

BRS/EBS Transceiver

Operation Manual



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Chapter 1. General Information

1.1 Module Features and Specifications

Category	Parameter	Description
Downstream	RF frequency	2500 ~ 2624 MHz
	IF frequency	152 ~ 276 MHz
	Gain	30 ± 2dB 0.3 dB/6 MHz
	Noise Figure	5.5 dB typ / 9.0 dB max
	Output 3rd Intercept	24 dBm
	PCS Rejection	> 90 dB
	2.3G WCS Rejection	> 90 dB
	Image Rejection (add gain)	> 80 dB
	IF Rejection	> 80 dB
	In-band Spurious	< -80 dBm
Upstream	IF Input	12 ~ 42 MHz
	RF Output	2657 ~ 2690 MHz
	Gain	24 ± 2 dB
	Output 1-dB Compression Point	+25 dBm typical
	Output Transmit Noise	-120 dBm/Hz typical -118 dBm/Hzm ax
	Output Spurious @+22 dBm Tx output	-60 dBc (in-band and out-band)
	Output Power Blanking Threshold	-45 dBm @ IF input
	TX Switch Latency	< 1.2 micro second
General	Phase Noise	-84dBc/Hz @ 1KHz -88 dBc/Hz @ 10 KHz -96 dBc/Hz @ 100 KHz
	LO Leakage at RF / IF ports	-50 dBm Max.
	LO Frequency	Downstream : 2348 MHz Upstream : 297MHz,2348MHz
	LO Stability	± 10 KHz over temp.

Other feature:

1. lightning protection Ok
2. surge protection Ok
3. Transceiver sleep mode Ok

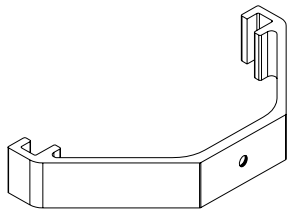
Note: Typical value @25°C, unless otherwise specified. Technical specifications are subject to change without prior notice.

Chapter 2. Installation

2.1 Step by Step Installation

2.1.1 Mounting Bracket Assembly Suite

The following hardwares are suggested for mounting the Transceiver to the pole. A set of mounting bracket, one L type screw. Please contact TSI sales department for this accessory.



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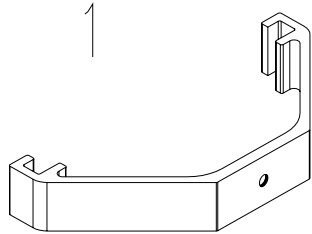


SCREW(M6*1.0)

2.1.2 Step by Step Installation

Step 1 – Attach sequence

Left to right: Bracket , Mounting screw.



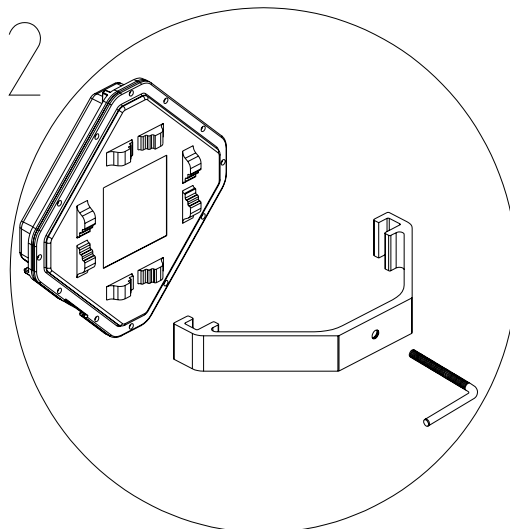
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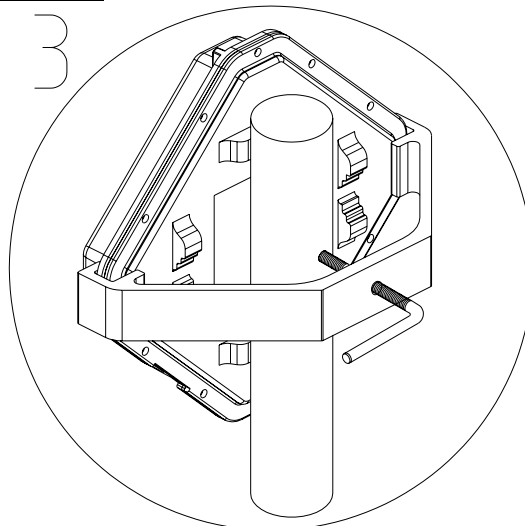
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Step 2 – How to Attach

The concave of Bracket 2 is for holding onto the pole.



