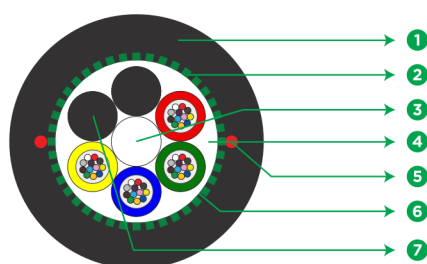
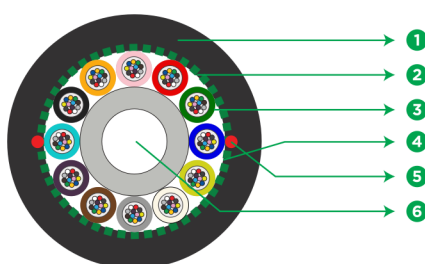


A-DQ(ZN)BY Duct cable

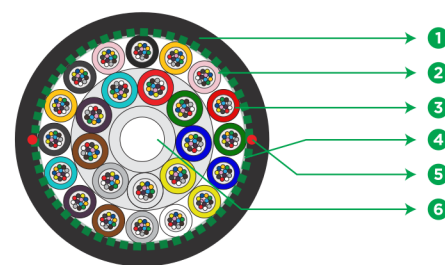
Multitube Gel Filled Optical Cable with Glass Roving Yarn 12F - 288F



Cross Section 48F



Cross Section 144F



Cross Section 288F

1 OUTER PA JACKET

2 GLASS ROVING YARNS

3 STRENGTH MEMBER

4 GEL FILLED TUBE

5 RIPCORD(S)

6 SWELLABLE TAPES

7 FILLERS

* Typical Construction Diagram - Not to Scale

Features & Benefits

- Duct cables with glass roving yarns are ideal for installation by pulling or air-blowing in conventional ducts, they can also be direct buried in clean sand bed.
- The glass roving yarns armoring provides enhanced rodent protection
- Dry water-blocking technology for gel free core helps in quicker end preparation
- No earthing needed thanks to fully dielectric construction
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install

Product Details

Cables are suitable for installation in conventional ducts by means of pulling or air-blowing techniques. These cables are based on a loose tube structure with optical fibres placed inside robust buffer tubes stranded around a fibre-glass reinforced plastic (FRP) central strength member. In addition to the optical fibres, the buffer tubes are gel filled, and water swellable yarns and tape are added to the core to ensure longitudinal water protection. A layer of glass roving yarns provides additional tensile strength and enhanced rodent protection. An outer jacket of thermoplastic material is extruded over the cable core as a mechanical and environmental protection.

Fibres and Cable Performance Standards

The cables comply to the following standards IEC 60793-2-50, IEC 60794-3-10, Telcordia GR-20, ITU-T G652 and/or G657, RoHS, REACH.

Printing Details

Printing: SM FIBRE TYPE FIBRE COUNT F LASER SYMBOL TELEPHONE SYMBOL YEAR
OF MANUFACTURE LENGTH CODE METER MARKING

Printing method: Ink-Jet/Hot Foil

Note: The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Maximum Cabled Fibre Attenuation (dB/km)	1310nm: 0.35; 1550nm: 0.23; 1625nm: 0.26
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibres per Tube	12 or 24
Central Strength Member	FRP (Fibre Reinforced Plastic)
Fillers (if required)	Thermoplastic material, natural colour
Core binder	Binder and water swellable yarns
Peripheral Strength Elements	Glass Roving Yarns
No of Ripcords Below Outer Sheath	2
Outer Jacket Thickness (mm)	1.5 (nominal)
Outer Jacket Material	UV Proof Black, HDPE

Fibres Colour Sequence (as per DIN/VDE 0888)^{2,3}

Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Pink	Orange
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Note: ¹Other jacket colours are available on demand, prior approval

²The fibres 13 to 24, when present, have a black ring marking (the back fibre is replaced by a natural fibre with black ring marking)

³Other fibres colour sequences are available on demand, prior approval.

