GPS ANTENNAS

PROCOM A/S

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XG-Combi Mount

GPS mount for GPS Antennas and Other Frequencies

- Mobile mount with a nice, “streamline”-look, which can be installed everywhere on the car in an 19 mm dia. hole.
- Especially suited for mounting on the narrow strip on rear wing between trunk lid and car side.
- M6 thread whip-mounting system.

DESCRIPTION

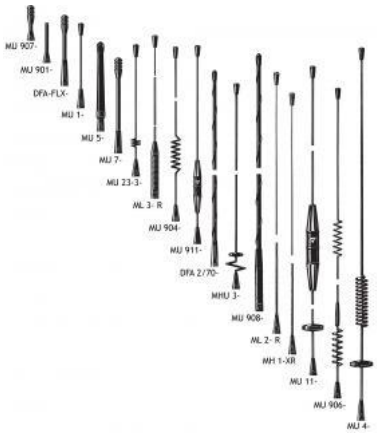
- Very low requirements to installation depth both under and after installation.
- Designed for installation with access from the outside only.
- Bendable section in mount makes whip tiltable 30° by hand.
- Complete line of whips available for all communications bands up to 1300 MHz.
- Mounting body made of stainless steel !
- Choice between two connection principles:
  - XG-Combi mount: FME-connection and GPS (supplied without cable).
  - XGP4-Combi mount: Permanently attached 4 m RG 58 cable terminated with FME-connector and GPS.

- GPS-antenna for fixed installations.
  - Full hemispherical coverage.
  - Built-in high-gain, low-noise amplifier.
  - Right-Hand Circular Polarization (RHCP).
  - 2.85 V - 5 V supply voltage (typical 3 V).

ORDERING DESIGNATIONS

TYPE NO.	VERSION	PRODUCT NO.
XG-COMBI MOUNT	XG-Combi mount with FME-system	130002032
XGP4-COMBI MOUNT	XGP4-Combi mount with 4 m RG 58 cable and FME-connector	130002043

A SELECTION OF THE VARIOUS WHIPS WHICH CAN BE CONNECTED TO THE XG-COMBI MOUNT



SPECIFICATIONS

ELECTRICAL	

MODEL	XG-COMBI MOUNT
APPLICATION	Mount for mobile antennas
CONNECTION TO WHIP	M6 thread stud
BUILD-IN DEPTH	Active : 30 mm Passive : 11 mm
MECHANICAL	
MATERIALS	Black-chromed brass Weather- and shockproof plastics Stainless steel
RECOMMENDED INSTALLATION TORQUE	4 ± 1 Nm
COLOUR	Black
LENGTH/WIDTH	48 mm/28 mm
WEIGHT	XG-version: Approx. 60 g XGP4-version: Approx. 200 g
MOUNTING	19 mm dia. hole
ROOF THICKNESS	Max. 2 mm
ELECTRICAL for GPS-part	
OPERATING FREQUENCY	1575.42 ±1.023 MHz
LNA GAIN	22 dB ±2 dB
NOISE FIGURE	Max. 1.5 dB (typical 1.1 dB)
VOLTAGE	DC 2.85 V ~ 5 V (typical 3 V)
CURRENT	≤ 20 mA
IMPEDANCE	Nom. 50 Ω
MECHANICAL	
CONNECTOR	Cable: RG 178, length 150 mm Connector: FME-male

FME-SYSTEM ACCESSORIES

FME-CABLES	
TYPE	PRODUCT NO.
1 m FME	130000437
2 m FME	130000447
3 m FME	130000457
4 m FME	130000466
5 m FME	130000474
6 m FME	130000483
4 m FME-white	110000064
6 m FME-white	110000066

12 m FME-white	110000068
18 m FME-white	110000069
FME-CONNECTORS	
TYPE	PRODUCT NO.
FME-FME	130000583
FME-P (Prolongation)	130000565
FME-N	130000571
FME-FSMA (Female-SMA)	130000578
FME-BNC	130000566
FME-TNC	130000569
FME-UHF	130000572
FME-MUHF (Mini-UHF)	130000573
FME-EMUHF (Elbow-MUHF)	130000582
FME-EBNC (Elbow-BNC)	130000580
FME-ETNC (Elbow-TNC)	130000581
FME-SMA	130000577

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.

INSTALLATION

XG-Combi mount antenna types can be mounted anywhere on the car, however, roof top mounting is always recommended.

The oblong XG-Combi mount is able to be mounted on the often very narrow strip on the rear wing between the trunk lid and the side of the car.

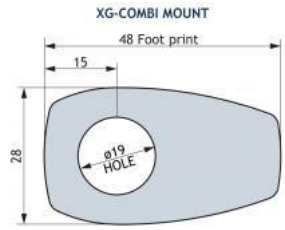
Mounting can take place with access from the outside or inside when drilling an 19 mm dia. hole.

A good contact surface on the inside of the car body must always be ensured, thus enabling the base plate to get in direct contact with the metal parts of the car, which is of utmost importance for proper performance of the antenna.

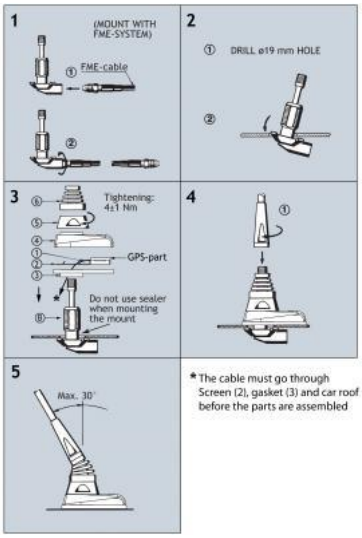
When cleaning the car in car-washing machines, the whip is easily removed using a fork spanner, size 9 mm. The whip is refitted again by screwing it onto the thread stud and tightening it lightly with the spanner.

As the XG-Combi mount is internally equipped with a bendable section, the antennas can always be adjusted to an upright position independent of the tilt angle of the installation spot (up to 30° tilt).

1. INSTALLATION DIMENSIONS



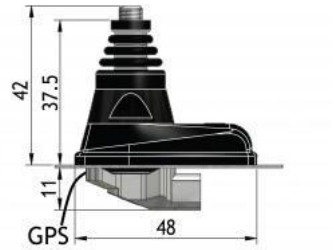
2. INSTALLATION STEPS



Do not use sealer on rubber gasket or other places.

ASSEMBLY INSTRUCTIONS

- Put GPS-FME-connector-cable through the gasket (2).
- Put the gasket (2) + GPS-part (1) over the body (B).
- Put the body (B) + gasket (3) + GPS-part (1) through the ø19 mm hole.
- Put the housing (4) over the body (B) and be sure that the GPS-part (1) fits into the square hole in the body (B).
- Put the threaded part over the body (B) and tighten max. 4 ±1 Nm!
- Put the corrugated plastic unit (6) over the body (B).
- Mount the antenna whip se figure 4.



PCPI GPS EXTEND

Indoor Right Hand Circularly Polarized Patch Antenna for extending GPS coverage

- To be used where GPS-signals are missing.
- Outdoor GPS antenna is necessary.
- Recommended outdoor GPS antenna: GPS 4/...

- Low profile antenna for reradiating the GPS signal.
- Specially designed for closed rooms.
- Covers the GPS frequency 1575 MHz with a radiation of approx.5 dBic 3 dBd.
- Full size 2 λ circular patch antenna.
- The antenna is carefully sealed with a discreet white cover.
- Internal 25 dB selective amplifier.
- PCPI GPS EXTEND 12V/5V-N has 5V DC output on N-connector for feeding outside GPS antenna with built-in amplifier.
- PCPI GPS EXTEND 12V/12V-N has 12V DC on N-connector for phantom powering the unit via the signal line.

ORDERING DESIGNATIONS

TYPE	SUPPLY VOLTAGE	PRODUCT NO.
PCPI GPS EXTEND 12V/5V-N		102000002
PCPI GPS EXTEND 12V/12V-N		102000005
ADAPTOR AC/DC 12V EU		240000040
ADAPTOR AC/DC 12V UK		240000041
GPS 4	5 V DC (4.5 - 5.5 V)	112000017

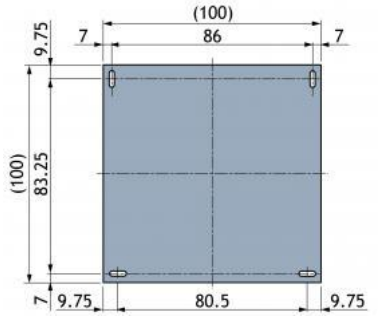
SPECIFICATIONS

ELECTRICAL	
MODEL	PCPI GPS EXTEND
ANTENNA TYPE	Right Hand Circularly Polarized patch antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
COVERAGE	10 - 16 m *
GAIN	Approx. 5 dBic 3 dBd ±2 dB
HALF-POWER BEAMWIDTH	Approx. 70° (H- and E-plane)
SWR	≤ 1.5 f.res.
SUPPLY VOLTAGE PCPI GPS EXTEND 12V/5V-N	12V on DC connector, 5V out on N-connector for GPS outdoor antenna

