



## 4-24 FIBERS CENTRAL TUBE OUTDOOR TYPE STEEL ARMORED F.O. CABLE - HDPE



### Application

For external or direct wiring in the ground, in pipelines, pipes, collectors, on bridges and overpasses



### Cable Construction

| Number of fibers                   | 4                     | 6 | 8 | 12 | 24                 |
|------------------------------------|-----------------------|---|---|----|--------------------|
| Loose Tubes                        | 1 central tube        |   |   |    |                    |
| Outer Diameter                     | 2,50 mm $\pm$ 3%      |   |   |    | 3,00 $\pm$ 3%      |
| Material                           | PBT                   |   |   |    |                    |
| Type of filling compound           | Thixotropic jelly     |   |   |    |                    |
| Water blocking material            | Water blocking tape   |   |   |    |                    |
| Peripheral Strength Member         | Glass yarn            |   |   |    |                    |
| Material                           | Glass yarn            |   |   |    |                    |
| Thickness of glass yarn            | 0,3 mm $\pm$ 3%       |   |   |    | 0,35 mm $\pm$ 3%   |
| Armor & rodent protection          | corrugated steel tape |   |   |    |                    |
| Material                           | corrugated steel tape |   |   |    |                    |
| Thickness of corrugated steel tape | 0,75 mm $\pm$ 3%      |   |   |    |                    |
| Outer Sheath                       | HDPE                  |   |   |    |                    |
| Material                           | HDPE                  |   |   |    |                    |
| Thickness                          | 1,2 mm (nominal)      |   |   |    |                    |
| Cable diameter                     | 4                     | 6 | 8 | 12 | 24                 |
| Cable weight                       | 55 $\pm$ 10% kg/km    |   |   |    | 56 $\pm$ 10% kg/km |

## Mechanical characteristics

| Test                       | Test Standard     | Specified Value                                                  |
|----------------------------|-------------------|------------------------------------------------------------------|
| Tensile Force Installation | IEC 60794-1-2-E1  | 500 N                                                            |
| Crush Resistance           | IEC 60794-1-2-E3  | Max. 1500 N/100mm                                                |
| Impact                     | IEC 60794-1-2-E4  | 3 Nm                                                             |
| Repeated bending           | IEC 60794-1-2-E6  | R= 20 x D, 10 N load, 30 cycles                                  |
| Torsion                    | IEC 60794-1-2-E7  | 5 cycles ±1 turn                                                 |
| Cable Bend                 | IEC 60794-1-2-E11 | With load: 20xD mm<br>Without load: 15xD mm (D = Cable diameter) |

## Environmental Characteristics

| Test                                                             | Test Standard    | Specified Value |                |
|------------------------------------------------------------------|------------------|-----------------|----------------|
| Temperature cycling                                              | IEC 60794-1-2-F1 | Storage         | -40 to + 70 °C |
|                                                                  |                  | Installation    | -20 to + 50 °C |
|                                                                  |                  | Operation       | -30 to + 60 °C |
| ΔdB ≤ 0.2 dB/km for SM fibers and ΔdB ≤ 0.5 dB/km for MM fibers. |                  |                 |                |

## Identification

|                                                                                   |                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cable Marking                                                                     | 1m ±1% Intervals in white color with hot print                                                                                                                                                                                                                                                       |
| Identification of cable (1)                                                       | <ORCA code> <year of manufacture> <number of fibers> FO <type of fibers><br><length marking in meter>                                                                                                                                                                                                |
| Color of loose buffer tube (2)                                                    | Natural                                                                                                                                                                                                                                                                                              |
| - Color of fibers IEC 304(2)                                                      | 1. Red, 2. Green, 3. Blue, 4. Yellow, 5. White, 6. Grey,<br>7. Brown, 8. Violet, 9. Turquoise, 10. Black,, 11. Orange, 12. Pink,<br>13. Red I, 14. Green I, 15. Blue I, 16. Yellow I, 17. White I, 18. Grey I,<br>19. Brown I, 20. Violet I, 21. Turquoise I, 22. Black I, 23. Orange I, 24. Pink I. |
| - Color of outer sheath (2)                                                       | Blue RAL 5015 for all type of Fibers                                                                                                                                                                                                                                                                 |
| (1) This inscription is standard imprint. It can be changed according to request. |                                                                                                                                                                                                                                                                                                      |
| (2) The other tube, fiber and sheath colors are optional.                         |                                                                                                                                                                                                                                                                                                      |

## Delivery Information

|                             |             |             |
|-----------------------------|-------------|-------------|
| - Drum length/Tolerance (3) | 2000 m ± 5% | 4000 m ± 5% |
| - Drum Flange diameter (3)  | 700 mm      | 900 mm      |
| - Drum core diameter (3)    | 400 mm      | 580 mm      |
| - Outside width (3)         | 780 mm      | 860 mm      |
| - Central hole diameter     | 85 mm       | 85 mm       |

(3) Drum dimensions can change depends on cable length on a drum.  
Standard delivery length is 2 km. Other delivery lengths are optional.