Step 3 – Tighten the bracket



2.2 Connection to the Power Inserter and Cable Modem

Connections to the Transceiver are shown in diagram 2.2. Please note:

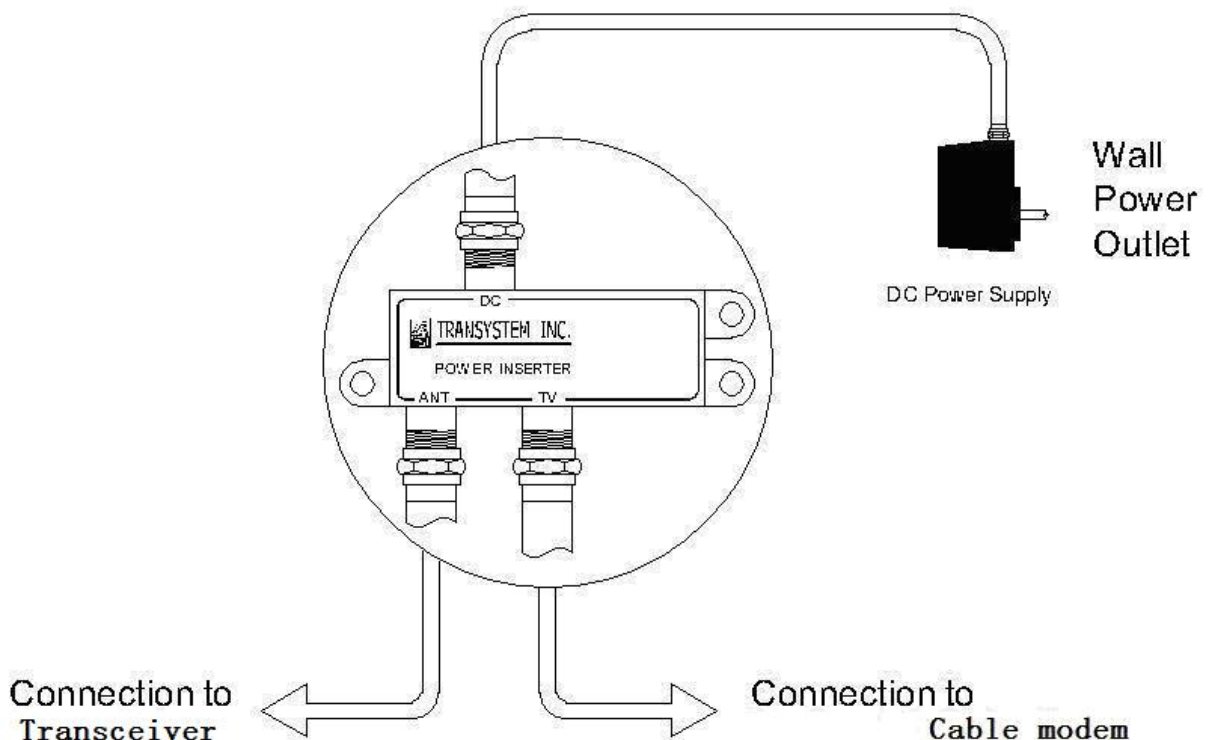
- ① The power inserter normally has 3 ports:

DC	Connect to wall adapter with RG-59 cable
ANT	Connect to the Transceiver
TV	Connect to Cable modem

VERY IMPORTANT NOTICE!

