



HYBRIFLEX® Jumper Cables for Small Cell 5G mmWave Radio Deployments

Hybrid and fiber-only jumpers simplify installations in any location, using any power source

Deploying large numbers of small cell millimeter wave (mmWave) radios close to end users is key to mobile operators' strategies as they evolve to 5G. With RFS HYBRIFLEX jumper cables, mobile operators have the flexibility to install this critical 5G equipment on towers, rooftops, light poles, and other locations, and to take advantage of DC or AC power sources.

Jumpers for any small cell installation scenario

The HYBRIFLEX small cell 5G mmWave radio jumpers are available in two configurations:

- **Hybrid jumpers** that are ideal to efficiently bring DC power and single-mode optical fiber to small cell 5G mmWave radios on macro site towers. The hybrid jumpers are available in 10 AWG, 8 AWG or 6 AWG and feature a corrugated aluminum armor.
- **Fiber-only jumpers** that are ideal to efficiently bring single-mode optical fiber to small cell 5G mmWave radios on rooftops, light poles and other locations where AC power is already available. The fiber-only jumpers are ruggedized for outdoor environments.

A variety of termination options and lengths

The jumpers are terminated in combinations of:

- Duplex LC with or without FullAXS compatibility
- Simplex LC with or without FullAXS compatibility

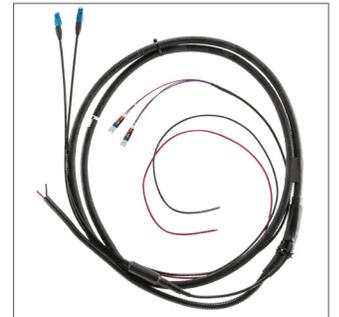
They are available in lengths up to 100 feet in 10-foot increments with additional lengths available on request.

Leveraging field-proven strength and reliability

Like all HYBRIFLEX cables, these jumpers are engineered to hold internal fiber and power lines in place with maximum force without damaging the core components and are fully tested to ensure long-term performance and durability in the field.

Complete test results for the UL-listed jumpers are available on our [test performance data tool](#).

Mobile operators have the flexibility to install small cell 5G mmWave radios everywhere they need them



Exclusive Features and Benefits

RFS is your single source for 5G evolution

- **Hybrid and fiber-only configurations**
Simplifies small cell 5G mmWave radio deployments in any location
- **Lengths up to 100 feet**
Supports any installation scenario
- **Duplex and simplex LC terminations with FullAXS compatibility option**
Increases deployment flexibility
- **UL-Listed**
Meets the most stringent industry standards for maximum safety and product quality
- **Weather- and corrosion-resistant construction**
Extends jumper lifespan in any conditions



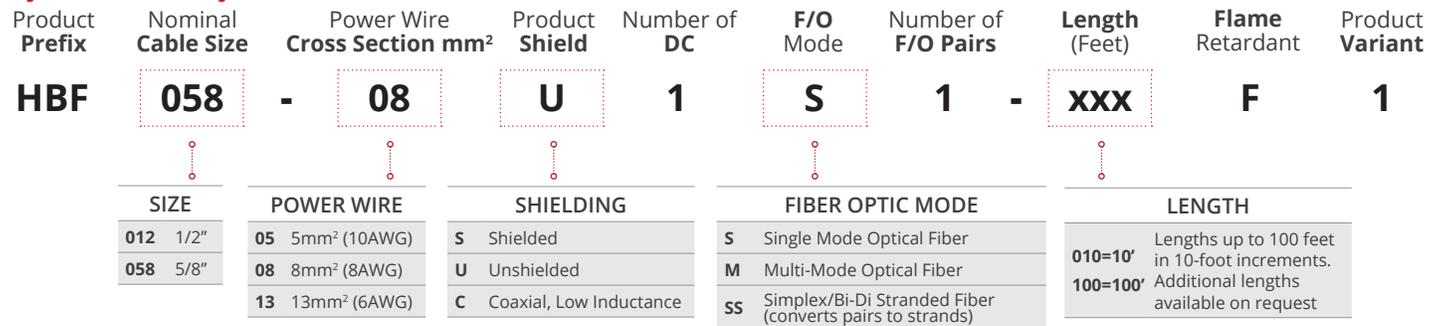
Hybrid and Fiber Only Cable Assemblies (typical for Ericsson applications)

