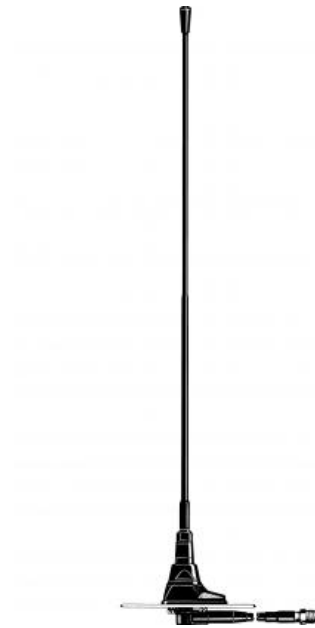


450 MHz 2 dB mobile antenna for glass fibre roof

DESCRIPTION

- > Ground plane independent antenna for installation on non-conducting surfaces.
- > Ideal for glass fibre roofs as can be found on some trucks, busses, transport vans and trains.
- > MU 9-XP4/s can be tuned by cutting within 380...410 MHz.
 MU 9-XP4/l can be tuned by cutting within 400...440 MHz.
 MU 9-XP4/h can be tuned by cutting within 430...470 MHz.
- > M6-thread whip-fastening system.
- > Simple mounting exclusively with access from the outside.
- > Models available with oblong or circular mount.
- > Also oblong models with GPS are available.
- > Delivered with permanently attached 4 m RG 58 cable terminated with FME-connector. (Other models on request)
- > ECE R118.02 approved cable.



SPECIFICATIONS

Electrical	
Model	MU 9-XP4/..., MU 9-CXP4/..., MU 9-XGP4/...
Frequency	450 MHz band covered by three models
Antenna Type	End-fed 1/2 λ dipole mobile antenna
Max. Input Power	40 W
Polarisation	Vertical
Impedance	50 Ω
Gain (EIA RS-329-1)	2 dB
Mechanical	
Compliance	ECE R118.02 approved cable
Connection(s)	Cable RG 178, length 150 mm Connector : FME(m)
Materials	Whip : Polyethylene-covered spring steel wire Mount : Black-chromed brass Weather- and shockproof plastics Surface treated steel
Cable	4 m cable terminated with FME-connector. (Other cable lengths on request)
Installation Torque	Max. 3 Nm
Colour	Black
Height	Approx. 410 mm / 16.14 in.
Weight	Approx. 0.21 kg / 0.46 lb.
Mounting	From outside : 21 mm dia. hole From inside : 14 mm dia. hole
Mounting For GPS-Models	19 mm dia. hole
Mounting Plate Thickness	0.6 - 5 mm / 0.02 - 0.20 in.
GPS Antenna	
Noise Figure (GPS Amplifier)	Max.1.5 dB (typical 1.1 dB)
Gain (GPS Amplifier)	22 dB ±2 dB
Frequency (GPS)	1575.42 ±1.023 MHz
Power Supply (GPS)	DC 2.85 V ~ 5 V (typical 3 V)
Impedance (GPS)	50 Ω

ORDERING

Model	Product No.	Description	Frequency
MU 9-XP4/s	130001089	Oblong mount with 4 m cable and FME-conn.	380... 410 MHz
MU 9-XP4/l	130001097	Same mount as above	400... 440 MHz
MU 9-XP4/h	130001085	Same mount as above	430... 470 MHz
MU 9-CXP4/s	130001096	Circular mount with 4 m cable and FME-conn.	380... 410 MHz
MU 9-CXP4/l	130001098	Same mount as above	400... 440 MHz
MU 9-CXP4/h	130001086	Same mount as above	430... 470 MHz
MU 9-XGP4/s	132000190	Oblong mount with 4 m and FME-conn., and GPS	380... 410 MHz
MU 9-XGP4/l	132000189	Same mount as above	400... 440 MHz
MU 9-XGP4/h	132000188	Same mount as above	430... 470 MHz

ORDERING DESIGNATIONS

TYPE	PRODUCT NO.	CELLULAR SYSTEM	MOUNT VERSION
READY-TUNED MODELS (examples)			
MU 9-XP4/380-410 MHz	130002508	TETRA BOS, Germany	Oblong mount with 4 m cable and FME-conn.
MU 9-XP4/410-430 MHz	Contact for availability	Industrial Systems Germany	Same mount as above
MU 9-XP0.1/380-410 MHz-MFME	Contact for availability	TETRA BOS, Germany	Oblong mount with 0.1 m cable and FME-male conn.
MU 9-CXP4/380-410 MHz	130001783	TETRA BOS, Germany	Circular mount with 4 m cable and FME-conn.
MU 9-CXP4/410-430 MHz	Contact for availability	Industrial Systems Germany	Same mount as above
MU 9-CXP0.1/ 380-410 MHz-MFME	130002191	TETRA BOS, Germany	Circular mount with 0.1 m cable and FME-male conn.
MU 9-XGP4/380-410 MHz	Contact for availability	TETRA BOS, Germany	Oblong mount with 4 m cable and FME-conn., and GPS
MU 9-XGP0.1/ 380-410 MHz-MFME	132000191	TETRA BOS, Germany	Oblong mount with 0.1 m cable and FME-male conn., and GPS

