Active Receiving Antenna for the 1575 MHz NAVSTAR GPS Satellite Navigational System

DESCRIPTION

- Full hemispherical coverage due to quadrifilar helix antenna element.
- Built-in high gain, low noise amplifier.
- Input filter for thorough RF-overload protection.
- Right-hand circular polarization (RHCP).
- High rejection of cross-polarized reflections prevents fading caused by multipath propagation.
- 5 V supply voltage (3 V respectively 12 V available on request).
- DC supply via RF-connector.
- EMC tested to IEC 801 and IEC 255.
- Total design carried out to make the antenna withstand tough environments.
- Comprehensive range of accessory mounting brackets available.
- Colour opportunities:
  - White (Standard)
  - Black
  - Sand

COLOUR OPPORTUNITIES

SPECIFICATIONS

Electrical	
Model	GPS 4/...
Frequency	1575 MHz
Antenna Type	Quadrifilar helix active antenna
Polarisation	Circular
Pattern Type	Hemispherical
Impedance	50 Ω
Axial Gain	> 32 dBi
Cross Polar Attenuation	> 10 dB (typ.)
Selectivity	> 20 dB down @ ±100 MHz
EMC	Full protection (IEC 801, IEC 255)

Mechanical	
Insulation	Connector ground terminal galvanically insulated from the mounting hardware
Antenna Colour	Marine white, black or sand
Connection(s)	FME(m) (pin) - (can be supplied with TNC(f) upon request)
Materials	Antenna dome: Weather-resistant low-loss plastic
Suggested Cable	< 10 m: RG 58 10 - 30 m: RG 213
Wind Area	0.0072 sq. m / 0.08 sq. ft
Wind Load	Approx. 9.6 N @ 150 km/h
Diameter	33 mm / 1.30 in.
Height	Approx. 230 mm / 9.06 in.
Weight	Approx. 0.15 kg / 0.33 lb
Mounting	Vertical on 1" water pipe or on PROCOM 1" mounting brackets (see accessories)

GPS Antenna	
P1dB (GPS Amplifier)	> 10 dBm
Noise Figure (GPS Amplifier)	< 3 dB (incl. input filter). Typ. approx. 3 dB
Gain (GPS Amplifier)	> 30 dB (typ.)
VSWR (GPS Amplifier)	< 2.0:1
Power Supply (GPS)	GPS 4: 5 ±0.5 V DC GPS 4/3 V: 3 - 3.5 V DC GPS 4/12V: 9 - 15 V DC
Attenuation Out Of Band (GPS)	0.03 - 1 GHz : > 40 dB down 2 - 10 GHz : > 40 dB down

Environmental	
Operating Temperature Range	-50°C to +70°C
Survival Wind Speed	200 km/h
Ingress Protection	IP56 (IP66 on request)

ORDERING

Model	Product No.	Description
GPS 4	112000017	5 V DC (4.5 - 5.5 V)
GPS 4/3 V	112000015	3 V DC (3 - 3.5 V)
GPS 4/12 V	112000016	SUPPLY VOLTAGE: 12 V DC (9 - 15 V)
GPS 4-B	112000065	5 V DC (4.5 - 5.5 V)
GPS 4/3 V-B	112000067	3 V DC (3 - 3.5 V)
GPS 4/12 V-B	112000069	SUPPLY VOLTAGE: 12 V DC (9 - 15 V)
GPS 4-S	112000066	5 V DC (4.5 - 5.5 V)
GPS 4/3 V-S	112000068	3 V DC (3 - 3.5 V)
GPS 4/12 V-S	112000070	SUPPLY VOLTAGE: 12 V DC (9 - 15 V)
GPS 4/5 V-TNC	112000014	5 V DC (4.5 - 5.5 V)
GPS 4/3 V-TNC	112000010	3 V DC (3 - 3.5 V)
GPS 4/12 V-TNC	112000012	SUPPLY VOLTAGE: 12 V DC (9 - 15 V)

