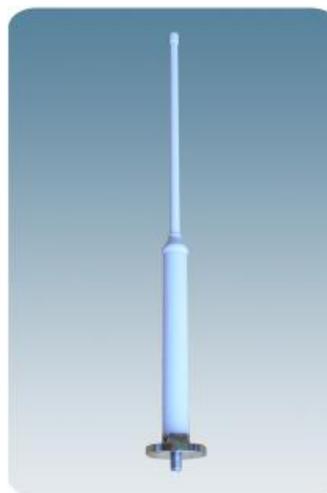


Dual Band Antenna for the UHF band e.g. TETRA, CDMA, ICE, and GPS.

DESCRIPTION

- 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.
- The antenna element is a $\frac{1}{2} \lambda$ 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.



SPECIFICATIONS

Electrical	
Frequency	Models within 380 - 467 MHz
Max. Input Power	25 W
Polarisation	Vertical
3 dB Beamwidth, H-Plane	Omnidirectional
Impedance	50 Ω
Gain	0 dBd (2.2 dBi)
VSWR	< 2.0:1
Bandwidth	5 % of freq. @ VSWR \leq 1.5

Mechanical	
Connection(s)	N(f)
Materials	Shroud : Polyurethane-coated glass fibre Flange : Chromed brass
Colour	White
Wind Area	0.018 sq. m / 0.19 sq. ft.
Wind Load	23 N (160km/h)
Height	Approx. 730 mm / 28.74 in.
Weight	Approx. 0.9 kg / 1.98 lb.
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)

GPS Antenna	
P1dB (GPS Amplifier)	10 dBm
Gain (GPS)	32 dBi
Antenna Type (GPS)	Quadrifilar Helix Active antenna
Noise Figure (GPS Amplifier)	< 3 dB (typ.)
Cross Polar Discrimination (GPS)	> 10 dB (typ.)
Gain (GPS Amplifier)	> 30 dB (typ.)
Selectivity (GPS Amplifier)	> 20 dB down @ \pm 100 MHz
Frequency (GPS)	1575 MHz
Power Supply (GPS)	5 \pm 0.5 VDC (3 V resp. 12 V available on request)
Current Consumption (GPS Amplifier)	0.044 mA
Polarisation (GPS)	RHCP
Impedance (GPS)	50 Ω

Environmental	
Operating Temperature Range	-30 to 70 $^{\circ}$ C

ORDERING

Model	Product No.	Description	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

Accessories			
DM Mounting Kit	112000001		
SM-MAS	110000196		
DIPX 1000/1550 N-DC-H	200000749		
PRO-DIPX 1000/1550 N-DC-H	200000799		
PRO-DIPX 1000/1550-DC-L XS	200001622	DC Pass: Low port	
PRO-DIPX 1000/1550-DC-H XS	200001998	DC Pass: High port	
PRO-DIPX 1000/1550-DC-LH XS	200001999	DC Pass: Low and high port	
PRO-DIPX 1000/1550-NO-DC XS	200002000	No DC pass	

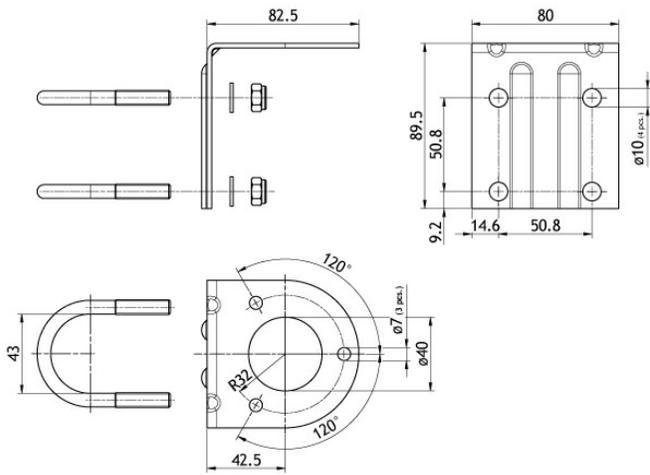
MOUNTING DETAILS



Standard Mounting Kit included.

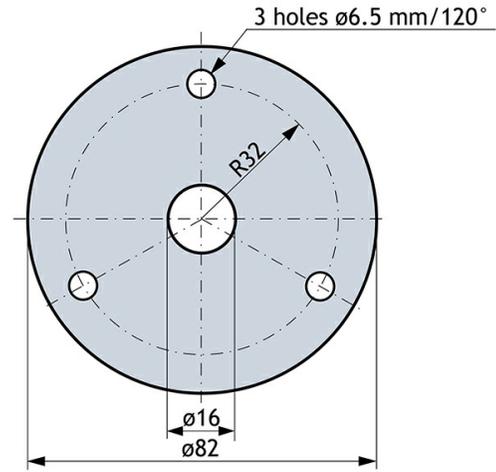


DM Mounting Kit for Deck Mount to be ordered separately.

