

Unity Gain $\frac{1}{4}$ λ Mobile Antenna for the 450 MHz Band

DESCRIPTION

- > Stainless steel whip with toggle joint.
- > Type MU 1-Z/... cover a large frequency range from 370 - 470 MHz. (See Ordering Designations.)
- > Stainless steel Z-mount with ball-joint and wing screw whip-fastening system.
- > Available with bright or black-chromed metal parts (mount and whip):
 - > MU 1-Z/... : Bright version
 - > MU 1-BZ/... : Black version
- > Simple mounting exclusively with access from the outside. Models with roof thickness from 2 mm to 7.5 mm mounting from the inside.
- > Choice between two connection principles:
 - > Z-mount : FME-connection (supplied without cable).
 - > ZP4-mount : Permanently attached 4 m cable terminated with FME-connector.



ORDERING

| Type | Product No. | Description | Frequency |
|--------------|-------------|---|---------------|
| MU 1-Z/s | 130000880 | Z-mount with FME-system BRIGHT | 370 - 410 MHz |
| MU 1-Z/sl | 130002322 | Same mount as above | 380 - 430 MHz |
| MU 1-Z/l | 130000872 | Same mount as above | 406 - 440 MHz |
| MU 1-Z/h | 130000875 | Same mount as above | 430 - 470 MHz |
| MU 1-BZ/s | 130000881 | BZ-mount with FME-system BLACK | 370 - 410 MHz |
| MU 1-BZ/sl | 130002323 | Same mount as above | 380 - 430 MHz |
| MU 1-BZ/l | 130000883 | Same mount as above | 406 - 440 MHz |
| MU 1-BZ/h | 130000882 | Same mount as above | 430 - 470 MHz |
| MU 1-ZP4/s | 130000870 | ZP4-mount with 4 m cable and FME-connector BRIGHT | 370 - 410 MHz |
| MU 1-ZP4/sl | 130002324 | Same mount as above | 380 - 430 MHz |
| MU 1-ZP4/l | 130000876 | Same mount as above | 406 - 440 MHz |
| MU 1-ZP4/h | 130000877 | Same mount as above | 430 - 470 MHz |
| MU 1-BZP4/s | 130000871 | BZP4-mount with 4 m cable and FME-connector BLACK | 370 - 410 MHz |
| MU 1-BZP4/sl | 130002325 | Same mount as above | 380 - 430 MHz |
| MU 1-BZP4/l | 130000873 | Same mount as above | 406 - 440 MHz |
| MU 1-BZP4/h | 130000874 | Same mount as above | 430 - 470 MHz |

SPECIFICATIONS

| Electrical | |
|---------------------|--|
| Model | MU 1-Z/... |
| Frequency | 450 MHz-band covered by four models |
| Antenna Type | Mobile whip antenna |
| Polarisation | Vertical |
| Impedance | 50 Ω |
| VSWR | $\leq 1.2:1$ @ f_{res} . |
| Max. Input Power | 100 W |
| Bandwidth | ≥ 45 MHz @ VSWR $\leq 1.5:1$ ≥ 50 MHz @ VSWR $\leq 2.0:1$ |
| Gain (EIA RS-329-1) | 0 dB |

| Mechanical | |
|--------------------------|--|
| Materials | Whip : Stainless steel, bright polished or black-chromed Chromed brass Mount : Chromed brass Weather- and shockproof plastics Stainless steel |
| Installation Torque | 7.5 +/- 1 Nm |
| Colour | Bright or black, see above |
| Height | Approx. 185 mm / 7.28 in. |
| Weight | Z-version: Approx. 140 g / 0.31 lb. ZP4-version: Approx. 280 g / 0.62 lb. |
| Mounting | 21 mm / 0.83 in. dia. hole (For roof thickness 2 mm / 0.08 in. up to 7.5 mm / 0.30 in. mounting hole should be 22 mm dia.) |
| Mounting Plate Thickness | Max. 2.0 mm / 0.08 in. (Models up to 7.5 mm / 0.30 in. on request) |

ADDITIONAL DATA

Hat screw option:



For antenna delivered with hat screw instead of wing screw add a K to the antenna designation.

THE WHIP IS COMPATIBLE WITH ALL BELOW MOUNTS.

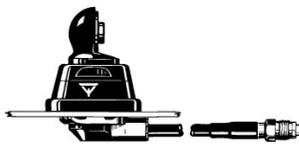
Z-Mount

ZP4-Mount



BZ-Mount

BZP4-Mount



INSTALLATION

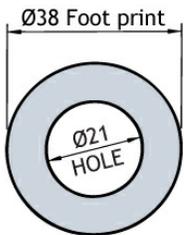
This antenna should always be mounted on the car roof to ensure best omnidirectional coverage.

The antenna is provided with type Z-mount. The whip is fastened to the mount by means of our standard ball-joint and wings crew system. The adjustable ball-joint ensures that the whip can always be mounted in a vertical position independent of the angle of the installation spot.

The Z-mount is particularly well suited for mounting on car roofs because of its ability to be installed exclusively with access from the outside. The Z-Mount for roof thickness from 2 mm to 7.5 mm must be mounted from the inside.

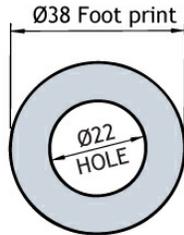
1. INSTALLATION DIMENSIONS

Z-MOUNT



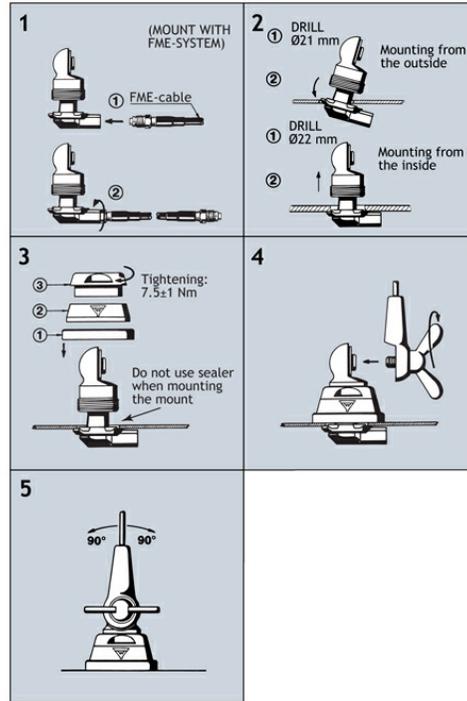
Build- in depth: 10.5 mm
Mounting from the outside

Z-MOUNT



Build- in depth: 10.5 mm
Mounting from the inside

2. INSTALLATION STEPS



Do not use sealer on rubber gasket or other places.

3. TUNING / MODEL CONVERSION

- The antenna is delivered factory-tuned and requires no further tuning.
- To convert an MU 1-Z/s model into an MU 1-Z/l model, cut off 12 mm of the top end of the whip.
- To convert an MU 1-Z/l model into an MU 1-Z/h model, cut off 10 mm of the top end of the whip.

PLEASE NOTE

As standard the antenna is provided with wing screw. However, the wing screw may be replaced by the less obtrusive hat screw (with key), which also gives an improved protection against theft. To order the antenna with hat screw, please add a "K" to the antenna designation.

