

# DTMA-GSM1800-12-CWA

## Fullband Double Dual Duplex Tower Mounted Amplifier (Masthead Amplifier)

**KATHREIN**

Antennen · Electronic

- Double unit for easy use with XPol antennas
- Kathrein redundancy amplifier design for improved system reliability
- By-pass mode to ensure cell operation in case of TMA (Alarm 2) or DC power down
- Alarm management: Supports 2 alarm levels  
 Alarm 1: One LNA of the balanced circuit failed  
 Alarm 2: Both LNAs of the balanced circuit failed.  
 Automatically switched to by-pass mode
- Built-in lightning protection
- Compact size
- DTMA DC supply and alarming separately via BTS 0 respectively BTS 1 port

**CWA = Current Window Alarm**

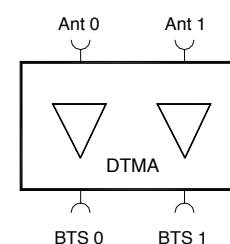
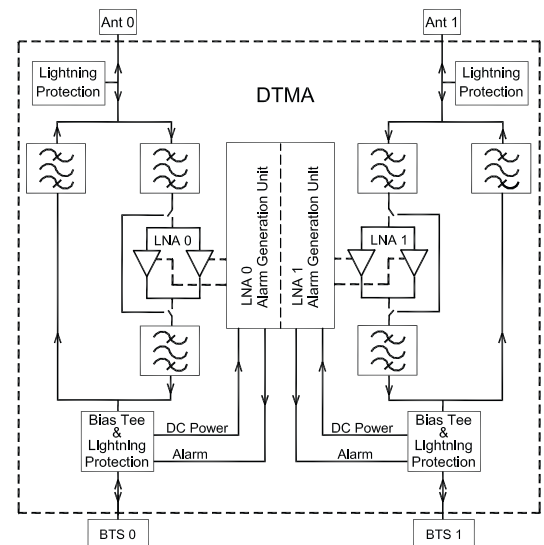
### Technical Data

Type No.	<b>782 10312</b> DTMA-GSM1800-12-CWA (12 dB gain)
<b>Tx Characteristics</b>	
Frequency range	1805 – 1880 MHz
Bandwidth	75 MHz
Insertion loss	< 0.45 dB over the middle 80% of BW, a further 0.25 dB over the remaining BW.
Input power	< 160 W (+52 dBm) CW < 1.6 kW (+62 dBm) Peak
Intermodulation products in Rx band	< -117 dBm (2 Tx carriers at +43 dBm)
Return loss	> 18 dB
<b>Rx Characteristics</b>	
Frequency range	1710 – 1785 MHz
Bandwidth (BW)	75 MHz
Loss in by-pass mode	< 2.8 dB typically
Return loss	> 18 dB (DC ON) > 15 dB By-pass mode
Gain	+22 ... +28 °C -40 ... +65 °C 12 ±0.7 dB 12 ±1.3 dB
Noise figure	+22 ... +28 °C -40 ... +65 °C < 1.7 dB over the middle 80% of BW, a further 0.3 dB over the remaining BW. < 2.2 dB over the middle 80% of BW, a further 0.3 dB over the remaining BW.
Output 1-dB compression point	> 15 dBm
3rd order intercept point (OIP3)	> 25 dBm
<b>Environmental Characteristics</b>	
Operating temperature range	-40 ... +65 °C
IP rating	IP67 *
MTBF	> 1 000 000 hours (per TMA)
EMC	ETS 300 342-3
Lightning protection	5 kA, 8/20 µs pulse
<b>DC and Alarm Characteristics</b>	
DC supply	+12V nominal (7.5 – 15V, minus grounded) Typically 110 mA per TMA
Alarm management Alarm current I <sub>a</sub>	Current window alarm handling Alarm 1: I <sub>a</sub> > 230 mA Alarm 2: I <sub>a</sub> > 330 mA
<b>Mechanical Characteristics</b>	
Material	Aluminium housing
RF connectors	7-16 female
Mounting	Wall mounting: With 4 screws (max. 8 mm diameter) Mast mounting: With additional clamp set
Weight	5 kg
Packing size	262 mm x 502 mm x 214 mm
Dimensions (w x h x d)	166 mm x 278 mm x 77.5 mm (without connectors, without mounting brackets)

\* see note on page 2

Internet: <http://www.kathrein.de>

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936.2566/h Subject to alteration.

