

GPS Antenna with a $\frac{1}{4} \lambda$ Mobile Antenna for the 450 MHz Band

DESCRIPTION

- Heavy-duty magnetic mount with toggle joint.
- External antenna whip mounted on the magnetic base (MG) which includes antenna for Global Positioning System (GPS).
- Provided with two 5 m cables attached:
 - 5 m RG 58 cable with FME(f) connector for UHF.
 - 5 m RG 174 cable with SMA(m) connector for GPS.
- ECE R118.02 approved cable.
- The whip is fixed on the mount using a hat screw which is supplied with the mount and a special fastening key.
- Built-in high-gain, low-noise amplifier.
- 3 - 15 VDC supply.
- DC supply via SMA(m)-connector.



SPECIFICATIONS

Electrical	
Model	MU 1-MG/GPS
Frequency	380 - 410 MHz, 400 - 430 MHz and other frequencies on request
Antenna Type	$\frac{1}{4} \lambda$ mobile whip antenna
Max. Input Power	25 W
Polarisation	Vertical
Impedance	50 Ω
VSWR	≤ 1.3 @ f.res.
Bandwidth	≥ 30 MHz @ VSWR ≤ 1.5
Gain (EIA RS-329-1)	0 dB
Mechanical	
Compliance	ECE R118.02 approved cable
Connection(s)	FME(f) with 5 m RG 58 cable for UHF (other connectors like BNC(m) or TNC(m) can be made upon request) SMA(m) with 5 m RG 174 cable for GPS
Materials	Whip: Black-chromed stainless steel Mount: Stainless steel Black-chromed brass Weather- and shockproof plastics
Colour	Black
Dimensions	Whip: 175 mm / 6.89 in. Mount: Total height: Approx. 63 mm / 2.52 in. Diameter: 130 mm / 5.12 in.
Whip Connection	Toggle joint (Hat screw with key)
Weight	Whip : Approx. 0.04 kg / 0.088 lb. Mount : Approx. 0.9 kg / 1.98 lb.
Mounting	Whip: On the MG Mount: Centre of vehicle roof for best omnidirectional coverage
Max. Car Speed	170 km/h

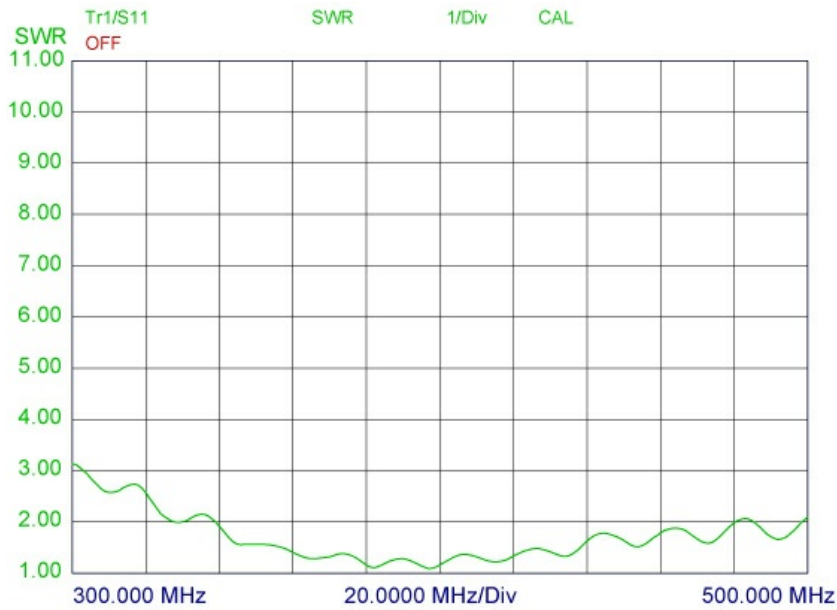
GPS Antenna	
P1dB (GPS Amplifier)	Approx. +7 dBm
Coverage (GPS)	Hemispherical
Gain (GPS)	28 dB in axial direction (typ.)
Antenna Type (GPS)	Active patch antenna
Noise Figure (GPS Amplifier)	< 1 dB (typ.)
Cross Polar Discrimination (GPS)	> 10 dB (typ.)
Gain (GPS Amplifier)	> 30 dB (typ.)
Selectivity (GPS Amplifier)	> 20 dB down @ ± 100 MHz
VSWR (GPS Amplifier)	< 2.0:1
Selectivity (GPS)	> 45 dB down @ ± 45 MHz
Frequency (GPS)	1575 MHz
Power Supply (GPS)	3 - 15 VDC, Approx. 20 mA
Current Consumption (GPS Amplifier)	Approx. 20 mA
Polarisation (GPS)	RHCP
Impedance (GPS)	50 Ω

