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12.08.2021

Product Datasheet

fiber optic cable: InAir ADSS MT Aramid DJ-TR-144U (12x12)-27kN

Order information

Design	Part number
InAir ADSS MT Aramid DJ-TR-144U (12x12)-27kN	0524-102476-23

Other fiber counts available upon request

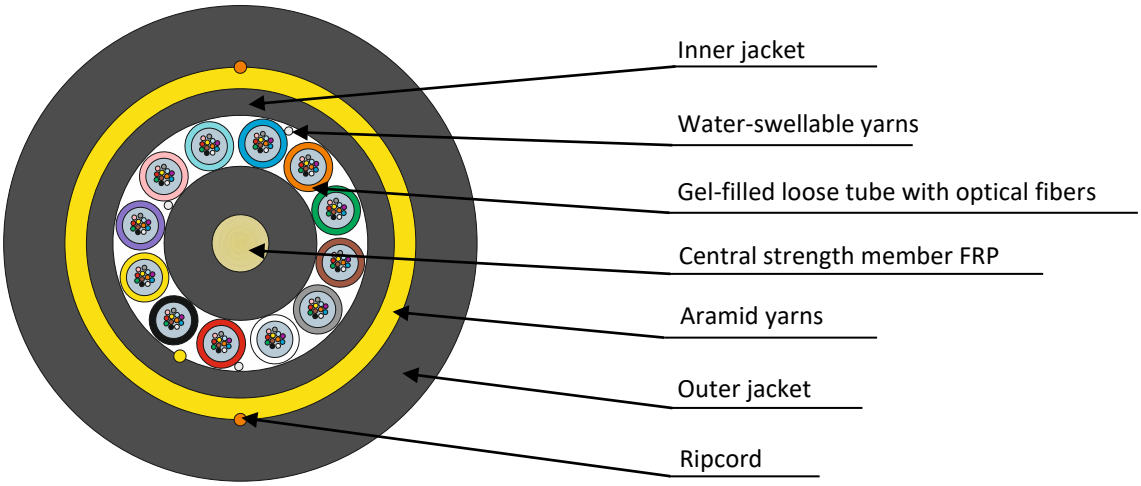
Typical application and features

- Aerial installation between poles and buildings
- Aerial installation on powerlines
- Aerial installation for communication lines
- Pulling into underground ducts and sewer pipes
- Installation along bridges, tunnels and other structures
- Installation into indoor/outdoor cable conduits and trays

All-dielectric design

UV-resistant

Design



Cable consists of stranded core with central strength member (FRP), gel-filled loose tubes with optical fibers. Stranded core is fixed by water-swellable yarns. Inner jacket is made of LDPE. One ripcord is laid under inner jacket. Aramid yarns are laid over inner jacket. Outer jacket is made of tracking-resistant PE. Two ripcords are laid under outer jacket. Meets IEEE 1222-2011.

Optical fibers and loose tubes color identification:

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Other colors upon request

Cable marking example

Marking is made on each 2 feet of cable

00001 FT	= INCAB	OPTICAL CABLE =	PART NUMBER	InAir ADSS MT Aramid DJ	TR	144	U	(12	x	12)	27KN	2021
1	2		3	4	5	6	7	8		9	10	11

1	Length marking unit	7	Fiber type
2	Manufacturer	8	Number of loose tubes
3	Part number	9	Fibers per loose tube
4	Cable trade name	10	Maximum rated design tension
5	Outer jacket material	11	Year of production
6	Fiber count		

