

## DIGISOL Single Mode (OS2), Multitube Single Sheath Armoured Cable

### Introduction:-

DIGISOL Single Mode (OS2) Multitube Armoured Cable is a direct burial cable. It has multi loose tubes having fibers filled with thixotropic jelly to prevent water ingress and armouring made with high quality electro chromium corrugated steel tape. Fiber Reinforced Plastic provides better tensile strength and antibuckling properties along with cable flooding compound in interstices of core to prevent water ingress in core. Available in UV HDPE sheath and LSZH sheath.

### Key Features:-

- Suitable for Outdoor network direct burial
- Rodent proof
- UV protection
- Polyester based cord below armour tape for easy ripping
- Thermoplastic material loose tube
- Core covering Polyester tape with binder
- Excellent water proof layer and moisture resistance
- Excellent Crush resistance performance
- Light weight and Compact structure

### Constructional Specifications:-

| Parameters / Fiber Cores            | 04 F                                  | 06 F | 08 F | 12 F | 24 F | 48 F                    | 72 F               | 96 F                                             |
|-------------------------------------|---------------------------------------|------|------|------|------|-------------------------|--------------------|--------------------------------------------------|
| Number of Fiber per Tube            | 02                                    | 02   | 04   | 04   | 04   | 08                      | 12                 | 12                                               |
| Fiber Colours                       | * *                                   |      |      |      |      |                         |                    |                                                  |
| Number of Loose Tube                | 02                                    | 03   | 02   | 03   | 06   | 06                      | 06                 | 08                                               |
| Loose Tube Colours                  | * *                                   |      |      |      |      |                         |                    |                                                  |
| Number of Fillers                   | 04                                    | 03   | 04   | 03   | 00   | 00                      | 00                 | 00                                               |
| Loose Tube Internal Diameter        | 1.2 ± 0.1 mm (PBT)                    |      |      |      |      |                         | 1.4 ± 0.1 mm (PBT) |                                                  |
| Loose Tube Outer Diameter           | 1.9 ± 0.1 mm (PBT)                    |      |      |      |      |                         | 2.1 ± 0.1 mm (PBT) |                                                  |
| Central Strength Member             | 2.0 ± 0.1 mm (FRP Rod)                |      |      |      |      |                         | 2.2 ± 0.1 mm       | 2.5 ± 0.1 mm<br><small>upcoated to 3.3mm</small> |
| Moisture Barrier                    | Flooding Gel / Water Swellable Yarn   |      |      |      |      |                         |                    |                                                  |
| Core Wrapping                       | Polyester Tape / Water Swellable Tape |      |      |      |      |                         |                    |                                                  |
| Armoring                            | ≥ 0.150 mm (ECCS Tape)                |      |      |      |      |                         |                    |                                                  |
| Number of Rip Cords                 | 02 nos (Polyester)                    |      |      |      |      |                         |                    |                                                  |
| Outer Sheath Thickness              | 1.5 mm (Nominal) (HDPE/LSZH Black)    |      |      |      |      |                         |                    |                                                  |
| Cable Diameter (mm)                 | 10.5 ± 0.5                            |      |      |      |      | 11.5 ± 0.5              |                    | 12.5 ± 0.5                                       |
| Cable Weight (kg/km)<br>(HDPE/LSZH) | 110.0 ± 10 / 120.0 ± 10               |      |      |      |      | 125.0 ± 10 / 130.0 ± 10 |                    | 145.0 ± 15 / 155.0 ± 15                          |

Fiber colours and Loose tube colours: \* \*

04 to 96 Fibers: Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua,  
Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Natural  
Fillers : Black

### Environmental Specifications:-

Storage Temperature : -40 °C to +60 °C  
Installation Temperature : -20 °C to +70 °C  
Operating Temperature : -20 °C to +60 °C

