

# Fibre Hybrid cable

## Type 3744



### Construction characteristics

<b>Fibre optic element</b>	Steel tube (1.9 mm OD) with 4 off single mode fibre SM (9/125) type Strong bend-EX single mode fibre ITU-T G657.B2 and 4 off multi mode fibre MM (50/125) type BandAble OM2/OM2+ Bend-Insensitive. Black polyethylene jacket to a nominal OD of 3.5 mm SM fibre colour white, yellow, green, blue MM fibre colour red, orange, brown, grey
<b>Conductor</b>	1.0 mm <sup>2</sup> (18 AWG) stranded tinned copper conductor with double layer of tecnopolymer compound insulation. Nominal OD 2.23 mm (7 each) Colour red, orange, yellow, green, blue, violet, brown
<b>Wrap</b>	Mylar tape
<b>Outer jacket</b>	Polyurethane jacket. Colour red RAL 3000 glossy
<b>European directives</b>	2002/95/CE (RoHS) and 2002/96/CE (WEEE)
<b>Halogen free</b>	Acc. to EN 50267-2-1 — IEC 60754-1

### Mechanical characteristics

<b>Diameter</b>	10.5 mm ±0.40 mm
<b>Weight in air</b>	150 kg/km
<b>Weight in seawater</b>	65 kg/km
<b>Min. bending radius, static</b>	105 mm
<b>Min. bending radius, dynamic</b>	158 mm
<b>Depth rating</b>	6,000 m
<b>Operating temperature range</b>	-20°C - +80°C

### Electrical and fibre optical characteristics

<b>Operating voltage</b>	3,000 V
<b>Test voltage</b>	6 kVa.c x 1 minute
<b>Electrical resistance at 20°C</b>	≤ 20.4 Ω/km
<b>Insulation resistance at 20°C</b>	≥ 1,000 MΩxkm

**Theoretical nominal capacitance at 20°C**

71 pF/m (near core - core)

**Theoretical nominal inductance at 20°C**

0,69  $\mu$ H/mn (near core - core)

**Fibre attenuation (SM – dB/km)**

$\leq 0.38$  dB/km at 1,310 nm  
 $\leq 0.25$  dB/km at 1,550 nm

Mandrel radius 15 mm at 1,550 nm 10 turns	$\leq 0.03$ dB
Mandrel radius 15 mm at 1,626 nm 10 turns	$\leq 0.10$ dB
Mandrel radius 10 mm at 1,550 nm 1 turn	$\leq 0.10$ dB
Mandrel radius 10 mm at 1,625 nm 1 turn	$\leq 0.20$ dB
Mandrel radius 7.5 mm at 1,550 nm 1 turn	$\leq 0.50$ dB
Mandrel radius 7.5 mm at 1,625 nm 1 turn	$\leq 1.00$ dB

**Fibre attenuation (MM – dB/km)**

$\leq 2.80$  dB/km at 850 nm  
 $\leq 0.80$  dB/km at 1,300 nm

Mandrel radius 37.5 mm at 850 nm 100 turns	$\leq 0.05$ dB
Mandrel radius 37.5 mm at 1,300 nm 100 turns	$\leq 0.15$ dB
Mandrel radius 15 mm at 850 nm 2 turns	$\leq 0.10$ dB
Mandrel radius 15 mm at 1,300 nm 2 turns	$\leq 0.30$ dB
Mandrel radius 7.5 mm at 850 nm 2 turns	$\leq 0.20$ dB
Mandrel radius 7.5 mm at 1,300 nm 2 turns	$\leq 0.50$ dB