

TWA 1

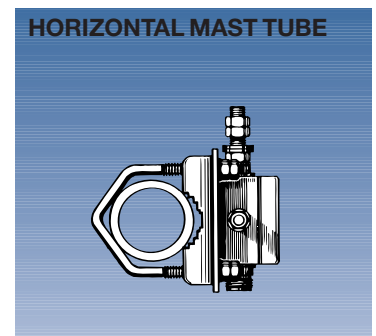
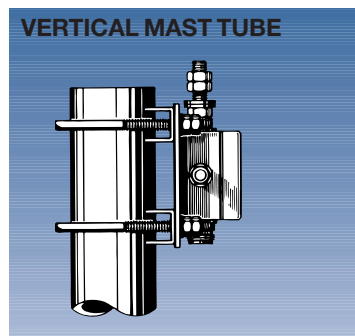
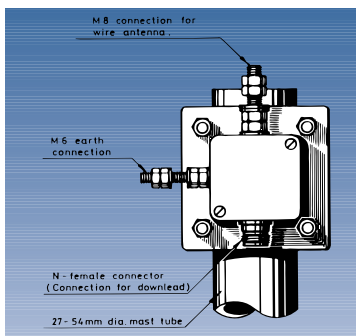
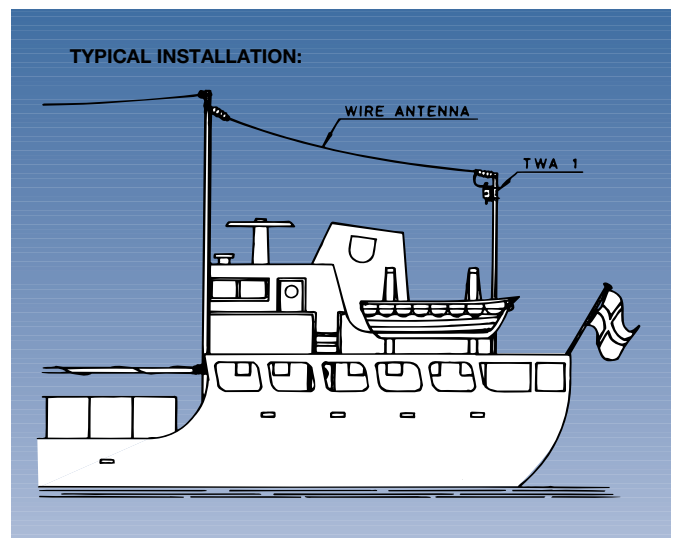
Broadband Transformer for Marine Wire Receiving Antennas

DESCRIPTION:

- ★ Together with a wire receiving antenna this passive matching transformer provides a very efficient means of establishing a wideband 50 Ω receiving antenna system for the complete LF, MF and HF range.
- ★ A typical installation can be seen on the figure below. The wire antenna is suspended with both ends insulated between two high points on the ship. The TWA 1 is mounted in immediate vicinity of one of the suspension points, and the antenna terminal of the TWA 1 is connected to the wire antenna.
- ★ The TWA 1 can be mounted on vertical or horizontal mast tubes, 30–54 mm in outer diameter and it can operate together with wire antennas with a length between 5 and 10 meters.
- ★ The frequency compensated transformer converts the widely varying antenna impedance to a constant 50 Ω, making it possible to use length-independent, shielded, standard RG 58 C/U or RG 213/U as downlead cable to the 50 Ω receiver.
- ★ For proper performance of the antenna system the separate earth terminal on the transformer must be connected to the mounting tube, and this mounting tube must be connected to the earth potential of the ship.
- ★ This earthing procedure ensures a low-loss connection to ground for RF-signals and prevents noise pick-up from the ship's installations, running on the outside of the coaxial cable, in being coupled on-frequency to the wire antenna. As the earth terminal is AC-coupled, electrolytical corrosion is effectively prevented.
- ★ The transformer and the 50 Ω receiver are protected against RF overload and violent discharges by an air spark gap (approx. 1 kV), a gas filled spark gap (90 V) and a resistance network.
- ★ The transformer unit with protection circuits is built into a watertight UV-resistant polycarbonate box and, moreover, all circuitry is totally encapsulated in polyurethane sealer. The mounting plate as well as all accompanying fittings are made of stainless steel.

SPECIFICATIONS:

ELECTRICAL	
MODEL	TWA 1
TYPE	Broadband matching transformer for marine wire receiving antennas
FREQUENCY RANGE	100 kHz – 30 MHz
OUTPUT IMPEDANCE	Nom. 50 Ω
MIN. LENGTH OF WIRE ANT.	5 m
MAX. LENGTH OF WIRE ANT.	10 m
MECHANICAL	
TEMP. RANGE	-30° C → +70° C
CONN. TO ANTENNA	M8 thread stud
CONN. TO EARTH	M6 thread stud
CONN. TO DOWNLEAD	N-female
COLOUR	Light-grey
MATERIALS	Clamps : Stainless steel Housing : Polycarbonate
WIDTH	95 mm
HEIGHT	100 mm
DEPTH	38 mm
WEIGHT	Approx. 450 g
MOUNTING	On vertical or horizontal mast tubes 30–54 mm in outer dia.



PLEASE NOTE:

1. The antenna terminal on the TWA 1 is not dimensioned to carry the pull from the antenna wire directly. The tension of the antenna wire must be relieved at a well insulated point before it is connected to the TWA 1.
2. If the receiving range is restricted to 8 MHz and below, the wire antenna can advantageously be extended up to a length of 40 m.

PROCOM A/S reserve the right to amend specifications without prior notice.