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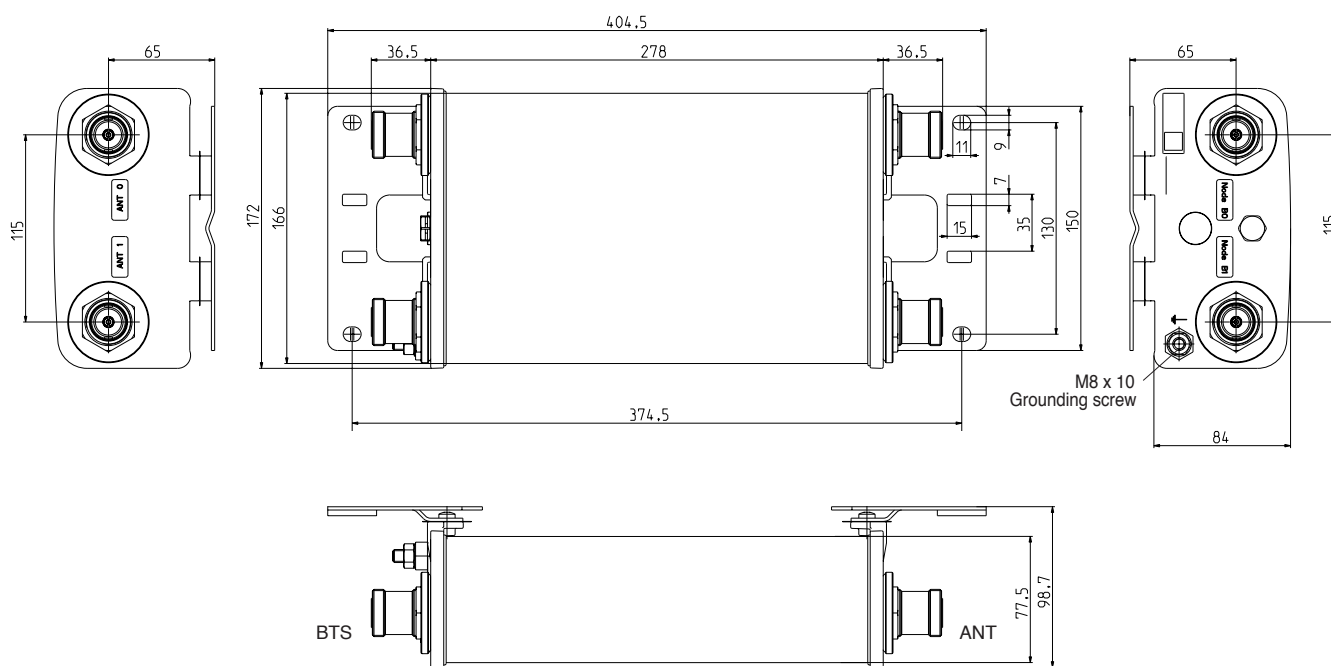
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### Accessories (order separately)

Type No.	Clamp set suitable for mast diameter of
734 360	34 – 60 mm
734 361	60 – 80 mm
734 362	80 – 100 mm
734 363	100 – 120 mm
734 364	120 – 140 mm
<b>734 365</b>	<b>45 – 125 mm</b>



### Please note:

The coupling torque at 7-16 connectors is 25 – 30 Nm!

The DTMA is not designed for permanent operation under water.

Test conditions for the IP67 rating: submerge depth: 1 m; submerge time: 24 hours

**As a result of more stringent legal regulations and judgements regarding product liability, we are obliged to point out certain risks that may arise when products are used under extraordinary operating conditions.**

Extraordinary operating conditions, such as heavy icing or exceptional dynamic stress (e.g. strain caused by oscillating support structures), may result in the breakage of a mast mounted device or even cause it to fall to the ground.

These facts must be considered during the site planning process.

**KATHREIN tower mounted amplifiers are designed to operate under the environmental conditions as described in ETS 300 019-1-4 class 4.1E and have passed environmental tests as specified in ETS 300 019-2-4.**

**The homogenous design of KATHREIN's tower mounted amplifiers use identical modules and materials.**

**Extensive tests have been performed on typical samples and models.**

The DTMA is designed to operate under the environmental conditions as described in ETS 300 019-1-4 class 4.1E and have passed environmental tests as recommended in ETS 300 019-2-4.

**The installation team must be properly qualified and also be familiar with the relevant national safety regulations.**

**The details given on our data sheets have to be followed carefully when installing the antennas, filters, combiners, amplifiers and accessories.**

**The limits for the coupling torque of RF connectors, recommended by the connector manufacturers must be obeyed.**

**Any previous datasheet issues have now become invalid.**

