

Aug-17-2020

Product Datasheet
fiber optic cable DPT-P-6kN

Order information

Design	Part number
DPT-P-12U (1x12)-6kN	0325-85755-6
DPT-P-24U (2x12)-6kN	0325-83807-6
DPT-P-48U (4x12)-6kN	0325-77477-6
DPT-P-72U (6x12)-6kN	0325-61702-6
DPT-P-96U (8x12)-6kN	0325-61704-6
DPT-P-144U (12x12)-6kN	0325-81844-6
DPT-P-288U (12x24)-6kN	0325-83923-6

Other fiber counts available upon request

Application and features

As all-dielectric self-supporting (ADSS) cable for aerial installation between buildings and structures, or for cabling in ducts, tunnels, on bridges and overpasses, up to 50 ft inside buildings and construction sites.

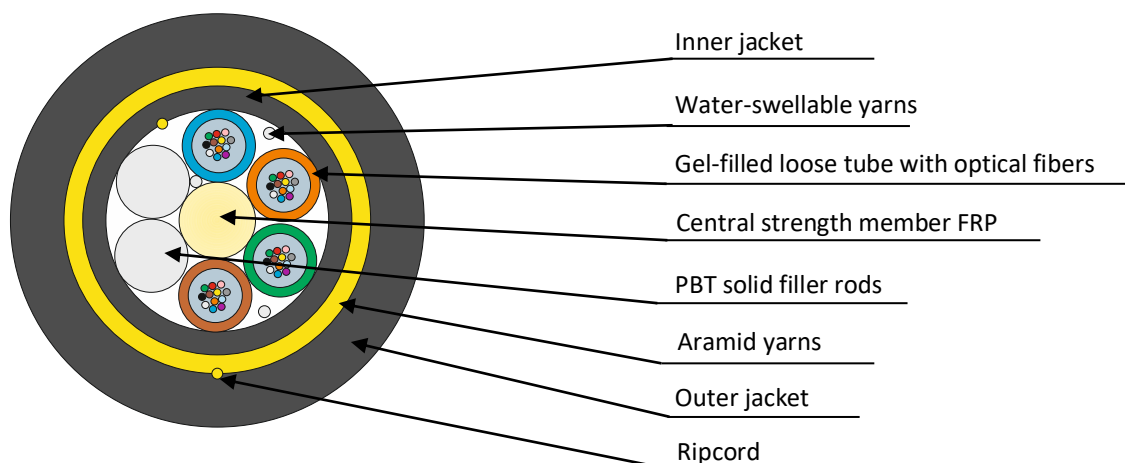


All-dielectric design



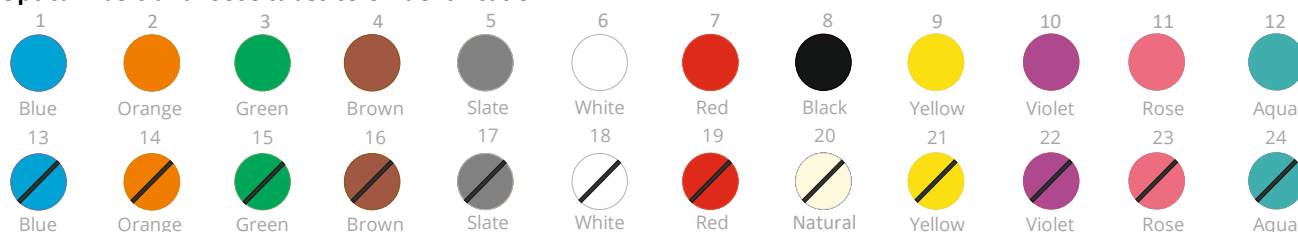
UV-resistant

Design



Cable consists of stranded core with central strength member (FRP), gel-filled loose tubes with optical fibers and PBT solid filler rods (natural color). Stranded core is fixed by water-swellable yarns. Inner jacket is made of LDPE. Aramid yarns are laid over inner jacket. Outer jacket is made of MDPE. One ripcord is laid under each jacket. Meets IEEE 1222-2011.