Model Number*	Product Configuration	Connector Interface
FR-N-1SM-01-xxxF1	Fiber Jumper, Riser, Ruggedized, 1 Pair SM Fiber	Bottom Optical Fiber Termination: LC Top Optical Fiber Termination: LC/FULLAXS
FR-N-1SSM-01-xxxF1	Fiber Jumper, Riser, Ruggedized, 1 Strand SM Fiber	
FR-N-2SM-01-xxxF1	Fiber Jumper, Riser, Ruggedized, 2 Pair SM Fiber	
FR-N-2SSM-01-xxxF1	Fiber Jumper, Riser, Ruggedized, 2 Strand SM Fiber	
FR-N-3SM-01-xxxF1	Fiber Jumper, Riser, Ruggedized, 3 Pair SM Fiber	
FR-N-3SSM-01-xxxF1	Fiber Jumper, Riser, Ruggedized, 3 Strand SM Fiber	
FR-N-4SM-01-xxxF1	Fiber Jumper, Riser, Ruggedized, 4 Pair SM Fiber	
FR-N-4SSM-01-xxxF1	Fiber Jumper, Riser, Ruggedized, 4 Strand SM Fiber	
HBF058-08U1S1-xxxF1	1 Pair 8AWG DC, 1 Pair SM Fiber UL	
HBF058-08U1S2-xxxF	1 Pair 8AWG DC, 2 Pair SM Fiber UL	
HBF058-08U1S3-xxxF	1 Pair 8AWG DC, 3 Pair SM Fiber UL	
HBF058-08U1S4-xxxF	1 Pair 8AWG DC, 4 Pair SM Fiber UL	
HBF058-08U1SS2-xxxF	1 Pair 8AWG DC, 2 Strand SM Fiber UL	
HBF058-08U1SS3-xxxF	1 Pair 8AWG DC, 3 Strand SM Fiber UL	
HBF058-08U1SS4-xxxF	1 Pair 8AWG DC, 4 Strand SM Fiber UL	
HBF058-08U1SS-xxxF	1 Pair 8AWG DC, 1 Strand SM Fiber UL	
HBF058-08U2S1-xxxFY	Y-Jumper, 2 Pair 8AWG DC, 1 Pair SM Fiber UL	
HBF058-08U2S2-xxxFY	Y-Jumper, 2 Pair 8AWG DC, 2 Pair SM Fiber UL	
HBF058-08U2SS2-xxxFY	Y-Jumper, 2 Pair 8AWG DC, 2 Strand SM Fiber UL	
HBF058-08U2SS-xxxFY	Y-Jumper, 2 Pair 8AWG DC, 1 Strand SM Fiber UL	
HBF058-13U1SS2-xxxF	1 Pair 6AWG DC, 2 Strand SM Fiber UL	
HBF058-13U1SS3-xxxF	1 Pair 6AWG DC, 3 Strand SM Fiber UL	

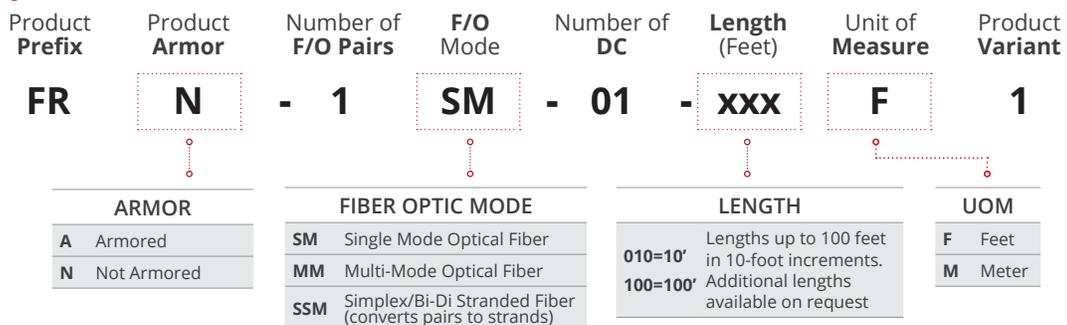
Hybrid and Fiber Only Cable Assemblies (typical for Nokia applications)

Model Number*	Product Configuration	Connector Interface
FR-N-1SM-01-xxxF	Fiber Jumper, Riser, Ruggedized, 1 Pair SM Fiber	Bottom Optical Fiber Termination: LC Top Optical Fiber Termination: LC
FR-N-1SSM-01-xxxF	Fiber Jumper, Riser, Ruggedized, 1 Strand SM Fiber	
FR-N-2SM-01-xxxF	Fiber Jumper, Riser, Ruggedized, 2 Pair SM Fiber	
FR-N-2SSM-01-xxxF	Fiber Jumper, Riser, Ruggedized, 2 Strand SM Fiber	
FR-N-3SM-01-xxxF	Fiber Jumper, Riser, Ruggedized, 3 Pair SM Fiber	
FR-N-6SM-01-xxxF	Fiber Jumper, Riser, Ruggedized, 6 Pair SM Fiber	
FR-N-12SM-01-xxxF	Fiber Jumper, Riser, Ruggedized, 12 Pair SM Fiber	
HBF012-05U1S1-xxxF	1 Pair 10AWG DC, 1 Pair SM Fiber UL	
HBF012-05U1S2-xxxF	1 Pair 10AWG DC, 2 Pair SM Fiber UL	
HBF012-05U1SS2-xxxF	1 Pair 10AWG DC, 2 Strand SM Fiber UL	
HBF058-08U1S1-xxxF	1 Pair 8AWG DC, 1 Pair SM Fiber UL	
HBF058-08U1S2-xxxF1	1 Pair 8AWG DC, 2 Pair SM Fiber UL	
HBF058-08U1SS2-xxxF1	1 Pair 8AWG DC, 2 Strand SM Fiber UL	
HBF058-08U1SS-xxxF1	1 Pair 8AWG DC, 1 Strand SM Fiber UL	

Hybrid Assembly Model Structure



Fiber Assembly Model Structure



*The X's in the model number denote jumper lengths. For example, HBF058-08U1S1-100F is a 100ft long jumper. Please visit our [eCatalog](#) for available lengths.