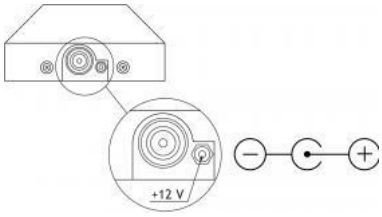
SUPPLY VOLTAGE PCPI GPS EXTEND 12V/12V-N	12V phantom voltage on N-connector, or 12V on DC-connector
SUPPLY CURRENT	Approx. 150 mA
MECHANICAL	
CONNECTOR	N-female
DC-CONNECTOR	ø2.5 mm - centre pin
COLOUR	Marine white
MATERIALS	Cover: ABS Chassis: Aluminium
SIZE (L x W x H)	104 x 104 x 40 mm / 4.1 x 4.1 x 1.5 in.
WEIGHT	Approx. 200 g / 0.4 lb
MOUNTING	For mounting on wall or ceiling ø4.5 x 10 mm (4 holes)

* To achieve 10-16 m coverage the cable loss between the PCPI-GPS EXTEND and the donor antenna must be ≤7 dB. (Provided donor antenna gain of ≥30 dB)

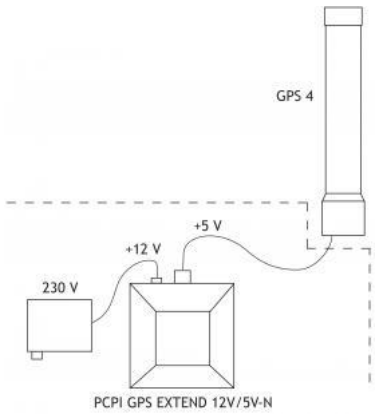
MOUNTING DETAILS (Dimensions excl. cover)



DETAILS

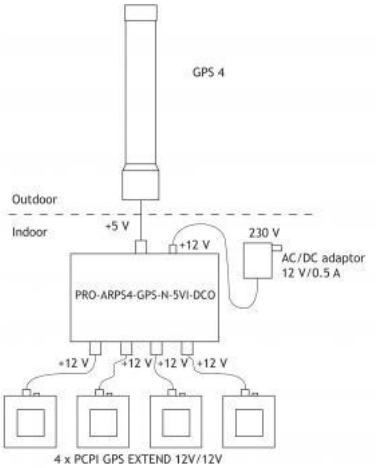


EXAMPLE



PLEASE NOTE: GPS 4/... + power supply to be ordered separately.

EXAMPLE PCPI GPS EXTEND 12V/12V-N



* To achieve 10-16 m coverage the total cable losses between the donor antenna, PRO-ARPS4-GPS-N-5VI-DCO and the 4 individual PCPI GPS EXTEND 12V/12V must be ≤12 dB. (Provided donor antenna gain of ≥30 dB).

PCPI GPS

Indoor Right Hand Circularly Polarized Patch Antenna for mounting on Wall or Ceiling

- Low profile antenna for the GPS band.
- PCPI GPS is a Right Hand Circularly Polarized patch antenna for indoor use.
- Circularly polarized antenna is chosen to avoid out-of-phase signals.

- Specially designed for closed rooms.
- Covers the GPS frequency 1575 MHz with a radiation of approx. 5 dBic 3 dBd.
- Full size 2 λ circular patch antenna.
- The antenna is carefully sealed with a discreet white cover.
- The connector is placed at one side to enable mounting close to a wall or a ceiling.

ORDERING DESIGNATIONS

TYPE	PRODUCT NO.
PCPI GPS	102000001

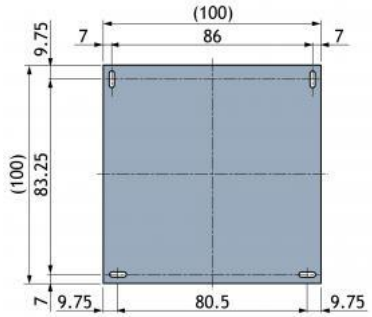
SPECIFICATIONS

ELECTRICAL	
MODEL	PCPI GPS
ANTENNA TYPE	Right Hand Circularly Polarized patch antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Circular
GAIN	Approx. 5 dBic 3 dBd ±2 dB
HALF-POWER BEAMWIDTH	Approx. 70° (H- and E-plane)
SWR	≤ 1.5 f.res.
MAX. POWER	50 W
MECHANICAL	
CONNECTOR	N-female
COLOUR	Marine white
MATERIALS	Cover: PS Chassis: Aluminium
SIZE (L x W x H)	Approx. 104 x 104 x 40 mm
WEIGHT	Approx. 0.4 kg
MOUNTING	For mounting on wall or ceiling

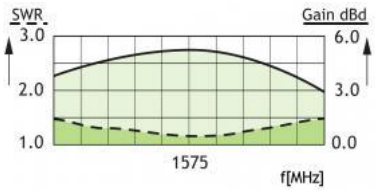
	ø4.5 x 10 mm (4 holes)

MOUNTING & PATTERN

MOUNTING DETAILS (Dimensions excl. cover)



TYPICAL GAIN AND SWR CURVES

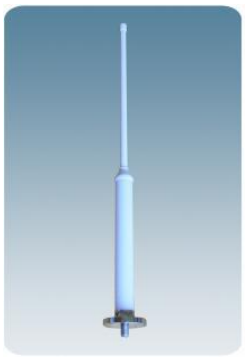


TYPICAL RADIATION PATTERN (E-PLANE)

This curve shows the radiation patterns in the vertical plane.

TYPICAL RADIATION PATTERN (H-PLANE)

This curve shows the radiation patterns in the horizontal plane (horizontal coverage).



MA 70/GPS 4/...

Dual Band Antenna for the UHF band e.g. TETRA, CDMA, ICE, and GPS.

- This active antenna has been designed for use on the UHF band e.g. TETRA, CDMA, ICE, and GPS.
- The antenna consists of a high-performance glass fibre- encapsulated antenna element and an active GPS antenna. The latter is built into the bottom part of the antenna together with a diplex filter. Only one down lead cable is therefore necessary.

DESCRIPTION

- The antenna element is a 1/2 λ antenna for the UHF band frequency range within 380 - 467 MHz.
- The GPS antenna has a full hemispherical coverage and a built-in high-gain, low-noise amplifier.
- The necessary supply voltage (5 V DC) for the amplifier is delivered through the down lead coaxial cable. Up to 30 m of
  RG 214/U coaxial cable can be used between the antenna and
  the receiver/transceiver.
- By careful choice of materials, the MA 70/GPS 4/... is designed to withstand the roughest of climate conditions, ensuring many years of trouble-free service.

ORDERING DESIGNATIONS

TYPE	PRODUCT NO.	FREQUENCY
MA 70/GPS 4/TETRA-l	110000200	380 - 400 MHz
MA 70/GPS 4/TETRA-h	110000201	410 - 430 MHz
MA 70/GPS 4/CDMA	110000202	453 - 467 MHz
MA 70/GPS 4/ice.net	110000223	453 - 467 MHz
MA 70/GPS 4/NET 1	110000224	453 - 467 MHz
DM Mounting Kit	112000001	
SM-MAS	110000196	
DIPX 1000/1550 N-DC-H	200000749	
PRO-DIPX 1000/1550 N-DC-H	200000799	

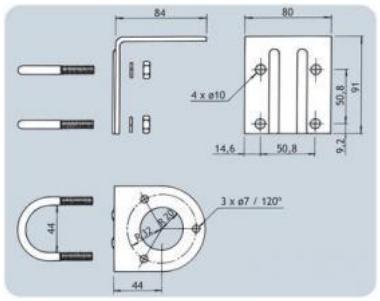
SPECIFICATIONS

ELECTRICAL UHF	
MODEL	MA 70/GPS 4/...
ANTENNA TYPE	1/2 λ antenna element
FREQUENCY	Models within 380 - 467 MHz
BANDWITH	5 % of freq. @ SWR ≤ 1.5
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Vertical

GAIN	Approx. 2 dBi 0 dBd
SWR	Typ. < 2.0
MAX. POWER	25 W
ELECTRICAL GPS	
ANTENNA TYPE	Quadrifilar Helix Active antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Circular right-hand
COVERAGE	Hemispherical
GAIN (in axial direction)	> 32 dBi
CROSS POLARIZATION ATT	> 10 dB (typ.)
Built-in Amplifier	
GAIN	> 30 dB (typ.)
NOISE FIGURE	< 3 dB (typ.)
$P_{1\ dB}$	Approx. +10 dBm
SWR (output)	≤ 2.0
SUPPLY VOLTAGE	5 ±0.5 V DC (3 V and 12 V respectively available on request)
SELECTIVITY	> 20 dB down @ ± 100 MHz
CURRENT CONSUMPTION	Approx. 44 mA
MECHANICAL (for the MA 70/GPS 4/...)	
TEMP. RANGE	-30° C → + 70° C
CONNECTOR	N-female
WIND SURFACE	Approx. 0.018 m²
WIND LOAD	Approx. 23 N @ 160 km/h
COLOUR	Marine white
MATERIALS	Shroud : Polyurethane-coated glass fibre Flange : Chromed brass
TOTAL HEIGHT	Approx. 730 mm
WEIGHT	Approx. 900 g
MOUNTING	Standard mounting on plane surface. Deck mounting by means of DM Mounting Kit (optional extra). Mounting on 30-44 mm mast tube by means of SM-MAS (optional extra)

