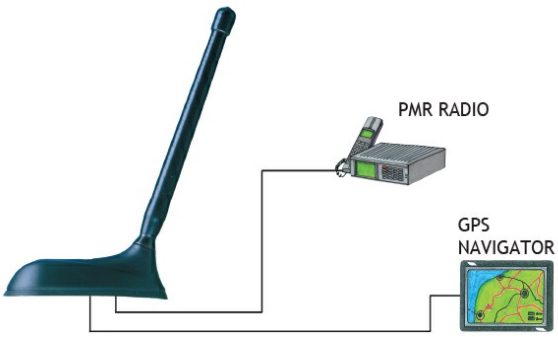
GPS Antenna with a ¼ λ Helical Antenna for the 160 MHz Band

DESCRIPTION

- External antenna whip mounted on the GPS-Combi mount.
  - Flexible, conical steel helix moulded in flexible thermoplastic rubber.
  - Reduced-size ¼ λ helical antenna whip.
  - Easily removable whip for cleaning in car-washing machine.
- GPS-antenna for fixed installations.
  - Full hemispherical coverage.
  - Built-in high gain, low noise amplifier.
  - Right-Hand Circularly Polarized antenna (RHCP).
  - 5 V supply voltage (3 V respectively 12 V available on request).
  - DC supply via RF-connector.

CONNECTION DIAGRAM



SPECIFICATIONS

Electrical	
Model	GPS-C HX2/FQ
Frequency	Tunable by cutting within : 144 - 175 MHz
Antenna Type	Shortened ¼ λ helical antenna
Max. Input Power	10 W
Polarisation	Vertical
Impedance	50 Ω
Gain (EIA RS-329-1)	-3 dB

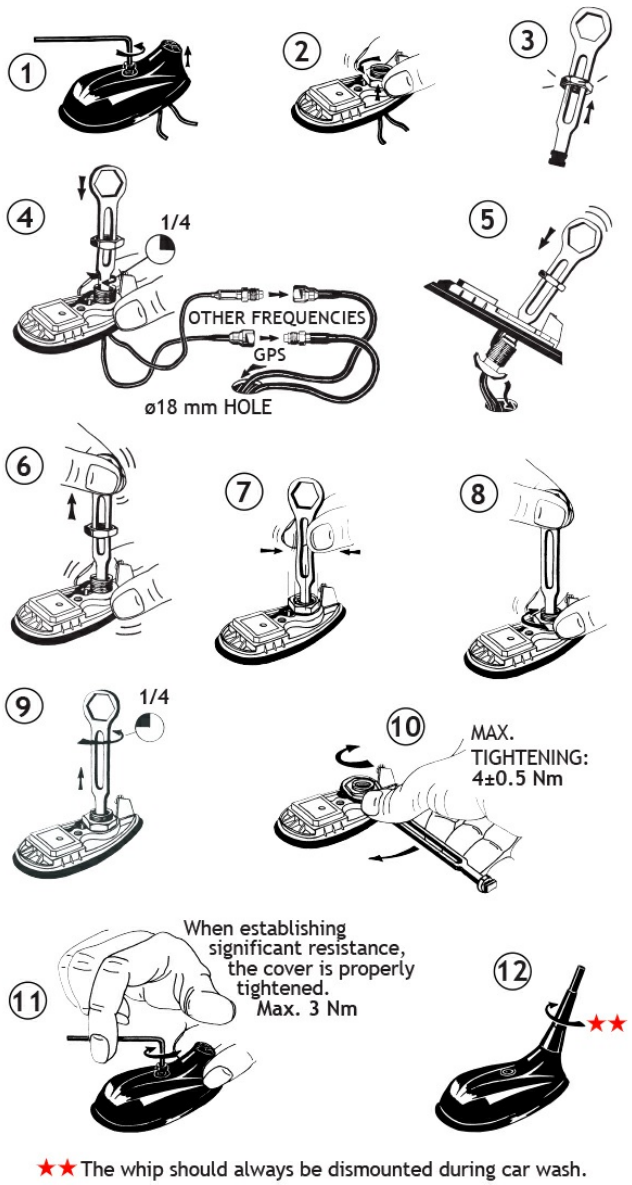
Mechanical	
Materials	Steel helix moulded in flexible thermoplastic rubber Black-chromed brass
Colour	Black
Height	Approx. 130 mm / 5.12 in.
Weight	Approx. 0.034 kg / 0.07 lb.
Mounting	On the GPS-Combi mount