When ordering a ready-tuned model, the name of the desired cellular system must be added to the antenna model number.

INSTALLATION

This antenna is especially designed for installation on non-conducting surfaces as e.g. glass fibre roofs, as can be found on some trucks, busses, transport vans and trains.

The antenna is an end-fed, $\frac{1}{2}$ λ -dipole concept which can be fed in such a way that the antenna does not require a "ground plane" as required by the standard $\frac{1}{4}$ λ , $\frac{5}{8}$ λ or collinear mobile whips.

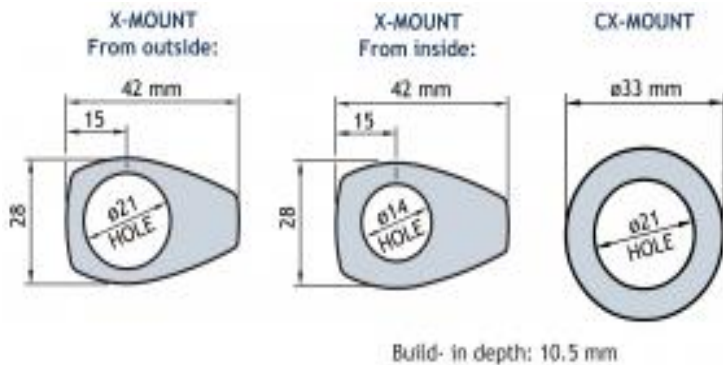
It is useful to note that this antenna type can be used anywhere where the ground plane is poor or completely missing, as e.g.: side-mounted on a clamp as a pager antenna on a wall or mounted at the very edge of a ground-plane without the loss induced by a tilted radiation pattern.

The antenna must be mounted on a horizontal surface. When cleaning the vehicle in car-washing machines, the whip is easily dismantled using a spanner, size 9 mm. The whip is refitted again by screwing it onto the M6 thread stud on the mount and tightening it lightly with the spanner.

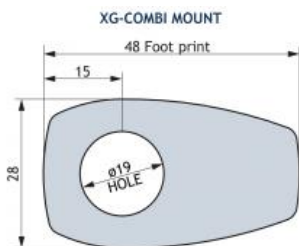
A polyethylene-covered, closely spirally wound flat steel-band material causes the whip always to stand erect while at the same time being very flexible.

1. INSTALLATION DIMENSIONS

1A.

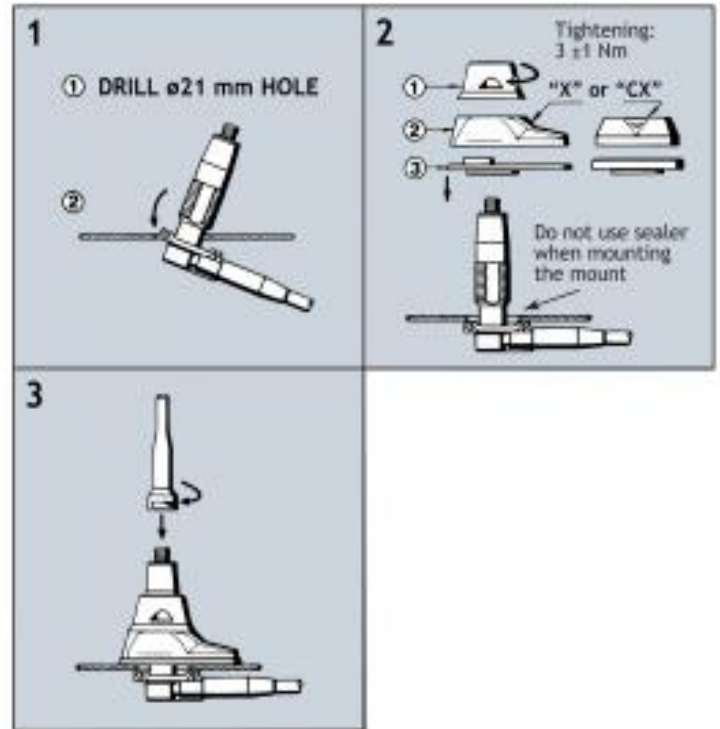


1B. FOR GPS-MODELS



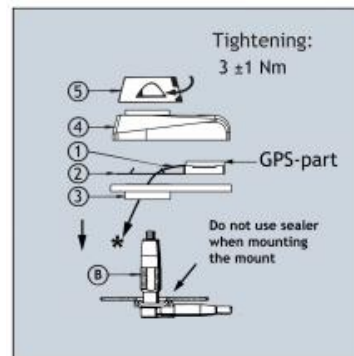
2. INSTALLATION STEPS

2A. (FROM OUTSIDE)