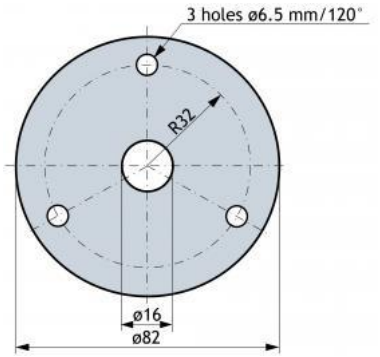
Standard Mounting Kit included

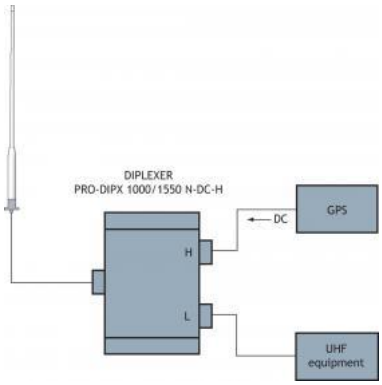
DM Mounting Kit for Deck Mount to be ordered separately



SM-MAS Mounting Kit for Side Mount and Mast Mount to be ordered separately

MOUNTING ON FLAT SURFACES

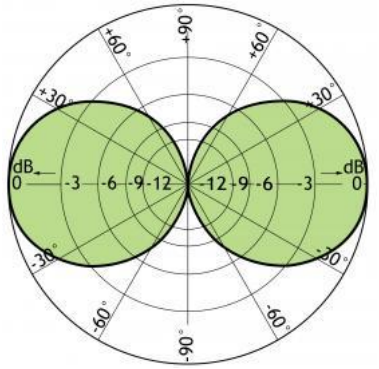




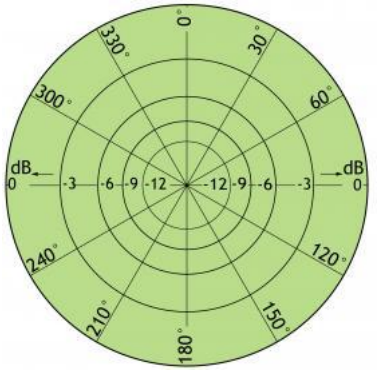
Alternatively, filter type DIPLEXER DIPX 1000/1550 N-DC-H can be used. Either filter to be ordered separately

RADIATION PATTERN FOR THE UHF BAND

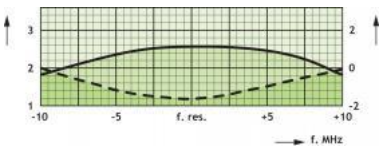
TYPICAL RADIATION PATTERN (E-PLANE)



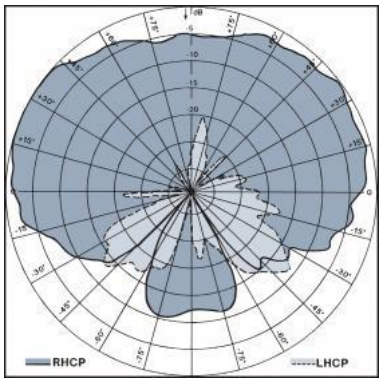
TYPICAL RADIATION PATTERN (H-PLANE)



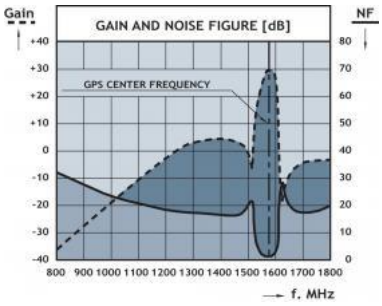
TYPICAL GAIN AND SWR CURVES

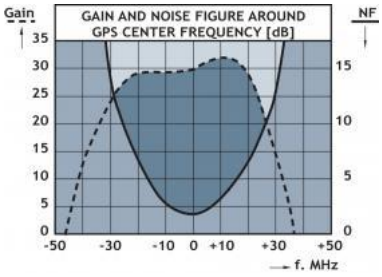


VERTICAL RADIATION PATTERN



TYPICAL RESPONSE CURVES AND RADIATION PATTERN FOR THE GPS-PART (1575 MHz)





GPS 4/...

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

- 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).

Description

- 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

ORDERING DESIGNATIONS

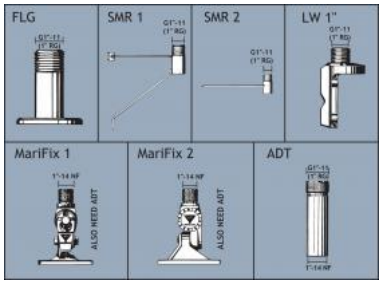
TYPE	PRODUCT NO.	SUPPLY VOLTAGE	TYPE	PRODUCT NO.
GPS 4	112000017	5 V DC (4.5 - 5.5 V)	GPS 4-S	112000066
GPS 4/3 V	112000015	3 V DC (3 - 3.5 V)	GPS 4/3 V-S	112000068
GPS 4/12 V	112000016	12 V DC (9 - 15 V)	GPS 4/12 V-S	112000070
GPS 4-B	112000065	5 V DC (4.5 - 5.5 V)	GPS 4/5 V-TNC	112000014
GPS 4/3 V-B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

SPECIFICATIONS

ELECTRICALGeneral Specifications	
MODEL	GPS 4/...
ANTENNA TYPE	Quadrifilar helix active antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Circular right-hand

COVERAGE	Hemispherical
GAIN (in axial direction)	> 32 dBi
CROSSPOLARIZATION ATT.	> 10 dB
SELECTIVITY	> 20 dB down @ ± 100 MHz
Built-in Amplifier	
GAIN	> 30 dB
NOISE FIGURE	< 3 dB (incl. input filter). Typ. approx. 3 dB
1 dB COMPRESSION POINT	> 10 dBm
OUT OF BAND ATTENUATION	0.03 – 1 GHz : > 40 dB down 2 – 10 GHz : > 40 dB down
SWR (output)	< 2.0
SUPPLY VOLTAGE	GPS 4: 5±0.5 V DC GPS 4/3 V: 3-3.5 V DC GPS 4/12V: 9–15 V DC
CURRENT CONSUMPTION	Approx. 44 mA
EMC	Full protection (IEC 801, IEC 255)
MECHANICAL	
MATERIALS	Antenna dome: Weather-resistant low-loss plastic
ANTENNA COLOUR	Marine white, black or sand
INSULATION	Connector ground terminal galvanically insulated from the mounting hardware
WIND SURFACE	Approx. 0.0072 m² / 0.08 ft²
MAX. WIND SPEED	200 km/h / 124.27 mph.
WIND LOAD	Approx. 9.6 N @ 150 km/h / 93.21 mph.
CONNECTOR	FME-male (pin) or TNC-female
SUGGESTED DOWNLEAD CABLE	< 10 m: RG 58 10 - 30 m: RG 213
TOTAL HEIGHT	Approx. 23 cm / 9.06 in.
ANTENNA DIA.	33 mm / 1.30 in.
WEIGHT	Approx. 150 g / 0.33 lb.
MOUNTING	Vertical on 1" water pipe or on PROCOM 1" mounting brackets (see accessories below)
ENVIRONMENTAL	
TEMP. RANGE	-50° C → +70° C
IP-RATING	IP-56 (IP-66 on request)

ACCESSORIES



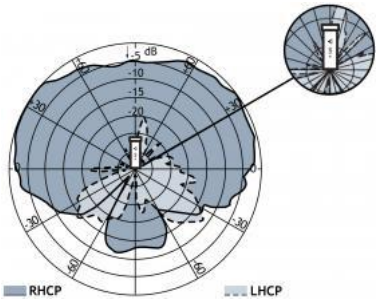
FME-SYSTEM ACCESSORIES

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

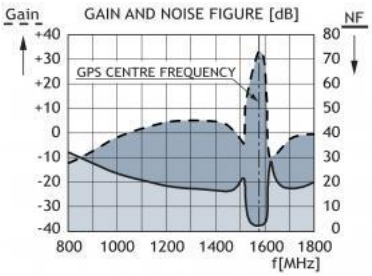
FME(m)-BNC(m)	130000566
FME(m)-TNC(m)	130000569
FME(m)-UHF(m)	130000572
FME(m)-MUHF(m) (Mini-UHF)	130000573
FME(m)-EMUHF(m) (Elbow-MUHF)	130000582

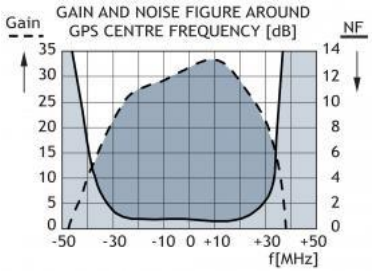
For further information about other types of FME-cables and FME-connectors, please compare the cable and connector data sheets under accessories in our catalogue.

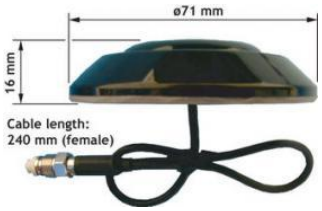
VERTICAL RADIATION PATTERN



TYPICAL RESPONSE CURVES







GPS 2000 QM

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

- Flat-pack GPS-antenna for fixed installations.
- Full hemispherical coverage.
- Built-in high gain, low noise amplifier.

- Right-Hand Circular Polarisation (RHCP).
- Available in black.
- 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.
- Provided with FME (female) connector.
- Wide range of FME-accessories available.
- Double-adhesion procedure ensures fast and reliable fixing.

