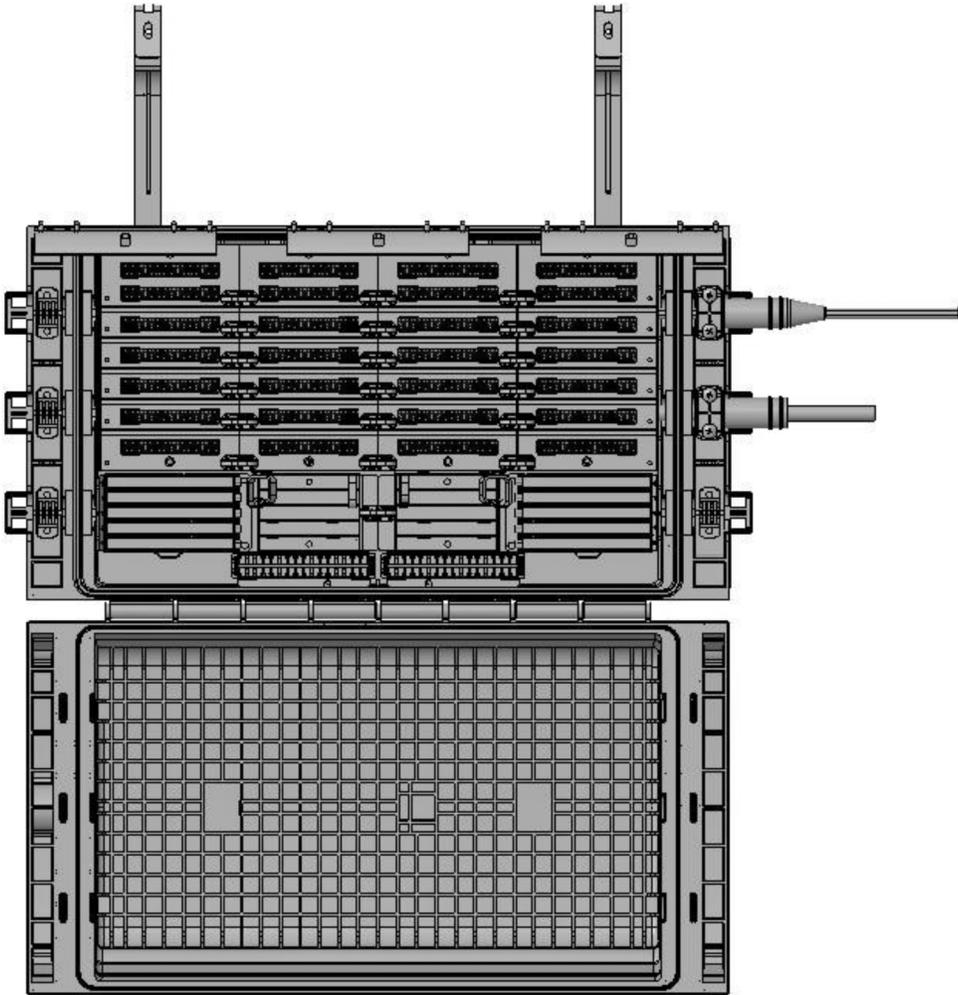




# A E R I A L Fiber Distribution Hub

## Installation Instructions





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## **Product Description/Overview**

STL's Aerial FDH (Fiber Distribution Hub) is a critical component in fiber FTTH (Fiber to the Home) PON deployments. It acts as a central point for connecting and distributing fiber optic cables, containing optical splitters. The Aerial FDH facilitates the connection between feeder and distribution cables, enabling the delivery of high-speed internet and other services to homes and businesses. Service connections, reconfigurations and testing in the outside plant network are greatly simplified and faster. Designed for those applications where mounting to the pole is prohibitive and ground mount cabinets are not possible, STL's Aerial FDH uses an offset bracket which mounts directly on the messenger strand allowing the FDH to hang below lashed telecommunications cabling. By attaching to the strand, many permitting restrictions can be avoided as well as gaining increased security vs. traditional ground mount cabinets. The Aerial FDH may be used in both centralized and distributed split architectures.

