

# DTMA-1900-AWS4-12-AISG-CWA

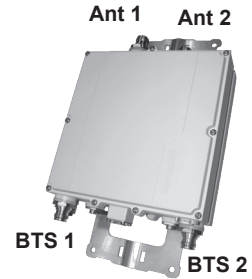
## Fullband Double Dual Duplex Tower Mounted Amplifier (Masthead Amplifier)

**KATHREIN**

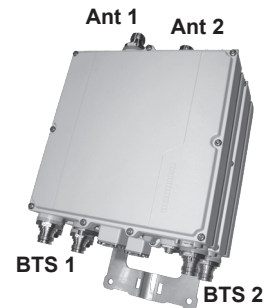
- Double unit for easy use with XPol antennas
- Suitable for antenna RET control according to AISG/3GPP standard
- Bypass mode to ensure cell operation in case of DC power down
- Supports CWA, AISG 1.1 and AISG 2.0 (default)
- Built-in lightning protection
- Low Inrush Current
- Clamp Set 45 – 125 | 1.77 – 4.92 [mm | in] included



**AISG** = Antenna Interface Standards Group  
**CWA** = Current Window Alarm  
**RET** = Remote Electrical Tilt



78210863V04



78210864V04

### Technical Data

|          |             |                                                  |                 |
|----------|-------------|--------------------------------------------------|-----------------|
| Type No. | Single Unit | <b>78210863V04</b><br>DTMA-1900-AWS4-12-AISG-CWA | clamps included |
|          | Double Unit | <b>78210864V04</b><br>DTMA-1900-AWS4-12-AISG-CWA |                 |

#### 1900/AWS Tx Characteristics

|                                               |       |                                      |
|-----------------------------------------------|-------|--------------------------------------|
| Frequency range                               | [MHz] | 1930 – 2200                          |
| Insertion loss                                | [dB]  | Typically 0.4                        |
| Input power<br>(per input and frequency band) | [kW]  | < 0.2 (+53 dBm) / 1.6 (+62 dBm) peak |
| Intermodulation products in Rx band           | [dBm] | < -117 (2 Tx carriers at +43 dBm)    |
| Return loss                                   | [dB]  | > 18                                 |

#### 1900/AWS Rx Characteristics

|                                              |       |                              |
|----------------------------------------------|-------|------------------------------|
| Frequency range                              | [MHz] | 1695 – 1915                  |
| Loss in bypass mode                          | [dB]  | Typically 2.0                |
| Return loss                                  | [dB]  | > 18 (DC ON) / > 12 (DC OFF) |
| Gain                                         | [dB]  | 12 nominal                   |
| Noise figure                                 | [dB]  | Typically 1.5                |
| 3 <sup>rd</sup> order intercept point (OIP3) | [dBm] | Typically 25                 |

Subject to alteration.