ORDERING DESIGNATIONS

TYPE	PRODUCT NO.
GPS 2000 QM	112000037

SPECIFICATIONS

ELECTRICAL General specifications	
MODEL	GPS 2000 QM
ANTENNA TYPE	Active patch antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Circular right-hand
COVERAGE	Hemispherical
GAIN (in axial direction)	28 dBi (typ.)
CROSS-POLARISATION ATT.	> 10 dB (typ.)
SELECTIVITY	> 45 dB down at ± 45 MHz
BUILT-IN AMPLIFIER	
GAIN	> 30 dB (typ.)
NOISE FIGURE	≤ 1 dB (typ.)
SWR (output)	≤ 2.0
SUPPLY VOLTAGE	5 ± 0.5 VDC (3 V respectively 12 V available on request)
CURRENT CONSUMPTION	Approx. 20 mA
MECHANICAL	

MOUNTING	10 mm dia. hole
MATERIALS	Cu-nite brass Seawater resistant Lexan
COLOUR	Black
TEMP. RANGE	-30° C →+70° C
CONNECTOR	FME (female)
HEIGHT	Approx. 16 mm
WIDTH/LENGTH	ø71 mm
WEIGHT	Approx. 90 g

FME-SYSTEM ACCESSORIES

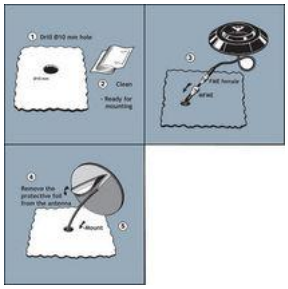
FME-CABLES	
TYPE	PRODUCT NO.
1 m FME	130000437
2 m FME	130000447
3 m FME	130000457
4 m FME	130000466
5 m FME	130000474
6 m FME	130000483
4 m FME-white	110000064
6 m FME-white	110000066
12 m FME-white	110000068
18 m FME-white	110000069
FME-CONNECTORS	
TYPE	PRODUCT NO.
FME-FME	130000583
FME-P (Prolongation)	130000565
FME-N	130000571
FME-FSMA (Female-SMA)	130000578
FME-BNC	130000566
FME-TNC	130000569
FME-UHF	130000572
FME-MUHF (Mini-UHF)	130000573

FME-EMUHF (Elbow-MUHF)	130000582
FME-EBNC (Elbow-BNC)	130000580
FME-ETNC (Elbow-TNC)	130000581
FME-SMA	130000577

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

INSTALLATION

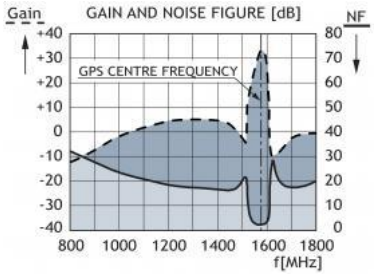
1. **BEFORE INSTALLATION**
   - Environmental and car temperature must be above 15º C at installation, and installation surface must be dry and clean.
2. **INSTALLATION**

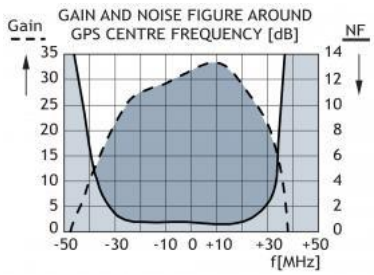


3. **ADHESION ADVICE**
   - It is essential for a good adhesion result that the surface is properly cleaned and dry.
   - A high application pressure improves the binding power.
   - Ideal application temperature range is +20º C to +38º C but may be extended down to +15º C. When applied binding strength is maintained between -30º C and +70º C.

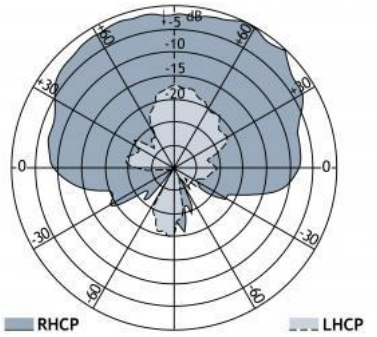
Do not use sealer on rubber gasket or other places.

TYPICAL RESPONSE CURVES





VERTICAL RADIATION PATTERN


dB
-5
-10
-15
-20
+60
+30
+90
0
0
-30
-60
-90
RHCP
LHCP

GPS 2000

Active Receiving Antenna for the 1575 MHz NAVSTAR GPS Satellite Navigational System for Maritime and Landmobile Use

- Flat-pack GPS-antenna for fixed installations.
- Full hemispherical coverage.
- Built-in high-gain, low-noise amplifier.

- Right-hand circular polarization (RHCP).
- Available in black or white, see model survey.
- 3 V or 5 V supply voltage (12 V available on request).
- DC supply via RF-connector.
- EMC tested to IEC 801 and IEC 255.
- Provided with FME (male), TNC (female) connector, or models with permanently attached 0.15 m cable with FME (male) connector, see model survey.
- Wide range of FME-accessories available.

ORDERING DESIGNATIONS

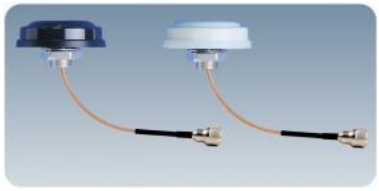
TYPE	COLOUR	PRODUCT NO.
FME CONNECTOR		
GPS 2000B-FME-5V	Black	112000026
GPS 2000B-FME-3V	Black	112000029
GPS 2000W-FME-5V	White	112000024
GPS 2000W-FME-3V	White	112000023
TNC CONNECTOR		
GPS 2000B-TNC-5V	Black	112000028
GPS 2000B-TNC-3V	Black	112000032
GPS 2000W-TNC-5V	White	112000027
GPS 2000W-TNC-3V	White	112000019
PERMANENTLY ATTACHED CABLE WITH MFME-CONNECTOR		
GPS 2000B-P0.15-5V	Black	112000072
GPS 2000B-P0.15-3V	Black	112000074
GPS 2000W-P0.15-5V	White	112000071
GPS 2000W-P0.15-3V	White	112000073

SPECIFICATIONS

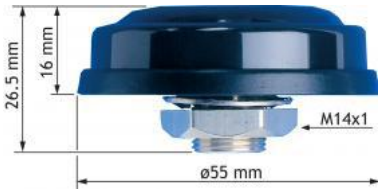
ELECTRICAL General Specifications	
MODEL	GPS 2000

ANTENNA TYPE	Active patch antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Circular right-hand
COVERAGE	Hemispherical
GAIN (in axial direction)	28 dBi (typ.)
CROSSPOLARIZATION ATT.	> 10 dB (typ.)
SELECTIVITY	> 45 dB down @ ± 45 MHz
Built-in Amplifier	
GAIN	> 30 dB (typ.)
NOISE FIGURE	< 1 dB (typ.)
1 dB COMPRESSION POINT	Approx. +7 dBm
SWR (output)	< 2.0
SUPPLY VOLTAGE	5 ± 0.5 VDC or 3 V ± 0.3 VDC (12 V available on request)
CURRENT CONSUMPTION	Approx. 20 mA
MECHANICAL	
MOUNTING	14 mm / 0.55 in. dia. hole
MOUNTING THICKN.	0.7 → 4.5 mm / 0.028 → 0.18 in.
MATERIALS	Cu-nite brass, seawater resistant Lexan
COLOUR	Black or white, see ordering designations
TEMP. RANGE	-50° C → +70° C
CONNECTOR	FME (male), TNC (female) or models with 0.15 m RG 316 permanently attached cable with FME (male) connector, see ordering designations
RECOMMENDED INSTALL. TORQUE	8.5 ± 1 Nm
HEIGHT	16 mm / 0.63 in.
OUTER HEIGHT	26.5 mm / 1.04 in. total (FME) 38 mm / 1.50 in. total (TNC) 27 mm / 1.22 in. total for P0.15 models
WIDTH/LENGTH	ø55 mm / ø2.17 in.
WEIGHT	Approx. 120 g / 0.26 lb.

GPS 2000B-P0.15 and GPS 2000W-P0.15



FME-VERSION



TNC-VERSION

MODELS WITH PERMANENTLY ATTACHED CABLE

MOUNTING

The gasket should be entirely supported by the mounting plane.

Do not use sealer on rubber gasket or other places.

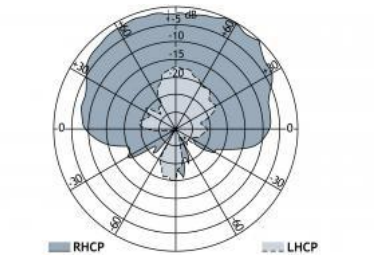
FME-SYSTEM ACCESSORIES

FME-CABLES	
TYPE	PRODUCT NO.
1 m FME	130000437
2 m FME	130000447
3 m FME	130000457
4 m FME	130000466
5 m FME	130000474
6 m FME	130000483
1 m FME-EFME	130000526
2 m FME-EFME	130000527
3 m FME-EFME	130000528
4 m FME-EFME	130000529

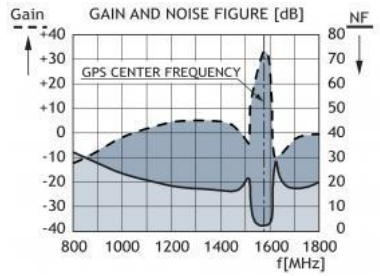
5 m FME-EFME	130000530
6 m FME-EFME	130000531
4 m FME-white	110000064
6 m FME-white	110000066
12 m FME-white	110000068
18 m FME-white	110000069
FME-CONNECTORS	
TYPE	PRODUCT NO.
FME-FME	130000583
FME-P (Prolongation)	130000565
FME-N	130000571
FME-FSMA (Female-SMA)	130000578
FME-BNC	130000566
FME-TNC	130000569
FME-UHF	130000572
FME-MUHF (Mini-UHF)	130000573
FME-EMUHF (Elbow-MUHF)	130000582
FME-EBNC (Elbow-BNC)	130000580
FME-ETNC (Elbow-TNC)	130000581
FME-SMA	130000577
MFME-MSMC	130001573

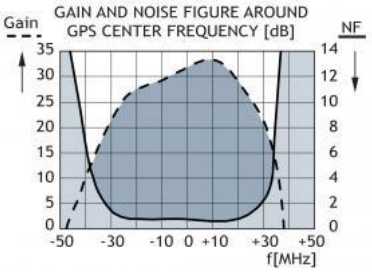
For further information about other types of FME-cables and FME-connectors, please compare the cable and connector data sheets under accessories.