Additional information upon request. Marking can also be in meters

Design details

Fiber count		144
Number of loose tubes		12
Fibers per loose tube		12
Number of PBT fillers		-
Loose tube diameter	mm (in)	2.6 (0.102)
Inner jacket thickness	mm (in)	1.1 (0.043)
Outer jacket thickness	mm (in)	2.4 (0.094)
Cable diameter ± 0.2 (0.008)	mm (in)	21.7 (0.854)
Cable weight	kg/km (lb/ft)	366.1 (0.246)
Maximum rated design tension	kN (lb)	27.0 (6071)
Zero fiber strain margin	kN (lb)	22.8 (5127)
Stringing tension (STT)	kN (lb)	6.75 (1518)
Rated breaking strength (RBS)	kN (lb)	49.7 (11175)
Modulus of elasticity, initial	kN/ mm^2 (ksi)	8.4 (1218)
Modulus of elasticity, final	kN/mm^2 (ksi)	9.07 (1316)
Modulus of elasticity, creep	kN/mm^2 (ksi)	5.88 (853)
Cable cross-sectional area	mm^2 (in^2)	369.5 (0.573)
Coefficient of thermal expansion, 10^{-6}	1/°C (1/°F)	4.83 (2.68)

Other design upon request

Optical fiber

Fiber type	**«U»**
Product name	Corning SMF 28®ULTRA
ITU-T Recommendation	G.652D + G.657.A1
Dimensional Specifications	
Core-Clad Concentricity	0.5 µm
Cladding Diameter	125 ±0.7 µm
Cladding Non-Circularity	0.7 %
Coating Diameter	242 ±5 µm
Transmission Specifications	
Attenuation in the cable (dB/km)*:	
1310 nm wavelength (Typical** / Max.)	0.32 / 0.34
1550 nm wavelength (Typical** / Max.)	0.19 / 0.20

* Local attenuation discontinuities caused by cable winding on a reel are allowed

** Typical attenuation is the real level of optical attenuation of at least 90% fibers after cabling

Additional information about optical fiber at www.incabamerica.com

Operating parameters		
Operation temperature range	-50°C…+70°C -60°C…+70°C* * Available upon request	-58°F…+158°F -76°F…+158°F* * Available upon request
Installation temperature range	-30°C…+50°C	-22°F…+122°F
Transportation and storage temperature range	-50°C…+70°C	-58°F…+158°F
Minimum bending radius	15 x cable diameter	
Design life	25 years (per fiber supplier)	
Maximum space potential	25 kV	

Reel capacity		
Standard maximum reel length*	4,000 m	13,00 ft

* Longer length may be possible

Cable parameters		
Parameter	Nominal value	Evaluation criterion
Tensile strength (IEEE 1222-2011 p.6.5.1.2.)	27 kN	- Δα* ≤ 0.10 dB - no damage
Crush (IEEE 1222-2011 p.6.5.2.2.)	0.22 kN/cm	
Twist (IEEE 1222-2011 p.6.5.2.4.)	- 10 cycles - torsion angle ±360° length 4 m	
Water ingress test (IEEE 1222-2011 p.6.5.3.3.)	Sample length: 3 m Testing time: 1 hour	No water at the cable end
Temperature cycling** (IEEE 1222-2011 p.6.5.3.5.)	- temperature range from -50°C to 70°C - 2 cycles - cycle period ≥16 hours	Δα ≤ 0.10 dB/km
Seepage of flooding compound (IEEE 1222-2011 p.6.5.2.7.)	at 65°C	No dripped compound

* - attenuation increasing at standard wavelengths
** - other temperature range upon request

Reel packing and marking

Cables are supplied on non-returnable wooden reels. Reel diameter is not less than 40 diameters of the cable. Not less than 2 m of inside end of the cable is fixed to the reel flange. The cable ends are sealed with waterproof covers.
The label on the outer reel flange contains our trademark, cable type, customer's name and PO, reel number, production date, cable length, cable weight net/gross.
The following information is printed on the reel flange: manufacturer's name and website, rotation direction, cable end indication, shipping and handling summary, labels "Fragile" and "Handle with care".
Our cable passport shows: cable type, technical standard number, cable length, fiber type, fiber coloring, fibers per tube, tube identification coloring, final attenuation for all fibers, refractive index of the fiber, fiber manufacturer and production date.
Cable passport is affixed to the inner flange in a plastic bag. Additional information can be included on the passport upon request.