Microwave antenna

UNI2-18

Antenna description

High Performance Ø 0.65 m antenna for ALCOMA point to point radios. Antenna is pointing by precise holder AFM.

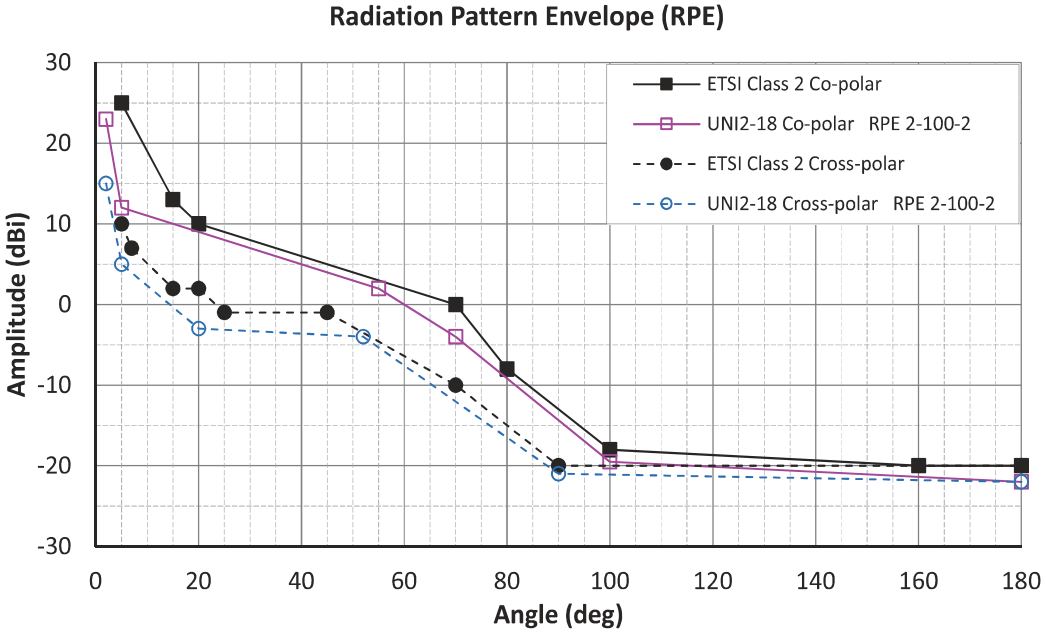
General parameters

Diameter	0.65 m (2 ft.)
Feeder	single polarized (dual polarized)
Polarization	horizontal / vertical (dual)
Input flange -standard	circular, hole diameter 10.99 mm
- optional	R220 (WR42)
Environmental temperature	-35 °C to +55 °C
Color	light gray
Radom material	white plastic (ABS + PMMA)

Electrical parameters

Frequency band	17.700 - 19.700 GHz
Gain: - low band	38.8 dBi
- mid band	39.3 dBi
- high band	39.7 dBi
Beamwidth (-3 dB)	1.9° (H / V)
Return loss PSV	< 1.60 (17.7 dB)
Front to Back Ratio	60 dB
Cross Polarization Discrimination	30 dB
Antenna class	2 (ETSI EN 302 217-4-2)

Radiation pattern envelope RPE 2-180-2



Co-polar	
Angle (deg)	Amplitude (dBi)
4,5	25
6	20
20	10
85	-6
104	-20,5
180	-20,5

Cross-polar	
Angle (deg)	Amplitude (dBi)
2	15
5	5
20	-3
52	-4
90	-21
180	-22

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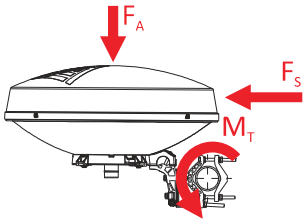
Mechanical parameters due to wind	UNI2-18-180xFxx	UNI2-18-180xSxx
Performance stability	max 30 m/s (110 km/h)	max 30 m/s (110 km/h)
Survival	max 55 m/s (200 km/h)	max 55 m/s (200 km/h)
Radial ice load (density 7kN/m^3)	25 mm	25 mm
Net weight	9.1 kg	9.3 kg
Pipe diameter*	42 - 115 mm	42 - 115 mm
Adjust azimuth / elevation	±180° / –	±180° / ±20°
Fine adjust azimuth	±15°	–
Fine adjust elevation	±30°	–

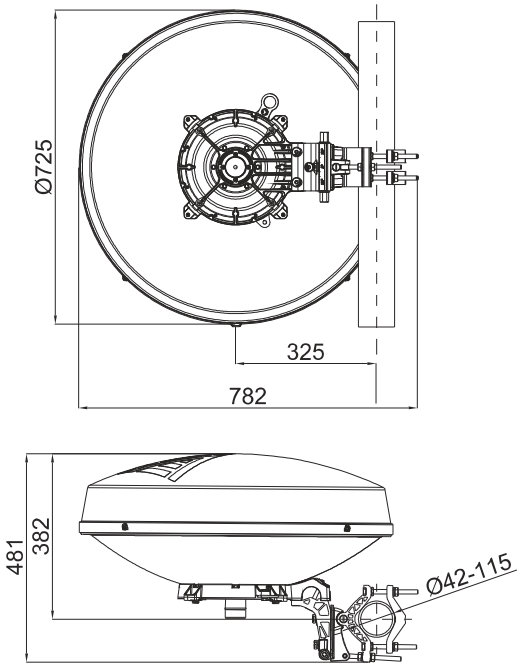
Forces and twisting moment due to wind



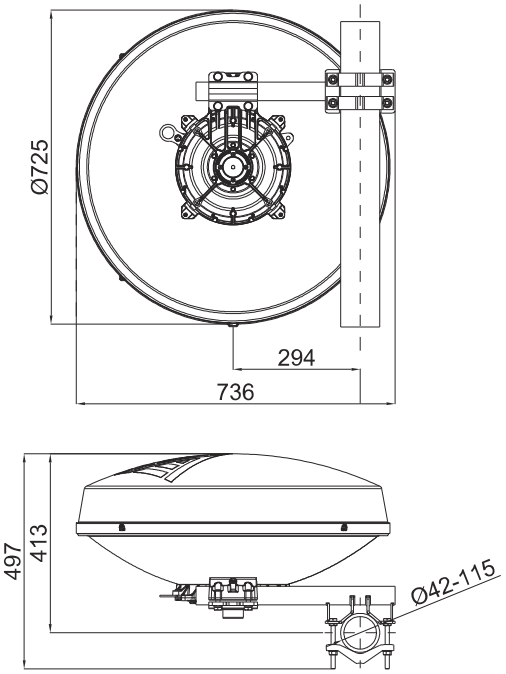
Wind velocity	30 m/s	55 m/s	30 m/s	55 m/s
F_A - axial force	335 N	1090 N	335 N	1090 N
F_S - side force	115 N	365 N	115 N	365 N
M_T - twisting moment	110 Nm	350 Nm	90 Nm	290 Nm
Icing thickness 25 mm		33 kg		

Outlines

UNI2-18-180xFxx



UNI2-18-180xSxx



* diameter 42 - 48 mm can be used when the wind speed does not exceed 50 m/s (180 km/h)

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