VERTICAL RADIATION PATTERN



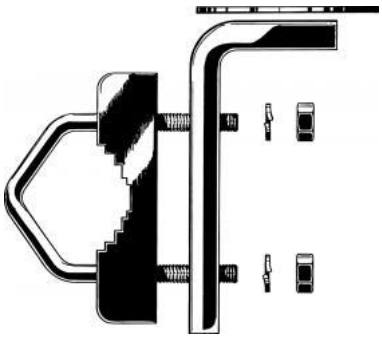
TYPICAL REPSONSE CURVES





ACCESSORIES

Stainless steel angle bracket for fixation of GPS 2000... antennas. (To be ordered separately: MB 2000 clamp). Not recommended for GPS 2000...-P0.15 types.



GPS 100 KT-FME

Active Receiving Antenna for the 1575 MHz NAVSTAR GPS Satellite Navigational System for Landmobile and Maritime Use

- Flat-pack GPS-antenna for temporary or fixed installations.
- Full hemispherical coverage.

Description

- Built-in high gain, low noise amplifier.
- Right-hand circular polarization (RHCP).
- Magnet mount – ideal for mounting on e.g. roof of car or vessel.
- 5 V supply voltage (3 V respectively 12 V available on request).
- DC supply via RF-connector.
- Permanently attached 5 m RG 174 coaxial cable terminated with FME (female) connector.
- Wide range of FME-accessories available.

Ordering designations

TYPE NO.	PRODUCT NO.
GPS 100 KT-FME	112000022

SPECIFICATIONS

ELECTRICAL General specifications	
MODEL	GPS 100 KT-FME
ANTENNA TYPE	Active patch antenna
FREQUENCY	1575 MHz (DCS)
IMPEDANCE	Nom. 50 Ω
POLARISATION	Circular right-hand
COVERAGE	Hemispherical
GAIN (in axial direction)	27 dBi (typ.)
CROSS-POLARISATION ATT.	> 10 dB (typ.)
SELECTIVITY	> 45 dB down at ± 45 MHz
BUILT-IN AMPLIFIER	
GAIN	> 26 dB (typ.)
NOISE FIGURE	≤ 3 dB (typ.)
SWR (output)	≤ 2.0
SUPPLY VOLTAGE	5 ± 0.5 VDC
CURRENT CONSUMPTION	Approx. 25 mA
MECHANICAL	

MATERIALS	Aluminium and ABS
ANTENNA COLOUR	Black
TEMP. RANGE	-35° C →+75° C
CONNECTOR	FME-female
CABLE	5 m RG 174
HEIGHT	15 mm
WIDTH/LENGTH	ø50 mm
WEIGHT	Approx. 130 g

Do not use sealer on rubber gasket or other places.

FME-SYSTEM ACCESSORIES

FME-CABLES	
LENGTH	TYPE NO.
1 m	1 m FME
2 m	2 m FME
3 m	3 m FME
4 m	4 m FME
5 m	5 m FME
6 m	6 m FME
4 m white	4 m FME-white
6 m white	6 m FME-white
12 m white	12 m FME-white
18 m white	18 m FME-white
FME-CONNECTORS	
CONNECTOR	ORDER NO.
FME-FME	FME-FME
Prolongation	FMEP
N	FME-N
FSMA	FME-FSMA
BNC	FME-BNC
TNC	FME.TNC
UHF	FME-UHF

Mini-UHF	FME-MUHF
Elbow-MUHF	FME-EMUHF
Elbow-BNC	FME-EBNC
Elbow-TNC	FME-ETNC
SMA	FME-SMA

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

GPS 4-Ex

ATEX Certified GPS, Galileo, Glonass and BeiDou antenna for Mast Mounting in Hazardous areas

PRELIMINARY DATA SHEET

- Passive quadrifilar helix antenna for fixed installation.
- Covering GPS, Galileo, Glonass and BeiDou.
- The antenna is specified as ATEX antenna for use in zone 2 in potentially explosive areas.
- The antenna is to be used as a receiver only.

DESCRIPTION

- Before installing the antenna, read the ATEX Product Manual carefully.
- The antenna is suitable for use in gas groups IIA, IIB and IIC in zone 2.
- A grounding-kit is supplied with the antenna.
  Only to be used to ensure equipotential bonding.
  See the ATEX Product Manual for further details.
- Right-hand circularly polarized antenna (RHCP).
- The circularly polarized antenna minimizes the fading effect often encountered in environments with reflecting obstacles.
- Suitable for mounting on 1” threaded water pipe.
- Comprehensive range of accessory mounting brackets available to make the perfect installation for your specific needs.
- All metal parts in the antenna are DC-grounded. Consequently, the antenna shows a DC-short across the coaxial cable.

ORDERING DESIGNATIONS

TYPE	PRODUCT NO.
GPS 4-Ex	115000029

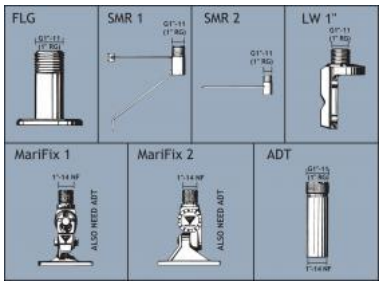
SPECIFICATIONS

ELECTRICAL	
MODEL	GPS 4-Ex
ANTENNA TYPE	Passive quadrifilar helix antenna
FREQUENCY	1575 - 1650 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Circular right-hand
COVERAGE	Hemispherical
GAIN	Approx. 2 dBic 0 dBd
BANDWIDTH	75 MHz
SWR	≤ 2.0

MAX. POWER	Receiver only
ANTISTATIC PROTECTION	All metal parts DC-grounded (Connector shows a DC-short)
MECHANICAL	
TEMP. RANGE	-30°C → +60°C
CONNECTOR	N-female
WIND SURFACE	Approx. 0.0072 m² / 0.08 feet²
MAX. WIND SPEED	200 km/h / 124.3 miles/h
WIND LOAD	Approx. 9.6 N @ 150 km/h / 93.2 miles/h
INGRESS PROTECTION LEVEL	IP66
COLOUR	Blue
MATERIALS	Shroud: Weather resistant low loss plastic. Mounting bracket: Stainless acidproof steel. (AISI 316L)
TOTAL HEIGHT	Approx. 23 cm / 9.1 in
ANTENNA DIA.	33 mm / 1.3 in
WEIGHT	Approx. 350 g / 0.31 lb
MOUNTING TIGHTENING TOQUE	On 1” threaded water pipe or on PROCOM 1” Mounting brackets (see accessories) 20-25 Nm
ATEX MARKING	II 3G Ex nA IIC T6

*See the ATEX Product Manual (safety and mounting instructions) and related EC DECLARATION OF CONFORMITY ATEX Directive 2014/34/EU.

ACCESSORIES (to be ordered separately)



GPS-COMBI MOUNT 3.5-7.5 mm

GPS mount for GPS Antennas

- GPS-antenna for fixed installations.
- Special mount for roof thickness 3.5-7.5 mm.

DESCRIPTION

- External antenna whip mounted on the GPS-Combi mount.
- Full hemispherical coverage.
- Built-in high gain, low noise amplifier.
- Right-Hand Circular Polarisation (RHCP).
- 5 V supply voltage (3 V respectively 12 V available on request).
- DC supply via RF-connector.
- Tools for mounting included.

Applicable to all GPS-C whip models

ORDERING DESIGNATIONS

TYPE	PRODUCT NO.
GPS-COMBI MOUNT 3.5-7.5 mm	132000006

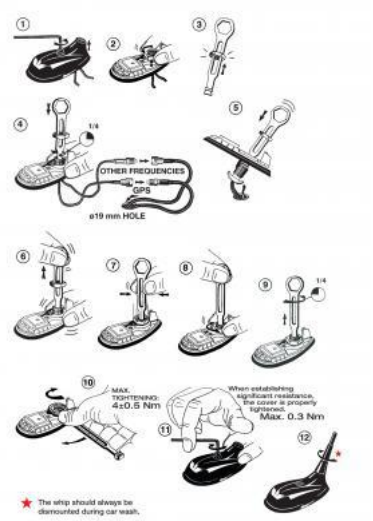
SPECIFICATIONS

ELECTRICAL General specifications	
MODEL	GPS-COMBI MOUNT 3.5-7.5 mm
ANTENNA TYPE	Active patch antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω