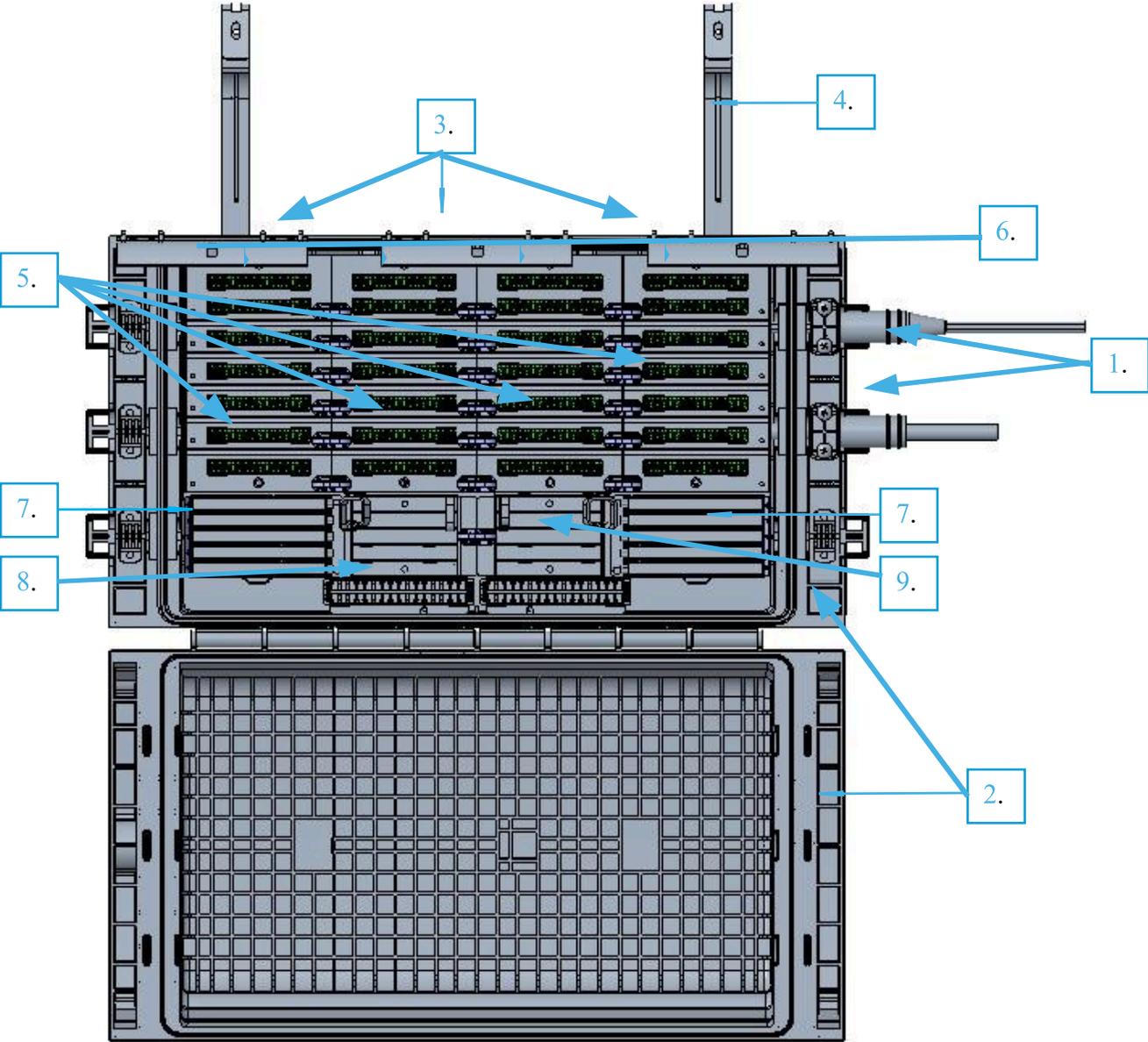
## **Features:**

- Equipped with 100-foot IBR (Intermittently Bonded Ribbon) factory terminated and tested feeder and distribution cables for simplified field installation. 12, 24 or 48 fiber feeder cable options.
- Available in either 144 or 288 output distribution ports.
- 10 splitter slots available.
  - a. 1x16, 1x32 or 1x64 splitters may be used
- Splitters are either factory installed based on customer specifications or installed by customer as needed.
- Intuitive fiber routing paths with bend radius protection.
- Slack storage.
- A2 bend insensitive fiber is used on all splitter tails (1.2mm).
- Integrated parking lot feature for up to 64 fibers.
- Molded IP55 hinged case.
- Dimension – [21" X 11" X 8"] 540 x 288 x 205mm
- LC connections with pull tabs.

## **Technical Specifications**

Dimensions	21" x 11" x 8" (540 x 288 x 205)
Weight	~20lbs (9kg)
Feeder Ports	12-48
Distribution Ports	96-288
Cable Entrances	6
Mounting Options	Aerial, Pedestal
Splitter Slots	10
Connector Types	LC/APC
Cable Types	12-48F IBR Flat, 96-288 IBR Round

