



<b>Cable Construction</b>						
- Number of fibers	24	48	72	96	144	288
- Number of loose tubes x Number of fibers per tube	2x12	4x12	6x12 2	8x12	12x12	9+15x12
- Number of fillers ( dummies )	4	2	-			
- Central strength member						
- Diameter	2,2 ± 0,05 mm					
- Material	Glass FRP					
- PE coated diameter	-		3,9 mm	6,8 mm	4,6 mm	
- Loose tube						
-Material	PBT or PC+PBT					
-Diameter	2,3 ± 3% mm					
-Type of filling compound	Thixotropic jelly					
- Tube assembly	Tubes and fillers (if required) are SZ stranded around a central strength member					
- Longitudinal water blocking	DRY core with water swellable elements Water swellable yarn on FRP, Water swellable tape on the core and between inner and outer sheath					
- Core wrapping						
-Material	Water Swellable Tape					
- Peripheral Strength Members	Glass yarns					
- Inner Sheath						
Thickness	PE					
Color	1,1 ± 0,1 Black					
- Armor & Rodent protection						
-Material	Both sides copolymer coated corrugated steel tape					
- Outer Sheath						
- Material	HDPE					
- Thickness	2,1 ± 0,1mm With corrugated steel tape					
- Color	Black (with blue stripes on each side)					
	24-48-72F	96F	144F	288F		
- Cable diameter	14,7 mm ± 0,2	16,7 mm ± 0,2	19,6 mm ± 0,2	22,5 mm ± 0,2		
- Cable weight	200 kg/km ± 10%	245 kg/km ± 10%	325 kg/km ± 10%	410 kg/km ± 10%		

- Mechanical characteristics		(Optical measurements at 1550 nm)	
Test	Test Standard	Specified Value	Acceptance Criteria
- Tensile Force Installation Operation Max. tensile can be applied	IEC 60794-1-2-E1	Max. 2700 N Max. 1700 N Max. 3700 N	$\Delta\alpha \leq 0,05$ dB, Fiber strain $\leq 0,33\%$ $\Delta\alpha \leq 0,05$ dB, no fiber strain $\Delta\alpha \leq 0,05$ dB, Fiber strain $\leq 0,6\%$
- Crush Resistance	IEC 60794-1-2-E3	Max. 3000 N/100 mm.	$\Delta\alpha \leq 0,05$ dB, no damage
- Impact	IEC 60794-1-2-E4	10 Nm, 3 impacts at different points, R= 300 mm,	$\Delta\alpha \leq 0,05$ dB, no damage
- Repeated bending	IEC 60794-1-2-E6	R= 20 x D, 20 N load, 30 cycles.	$\Delta\alpha \leq 0,05$ dB, no damage
- Torsion	IEC 60794-1-2 E7	2 meter specimen, load is 100 N, 1 turn 180 ° each directions, 5cycles	$\Delta\alpha = <0,05$ dB after the test, no damage on cable jacket
- Cable Bend	IEC 60794-1-2-E11	R= 20 x D, 4 turns, 3 cycles	$\Delta\alpha \leq 0,05$ dB, no damage

- Environmental Characteristics			
Test	Test Standard	Specified Value	Acceptance Criteria
- Water penetration	IEC 60794-1-2-F5B	3 meter specimen, 1 m water altitude	No leaked from the opposite end of the cable in 24 hours.
- Temperature cycling	IEC 60794-1-2-F1	Installation -5 to + 50 °C operating -30 to + 70 °C transportation -40 to + 80 °C	$\Delta\alpha \leq 0,05$ dB/km at 1550 nm

- Identification	
- Cable Marking	1m $\pm 1\%$ Intervals in white color with hot print.
- Identification of cable <sup>1</sup>	<year of manufacture> <number of fibers> F <fiber type> <Direct Buried Fiber Optic Cable > PALTEL <drum number> <length marking in meter>
- Color of loose tube <sup>2</sup>	1.Blue , 2. Orange, 3. Green , 4. Brown , 5. Grey, 6. White, 7. Red, 8. Black 9. Yellow, 10. Violet, 11. Pink, 12. Turquoise,
- Color of fibers <sup>2</sup>	1.Blue , 2. Orange, 3. Green , 4. Brown , 5. Grey, 6. White, 7. Red, 8. Black 9. Yellow, 10. Violet, 11. Pink, 12. Turquoise,
- Color of outer sheath <sup>2</sup>	Black (with blue stripes on each side)

<sup>1</sup> This inscription is standard imprint. It can be changed according to request.

<sup>2</sup> The other tube, fiber and sheath colors are optional.

- Delivery Information	24-48-72F	96F	144F	288F
- Drum length/Tolerance <sup>3</sup>	2000 m $\pm 5\%$			
- Drum Flange diameter <sup>3</sup>	1050 mm	1150	1300	1600
- Drum core diameter <sup>3</sup>	600 mm	650	700	900
- Outside width <sup>3</sup>	1100 mm			
- Central hole diameter	85 mm			

- Transmission characteristics
-Refer to fiber data