POLARISATION	Circular right-hand
COVERAGE	Hemispherical
GAIN	28 dBic in axial direction (typ.)
CROSS-POLARISATION ATT.	> 10 dB (typ.)
SELECTIVITY	> 45 dB down at ± 45 MHz
BUILT-IN AMPLIFIER	
GAIN	> 30 dB (typ.)
NOISE FIGURE	< 1 dB (typ.)
P 1dB	Approx. +7 dBm
SWR (output)	<2.0
SUPPLY VOLTAGE	5 ± 0.5 VDC (3 V resp. 12 V on request
CURRENT CONSUMPTION	Approx. 25 mA
MECHANICAL (only for the GPS-part)	
MATERIALS	Cu-nite brass Stainless steel Reinforced thermoplastic
ANTENNA COLOUR	Black
TEMP. RANGE	-35° C →+75° C
CONNECTOR	FME (male for GPS) + FME (female for mobile antenna)
RECOMMENDED INSTALL. TORQUE	4 ± 0.5 Nm
DIMENSIONS(H x L)	Approx. 30 x 89 mm
ROOF THICKNESS	3.5 - 7.5 mm
WEIGHT	Approx. 114 g
MOUNTING	ø19 mm dia. hole Tools for mounting included

TOOLS

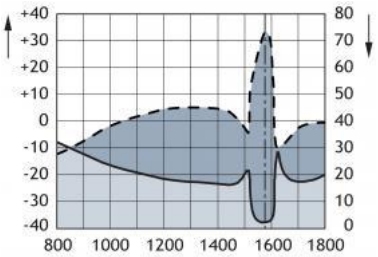
MOUNTING INSTRUCTIONS



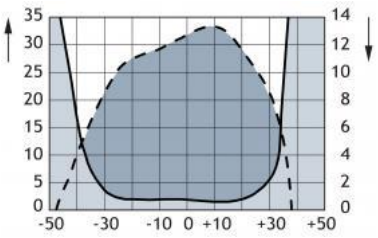
Do not use sealer on rubber gasket or other places.

TYPICAL RESPONSE CURVE

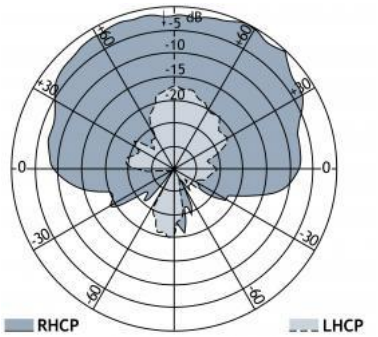
GAIN AND NOISE FIGURE (dB)

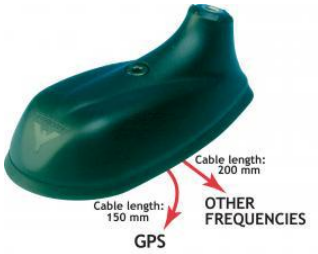


GAIN AND NOISE FIGURE AROUND GPS CENTER FREQUENCY (dB)



VERTICAL RADIATION PATTERN


dB
-5
-10
-15
-20
90
60
30
0
-30
-60
-90
RHCP
LHCP



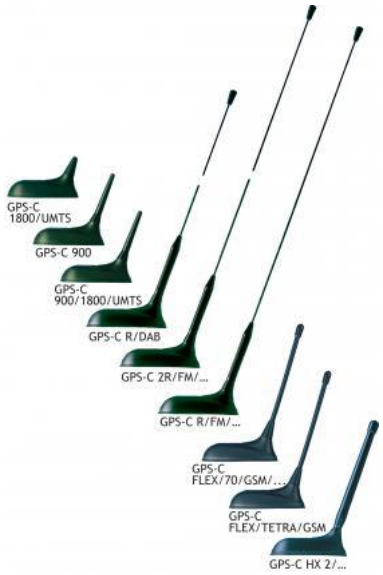
GPS-COMBI MOUNT

GPS mount for GPS Antennas for Other Frequencies

- GPS-antenna for fixed installations.
- External antenna whip mounted on the GPS-Combi mount.

DESCRIPTION

- Full hemispherical coverage.
- Built-in high-gain, low-noise amplifier.
- **R**ight-**H**and **C**ircular **P**olarization (RHCP).
- 5 V supply voltage (3 V respectively 12 V available on request).
- DC supply via RF-connector.
- Tools for mounting included.



ORDERING DESIGNATIONS

TYPE	PRODUCT NO.
GPS-COMBI MOUNT	132000003

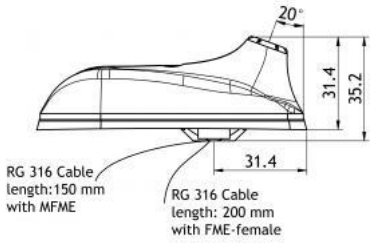
SPECIFICATIONS

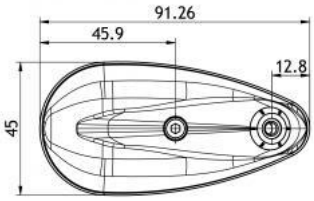
ELECTRICAL General specifications	
MODEL	GPS-COMBI MOUNT
ANTENNA TYPE	Active patch antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω

POLARIZATION	Circular right-hand
COVERAGE	Hemispherical
GAIN	28 dBic in axial direction (typ.)
CROSS- POLARIZATION ATT.	> 10 dB (typ.)
SELECTIVITY	> 45 dB down @ ± 45 MHz
BUILT-IN AMPLIFIER	
GAIN	> 30 dB (typ.)
NOISE FIGURE	< 1 dB (typ.)
$P_{1\ dB}$	Approx. +7 dBm
SWR (output)	<2.0
SUPPLY VOLTAGE	5 ± 0.5 VDC (3 V resp. 12 V on request)
CURRENT CONSUMPTION	Approx. 25 mA
MECHANICAL (only for the GPS-part)	
MATERIALS	Cu-nite brass Stainless steel Reinforced thermoplastic
ANTENNA COLOUR	Black
TEMP. RANGE	-35° C →+75° C
CONNECTOR	FME (male for GPS) + FME (female for mobile antenna)
RECOMMENDE INSTALL. TORQUE	4 ± 0.5 Nm
DIMENSIONS (H x L)	Approx. 30 x 89 mm
ROOF THICKNESS	Max. 2.5 mm
WEIGHT	114 g
MOUNTING	ø18 mm dia. hole for roof thickness up to 2.0 mm ø18.5 mm dia. hole for roof thickness 2.0 - 2.5 mm Tools for mounting included

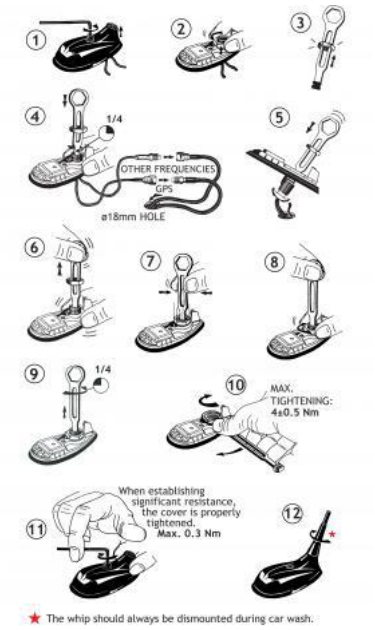
TOOL

MOUNTING DETAILS





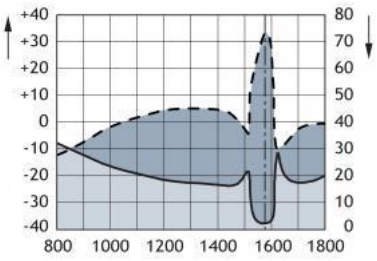
MOUNTING INSTRUCTIONS

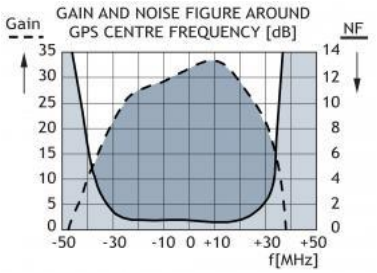


Do not use sealer on rubber gasket or other places.

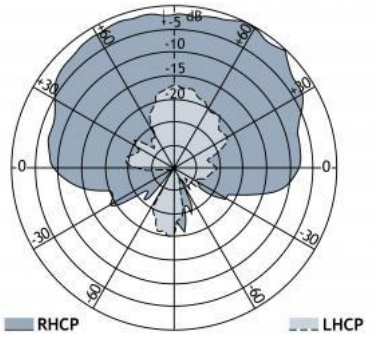
Installation

TYPICAL RESPONSE CURVE





VERTICAL RADIATION PATTERN



CXL 70-3/GPS 4/...

Dual Band Antenna for the UHF Band and GPS

- This active antenna has been designed for use on the TETRA band and GPS.
- The antenna consists of a high-performance 3 dBd glass fibre- encapsulated antenna element and an active GPS antenna. The latter is built into the bottom part of the antenna together with a diplex filter. Only one down lead cable is therefore necessary.

DESCRIPTION

- The antenna element is a colinear antenna for the UHF band frequency range within 380 - 430 MHz.
- The GPS antenna has a full hemispherical coverage and a built-in high-gain, low-noise amplifier.
- The necessary supply voltage (5 V DC) for the amplifier is delivered through the down lead coaxial cable. Up to 30 m of RG 214/U coaxial cable can be used between the antenna and the receiver/transceiver.
- By careful choice of materials, the CXL 70-3/GPS 4/... is designed to withstand the roughest of climate conditions, ensuring many years of trouble-free service.