936.5345

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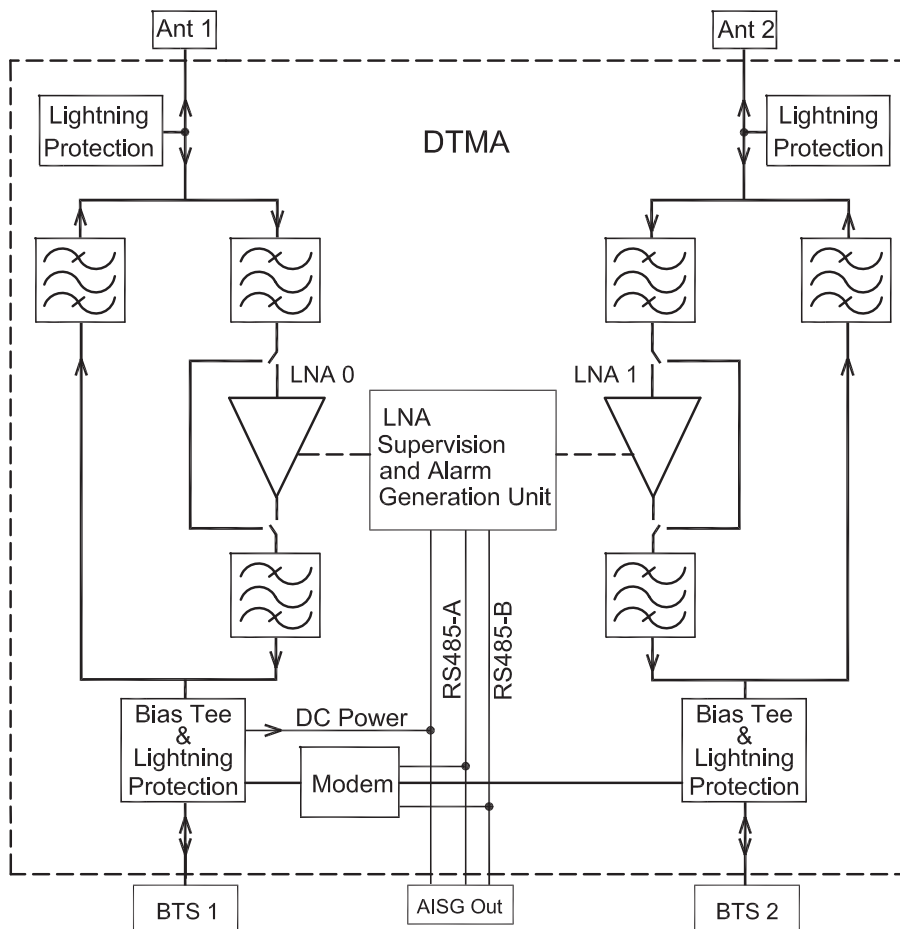
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| Environmental Characteristics |           |                                                                                                                                                           |                  |
|-------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Operating temperature range   | [°C   °F] | -40 ... +65   -40 ... 149                                                                                                                                 |                  |
| IP rating                     |           | IP67*                                                                                                                                                     |                  |
| MTBF                          | [hours]   | > 1 000 000 (per TMA)                                                                                                                                     |                  |
| EMC                           |           | FCC Part 15                                                                                                                                               |                  |
| DC and Alarm Characteristics  |           | CWA Mode                                                                                                                                                  | AISG Mode        |
| DC supply                     | [V DC]    | 10 – 19                                                                                                                                                   | 10 – 30          |
| Operating current             | [mA]      | 120 – 150                                                                                                                                                 | Nom. 170 at 12 V |
| Alarm management              | [mA]      | 180 – 200                                                                                                                                                 | AISG*            |
| Mechanical Characteristics    |           |                                                                                                                                                           |                  |
| Material                      |           | Aluminium housing                                                                                                                                         |                  |
| Connectors                    | RF        | 4.3-10 female (long neck)<br>8-pin female, IEC 60130-9                                                                                                    |                  |
| AISG out                      |           | (Pin 3: RS485B, pin 5: RS485A, pin 6: 10 – 30 V DC,<br>pin 7: DC return, other pins: Not connected)                                                       |                  |
| Mounting                      | [mm   in] | Wall mounting: With 4 screws (max. 8   0.315 diameter)<br>Mast mounting: With included clamp set                                                          |                  |
| Weight                        | [kg   lb] | Single Unit: 7.3   16.09 / Double Unit: 14.5   31.96                                                                                                      |                  |
| Dimensions (w x h x d)        | [mm   in] | Single Unit: 220 x 220 x 83   8.66 x 8.66 x 3.268<br>Double Unit: 220 x 220 x 171   8.66 x 8.66 x 6.73<br>(without connectors, without mounting brackets) |                  |