FME-SYSTEM ACCESSORIES

FME-CABLES	
TYPE	**PRODUCT NO.**
1 m FME(f)	130000437
2 m FME(f)	130000447
3 m FME(f)	130000457
4 m FME(f)	130000466
5 m FME(f)	130000474
6 m FME(f)	130000483
4 m FME-white(f)	110000064
6 m FME-white(f)	110000066
12 m FME-white(f)	110000068
18 m FME-white(f)	110000069

FME-CONNECTORS	
TYPE	**PRODUCT NO.**
FME(f)-FME(f)	130000583
FME(m)-P(m) (Prolongation)	130000565
FME(m)-N(m)	130000571
FME(m)-FSMA (Female-SMA)	130000578
FME(m)-BNC(m)	130000566
FME(m)-TNC(m)	130000569
FME(m)-UHF(m)	130000572
FME(m)-MUHF(m) (Mini-UHF)	130000573
FME(m)-EMUHF(m) (Elbow-MUHF)	130000582

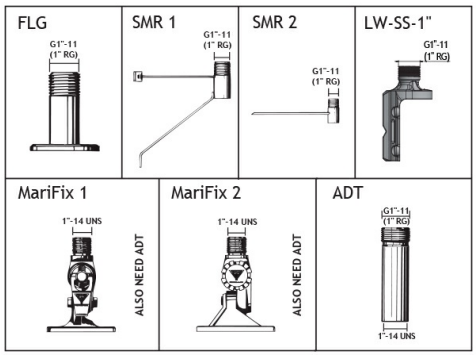
For further information about other types of FME-cables and FME-connectors, please compare the cable and connector data sheets under accessories in our catalogue.

EU DECLARATION OF CONFORMITY

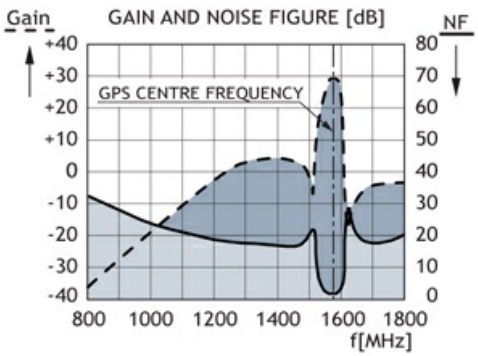
Hereby Amphenol Procom declare that the product type GPS 4/... is in compliance with EU Directive 2014/53/EU.
The full text of the EU Declaration of Conformity is available at:

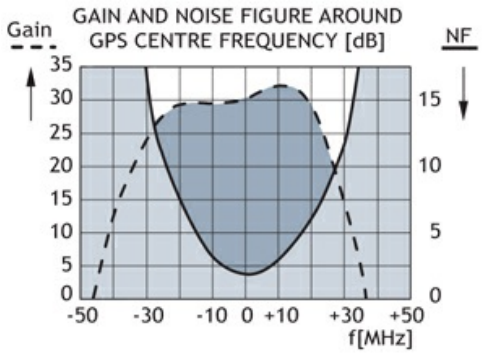
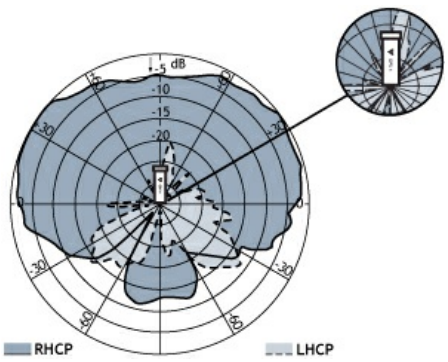
http://amphenolprocom.com/images/shop/catalog/pdf-for-catalouges/Declaration-of-Conformity-GPS 4.pdf

ACCESSORIES (TO BE ORDERED SEPARATELY)



TYPICAL RESPONSE CURVES





VERTICAL RADIATION PATTERN