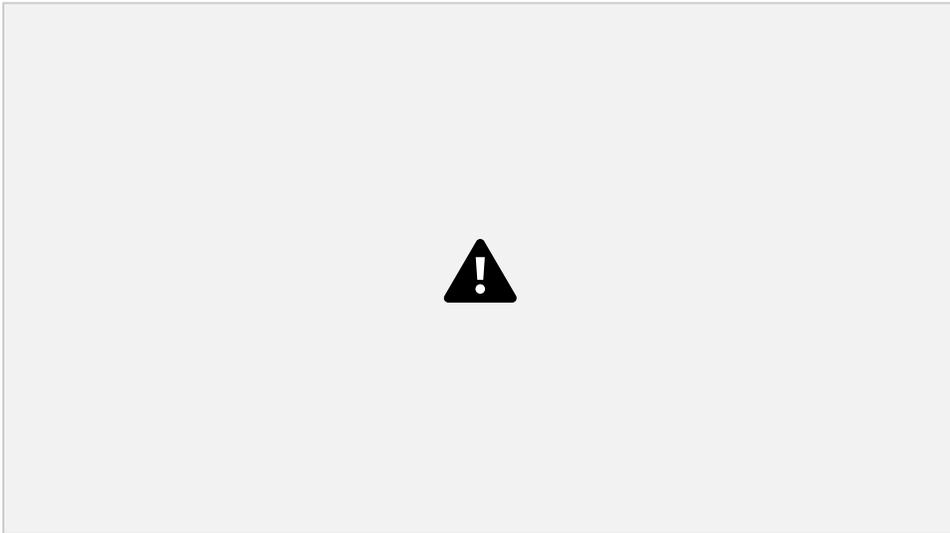
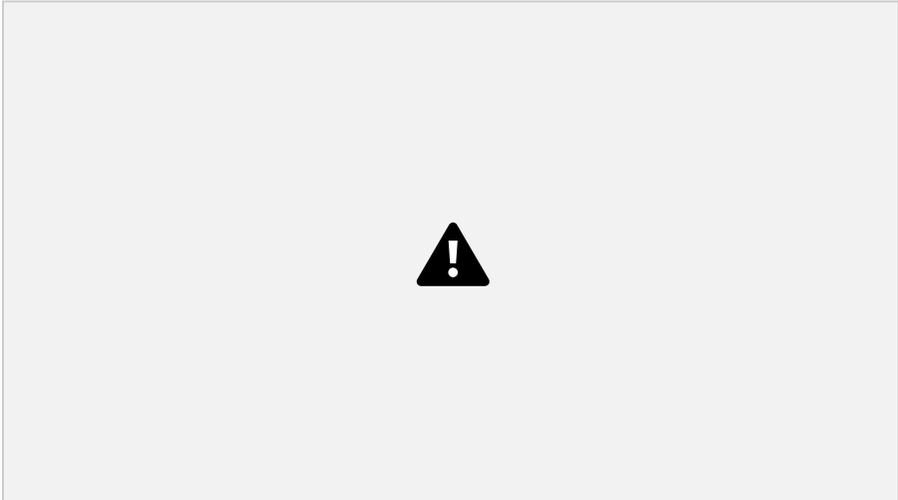
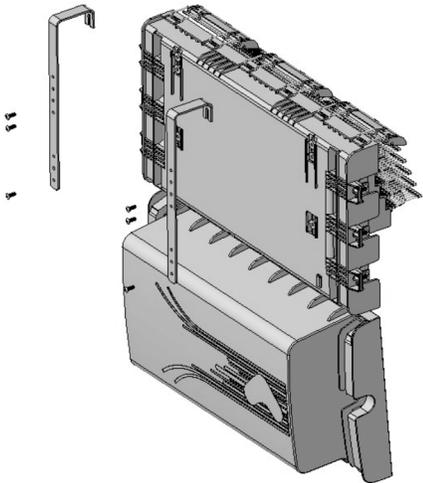
**Components**



- 1. Fiber Feeder and Distribution Cables
- 2. Closure Base and Lid
- 3. Clasps for Sealing Closure
- 4. Aerial Strand Mount Bracket
- 5. FDH Distribution Ports
- 6. FDH Feeder Ports
- 7. Splitter Slots
- 8. Parking Lot
- 9. Splitter Pigtail Storage

**Aerial Strand Mounting & Hanger Bracket Installation Instructions**

The Aerial FDH is designed for easy installation to the messenger strand. Secure the aerial mount bracket to the back of the base of the closure with 4 provided screws. The brackets have a slotted opening allowing for height adjustment in relation to the strand.



Loosen the outer nut on the bug nut and position on the messenger strand. Secure to the strand by tightening the outer nut with a can wrench or socket wrench.



## **Feeder and Distribution Cables**

Feeder cables are available with either a 12, 24 or 48-fiber IBR (intermittently bonded ribbon) all dielectric fiber optic cable or Loose Buffer Tube (LBT) style cable. The standard length for both the Feeder and Distribution cables is 100-feet and will enter the FDH on the right-hand side as shown in the Components diagram.

Both Feeder and Distribution cables are factory spliced to the Feeder and Distribution ports (see Component layout diagram).

Feeder and Distribution cables are to be spliced in a splice case per industry standard and specific manufacturer guidelines for the splice case being used.

## **Opening and Closing**



STL's Aerial FDH is equipped with 3 latches for securing the lid to the base of the closure.

To open, simply release the latches and allow the lid to swing down gently. Reverse for closing.