- a. The power inserter should be correctly connected, or the Transceiver will not operate.
 - b. Ensure that all wires and cables are hooked up before plugging into the AC adapter/power supply (i.e. you must hook up the power supply last).
- ② After connection, the F connector of Transceiver must be sealed with an asphalt sealing tape. (For details, please refer to Section 2.3 Waterproofing Connections)

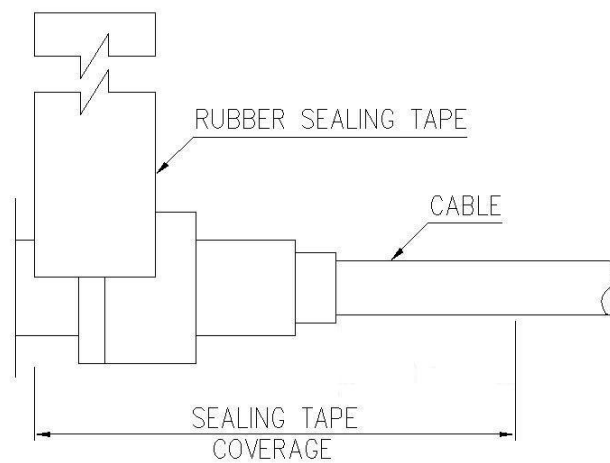
Diagram 2.2: Connection to Cable modem & Power Inserter



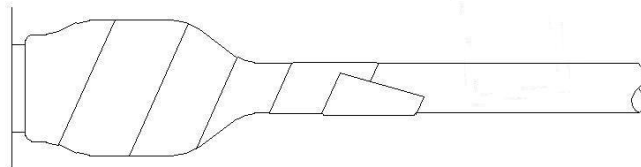
2.3 Waterproofing Connections

Water-proofing is very important during installation of Transceiver. Please use the included water-proof asphalt tape to seal off the F-connector as shown below:

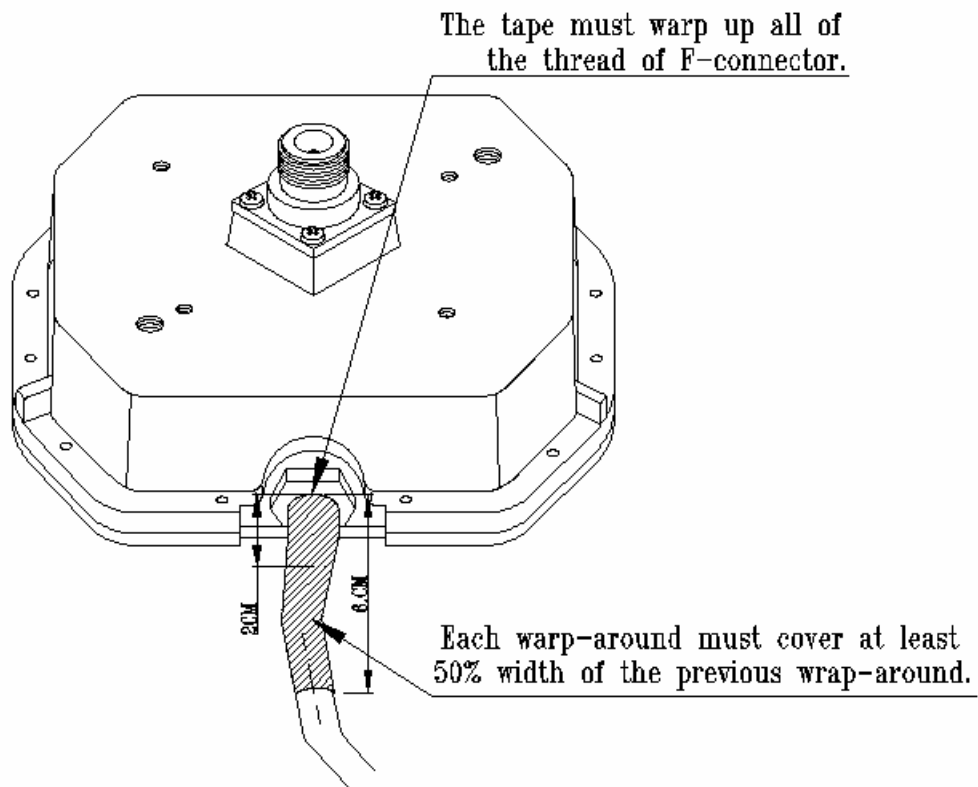
- ① After you plug in the coaxial cable into the F-connector, use the included water-proofing asphalt tape to seal off the F-connector from the bottom (i.e. the part close to Transceiver). Note that the tape must wrap up all the thread of the F-connector.