ORDERING DESIGNATIONS

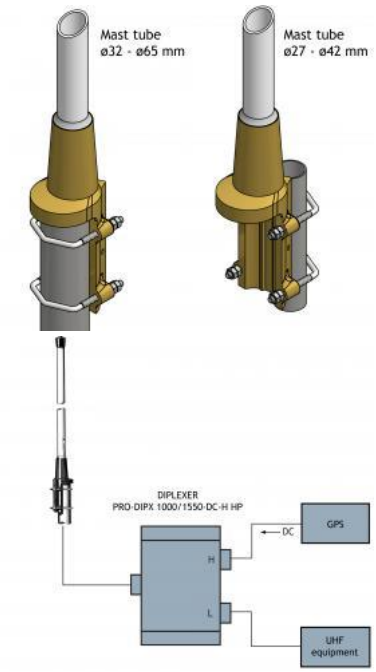
TYPE	PRODUCT NO.	FREQUENCY
CXL 70-3/GPS 4/TETRA-l	112000052	380 - 400 MHz
CXL 70-3/GPS 4/TETRA-h	112000053	410 - 430 MHz
ACCESSORIES	PRODUCT NO.	FREQUENCY
DIPX 1000/1550-DC-H	200000749	
PRO-DIPX 1000/1550-DC-H HP	200001998	

SPECIFICATIONS

ELECTRICAL UHF	
MODEL	CXL 70-3/GPS 4/...
ANTENNA TYPE	Collinear antenna element
FREQUENCY	380 - 400 MHz, 410 - 430 MHz and other frequencies on request
BANDWITH	14 - 20 MHz dependent on model
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Vertical
GAIN	Approx. 5.2 dBi 3 dBd
SWR	Typ. < 2.0
MAX. POWER	25 W

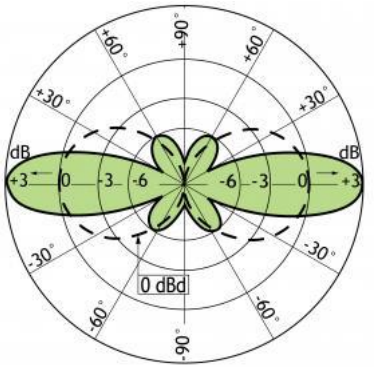
ELECTRICAL GPS	
ANTENNA TYPE	Quadrifilar Helix Active antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Circular right-hand
COVERAGE	Hemispherical
GAIN (in axial direction)	> 32 dBi
CROSS POLARIZATION ATT	> 10 dB (typ.)
Built-in Amplifier	
GAIN	> 30 dB (typ.)
NOISE FIGURE	< 3 dB (typ.)
$P_{1\ dB}$	Approx. +10 dBm
SWR (output)	≤ 2.0
SUPPLY VOLTAGE	5 ±0.5 V DC (3 V and 12 V respectively available on request)
SELECTIVITY	> 20 dB down @ ± 100 MHz
CURRENT CONSUMPTION	Approx. 44 mA
MECHANICAL	
TEMP. RANGE	-30° C → + 70° C
CONNECTOR	N-female
WIND SURFACE	Approx. 0.076 m²
WIND LOAD	Approx. 97 N @ 160 km/h
COLOUR	Marine white
MATERIALS	Radome : Polyurethane-coated glass fibre Mounting bracket: Seawater resistant aluminium, epoxy-coated
TOTAL HEIGHT	Approx. 1.95 m
WEIGHT	Approx. 3 kg
MOUNTING	On 27 - 65 mm dia. mast tube

MULTI-PURPOSE MOUNTING BRACKET



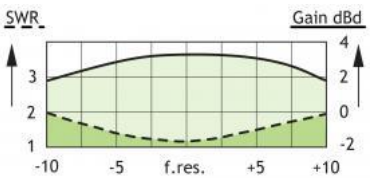
Alternatively, filter type DIPLEXER DIPX 1000/1550-DC-H can be used. Either filter to be ordered separately.

TYPICAL RADIATION PATTERN (E-PLANE) FOR THE UHF BAND



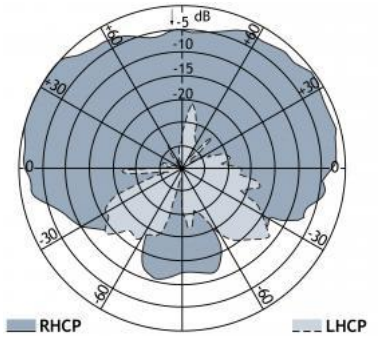
TYPICAL RADIATION PATTERN (H-PLANE) FOR THE UHF BAND

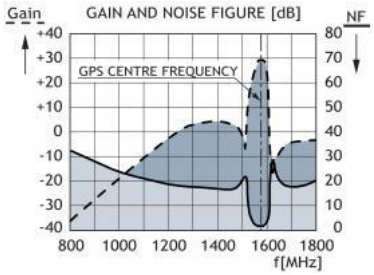
TYPICAL GAIN AND SWR CURVE FOR THE UHF BAND

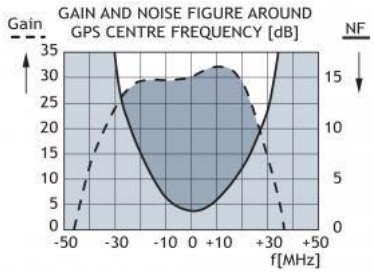


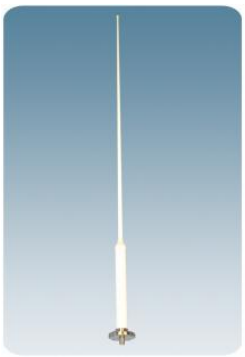
TYPICAL RESPONSE CURVES AND RADIATION PATTERN FOR THE GPS-PART (1575 MHz)

VERTICAL RADIATION PATTERN









AIS 2/GPS 4

Dual Band Antenna for the AIS system

- This active antenna has been designed for use by the Universal Shipborne Automatic Identification System (AIS) on all waterways.
- The antenna consists of a high-performance glass fibre encapsulated antenna element and an active GPS antenna.
- The latter is built into the bottom part of the antenna together with a diplex filter. Only one down lead cable is therefore necessary.

DESCRIPTION

- The antenna element is a 1/2 λ antenna for the maritime VHF frequency range 156 - 162.5 MHz.
- The GPS antenna has a full hemispherical coverage and a built-in high-gain, low-noise amplifier.
- The necessary supply voltage (5 V DC) for the amplifier is delivered through the down lead coaxial cable. Up to 30 m of RG 214/U coaxial cable can be used between the antenna and the receiver/transceiver.
- By careful choice of materials, the AIS 2/GPS 4 is designed to withstand the roughest of climate conditions, ensuring many years of trouble-free service.

ORDERING DESIGNATIONS

TYPE NO.	PRODUCT NO.
AIS 2/GPS 4-N	112000039
DM Mounting Kit	112000001
SM-MAS	110000196
DIPX 1000/1550 N-DC-H	200000749
PRO-DIPX 1000/1550 N-DC-H	200000799

SPECIFICATIONS

ELECTRICAL VHF	
MODEL	AIS 2/GPS 4
ANTENNA TYPE	1/2 λ antenna element
FREQUENCY	156 - 162.5 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Vertical
GAIN	Approx. 2 dBi 0 dBd
SWR	Typ. < 1.5
MAX. POWER	25 W
ELECTRICAL GPS	
ANTENNA TYPE	Quadrifilar Helix Active antenna
FREQUENCY	1575 MHz

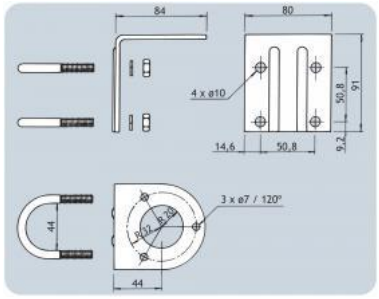
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Circular right-hand
COVERAGE	Hemispherical
GAIN (in axial direction)	> 32 dBi
CROSS POLARIZATION ATT	> 10 dB (typ.)
Built-in Amplifier	
GAIN	> 30 dB (typ.)
NOISE FIGURE	< 3 dB (typ.)
$P_{1\ dB}$	Approx. +10 dBm
SWR (output)	≤ 2.0
SUPPLY VOLTAGE	5 ±0.5 V DC (3 V and 12 V respectively available on request)
SELECTIVITY	> 20 dB down @ ± 100 MHz
CURRENT CONSUMPTION	Approx. 44 mA
MECHANICAL	
TEMP. RANGE	-30° C → + 70° C
CONNECTOR	N-female
WIND SURFACE	Approx. 0.031 m²
WIND LOAD	Approx. 50 N @ 160 km/h
COLOUR	Marine white

MATERIALSShroud : Polyurethane coated glass fibre
Flange : Chromed brass

TOTAL HEIGHT	Approx. 1350 mm
WEIGHT	Approx. 900 g
MOUNTING	On 30-44 mm mast tube using stainless steel clamp type SM-MAS or on deck using DM Mounting Kit

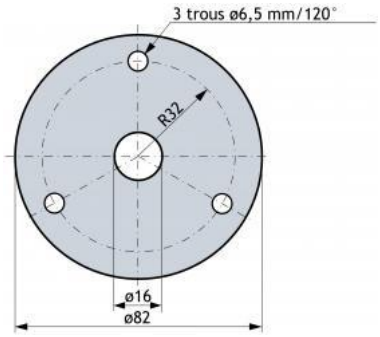
Standard Mounting Kit included.