GPS Antenna	
P1dB (GPS Amplifier)	Approx. 7 dBm
Gain (GPS)	28 dBic in axial direction (typ.)
Connection(s) (GPS)	FME(m) (male for GPS) + FME(f) (female for mobile antenna)
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.)
VSWR (GPS Amplifier)	< 2.0:1
Operating Temperature Range (GPS)	-35 °C to +75 °C
Selectivity (GPS)	> 45 dB down @ ± 45 MHz
Installation Torque (GPS)	4 ± 0.5 Nm
Frequency (GPS)	1575 MHz
Weight (GPS)	Approx. 0.114 kg / 0.25 lb.
Power Supply (GPS)	5 ± 0.5 V DC (3 V resp. 12 V on request)
Current Consumption (GPS Amplifier)	Approx. 25 mA
Dimensions (GPS)	Approx. 30 x 89 mm / 0.9 x 2.9 in.
Max. Roof Thickness (GPS)	2.5 mm / 0.10 in.
Colour (GPS)	Black
Polarisation (GPS)	RHCP
Impedance (GPS)	50 Ω
Materials (GPS)	Cu-nite brass Stainless steel Reinforced thermoplastic

ORDERING

Model	Product No.
GPS-C HX2/FQ	132000049

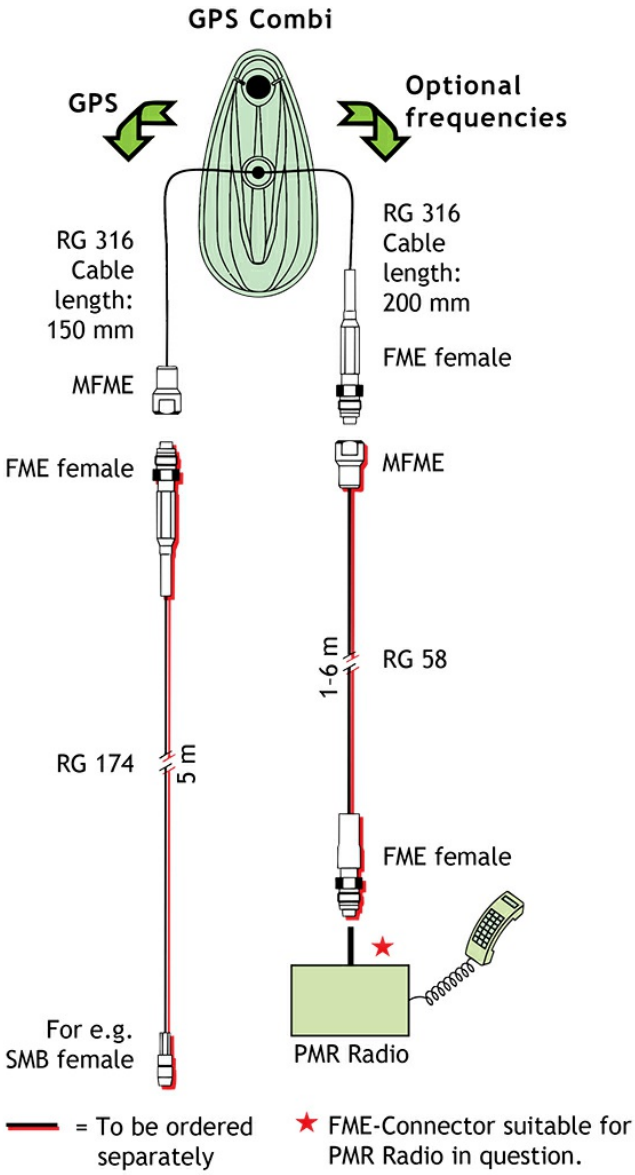
MOUNTING INSTRUCTIONS



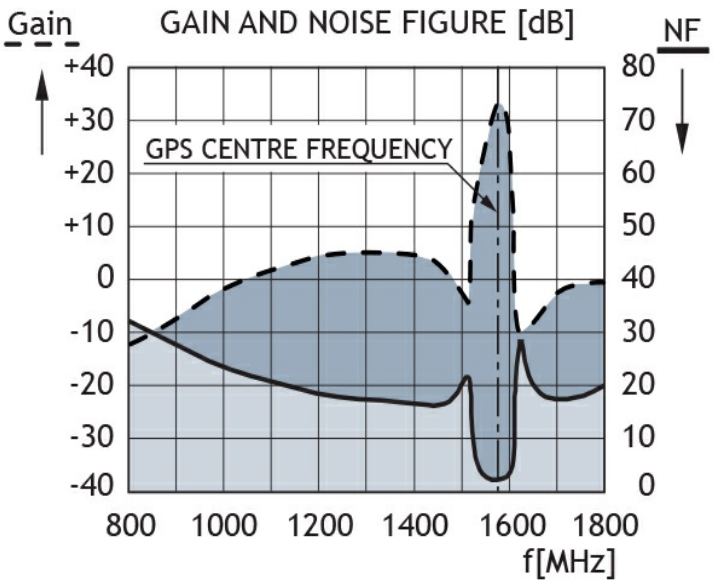
★★ The whip should always be dismounted during car wash.

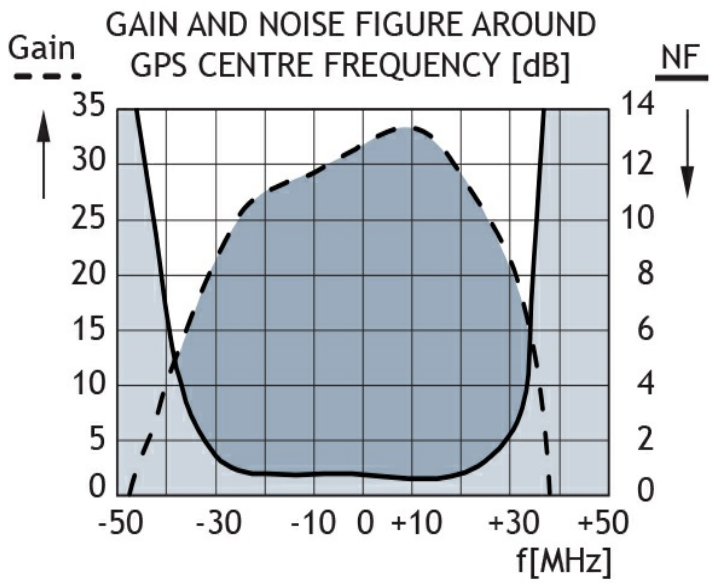
Do not use sealer on rubber gasket or other places.

CABLE MOUNTING

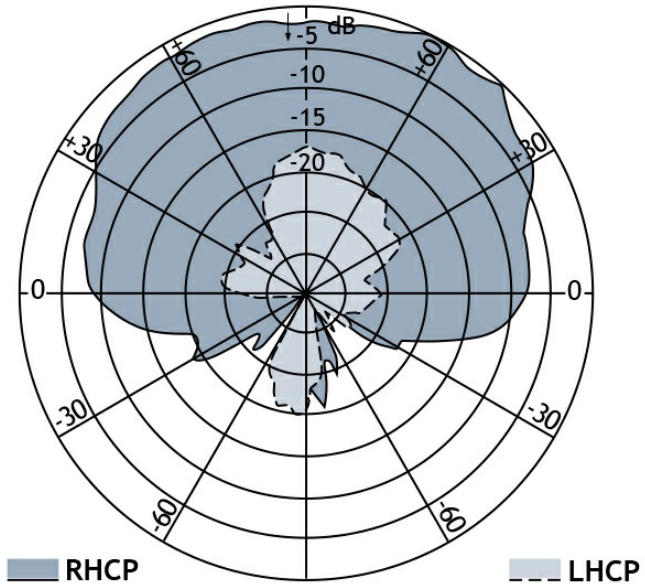


TYPICAL RESPONSE CURVES





VERTICAL RADIATION PATTERN



EU AND UK DECLARATION OF CONFORMITY

Hereby Amphenol Procom declare that the product type GPS-C HX 2/FQ is in compliance with EU Directive 2014/53/EU and
the UK Radio Equipment Regulations 2017 (S.I. 2017 No. 1206).
The full text of the Declaration of Conformity is available at:

https://amphenolprocom.com/images/shop/catalog/pdf-for-catalouges/Declaration-of-Conformity-GPS-C-1.pdf