- ② The wrap up of the tape must be tight and sturdy. Each wrap-around must cover at least 50% width of the previous wrap-around.



- ③ The total width of the wrap-around is about 6cm, which corresponds to 7 to 8 rounds of tapes.

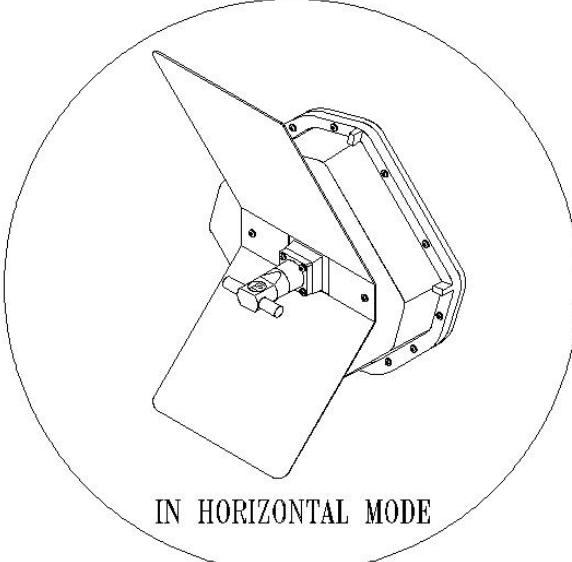
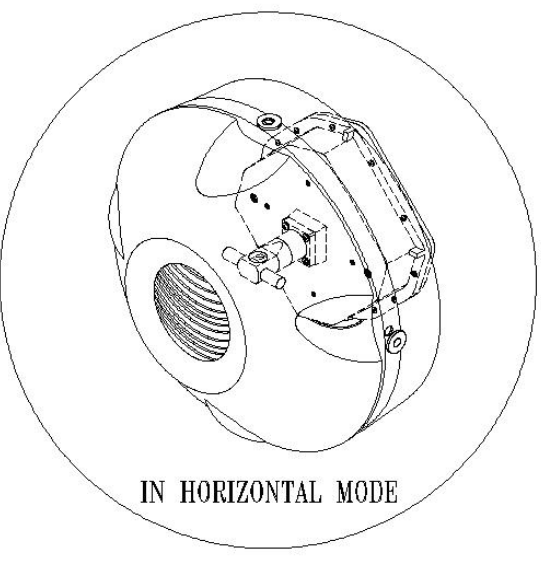
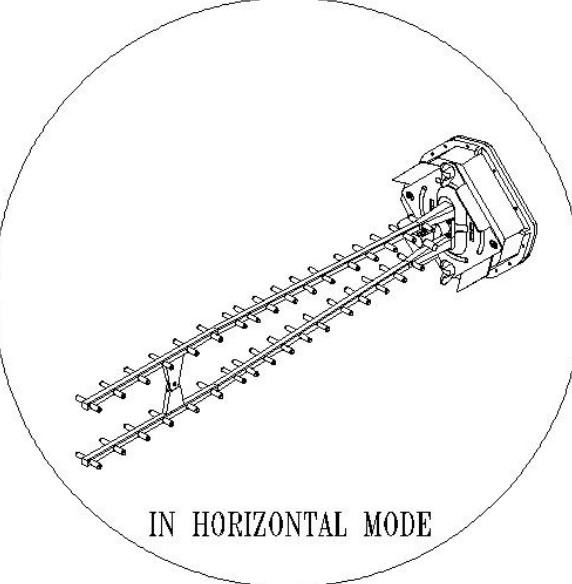


*** Warning: If you do not follow the above procedure, the Transceiver could become malfunctioning due to water leakage.'**

Chapter 3 Accessories

3.1 BRS/EBS Antenna

TSI is proud to offer a complete line of 2.5GHz antennas specifically designed to satisfy your subscribers. Below are the series:

 <p>IN HORIZONTAL MODE</p> <p>12dBi Corner Reflector</p>	 <p>IN HORIZONTAL MODE</p> <p>15dBi Spotbeam</p>
 <p>IN HORIZONTAL MODE</p> <p>17 dBi Viper</p>	