

HLF 400 Ultraflex Coaxial Cable

P/N: AT1ATR400-3S



The **HLF400 Ultraflex cable** is a **high-performance, 50-ohm coaxial** solution specifically engineered for applications requiring both the low-loss characteristics of a 400-series cable and the extreme pliability of a braided wire. Unlike standard HLF400 which uses a solid center conductor, the Ultraflex version features a **stranded copper center conductor** and a thermoplastic rubber (TPE) or specialized PVC jacket. This construction allows for a much tighter bend radius and repeated flexing without work-hardening the metal or degrading the signal. It is the premier choice for **deployable antenna systems, mobile radio setups, and high-quality jumper assemblies** where the cable must be routed through tight corners or move frequently during operation.

Construction Specifications

Description	Material & Plating	Diameter (mm)
Centre Conductor	Solid Copper Clad Aluminum Wire	7/0.93±0.03
Dielectric	Solid Polyethylene	7.24±0.15
1 st Outer Conductor	Laminated APA Tape	7.45±0.15
2 nd Outer Conductor	Tinned Copper Braid	168*0.15/8.05±0.15
Jacket	TPE	10.20±0.20

Electrical Specifications

Parameter	Value	Unit
Frequency Range	DC - 8	GHz
Impedance	50	Ω
Propagation Velocity	85	%
Capacitance	78.4	pF/m
Screening Effectiveness	≥90	dB
Insulation Resistance	1000	MΩ-Km
Inner Conductor Resistance	4.17	Ω/km
Outer Conductor Resistance	6.92	Ω/km
Voltage Withstanding	2500	V DC
Peak Power Rating	16	KW



Technical Data Sheet

Mechanical Specifications

Parameter	Value	Unit
Weight	130	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 (MHz)	Attenuation (dB/100m)	Avg. Power (kW)
30	2.7	2.47
50	3.5	1.88
150	6.1	1.09
200	7.1	0.95
220	7.4	0.89
450	10.7	0.61
900	15.4	0.43
1500	20.2	0.32
1800	22.3	0.29
2000	23.6	0.28
2500	26.7	0.25
3000	29.5	0.23
3500	32.1	0.21
4000	34.6	0.20
5000	39.2	0.19
5500	41.4	0.17
5800	42.6	0.15
6000	43.5	0.14