



-55°C/+180°C

# Lightweight microwave coaxial cables KW

## ADVANTAGES

- > 30% lighter than the avionics WN standard (EN 4604-007).
- > Excellent attenuation values.
- > 15 dB for 100 m at 1 GHz.
- > -55°C to +180°C.
- > Characteristic impedance : 50  $\Omega$ .
- > Lightweight and small diameter, they are designed for the cabling of aircrafts and helicopters.
- > In accordance with EN 4604-009 avionics KW standard.
- > Cables delivered with AXON' coaxial connectors such as N, TNC and SMA- or others on request.

## APPLICATIONS

- > Aircrafts.
- > Helicopters.

[www.axon-cable.com](http://www.axon-cable.com)

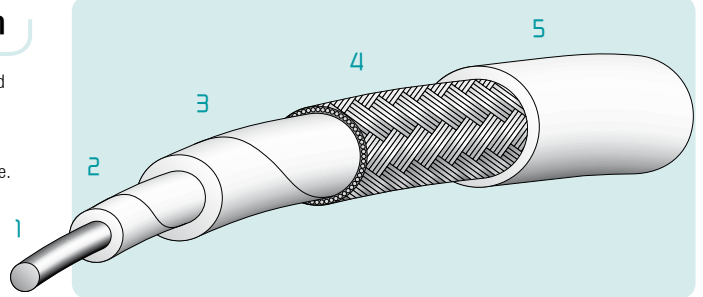
 **axon'**  
CABLE & INTERCONNECT

# AXOWAVE KW 18 GHz

LIGHTWEIGHT

## Construction

- 1 - Silver plated copper clad aluminium conductor.
- 2 - CELLOFLON® dielectric (expanded PTFE).
- 3 - Silver plated copper tape.
- 4 - Reinforced silver plated copper clad aluminium braided shield.
- 5 - FEP outer jacket.



## CABLE

Rated frequency	0 - 18 GHz
Max. cable attenuation at 18 GHz (see graph 1)	0.72 dB/m
Characteristic impedance	50 +/- 2 Ω
Capacitance	80 pF/m
Velocity of propagation compared to light propagation	83 %
Outer diameter	7.7 mm
Nominal weight	93 g/m
Outer jacket material (colour)	Turquoise blue FEP
Inner conductor type	Single strand
Flexlife (*) at +/- 90° on R = 80 mm	500 cycles
Min. bending radius static application	60 mm
Min. bending radius dynamic application	80 mm
Crush resistance	900 N/10 cm

## CABLE ASSEMBLY

Insertion loss at 18 GHz (1 m assy, N plug straight)	0.95 dB
Shielding efficiency at 1 GHz	- 110 dB max
VSWR at frequency range (1 m assy, N plug straight)	1.35 max
Rated temperature	- 55°C / + 165°C
Phase change at 1 GHz depending on the temperature (see graph 2)	1.6°/m between -55 and 125°C and 3°/m between -55 and 165°C
Stability of insertion loss after bending at 18 GHz (R= 80 mm)	0.1 dB max
Stability of bending phase (R= 80 mm)	1°
Min. cable/connector retention force (*)	90 N

(\*) advised values

## Available connectors (\*\*)

### Up to 18 GHz

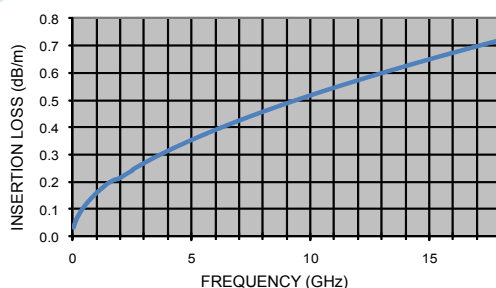
- SMA plug, straight.
- SMA plug, swept 90°.
- TNC plug, straight.
- TNC plug swept 90°.
- N plug, straight.
- N plug swept 90°.

### Up to 12 GHz

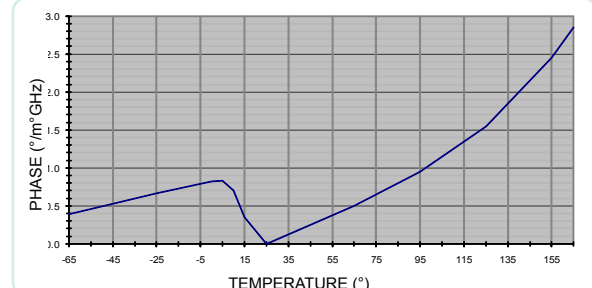
- N jack, straight.

(\*\*) Other connectors on request.

To calculate the assembly insertion loss, please refer to the calculation formula on page X of the AXOWAVE documentation



Graph 1: KW cable insertion loss at 23°C (dB/m)



Graph 2: KW cable phase change depending on temperature and frequency