## Labeling

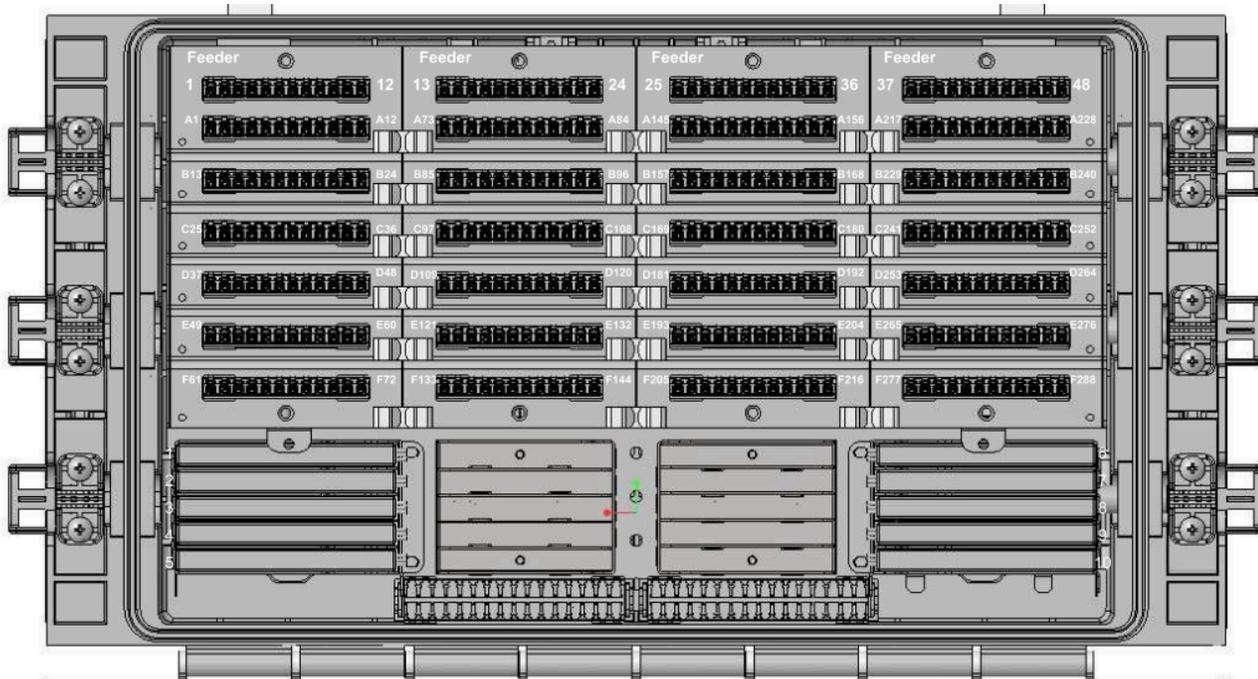


Diagram above shows the FDH as it would hang on the strand.

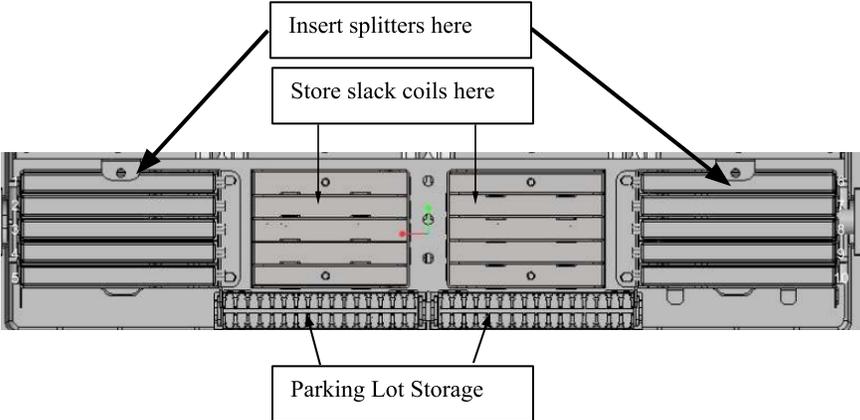
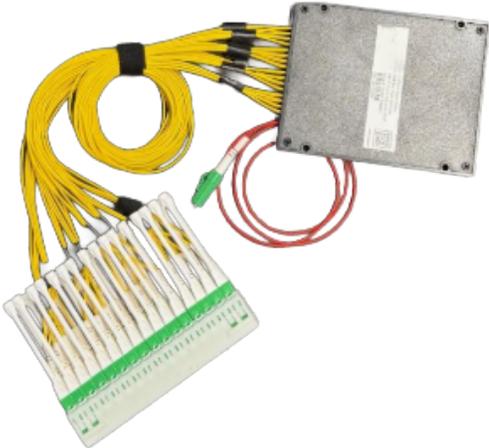
The top row of LC adapters is labeled 1–48 for the Feeder ports. The number of active feeder ports is determined by the Feeder fiber count chosen, 12, 24 or 48.

Below the Feeder ports are the Distribution ports labeled either 1–144 or 1-288 depending on which version of the Aerial FDH is being deployed.