### Cable Size & Standard Length:-

4F to 12F : 4.0 kms ± 10%  
24F to 96F : 2.0 kms ± 10%

### Standards:-

IEC 60793-1 & 60794-1  
ANSI/TIA 568-C.3 & ISO/IEC 11801

Telecordia GR-20 Core  
ITU-T REC G.652D

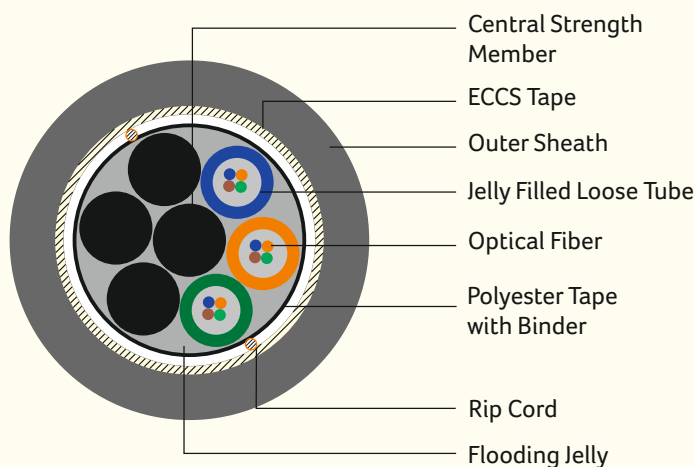
### Ordering Information:-

| Part Codes      | Description                                         |
|-----------------|-----------------------------------------------------|
| DGF-CAS2OMSX-YY | DIGISOL SM(OS2) MULTITUBE, ARMOURED, SS, Y CORE, XX |

Note: X / XX - Sheath Material - H / HDPE, L / LSZH

Example: DGF-CAS2OMSH-24 - DIGISOL SM(OS2), MULTITUBE, ARMOURED, SS, 24 CORE, HDPE  
DGF-CAS2OMSL-06 - DIGISOL SM(OS2), MULTITUBE, ARMOURED, SS, 6 CORE, LSZH

YY / Y - Number of fiber cores - 04 / 4, 06 / 6, 08 / 8, 12 / 12, 24 / 24, 48 / 48, 72 / 72, 96 / 96.



### Mechanical Specifications:-

| Parameters          | Fiber Core : 04, 06, 08, 12, 24, 48, 72, 96 F           | Standards         |
|---------------------|---------------------------------------------------------|-------------------|
| Tensile Strength    | 2200 N                                                  | IEC 60794-1-2-E1  |
| Crush Resistance    | 4000 N/100 mm                                           | IEC 60794-1-2-E3  |
| Impact Strength     | 25 N.m                                                  | IEC 60794-1-2-E4  |
| Torsion             | ± 180°                                                  | IEC 60794-1-2-E7  |
| Minimum Bend Radius | 20 x D (During Installation)<br>10 x D (During Service) | IEC 60794-1-2-E11 |

### Optical Fiber Specifications:-

| Parameters                        | Fiber Core : 04, 06, 08, 12, 24, 48, 72, 96 F                |
|-----------------------------------|--------------------------------------------------------------|
| Fiber Type                        | G.652D (OS2)                                                 |
| Attenuation                       | ≤ 0.38 dB/km (@1310 nm)<br>≤ 0.25 dB/km (@1550 nm)           |
| Chromatic Dispersion              | ≤ 3.5 ps/nm.km (@1285 - 1330 nm)<br>≤ 18 ps/nm.km (@1550 nm) |
| Zero Dispersion Wavelength        | 1300 - 1324 nm                                               |
| Zero Dispersion Slope             | ≤ 0.092 ps/nm².km                                            |
| Polarisation Mode Dispersion      | ≤ 0.2 ps/√km                                                 |
| Cut-off Wavelength                | ≤ 1260 nm                                                    |
| Mode Field Diameter               | 9.2 ± 0.4 μm (@1310 nm)                                      |
| Core Cladding Concentricity Error | ≤ 0.8 μm                                                     |
| Cladding Diameter                 | 125 ± 1 μm                                                   |
| Cladding Non-circularity          | ≤ 1 %                                                        |
| Coating Diameter                  | 245 ± 10 μm                                                  |