



RFS' HYBRIFLEX™ cabling solution for Remote Radio Unit (RRU) combines optical fiber and DC power in a single lightweight aluminum corrugated cable, making it the world's most innovative solution for RRU deployments. It was developed to reduce installation complexity and cost at Cellular sites.

HYBRIFLEX™ cabling solutions allows mobile operators deploying RRU architecture to standardized installation process and eliminates the need and the cost for an internal grounding wire.

The HYBRIFLEX™ cable is part of a site installation kit. It consists of an armored bundle of 4 unshielded DC cables, 8 F/O distribution cables and a rip cord to adjust the breakout part of the cable.

FEATURES / BENEFITS

- A corrugated armor with excellent bending characteristics minimizes installation time and enables mechanical protection and EMC shielding
- Outer conductor grounding eliminates typical additional grounding requirement and saves on installation costs
- Lightweight solution and compact design decreases tower loads
- Robust cabling eliminates need for expensive cable trays and conduits
- Installation of stripped fiber optic cable pairs directly to RRH reduces CAPEX and wind load by eliminating need for junction boxes
- F/O and DC housed in single corrugated cable saves CAPEX by standardizing RRH cable installation and reducing installation equipments



HYBRIFLEX Series

Technical features

STRUCTURE

| | | |
|-------------------------|--|-------------------------------|
| Cable Type | | 4 RRU HYBRIFLEX™ Standard LTE |
| Size | | 7/8 |
| Fire Performance | | Halogene Free |

MECHANICAL SPECIFICATIONS

| | | |
|--|--------------|----------------------|
| Outer Diameter Nominal | mm (in) | 27.8 (1.09) |
| Cable Weight | kg/m (lb/ft) | 0.75 (0.5) |
| Minimum Bending Radius, Single Bend | mm (in) | 120 (4.7) |
| Minimum Bending Radius, Multi Bends | mm (in) | 250 (9.8) |
| Tensile Strength | N (lb) | 700 (157) |
| Recommended / Maximum Clamp Spacing | m (ft) | 0.8 / 1 (2.75 / 3.3) |

**DC POWER CABLE SPECIFICATIONS**

| | | |
|-----------------------------------|--|--|
| Number of DC Pairs | | 4 |
| Maximum DC-Resistance Power Cable | Ω/km (Ω/kft) | 4.95 (1.51) |
| Cross Section of Power Cable | mm^2 (AWG) | 4 (12) |
| Shielding | | provided by aluminium armor |
| DC Wire Jacket Material | | Polyethylene, PE, Metalhydroxite Filling |
| DC Wire Jacket Thickness | mm (in) | 0.5 (0.02) |
| DC Cable Single Bending Radius | mm (in) | 100 (3.94) |
| DC Cable Diameter | mm (in) | 9.9 (0.39) |
| DC Cable Jacket | | UV stable black and blue PE |
| DC Standards (Meets or Exceeds) | | IEC 60228 |

CABLE JACKET

| | | |
|--|--|--------------------|
| UV-Protection Individual and External Jacket | | Yes |
| Jacket Material | | UV stable black PE |

ARMOR SPECIFICATIONS

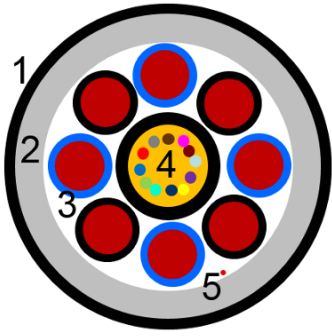
| | | |
|--|--|--------------------------|
| Armor Type | | Corrugated Aluminum tube |
| Maximum DC-Resistance of Armor | Ω/km (Ω/kft) | 1.21 (0.37) |
| Copper Equivalent Cross Section of Armor | mm^2 (AWG) | 16 (5) |
| Diameter Corrugated Armor | mm (in) | 25.2 (0.99) |

F/O CABLE SPECIFICATIONS

| | | |
|----------------------------------|--------------------|---------------------------|
| F/O Cable Type | | Tight-Buffer, Single mode |
| Number of F/O Pairs | | 8 |
| Core/Clad | μm | 9 /125 |
| Secondary Protection Nominal | μm (in) | 900 (0.035) |
| Single Bending Radius | mm (in) | 69 (2.71) |
| Cable Diameter mm (in) | | 6.9 (0.27) |
| F/O Cable Jacket | | UV stable black PE |
| F/O Standards (Meets or Exceeds) | | ITU G 657.A2 |

TESTING AND ENVIRONMENTAL

| | | |
|--------------------------|---|-------------------------|
| Storage Temperature | $^{\circ}\text{C}$ ($^{\circ}\text{F}$) | -40 to 85 (-40 to 185) |
| Operation Temperature | $^{\circ}\text{C}$ ($^{\circ}\text{F}$) | -40 to 85 (-40 to 185) |
| Installation Temperature | $^{\circ}\text{C}$ ($^{\circ}\text{F}$) | -20 to 50 (-4 to 122) |
| Jacket Specifications | | not applicable |
| LSZH Specification | | not applicable |



- 1) External Jacket
- 2) Aluminum Armor
- 3) Power Wire
- 4) F/O Cable
- 5) Rip Cord

Product Detail

External Document Links

- [Handling Instruction.pdf](#)
- [Ordering_code.pdf](#)
- [Solution Overview_4.pdf](#)
- [Solution Overview_5.pdf](#)

Notes