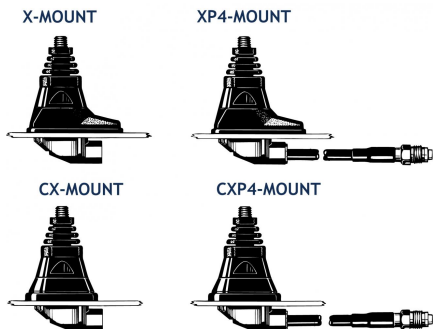


# DFA 2/900-X/...

Dual-frequency Mobile Antenna for the 160 and 900 MHz Bands

### DESCRIPTION

- New whip design for optimum wind noise reduction.
- This antenna makes it possible to:
  - operate 160 MHz and 900 MHz transceivers alternately on the same antenna.
  - operate two transceivers (160 and 900 MHz) at the same time on one antenna using a diplexer (type DIPX 225/330 – to be ordered separately).
  - operate a dual-frequency transceiver (160 and 900 MHz) on one antenna (diplexer not required).
- Ready-tuned and unity gain on both bands.
- Stainless steel X-mount with M6-thread whip-fastening system.
- Simple mounting exclusively with access from the outside.
- Models available with X-mount (oblong) and CX-mount (circular).
- Choice between two connection principles:
  - X-mount: FME-connection (supplied without cable).
  - XP4-mount: Permanently attached 4 m cable terminated with FME-connector.



### ORDERING DESIGNATIONS

TYPE	PRODUCT NO.	MOUNT VERSION
DFA 2/900-X/...	130000690	X-mount (oblong) with FME-system
DFA 2/900-CX/...	130000696	CX-mount (circular) with FME-system
DFA 2/900-XP4/...	130000693	XP4-mount (oblong) with 4 m cable and FME-system
DFA 2/900-CXP4/...	130000695	CXP4-mount (circular) with 4 m cable and FME-system

When ordering, the operating frequencies in both bands must be stated. In case of duplex operation, only the TX frequency should be stated. In case of application for a CELLULAR system in the 900 MHz band, the name of the CELLULAR network can be stated.

### SPECIFICATIONS

ELECTRICAL	
MODEL	DFA 2/900-X/...
ANTENNA TYPE	Dual-frequency mobile antenna
FREQUENCY	160 MHz-band freq. to be stated within: 144...175 MHz 900 MHz-band freq. to be stated within: 820...960 MHz
IMPEDANCE	Nom. 50 Ω
POLARIZATION	Vertical
GAIN	0 dB on both bands (acc. to EIA RS-329-1)
BANDWIDTH	160 MHz: ≥ 8 MHz @ SWR ≤ 2.0 900 MHz: ≥ 50 MHz @ SWR ≤ 2.0
SWR	160 MHz: ≤ 1.75 @ f.res. 900 MHz: ≤ 1.2 @ f.res.
MAX. POWER	30 W
MECHANICAL	
MATERIALS	<b>Whip:</b> Conical glass fiber Black-chromed brass <b>Mount:</b> Black-chromed brass Weather- and shockproof plastics Stainless steel
RECOMMENDED INSTALLATION TORQUE	4 ± 1 Nm
COLOUR	Black
HEIGHT	Approx. 50 cm
WEIGHT	X-version: Approx. 80 g XP4-version: Approx. 220 g
MOUNTING	18 mm dia. hole

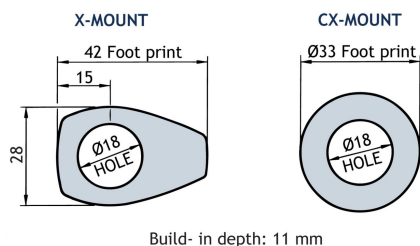
## INSTALLATION

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

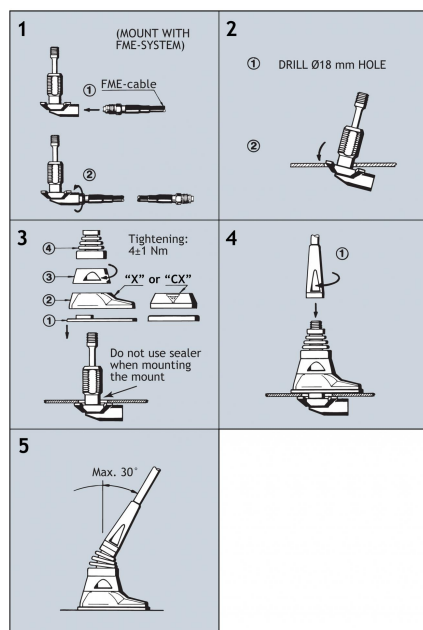
Mounting can take place exclusively with access from the outside when drilling an 18 mm dia. hole. Mounting can take place from the inside by drilling a 14 mm dia. hole. When mounting in a 14 mm dia. hole, remove the bottom plastic ring of the packing gasket with a sharp cutter.

When cleaning the car in car-washing machines, remove the whip using a spanner, size 9 mm. After wash, refit the whip and tighten it lightly with the spanner.

### 1. INSTALLATION DIMENSIONS



### 2. INSTALLATION STEPS



Do not use sealer on rubber gasket or other places.

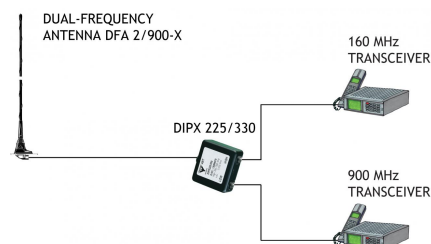
### 3. OPERATION USING A DIPLEXER

Several advantages are gained by using only one antenna. Only one single hole has to be drilled into the car body, only one cable installation has to be run, the car appearance is not destroyed by carrying several whips and also, it may be a particular demand that it should not be too obvious to see that the car is equipped with transceiving equipment.

In case of operating two transceivers on one antenna at the same time, a diplexer, type DIPX 225/330 is necessary to complete the system. (See the coupling diagram below). The tasks of the diplexer are to protect the two receiver inputs from being destroyed by the transmitter in the contrary band, and to ensure a low-loss path between the transceiver and the antenna, which is not loaded by the other branch. For further details please see the separate data sheet on the DIPX 225/330.

The diplexer fully covers both bands and, consequently, tuning to specific frequencies is not required.

#### COUPLING DIAGRAM



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23/08/13