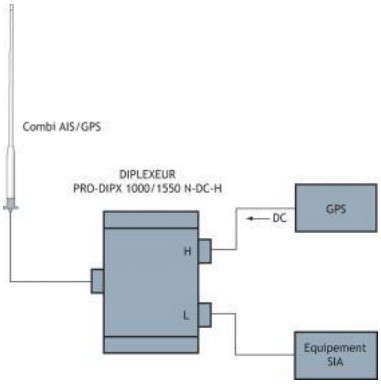
DM Mounting Kit for Deck Mount to be ordered separately



SM-MAS Mounting Kit for Side Mount and Mast Mount
to be ordered separately.

MOUNTING ON FLAT SURFACES

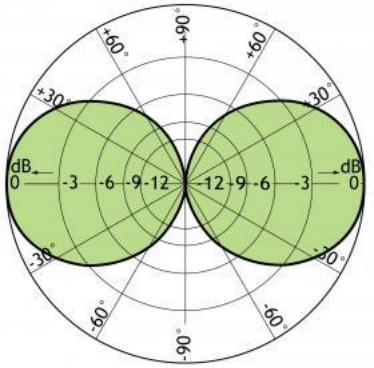




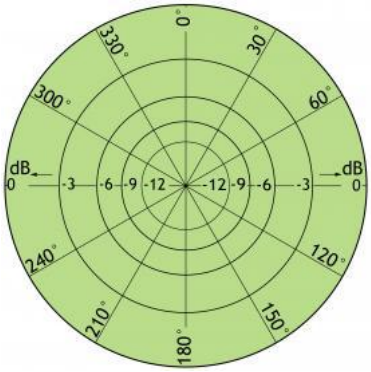
Alternatively, DIPLEXER DIPX 1000/1550-DC-H can be used. Either filter to be ordered separately.

RADIATION PATTERN FOR THE VHF BAND (156 - 162.5 MHz):

TYPICAL RADIATION PATTERN (E-PLANE)



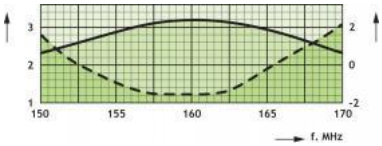
TYPICAL RADIATION PATTERN (H-PLANE)



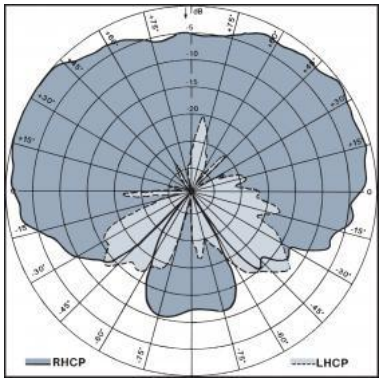
TYPICAL GAIN AND SWR CURVES:

FOR THE VHF BAND (156 - 162.5 MHz)

SWR Gain

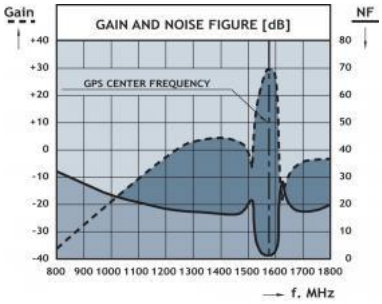


VERTICAL RADIATION PATTERN

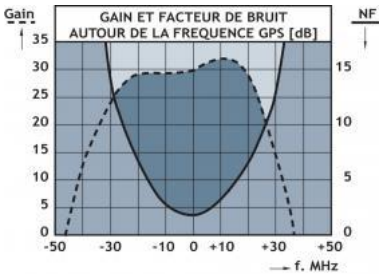


TYPICAL RESPONSE CURVES AND RADIATION PATTERN FOR THE GPS-PART (1575 MHz):

GAIN AND NOISE FIGURE (dB)



GAIN AND NOISE FIGURE AROUND GPS CENTER FREQUENCY (dB)



GPS-C FLEX/TETRA/DCK

2-Band Mobil Antenna system covering TETRA and GPS band

- External antenna whip mounted on the GPS-Combi mount.

- Flexible antenna made of steel wire covered with black silicone tubing.
- Diplexer for combining two ranges TETRA and GPS.
- Easily removable whip for car wash.

DESCRIPTION

- GPS-antenna for fixed installations.

- Full hemispherical coverage.
- Built-in high gain, low noise amplifier.
- Right-Hand Circular Polarisation (RHCP).
- 5 V supply voltage.
- DC supply via RF-connector.

ORDERING DESIGNATIONS

TYPE	PRODUCT NO.
GPS-C FLEX/TETRA/DCK	132000082

SPECIFICATIONS FOR WHIP

ELECTRICAL	
MODEL	GPS-C FLEX/TETRA/DCK
ANTENNA TYPE	¼ λ mobile antenna
FREQUENCY	380 - 430 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Vertical
GAIN	0 dB (acc. to EIA RS-329-1) for the TETRA band
BANDWIDTH	≥ 50 MHz @ SWR ≤ 1.8
SWR	≤ 1.5 @ f.res.
MAX. POWER	25 W
MECHANICAL	
MATERIALS	Silicone tube over flexible bowden wire

	Chromed brass
WIND LOAD	160 km/h
COLOUR	Black
HEIGHT	Approx. 140 mm
WEIGHT	Approx. 25 g
MOUNTING	On the GPS-Combi mount

SPECIFICATIONS FOR GPS-COMBI MOUNT

ELECTRICAL General specifications	
MODEL	GPS-COMBI MOUNT
ANTENNA TYPE	Active patch antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Circular right-hand
COVERAGE	Hemispherical
GAIN	28 dBic in axial direction (typ.)
CROSS- POLARIZATION ATT.	> 10 dB (typ.)
SELECTIVITY	> 45 dB down @ ± 45 MHz
BUILT-IN AMPLIFIER	
GAIN	> 30 dB (typ.)
NOISE FIGURE	< 1 dB (typ.)
$P_{1\ dB}$	Approx. +7 dBm
SWR (output)	≤ 2.0
SUPPLY VOLTAGE	5 ± 0.5 VDC
CURRENT CONSUMPTION	Approx. 25 mA
MECHANICAL (only for the GPS-part)	
MATERIALS	Cu-nite brass Stainless steel Reinforced thermoplastic
ANTENNA COLOUR	Black
TEMP. RANGE	-35° C →+75° C
CONNECTOR	FME (male for GPS) + FME (female for mobile antenna)
IEC RATING	IP64
WIND LOAD	160 kn/h
RECOMMENDED INSTALL. TORQUE	4 ± 0.5 Nm
DIMENSIONS (H x L)	Approx. 30 x 89 mm

ROOF THICKNESS	Max. 2.5 mm
WEIGHT	Approx. 114 g
MOUNTING	ø18.0 mm dia. hole for roof thickness up to 2.0 mm ø18.5 mm dia. hole for roof thickness 2.0 - 2.5 mm Tools for mounting included

MOUNTING INSTRUCTIONS

CABLE MOUNTING

TYPICAL RESPONSE CURVES

VERTICAL RADIATION PATTERN

GPS/Iridium-FME

Lightweight Circularly Polarized Quadrifilar Helix for Mast Mounting

- Passive quadrifilar helix antenna for fixed installation.
- Covering GPS and Iridium band: 1575 and 1616 - 1626.5 MHz.

DESCRIPTION

- Right-hand circularly polarized antenna (RHCP).
- The circularly polarized antenna minimizes the fading effect often encountered in environments with reflecting obstacles.
- Suitable for mounting on 1” threaded water pipe.
- Comprehensive range of accessory mounting brackets available to make the perfect installation for your specific needs.

ORDERING DESIGNATIONS

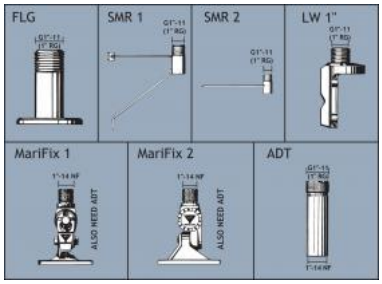
TYPE	PRODUCT NO.
GPS/Iridium-FME	112000050

SPECIFICATIONS

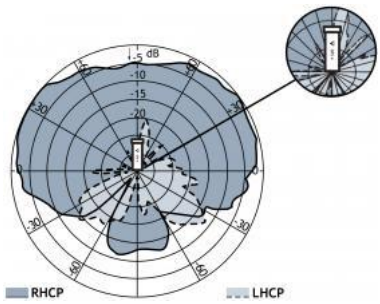
ELECTRICAL	
MODEL	GPS/Iridium-FME
ANTENNA TYPE	Passive quadrifilar helix antenna
FREQUENCY	1575 - 1650 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Circular right-hand
COVERAGE	Hemispherical
GAIN	Approx. 2 dBic 0 dBd
BANDWIDTH	75 MHz
SWR	≤ 2.0
MAX. POWER	2 W
MECHANICAL	
TEMP. RANGE	-30°C → +70°C
CONNECTOR	FME (male)

WIND SURFACE	Approx. 0.0072 m² / 0.08 feet²
MAX. WIND SPEED	200 km/h / 124.3 miles/h
WIND LOAD	Approx. 9.6 N @ 150 km/h / 93.2 miles/h
COLOUR	Marine white
MATERIALS	Shroud: Weather resistant low loss plastic
TOTAL HEIGHT	Approx. 23 cm / 9.1 in
ANTENNA DIA.	33 mm / 1.3 in
WEIGHT	Approx. 140 g / 0.31 lb
MOUNTING	On 1” threaded water pipe or on PROCOM 1” mounting brackets (see below)

ACCESSORIES (to be ordered separately)



VERTICAL RADIATION PATTERN



PROCOM A/S

Smedetoften 12, 3600
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