Splitter slots are found on the bottom left and right of the closure with slots 1-5 on the left and 6-10 on the right. It is recommended to start with the first splitter installed in slot 1.

### **Splitter Installation**

10 splitter slots are available in the Aerial FDH. 1X32 Splitter outputs comprised of 1.2mm cordage come connected to a parking lot for easy storage within the closure. There are parking slots for 2 splitters (1X32). Single red fiber indicates the splitter input. All output fibers are individually labeled. It is recommended to install the first splitter in slot #1, second splitter in slot #6, third splitter in slot #2. Continue populating in this manner working left to right and top to bottom.



## Splitter Pigtail Routing



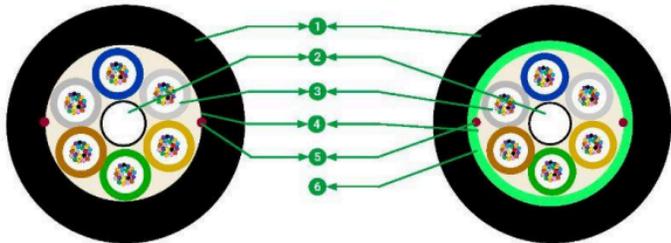
Install splitters starting with the top left slot (#1). Route and connect red input fiber of the splitter to Feeder port #1. Route and connect yellow output fibers from the splitter to Distribution ports as needed with any unused splitter output fibers stored in the Parking Lot. Follow branch and tree method shown in the diagram above utilizing the fiber management rings. Keep excess slack from the splitter output fibers coiled in the slack storage slots. It is recommended to install the first splitter in slot #1, second splitter in slot #6, third splitter in slot #2. Continue populating in this manner working left to right and top to bottom

# Splicing

Feeder (12, 24 or 48 fiber) and Distribution (144 or 288 fiber) cables are available in either STL's RapidTube, which is a standard loose buffer tube type cable or Celesta Intermittently Bonded Ribbon (IBR) fiber cable.

## RapidTube

MLT OFC - Duct & Armored



Single Jacket Dielectric Design

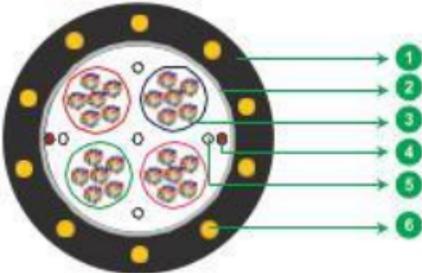
Single Jacket Armored Design

- 1 OUTER JACKET
- 2 STRENGTH MEMBER
- 3 LOOSE TUBES
- 4 WATER BLOCKING TAPE
- 5 RIPCORD(S)
- 6 CORRUGATED STEEL TAPE

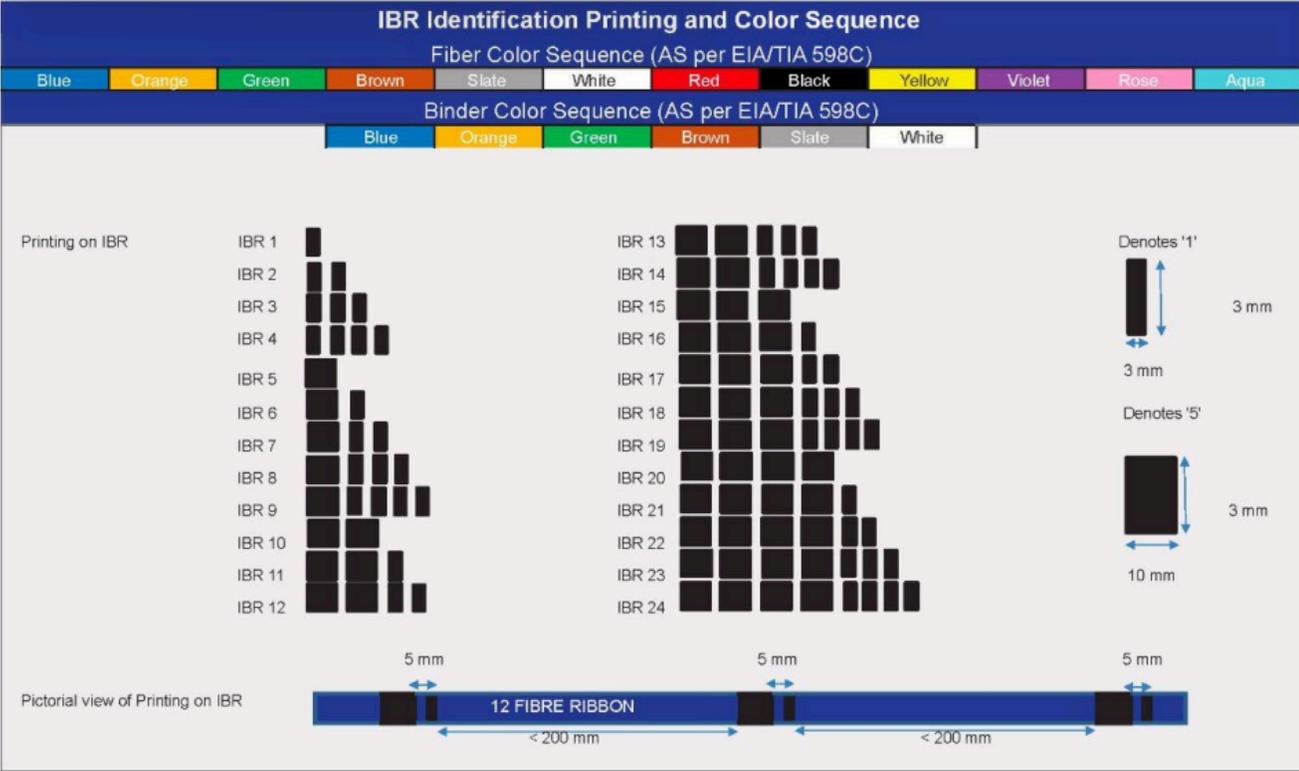
Fiber Color Sequence (as per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Pink	Aqua