Optical fibers and loose tubes color identification:



Other colors upon request

Cable marking example

Marking is made on each foot of cable

Fiber optic cable	= INCAB =	DPT	P	72	U	(6 x 12)	6 kN	2020	= 0001 ft =	
	1	2	3	4	5	6	7	8	9	10

1	Company name	6	Number of loose tubes
2	Cable type	7	Fibers per loose tube
3	Outer jacket material	8	Maximum rated design tension
4	Fiber count	9	Year of production
5	Fiber type	10	Foot marking

Additional information upon request. Marking can also be in meters

Design details

Fiber count		12 – 72	96	144	288
Number of loose tubes		6	8	12	12
Fibers per loose tube		12			24
Loose tube diameter	mm (in)	2.6 (0.102)	2.6 (0.102)	2.6 (0.102)	3.0 (0.118)
Inner jacket thickness	mm (in)	0.7 (0.028)	0.7 (0.028)	0.7 (0.028)	0.7 (0.028)
Outer jacket thickness	mm (in)	1.7 (0.067)	1.7 (0.067)	1.7 (0.067)	1.7 (0.067)
Cable diameter ± 0.2 (0.008)	mm (in)	12.8 (0.504)	14.8 (0.583)	18.3 (0.72)	20.4 (0.803)
Cable weight	kg/km (lb/ft)	122.9 (0.083)	157.7 (0.106)	241.2 (0.162)	291.9 (0.196)
Maximum rated design tension	kN (lb)	6.0 (1349)			
Installation tension (for stringing)	kN (lb)	1.5 (337)			
Rated breaking strength (RBS)	kN (lb)	10.34 (2325)	10.31 (2318)	14.11 (3173)	17.55 (3946)
Modulus of elasticity, initial	kN/mm ² (ksi)	5.02 (728)	3.76 (545)	3.36 (487)	3.36 (487)
Modulus of elasticity, final	kN/mm ² (ksi)	5.42 (786)	4.06 (589)	3.63 (526)	3.63 (526)
Modulus of elasticity, creep	kN/mm ² (ksi)	3.51 (510)	2.632 (382)	2.352 (341)	2.35 (341)
Cable cross-sectional area	mm ² (in ²)	128.7 (0.2)	171.5 (0.3)	262.1 (0.4)	326.0 (0.5)
Coefficient of thermal expansion, 10 ⁻⁶	1/°C (1/°F)	14.90 (8.3)	17.93 (10.0)	18.45 (10.2)	17.50 (9.7)

Other design upon request

Optical fiber

Fiber type	«U»
Fiber brand	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

* Point discontinuity in attenuation associated with winding the cable on a drum 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	-50°C...+70°C	-58°F...+158°F
Installation temperature	-30°C...+50°C	-22°F...+122°F
Transportation and storage temperature	-50°C...+70°C	-58°F...+158°F
Minimum bending radius	15 x cable diameter	
Life time	25 years (per fiber supplier)	
Potential	12kV	

Cable parameters

Parameter	Nominal value	Evaluation criterion
Tensile strength (IEC 60794-1-21 method E1)	6 kN	- $\Delta\alpha^* \leq 0.05$ dB - no damage
Crush (IEC 60794-1-21 method E3)	0.3 kN/cm	
Repeated bending (IEC 60794-1-21 method E6)	20 cycles, bending radius $\pm 90^\circ$	
Torsion (IEC 60794-1-21 method E7)	- 10 cycles - torsion angle $\pm 360^\circ$ length 4 m	
Impact (IEC 60794-1-21 method E4)	Impact energy 30 J	
Water penetration (IEC 60794-1-22 method F5C)	Sample length: 3 m Testing time: 24 hours	No water at the cable end
Temperature cycling** (IEC 60794-1-22 method F1)	- temperature range from -50°C to 70°C - 2 cycles - cycle period ≥ 16 hours	$\Delta\alpha \leq 0.05$ dB/km
Compound flow (IEC 60794-1-21 method E14)	at 70°C	No dripped compound

* - attenuation increasing at standard wavelengths

** - other temperature range upon request

Safety standards compliance

RoHS: 2011/65/EU; 2015/863/EU	"Restriction on the use of certain Hazardous Substances"
REACH: 1907/2006/EU	"Registration, Evaluation, Authorisation and Restrictions of Chemicals"

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.

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