Cable Designs with 3000 N Tensile strength

Product Code	Fibre count	Fibre Type	Tube/ Fillers	Buffer tube size (mm) Nom.	Cable Diameter (mm) ±5%	Cable Weight (kg/km) ±10%	Tensile Strength Short Term (N)
17CRT2489	12	G.652D	1/5	2.0	10.0	72	3000
05COR0192	24	G.652D	2/4	2.0	10.0	72	3000
17CRT2492	48	G.652D	4/2	2.0	10.0	72	3000
17CRT2493	72	G.652D	6/0	2.0	10.0	72	3000
17CRT2494	96	G.652D	8/0	2.0	11.2	105	3000
17CRT2495	144	G.652D	12/0	2.0	13.9	185	3000
	288	G.652D	24/0	2.0	16.5	245	3000

Cable Designs with 3000 N Tensile strength

Product Code	Fibre count	Fibre Type	Tube/Fillers	Buffer tube size (mm) Nom.	Cable Diameter (mm) $\pm 5\%$	Cable Weight (kg/km) $\pm 10\%$	Tensile Strength Short Term (N)
	12	G.652D	1/5	2.0	10.0	72	3000
	24	G.652D	2/4	2.0	10.0	72	3000
	48	G.652D	4/2	2.0	10.0	72	3000
	72	G.652D	6/0	2.0	10.0	72	3000
	96	G.652D	8/0	2.0	11.2	105	3000
	144	G.652D	12/0	2.0	13.9	185	3000
	288	G.652 D	(24/0	2.0	16.5	245	3000

Cable Designs with 6000 N Tensile strength

Product Code	Fibre count	Fibre Type	Tube/Fillers	Buffer tube size (mm) Nom.	Cable Diameter (mm) $\pm 5\%$	Cable Weight (kg/km) $\pm 10\%$	Tensile Strength Short Term (N)
	12	G.652D	1/5	2.4	11.7	110	6000
	24	G.652D	2/4	2.4	11.7	110	6000
	48	G.652D	4/2	2.4	11.7	110	6000
	72	G.652D	6/0	2.4	11.7	110	6000
	96	G.652D	8/0	2.4	14.0	150	6000
	144	G.652D	12/0	2.4	16.9	220	6000
	288	G.652 D	24/0	2.4	19.1	270	6000

Cable Designs with 6000 N Tensile strength

Product Code	Fibre count	Fibre Type	Tube/ Fillers	Buffer tube size (mm) Nom.	Cable Diameter (mm) ±5%	Cable Weight (kg/km) ±10%	Tensile Strength Short Term (N)
	12	G.652D	1/5	2.4	11.7	110	6000
	24	G.652D	2/4	2.4	11.7	110	6000
	48	G.652D	4/2	2.4	11.7	110	6000
	72	G.652D	6/0	2.4	11.7	110	6000
	96	G.652D	8/0	2.4	14.0	150	6000
	144	G.652D	12/0	2.4	16.9	220	6000
	288	G.652 D	24/0	2.4	19.1	270	6000

Specifications

Mechanical & Environmental Characteristics

Cable Characteristics	Cable Performance	Testing Standard Method
Tensile Strength Short term	As per above tables	IEC-60794-1-21-E1
Crush Resistance (N/10cm) For 3kN cable	2000	IEC-60794-1-21-E3A
Crush Resistance (N/10cm) For 6kN cable	2200	IEC-60794-1-21-E3A
Impact Strength(Nm)	10	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Repeated Bending	20 x OD	IEC-60794-1-21-E6
Bend	20 x OD	IEC-60794-1-21-E11A
Min. Bend Radius (During Installation)	20 x OD	
Min. Bend Radius (After Installation)	15 x OD	
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-21-F5B
Drip Test	30 cm, 70° C, 24 hr	IEC-60794-1-21-E14
Temperature Performance		IEC-60794-1-22-F1
Installation	-5° C to +50° C	
Operation	-30° C to +70° C	
Storage	-40° C to +70° C	

Note: All tests shall be performed according to the relevant methods of the IEC 60794-1 standard series with limit values and acceptance criteria according to the IEC 60794-3-10 standard.