

# FR-N-1SSM-01-xxF Series

HYBRIFLEX® RRH Optical Fiber Cable, 1 Single Strand, Ruggedized Bend-Insensitive Single-Mode Fiber, LC Connectors

#### PRODUCT DESCRIPTION

RFS' HYBRIFLEX Remote Radio Head (RRH) hybrid feeder cabling solution combines any combination of optical fiber and/or DC power for RRHs in a single lightweight armored or unarmored cable, making it the world's most innovative solution for RRH deployments. Hybrid, Fiber Optic and DC riser trunk and jumper cables are available in a large variety of fiber counts, DC counts and cross sections. Both pre-connectorized and on-site options are available.

### **FEATURES / BENEFITS**

- Ruggedized, bend-insensitive fiber design with outstanding bending characteristics
- Lightweight solution and compact design Decreases tower loading
- Robust cabling Eliminates need for expensive cable trays and ducts
- Installation of tight bundled fiber optic cable pair directly to the RRH Reduces CAPEX and wind load by eliminating need for interconnection
- Outdoor, black jacket Ensures long-lasting cable protection
- 100% Factory tested Online test results available



# **TECHNICAL FEATURES**

	JC1	

Cable Type		HYBRIFLEX®
Fire Performance		Flame Retardant
MECHANICAL SPECIFICATIONS		
Outer Diameter Nominal	mm (in)	5.5 (0.217)

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Cable Weight	kg/m (lb/ft)	0.033 (0.022)
Minimum Bending Radius, Single Bend	mm (in)	66 (2.6)
Minimum Bending Radius, Multiple Bends	mm (in)	83 (3.3)
Recommended / Maximum Clamp Spacing	m (ft)	1 / 1.2 (3.25 / 4)

### **F/O CABLE SPECIFICATIONS**

Number of F/O Strands		1
F/O Cable Type		G657-A2 Single Mode, Bend Tolerant
Core/Clad	μm	9/125
Secondary Protection Nominal	μm (in)	900 (0.035)
F/O Standards (Meets or Exceeds)		UL Listed Type OFNR (UL1666), RoHS Compliant
Optical Loss	dB/Km	0.5 @ 1310 nm 0.5 @ 1550 nm
FO Break-out Length (Top)	mm (in)	279 (11)
FO Break-out Length (Bottom)	mm (in)	228 (9)
Cable Sealing Method		Semi-rigid flame-retardant polyolefin, with hot melt adhesive



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		LC Connector
iber Termination End 2	LC Connector	
CABLE JACKET		
JV-Protection Individual and External Jacket		Yes
acket Material		Flame Retardant, Indoor/Outdoor, PVC, Black
TESTING AND ENVIRONMENTAL		
Storage Temperature	°C (°F)	-40 to 70 (-40 to 158)
Operation Temperature	°C (°F)	-40 to 65 (-40 to 149)
Installation Temperature	°C (°F)	-20 to 65 (-4 to 149)
acket Specifications		UL 1666
nstallation Guidelines: <u>Download</u> QuickShip 2.0 Program Information: <u>D</u> On-line Factory Test Results: <u>View</u> BLACK UNBOOT	ownload	— WHITE BOOT
BLACK BLOCK (PIN B)		92 MM TUBE
-	"L"—	<b>─</b> ✓



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#### **ADDITIONAL ASSEMBLIES - 1 PAIR SM FIBER**

Length, ft	Model Number
6	FR-N-1SM-01-6F
10	FR-N-1SM-01-10F
15	FR-N-1SM-01-15F
20	FR-N-1SM-01-20F
30	FR-N-1SM-01-30F
40	FR-N-1SM-01-40F
50	FR-N-1SM-01-50F
60	FR-N-1SM-01-60F
79	FR-N-1SM-01-70F
80	FR-N-1SM-01-80F
90	FR-N-1SM-01-90F
100	FR-N-1SM-01-100F