\* see note on page 4

### Block Diagram

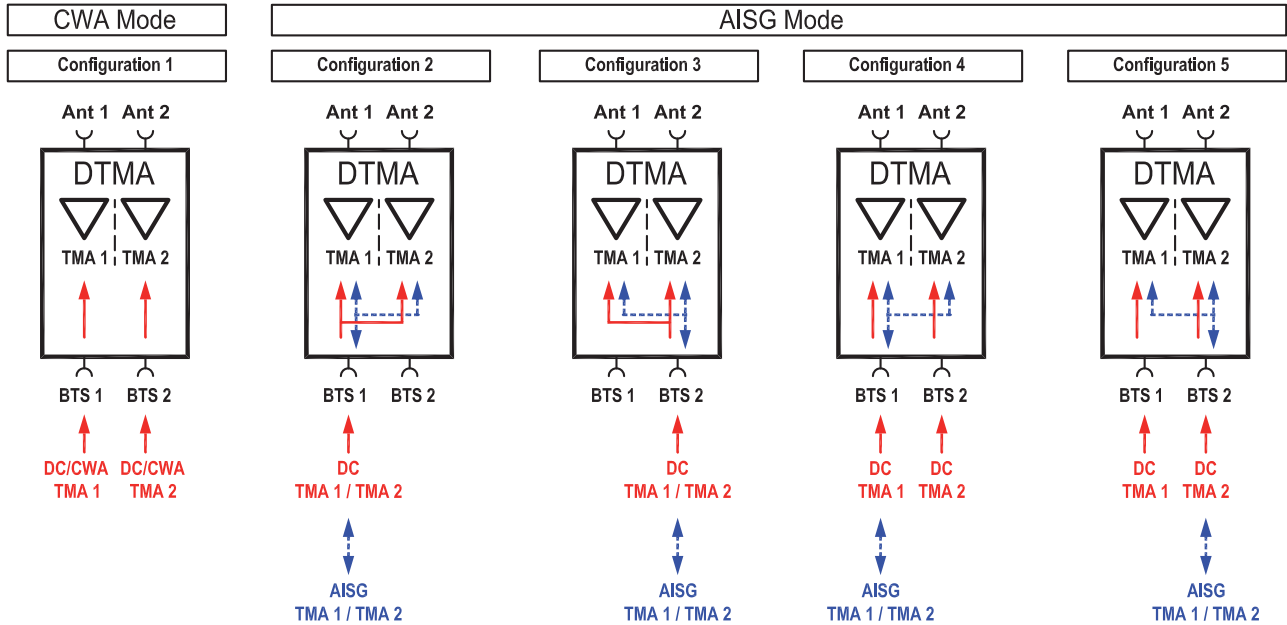


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### Dimensions



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### Accessories (included)

| Type No.         | Clamp set suitable for mast diameter of |
|------------------|-----------------------------------------|
| 734365 [mm   in] | 45 – 125   1.77 – 4.92                  |



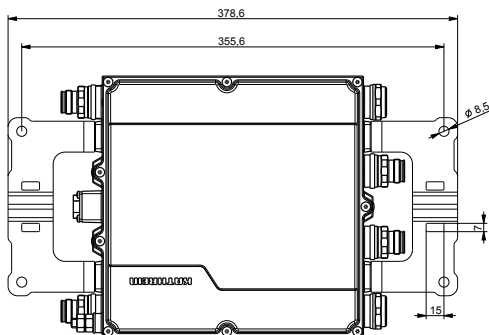
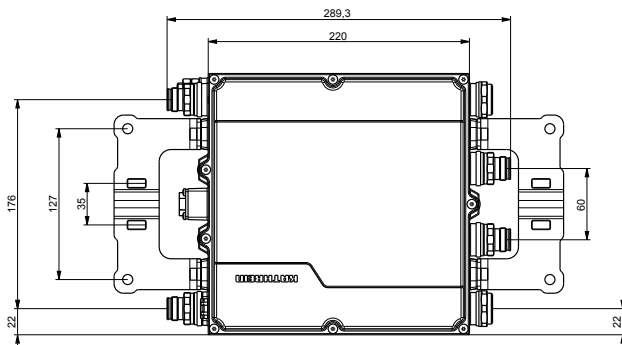
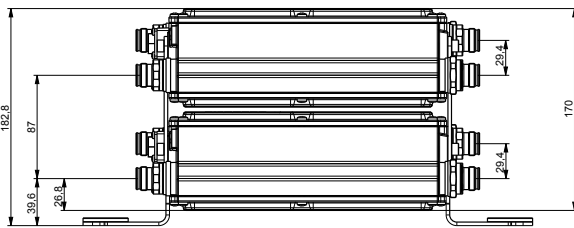
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All specifications are subject to change without notice.  
The latest specifications are available at [www.kathreinusa.com](http://www.kathreinusa.com)

# DTMA-1900-AWS4-12-AISG-CWA

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

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### Mounting Instructions

The coupling torque at 4.3-10 connectors is 5 - 8 Nm! The tightening torque for fixing the AISG connector must be 0.5 – 1.0 Nm ('handtightened').

It is recommended to install the DTMA's with the antenna connectors pointing upwards and the BTS connectors pointing downwards.

In case of DTMA's with RET-connectors (Remote Electrical Tilt-connectors according to AISG Standard) it is **recommended** to mount the DTMA's in such a way that the RET-connector **always points downwards!**

A downward slanted mounting position between the vertical and horizontal plane is also allowed.

### AISG Setting

The protocol of the software interface can be switched between AISG 2.0 / 3GPP and AISG 1.1 and vice versa with a vendor specific command (depending on default setting). If the primary station does not support the default setting, it has to be switched over before system start-up. Please contact Kathrein for further information.

### Please note

The DTMA is not designed for permanent operation under water. Test conditions for the IP67 rating: submerge depth 1 m, submerge time 1 hour.

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.

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 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.



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