## Celesta (IBR)

Intermittently Bonded Ribbon OFC  
Single Sheath Duct



48F-576F



**SPLICING TABLE**

APPENDIX A

Port Number	Multi-Loose Tube Cable		Uni-Tube Matrix Ribbon		Multi-tube Matrix Ribbon			IBR Ribbon Cable			
	Buffer Tube Color	Fiber Color	Ribbon Number	Fiber Color	Buffer Tube Color	Ribbon Number	Fiber Color	Buffer Tube Color	Binder Color	Ribbon Marking	Fiber Color
1	Blue	Blue	1	Blue	Blue	1	Blue	Blue	Blue	Blue	Blue
2		Orange		Orange			Orange				Orange
3		Green		Green			Green				Green
4		Brown		Brown			Brown				Brown
5		Slate		Slate			Slate				Slate
6		White		White			White				White
7		Red		Red			Red				Red
8		Black		Black			Black				Black
9		Yellow		Yellow			Yellow				Yellow
10		Violet		Violet			Violet				Violet
11		Rose		Rose			Rose				Rose
12		Aqua		Aqua			Aqua				Aqua
13	Orange	Blue	2	Blue	Blue	2	Blue	Blue	Blue	Blue	
14		Orange		Orange			Orange			Orange	
15		Green		Green			Green			Green	
16		Brown		Brown			Brown			Brown	
17		Slate		Slate			Slate			Slate	
18		White		White			White			White	
19		Red		Red			Red			Red	
20		Black		Black			Black			Black	
21		Yellow		Yellow			Yellow			Yellow	
22		Violet		Violet			Violet			Violet	
23		Rose		Rose			Rose			Rose	
24		Aqua		Aqua			Aqua			Aqua	
25	Green	Blue	3	Blue	Blue	3	Blue	Blue	Blue	Blue	
26		Orange		Orange			Orange			Orange	
27		Green		Green			Green			Green	
28		Brown		Brown			Brown			Brown	
29		Slate		Slate			Slate			Slate	
30		White		White			White			White	
31		Red		Red			Red			Red	
32		Black		Black			Black			Black	
33		Yellow		Yellow			Yellow			Yellow	
34		Violet		Violet			Violet			Violet	
35		Rose		Rose			Rose			Rose	
36		Aqua		Aqua			Aqua			Aqua	
37	Brown	Blue	4	Blue	Blue	4	Blue	Blue	Blue	Blue	
38		Orange		Orange			Orange			Orange	
39		Green		Green			Green			Green	
40		Brown		Brown			Brown			Brown	
41		Slate		Slate			Slate			Slate	
42		White		White			White			White	
43		Red		Red			Red			Red	
44		Black		Black			Black			Black	
45		Yellow		Yellow			Yellow			Yellow	
46		Violet		Violet			Violet			Violet	
47		Rose		Rose			Rose			Rose	
48		Aqua		Aqua			Aqua			Aqua	