#### **ADDITIONAL ASSEMBLIES - 2 PAIR SM FIBER**

Length, ft	Model Number
10	FR-N-2SM-01-10F
20	FR-N-2SM-01-20F
30	FR-N-2SM-01-30F
40	FR-N-2SM-01-40F
50	FR-N-2SM-01-50F
60	FR-N-2SM-01-60F
70	FR-N-2SM-01-70F
80	FR-N-2SM-01-80F
90	FR-N-2SM-01-90F
100	FR-N-2SM-01-100F



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#### **ADDITIONAL ASSEMBLIES - 3 PAIR SM FIBER**

Length, ft	Model Number
3	FR-N-3SM-01-3F
4	FR-N-3SM-01-4F
6	FR-N-3SM-01-6F
8	FR-N-3SM-01-8F
10	FR-N-3SM-01-10F
15	FR-N-3SM-01-15F
20	FR-N-3SM-01-20F
30	FR-N-3SM-01-30F
50	FR-N-3SM-01-50F

### **ADDITIONAL ASSEMBLIES - 6 PAIR SM FIBER**

Length, ft	Model Number
3	FR-N-6SM-01-3F
4	FR-N-6SM-01-4F
6	FR-N-6SM-01-6F
8	FR-N-6SM-01-8F
10	FR-N-6SM-01-10F
15	FR-N-6SM-01-15F
20	FR-N-6SM-01-20F
30	FR-N-6SM-01-30F
40	FR-N-6SM-01-40F

# **ADDITIONAL ASSEMBLIES - 12 PAIR SM FIBER**

Length, ft	Model Number
3	FR-N-12SM-01-3F
4	FR-N-12SM-01-4F
6	FR-N-12SM-01-6F
8	FR-N-12SM-01-8F
10	FR-N-12SM-01-10F
15	FR-N-12SM-01-15F
20	FR-N-12SM-01-20F
30	FR-N-12SM-01-30F



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#### **ADDITIONAL ASSEMBLIES - 1 STRAND SM FIBER**

Length, ft	Model Number
10	FR-N-1SSM-01-10F
20	FR-N-1SSM-01-20F
30	FR-N-1SSM-01-30F
40	FR-N-1SSM-01-40F
50	FR-N-1SSM-01-50F
60	FR-N-1SSM-01-60F
70	FR-N-1SSM-01-70F
80	FR-N-1SSM-01-80F
90	FR-N-1SSM-01-90F
100	FR-N-1SSM-01-100F

#### **ADDITIONAL ASSEMBLIES - 2 STRAND SM FIBER**

Length, ft	Model Number
10	FR-N-2SSM-01-10F
20	FR-N-2SSM-01-20F
30	FR-N-2SSM-01-30F
40	FR-N-2SSM-01-40F
50	FR-N-2SSM-01-50F
60	FR-N-2SSM-01-60F
70	FR-N-2SSM-01-70F
80	FR-N-2SSM-01-80F
90	FR-N-2SSM-01-90F
100	FR-N-2SSM-01-100F



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# PRE-PACKED HYBRIFLEX KITS FOR EASY INTEGRATION INTO RAYCAP JUNCTION BOXES

RFS Technologies now offers Kitting options for most hybrid risers and jumpers that include both the cable assembly and the Raycap inserts. For reference, kits have a "K" as the third digit in the model number. HB158 does not require an additional gland/insert for proper installation and sealing into the Distribution Boxes.

Kit Model Prefix	Assembly Prefix	Assembly Qty	Raycap Insert Kit	Insert Kit Contents	Raycap Insert Kit Qty
HBK114	HB114	1	RFS Technologies- TRUNK-KIT	(2) 190 0620, Insert, M75, 1H, 40mm	1
HBK058	HBF058		RFS Technologies- JUMP-KIT	(1) 190 0621, Insert, M75, 3H, 22mm, Split w/ plugs	
HBK012	HBF012		RFS Technologies- JUMP-KIT-2	(1) 190 0903, Insert, M75, 2H, 15mm, Split w/ plugs	
FRK-N	FR-N		RFS Technologies- FIBER-KIT	(1) 190 0657, Insert, M75, 6H, 6.1mm, Split w/ plugs	