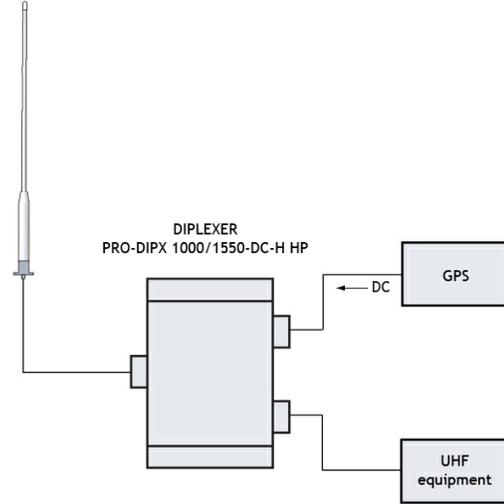


SM-MAS Mounting Kit for Side Mount and Mast Mount to be ordered separately.

MOUNTING ON FLAT SURFACES

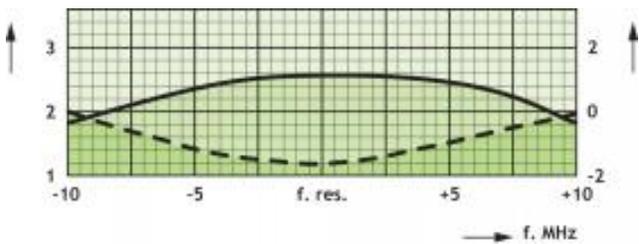


DIAGRAM



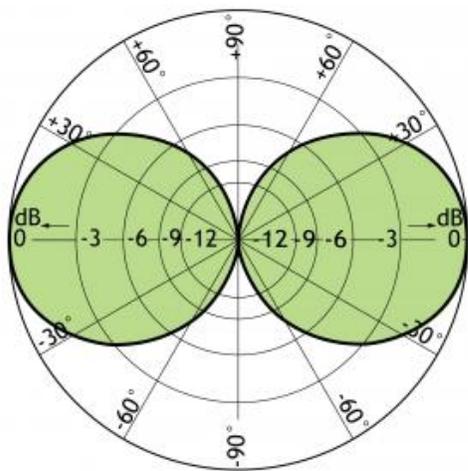
Alternatively, filter type DIPLER DIPX 1000/1550 N-DC-H can be used. Either filter to be ordered separately.

TYPICAL GAIN AND VSWR CURVES

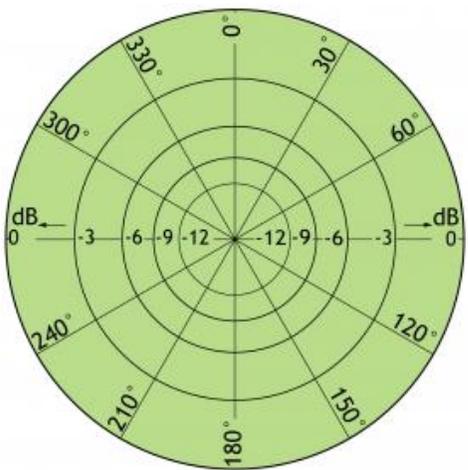


TYPICAL RADIATION PATTERN FOR THE UHF BAND

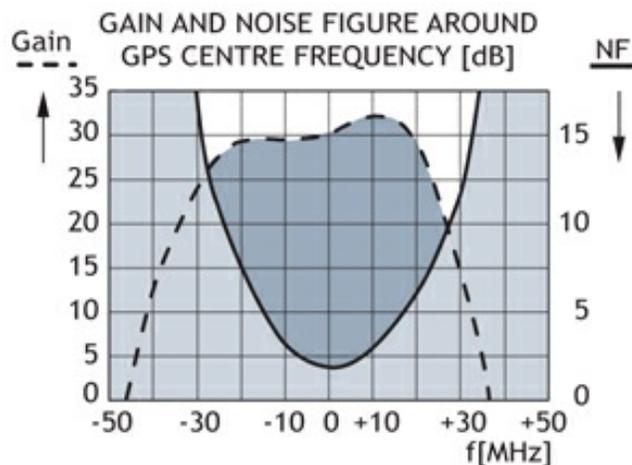
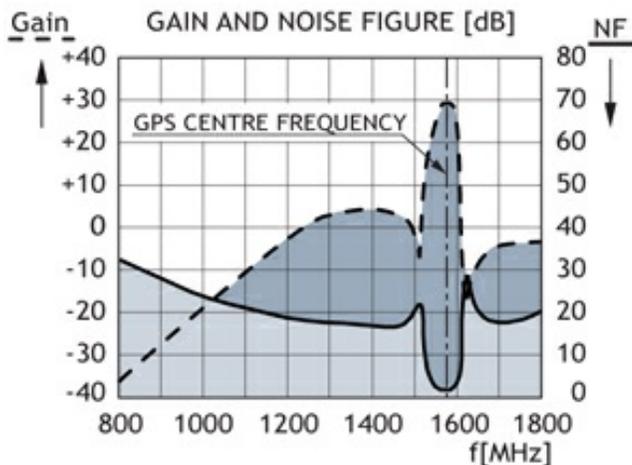
Typical Radiation Pattern (E-Plane)



Typical Radiation Pattern (H-Plane)



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



VERTICAL RADIATION PATTERN