Port Number	Buffer Tube Color	Fiber Color	Ribbon Number	Fiber Color	Buffer Tube Color	Ribbon Number	Fiber Color	Buffer Tube Color	Binder Color	Ribbon Marking	Fiber Color
49	Slate	Blue	5	Blue	Blue	5	Blue	Orange	Blue		Blue
50		Orange		Orange			Orange				
51		Green		Green			Green				
52		Brown		Brown			Brown				
53		Slate		Slate			Slate				
54		White		White			White				
55		Red		Red			Red				
56		Black		Black			Black				
57		Yellow		Yellow			Yellow				
58		Violet		Violet			Violet				
59	Rose	Rose	Rose	Rose							
60	Aqua	Aqua	Aqua	Aqua							
61	White	Blue	6	Blue	Blue	6	Blue	Orange		Blue	
62		Orange		Orange			Orange				
63		Green		Green			Green				
64		Brown		Brown			Brown				
65		Slate		Slate			Slate				
66		White		White			White				
67		Red		Red			Red				
68		Black		Black			Black				
69		Yellow		Yellow			Yellow				
70		Violet		Violet			Violet				
71	Rose	Rose	Rose	Rose							
72	Aqua	Aqua	Aqua	Aqua							
73	Red	Blue	7	Blue	Orange	7	Blue	Orange		Blue	
74		Orange		Orange			Orange				
75		Green		Green			Green				
76		Brown		Brown			Brown				
77		Slate		Slate			Slate				
78		White		White			White				
79		Red		Red			Red				
80		Black		Black			Black				
81		Yellow		Yellow			Yellow				
82		Violet		Violet			Violet				
83	Rose	Rose	Rose	Rose							
84	Aqua	Aqua	Aqua	Aqua							
85	Black	Blue	8	Blue	Orange	8	Blue	Green		Blue	
86		Orange		Orange			Orange				
87		Green		Green			Green				
88		Brown		Brown			Brown				
89		Slate		Slate			Slate				
90		White		White			White				
91		Red		Red			Red				
92		Black		Black			Black				
93		Yellow		Yellow			Yellow				
94		Violet		Violet			Violet				
95	Rose	Rose	Rose	Rose							
96	Aqua	Aqua	Aqua	Aqua							

Port Number	Buffer Tube Color	Fiber Color	Ribbon Number	Fiber Color	Buffer Tube Color	Ribbon Number	Fiber Color	Buffer Tube Color	Binder Color	Ribbon Marking	Fiber Color
97	Yellow	Blue	9	Blue	Orange	9	Blue	Brown	Blue		Blue
98		Orange		Orange			Orange				
99		Green		Green			Green				
100		Brown		Brown			Brown				
101		Slate		Slate			Slate				
102		White		White			White				
103		Red		Red			Red				
104		Black		Black			Black				
105		Yellow		Yellow			Yellow				
106		Violet		Violet			Violet				
107	Rose	Rose	Rose								
108	Aqua	Aqua	Aqua								
109	Violet	Blue	10	Blue	Orange	10	Blue	Brown	Blue		Blue
110		Orange		Orange			Orange				
111		Green		Green			Green				
112		Brown		Brown			Brown				
113		Slate		Slate			Slate				
114		White		White			White				
115		Red		Red			Red				
116		Black		Black			Black				
117		Yellow		Yellow			Yellow				
118		Violet		Violet			Violet				
119	Rose	Rose	Rose								
120	Aqua	Aqua	Aqua								
121	Rose	Blue	11	Blue	Orange	11	Blue	Green	Green		Blue
122		Orange		Orange			Orange				
123		Green		Green			Green				
124		Brown		Brown			Brown				
125		Slate		Slate			Slate				
126		White		White			White				
127		Red		Red			Red				
128		Black		Black			Black				
129		Yellow		Yellow			Yellow				
130		Violet		Violet			Violet				
131	Rose	Rose	Rose								
132	Aqua	Aqua	Aqua								
133	Aqua	Blue	12	Blue	Orange	12	Blue	Green	Green		Blue
134		Orange		Orange			Orange				
135		Green		Green			Green				
136		Brown		Brown			Brown				
137		Slate		Slate			Slate				
138		White		White			White				
139		Red		Red			Red				
140		Black		Black			Black				
141		Yellow		Yellow			Yellow				
142		Violet		Violet			Violet				
143	Rose	Rose	Rose								
144	Aqua	Aqua	Aqua								

Port Number	Buffer Tube Color	Fiber Color	Buffer Tube Color	Ribbon Number	Fiber Color	Buffer Tube Color	Blinder Color	Ribbon Marking	Fiber Color
145	Blue - Black *	Blue	Green	13	Blue	Slate	Blue		Blue
146		Orange			Orange				
147		Green			Green				
148		Brown			Brown				
149		Slate			Slate				
150		White			White				
151		Red			Red				
152		Black			Black				
153		Yellow			Yellow				
154		Violet			Violet				
155		Rose			Rose				
156		Aqua			Aqua				
157		Blue			Blue				
158		Orange			Orange				
159		Green			Green				
160	Orange - Black *	Brown	14	Blue	Slate	Green		Blue	
161		Slate		Orange					
162		White		Green					
163		Red		Brown					
164		Black		Slate					
165		Yellow		White					
166		Violet		Red					
167		Rose		Black					
168		Aqua		Yellow					
169		Blue		Violet					
170		Orange		Rose					
171		Green		Aqua					
172		Brown		Blue					
173		Slate		Orange					
174		White		Green					
175	Red	Brown							
176	Black	Slate							
177	Yellow	White							
178	Violet	Red							
179	Rose	Black							
180	Aqua	Yellow							
181	Blue	Violet							
182	Orange	Rose							
183	Green	Aqua							
184	Brown	Blue							
185	Slate	Orange							
186	White	Green							
187	Red	Brown							
188	Black	Slate							
189	Yellow	White							
190	Violet	Red							
191	Rose	Black							
192	Aqua	Yellow							
	Brown - Black *	Blue	15	16	Blue	Slate	Green		Blue
		Orange			Orange				
		Green			Green				
		Brown			Brown				
		Slate			Slate				
		White			White				
		Red			Red				
		Black			Black				
		Yellow			Yellow				
		Violet			Violet				
		Rose			Rose				
		Aqua			Aqua				
		Blue			Blue				
		Orange			Orange				
		Green			Green				
	Brown	Brown							
	Slate	Slate							
	White	White							
	Red	Red							
	Black	Black							
	Yellow	Yellow							
	Violet	Violet							
	Rose	Rose							
	Aqua	Aqua							