Environmental	
Operating temperature range	-35 °C to +75 °C

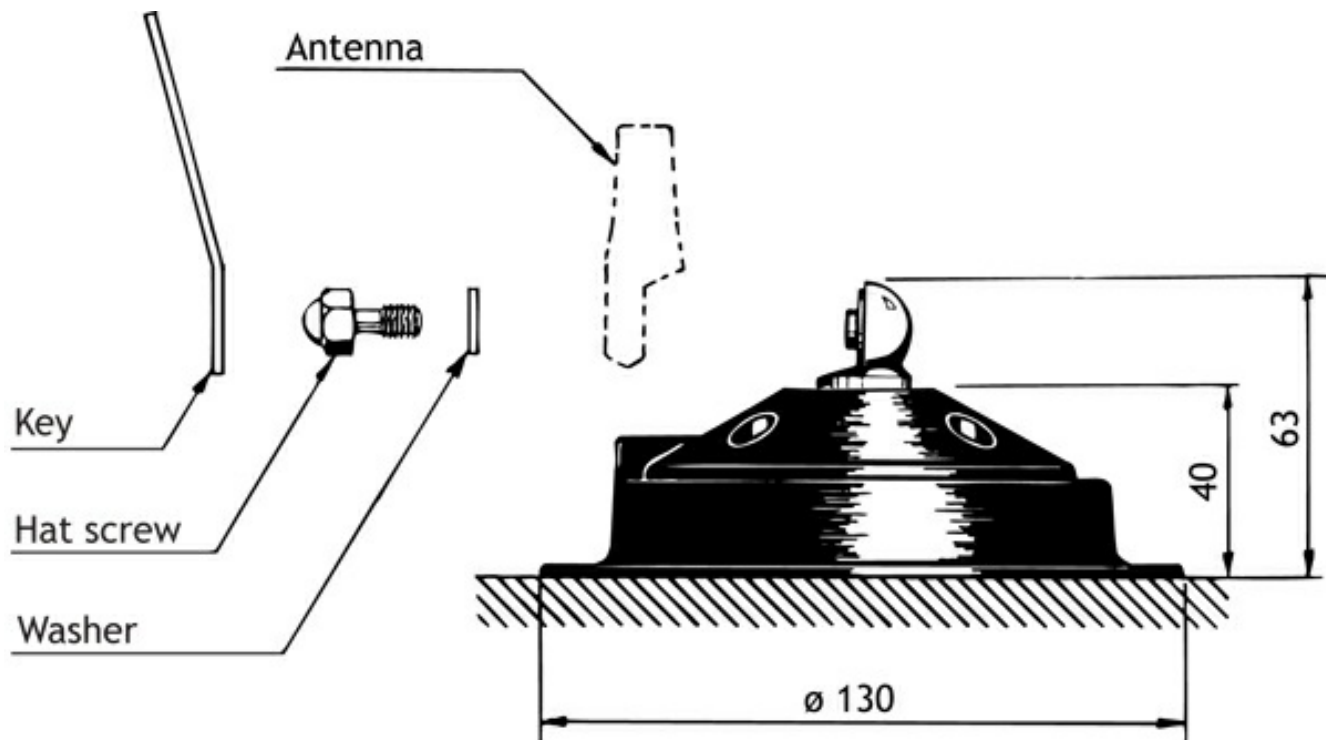
ORDERING

Model	Product No.
MU 1-MG/GPS/380-410 MHz	132000209
MU 1-MG/GPS/400-430 MHz	132000217
Accessories	
MG/GPS-Mount	132000158

TYPICAL SWR CURVE



INSTALLATION



The magnetic mount should be mounted in the middle of the vehicle roof or rear locker for the best omnidirectional coverage.