## Transmission characteristics

Refer to core fiber data

**Ordering Information code:**

4 f.o.

|                  |                                                                     |
|------------------|---------------------------------------------------------------------|
| OC-CVF-112211-04 | ORCA - Optical Cable Loose int/est CST arm 4 f.o. OM2 50/125um PE   |
| OC-CVF-112214-04 | ORCA - Optical Cable Loose int/est CST arm 4 f.o. OM3 50/125um PE   |
| OC-CVF-112215-04 | ORCA - Optical Cable Loose int/est CST arm 4 f.o. OM4 50/125um PE   |
| OC-CVF-112212-04 | ORCA - Optical Cable Loose int/est CST arm 4 f.o. OM1 62,5/125um PE |
| OC-CVF-112213-04 | ORCA - Optical Cable Loose int/est CST arm 4 f.o. OS2 09/125um PE   |

6 f.o.

|                  |                                                                     |
|------------------|---------------------------------------------------------------------|
| OC-CVF-112211-06 | ORCA - Optical Cable Loose int/est CST arm 6 f.o. OM2 50/125um PE   |
| OC-CVF-112214-06 | ORCA - Optical Cable Loose int/est CST arm 6 f.o. OM3 50/125um PE   |
| OC-CVF-112212-06 | ORCA - Optical Cable Loose int/est CST arm 6 f.o. OM1 62,5/125um PE |
| OC-CVF-112213-06 | ORCA - Optical Cable Loose int/est CST arm 6 f.o. OS2 09/125um PE   |

8 f.o.

|                  |                                                                     |
|------------------|---------------------------------------------------------------------|
| OC-CVF-112211-08 | ORCA - Optical Cable Loose int/est CST arm 8 f.o. OM2 50/125um PE   |
| OC-CVF-112214-08 | ORCA - Optical Cable Loose int/est CST arm 8 f.o. OM3 50/125um PE   |
| OC-CVF-112215-08 | ORCA - Optical Cable Loose int/est CST arm 8 f.o. OM4 50/125um PE   |
| OC-CVF-112212-08 | ORCA - Optical Cable Loose int/est CST arm 8 f.o. OM1 62,5/125um PE |
| OC-CVF-112213-08 | ORCA - Optical Cable Loose int/est CST arm 8 f.o. OS2 09/125um PE   |

12 f.o.

|                  |                                                                      |
|------------------|----------------------------------------------------------------------|
| OC-CVF-112211-12 | ORCA - Optical Cable Loose int/est CST arm 12 f.o. OM2 50/125um PE   |
| OC-CVF-112214-12 | ORCA - Optical Cable Loose int/est CST arm 12 f.o. OM3 50/125um PE   |
| OC-CVF-112215-12 | ORCA - Optical Cable Loose int/est CST arm 12 f.o. OM4 50/125um PE   |
| OC-CVF-112212-12 | ORCA - Optical Cable Loose int/est CST arm 12 f.o. OM1 62,5/125um PE |
| OC-CVF-112213-12 | ORCA - Optical Cable Loose int/est CST arm 12 f.o. OS2 09/125um PE   |

24 f.o.

|                  |                                                                      |
|------------------|----------------------------------------------------------------------|
| OC-CVF-112211-24 | ORCA - Optical Cable Loose int/est CST arm 24 f.o. OM2 50/125um PE   |
| OC-CVF-112214-24 | ORCA - Optical Cable Loose int/est CST arm 24 f.o. OM3 50/125um PE   |
| OC-CVF-112215-24 | ORCA - Optical Cable Loose int/est CST arm 24 f.o. OM4 50/125um PE   |
| OC-CVF-112212-24 | ORCA - Optical Cable Loose int/est CST arm 24 f.o. OM1 62,5/125um PE |
| OC-CVF-112213-24 | ORCA - Optical Cable Loose int/est CST arm 24 f.o. OS2 09/125um PE   |