

HLF 400 TNCU Coaxial Cable

P/N: AT1ATR400-2S



The **HLF400 TNCU (Tinned Copper)** cable is a high-performance, **50-ohm, low-loss coaxial cable** engineered for demanding RF applications where efficiency and weight savings are both critical. By using a Copper-Clad Aluminum center conductor, this cable significantly reduces weight compared to solid-copper alternatives while maintaining **excellent RF conductivity** due to the skin effect. Its robust double-shielding system—combining 100% coverage aluminum foil tape with a high-density Tinned Copper braid—ensures **superior EMI protection**. Designed with a low-density foam dielectric, it offers significantly **lower signal attenuation** than standard RG8 or RG213 cables, making it the preferred choice for **medium-to-long antenna runs and macro-site infrastructure**.

Construction Specifications

Description	Material & Plating	Diameter (mm)
Centre Conductor	Solid Copper Clad Aluminum Wire	2.77
Dielectric	Solid Polyethylene	7.24
1 st Outer Conductor	Sealed APA Tape	7.42
2 nd Outer Conductor	TCCA Braid	8.12 (90%)
Jacket	Black PE	10.29

Electrical Specifications

Parameter	Value	Unit
Frequency Range	DC - 6	GHz
Impedance	50	Ω
Propagation Velocity	85	%
Capacitance	78.4	pF/m
Screening Effectiveness	≥ 90	dB
Insulation Resistance	5000	M Ω -Km
Inner Conductor Resistance	5.0	Ω /km
Outer Conductor Resistance	5.4	Ω /km
Voltage Withstanding	1500	V DC
Peak Power Rating	8.5	KW



Technical Data Sheet

Mechanical Specifications

Parameter	Value	Unit
Weight	100	Kg/km
Single Bending Radius	≥ 25	mm
Repeated Bending Radius	≥ 80	mm

Environmental Specifications

Parameter	Value	Unit
Operation Temperature	-35 ~ 75	°C
Installation Temperature	-20 ~ 60	°C

Attenuation and Power Rating vs Frequency

Frequency	Attenuation (dB/100ft)	Attenuation (dB/100m)	Avg. Power Rating (kW)
30 MHz	0.67	2.2	3.33
50 MHz	0.88	2.9	2.57
150 MHz	1.52	5.0	1.47
220 MHz	1.86	6.1	1.20
450 MHz	2.71	8.9	0.83
900 MHz	3.90	12.8	0.58
1500 MHz	5.12	16.8	0.44
1800 MHz	5.67	18.6	0.40
2000 MHz	5.97	19.6	0.37
2500 MHz	6.77	22.2	0.33
5800 MHz	10.82	35.5	0.21

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