Port Number	Buffer Tube Color	Fiber Color	Buffer Tube Color	Ribbon Number	Fiber Color	Buffer Tube Color	Binder Color	Ribbon Marking	Fiber Color
193	Slate - Black*	Blue	Green	17	Blue	White	Blue		Blue
194		Orange			Orange				
195		Green			Green				
196		Brown			Brown				
197		Slate			Slate				
198		White			White				
199		Red			Red				
200		Black			Black				
201		Yellow			Yellow				
202		Violet			Violet				
203	Rose	Rose							
204	Aqua	Aqua							
205	White - Black*	Blue	Green	18	Blue	White	Blue		Blue
206		Orange			Orange				
207		Green			Green				
208		Brown			Brown				
209		Slate			Slate				
210		White			White				
211		Red			Red				
212		Black			Black				
213		Yellow			Yellow				
214		Violet			Violet				
215	Rose	Rose							
216	Aqua	Aqua							
217	Red - Black*	Blue	Brown	19	Blue	Green	Green		Blue
218		Orange			Orange				
219		Green			Green				
220		Brown			Brown				
221		Slate			Slate				
222		White			White				
223		Red			Red				
224		Black			Black				
225		Yellow			Yellow				
226		Violet			Violet				
227	Rose	Rose							
228	Aqua	Aqua							
229	Black - Gray*	Blue	Brown	20	Blue	Green	Green		Blue
230		Orange			Orange				
231		Green			Green				
232		Brown			Brown				
233		Slate			Slate				
234		White			White				
235		Red			Red				
236		Black			Black				
237		Yellow			Yellow				
238		Violet			Violet				
239	Rose	Rose							
240	Aqua	Aqua							

Port Number	Buffer Tube Color	Fiber Color	Buffer Tube Color	Ribbon Number	Fiber Color	Buffer Tube Color	Binder Color	Ribbon Marking	Fiber Color	
241	Yellow - Black*	Blue	Brown	21	Blue	Red	Blue		Blue	
242		Orange			Orange				Orange	
243		Green			Green				Green	
244		Brown			Brown				Brown	
245		Slate			Slate				Slate	
246		White			White				White	
247		Red			Red				Red	
248		Black			Black				Black	
249		Yellow			Yellow				Yellow	
250		Violet			Violet				Violet	
251	Rose	Rose		Rose						
252	Aqua	Aqua		Aqua						
253	Blue	Blue		22	Blue		Blue	Green	Blue	Blue
254	Orange	Orange			Orange		Orange			
255	Green	Green			Green		Green			
256	Brown	Brown			Brown		Brown			
257	Slate	Slate			Slate		Slate			
258	White	White			White		White			
259	Red	Red			Red		Red			
260	Black	Black			Black		Black			
261	Yellow	Yellow			Yellow		Yellow			
262	Violet	Violet			Violet		Violet			
263	Rose	Rose		Rose	Rose					
264	Aqua	Aqua		Aqua	Aqua					
265	Blue	Blue	23	Blue	Blue	Green	Blue	Blue		
266	Orange	Orange		Orange	Orange					
267	Green	Green		Green	Green					
268	Brown	Brown		Brown	Brown					
269	Slate	Slate		Slate	Slate					
270	White	White		White	White					
271	Red	Red		Red	Red					
272	Black	Black		Black	Black					
273	Yellow	Yellow		Yellow	Yellow					
274	Violet	Violet		Violet	Violet					
275	Rose	Rose	Rose	Rose						
276	Aqua	Aqua	Aqua	Aqua						
277	Blue	Blue	24	Blue	Blue	Green	Blue	Blue		
278	Orange	Orange		Orange	Orange					
279	Green	Green		Green	Green					
280	Brown	Brown		Brown	Brown					
281	Slate	Slate		Slate	Slate					
282	White	White		White	White					
283	Red	Red		Red	Red					
284	Black	Black		Black	Black					
285	Yellow	Yellow		Yellow	Yellow					
286	Violet	Violet		Violet	Violet					
287	Rose	Rose	Rose	Rose						
288	Aqua	Aqua	Aqua	Aqua						