

# DTMA-1900-AWS4-BYP400t1000-12-AISG-CWA-Y **KATHREIN**

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

- Double unit for easy use with XXPol antennas
- RF-Bypass for 400 – 1000 MHz
- 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
- DC/AISG bypass between any BTS port and Port 1 or Port 2
- Low Inrush Current
- Clamp Set 45 – 125 | 1.77 – 4.92 [mm | in] included



**AISG** = Antenna Interface Standards Group  
**BYP** = RF-BYPass  
**CWA** = Current Window Alarm  
**RET** = Remote Electrical Tilt

### Technical Data

Type No.	Single Unit	<b>78211273V04</b> DTMA-1900-AWS4-BYP400t1000-12-AISG-CWA-Y
	Double Unit	<b>78211374V04</b> DTMA-1900-AWS4-BYP400t1000-12-AISG-CWA-Y

clamps included

#### 1900/AWS Tx Characteristics

Frequency range	[MHz]	1930 – 2200
Insertion loss	[dB]	Typically 0.4
Input power (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)
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

#### 400 – 1000 MHz Bypass Characteristics

Frequency range	[MHz]	400 – 1000
Insertion loss	[dB]	Typically 0.15
Input power (per input)	[W]	< 500 (+57 dBm)
Intermodulation products	[dBm]	< -117 (2 carriers at +43)
Return loss	[dB]	> 18

Subject to alteration.

936.5344

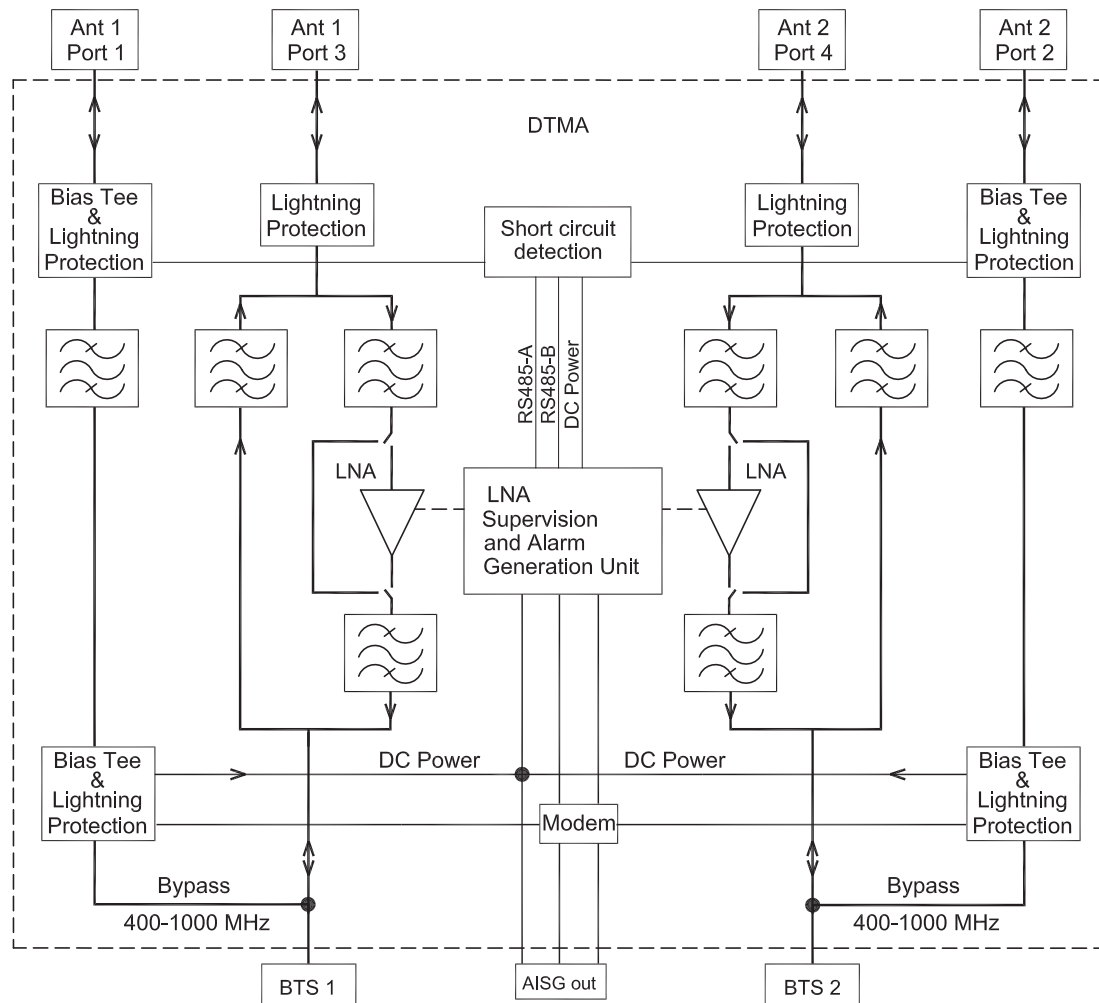
# DTMA-1900-AWS4-BYP400t1000-12-AISG-CWA-Y **KATHREIN**

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



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 AISG out	4.3-10 female (long neck) 8-pin female, IEC 60130-9 (Pin 3: RS485B, pin 5: RS485A, pin 6: 10 – 30 V DC, pin 7: DC return, other pins: Not connected)	
Mounting [mm   in]	Wall mounting: With 4 screws (diameter max. 8   0.315) 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 Double Unit: 220 x 220 x 171   8.66 x 8.66 x 6.73 (without connectors, without mounting brackets)	

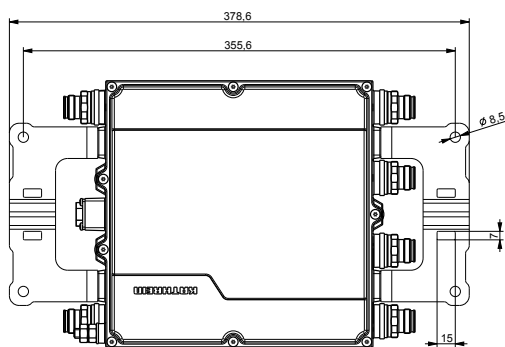
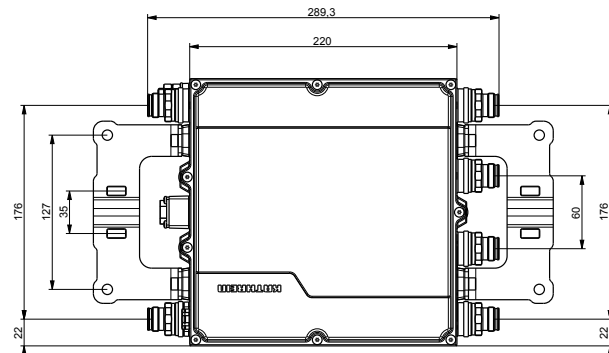
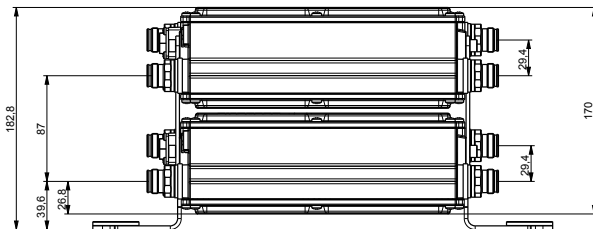
\* see note on page 4





# DTMA-1900-AWS4-BYP400t1000-12-AISG-CWA-Y **KATHREIN**

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



### Mounting Instructions

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