Do not use sealer on rubber gasket or other places.

2B. FOR GPS-MODELS (FROM OUTSIDE)



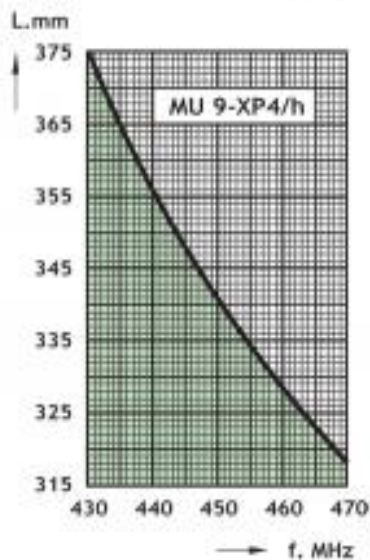
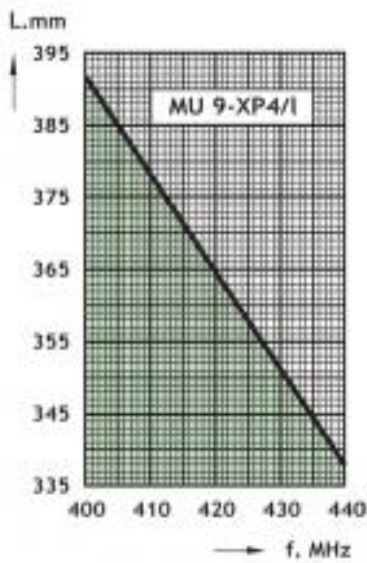
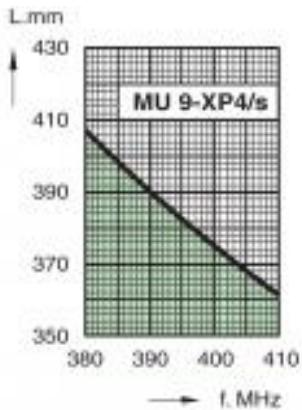
Do not use sealer on rubber gasket or other places.

2B. ASSEMBLY INSTRUCTIONS (FOR GPS-MODELS)

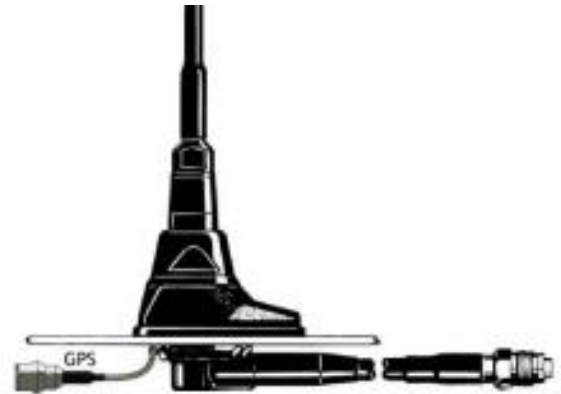
- Put GPS-FME-connector-cable through the gasket (2).
- Put the gasket (3) + GPS-part (1) over the body (B).
- Put the body (B) + gasket (3) + GPS-part (1) through the $\phi 19$ mm hole.
- Put the housing (4) over the body (B) and be sure that the GPS-part (1) fits into the square hole in the body (B).
- Put the threaded part over the body (5) and tighten max. 3 ± 1 Nm!
- Mount the antenna whip.

3. TUNING

The antenna should always be tuned using an SWR-indicating device. The cutting diagrams below serve as a guide for this procedure.



MU 9-XGP4 MOUNT



Please note that the MU 9-XP4, MU 9-CXP4 and MU 9-XGP4 type "s", "l" and "h" mounts contain matching transformers. Consequently, these special mounts cannot operate with other whip types.

EU AND UK DECLARATION OF CONFORMITY

Hereby Amphenol Procom declare that the product type MU 9-XGP4 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-catalogues/Declaration-of-Conformity-MU9-XGP4.pdf>

