

SeaTex[®] 7

ultraflexible, low loss, stray radiation resistant
and designed for marine applications



SeaTex 7 is a very flexible low loss and halogen-free communications coaxial cable perfectly designed to use for marine and offshore applications. It is worldwide approved for ship building (DNV GL certificate) and is suitable for use on ships, oil platforms, wind turbines and the entire maritime area. The jacket of the SeaTex 7 is made of a special thermoplastic copolymer (SHF2), which ensures that the cable is highly resistant to heat, cold, oils, salt-water, UV radiation and has a long service life in harsh environmental conditions.

The design of the SeaTex 7 is based on the successful Aircell 7 coaxial cable. It has excellent attenuation values, its flexibility and its small bending radius allow installation in limited spaces. Thus SeaTex 7 combines the advantages of Aircell coaxial cables with the special requirements in marine area. The product is specified up to 6 GHz and can be used in a temperature range from -55°C to 85°C.

Key features

| | |
|----------------------------|--------------|
| Diameter | 7,3 ± 0,3 mm |
| Impedance | 50 ± 2 Ω |
| Attenuation at 1 GHz/100 m | 21,52 dB |
| f max | 6 GHz |

Characteristics

- Conductor/screen material according to DIN EN 13602 Cu-ETP-R
- Screen material according to DIN EN 13602 Cu-ETP-A
- Insulating material according to ISO 6722-1 part 5.14, class „A“, bending diameter 80 mm
- Jacket material according to IEC 60092-360 (IEC 60092-359) SHF2
- Wall thickness of cable jacket according to IEC 60092-376
- Flame retardant according to IEC 60332-3-22 (Cat. A)
- Flame retardant according to IEC 60332-1-2
- Oil resistant according to EN 60811-2-1 (24 hours/100°C)
- RoHS compliant (Directive 2011/65/EC & 2015/863/ EU RoHS 3)
- Low Smoke, Fire retardant, Zero Halogen (LSZH)
- Corrosivity of fumes according to IEC 60754-2
- Smoke density according to IEC 61034
- UV-resistant
- Approved for marine and offshore applications
- DNV GL Certificate No. TAE00001JX



Technical data

| | |
|---------------------|--|
| Inner conductor | Stranded bare copper wire |
| Inner conductor Ø | 1,9 mm (19 x 0,38 mm, 14 AWG) |
| Dielectric | foamed Polyethylene (PE) with skin |
| Dielectric Ø | 5,0 mm |
| Outer conductor 1 | copper foil overlapped |
| Shielding factor | 100% |
| Outer conductor 2 | shield braiding of bare copper wires |
| Shielding factor | 85% |
| Outer conductor Ø | 5,7 mm |
| Jacket | special thermoplastic copolymer (SHF2) black |
| Weight | 73 kg/km |
| Min. Bending radius | 4X Ø single, 8X Ø repeated |
| Temperature range | -55 to +85°C Transport & fixed installation -40 to +85°C Flexible use |
| Pulling strength | 300 N |

Electrical data at 20°C

| | |
|---|------------|
| Capacity (1 kHz) | 78 nF/km |
| Velocity factor | 0,85 |
| Screening attenuation 1 GHz | ≥ 90 dB |
| DC-resistance Inner conductor | ≤ 9,0 Ω/km |
| DC-resistance Outer conductor | 8,7 Ω/km |
| Insulation resistance | ≥ 10 GΩ*km |
| Test voltage (Inner conductor/Outer conductor rms 50 Hz 1 Min.) | 1000 V |
| Max. Voltage | 300 kV |

| | SeaTex 7 | RG 213/U | RG 58/U |
|-----------------------|----------|----------|----------|
| Capacity | 78 pF/m | 101 pF/m | 102 pF/m |
| Velocity factor | 0,85 | 0,66 | 0,66 |
| Attenuation (dB/100m) | | | |
| 10 MHz | 2,20 | 2,00 | 5,00 |
| 100 MHz | 6,28 | 7,00 | 17,00 |
| 500 MHz | 14,72 | 17,00 | 39,00 |
| 1000 MHz | 21,52 | 22,50 | 54,60 |
| 3000 MHz | 40,88 | 58,50 | 118,00 |

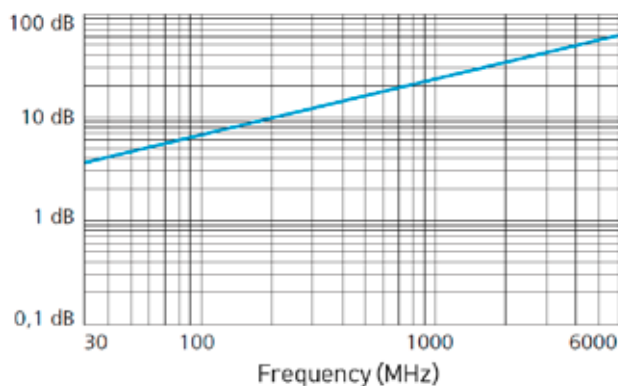
Typ. Attenuation (db/100 m at 20°C)

| | | | |
|---------|-------|----------|-------|
| 5 MHz | 1,60 | 1000 MHz | 21,52 |
| 10 MHz | 2,20 | 1296 MHz | 24,84 |
| 50 MHz | 4,52 | 1500 MHz | 27,08 |
| 100 MHz | 6,28 | 1800 MHz | 30,00 |
| 144 MHz | 7,60 | 2000 MHz | 31,88 |
| 200 MHz | 9,04 | 2400 MHz | 35,60 |
| 300 MHz | 11,20 | 3000 MHz | 40,88 |
| 432 MHz | 13,60 | 4000 MHz | 49,12 |
| 500 MHz | 14,72 | 5000 MHz | 57,04 |
| 800 MHz | 19,00 | 6000 MHz | 64,90 |

Max. Power handling (W at 40°C)

| | | | |
|----------|-------|----------|-----|
| 10 MHz | 2.040 | 2400 MHz | 118 |
| 100 MHz | 620 | 3000 MHz | 104 |
| 500 MHz | 260 | 4000 MHz | 89 |
| 1000 MHz | 191 | 5000 MHz | 78 |
| 2000 MHz | 131 | 6000 MHz | 70 |

Typ. Attenuation (db/100 m at 20°C)



Typ. Return loss

