The 3116-T291 Translator converts one of three selected 27.6 - 29.1 GHz input bands to a 17.8 - 19.3 GHz output band via a three way switch. Front panel LEDs provide indication of PLL Alarm, internal OCXO oven Alarm, Remote operation, and DC Power. The RF to RF gain is -29 ± 3 dB, fixed. Connectors are 2.92 mm for the RF in, Super SMA for the RF out and BNC female for the external reference input and reference output. In AUTO, the internal 100 MHz reference remains locked to the external 10 MHz at a +0 to +6 dBm level. Selected input channel, LO frequency (9.800 or 9.7904 GHz), and internal/external/Auto reference frequency selection are controlled by front panel push-button switches or remote selection (via RS 232C, standard; Ethernet Optional). The 3116-T291 is powered by a 100-240 ±10% VAC power supply and is in a 1.75” X 19” X 13” rack mount chassis.

**EQUIPMENT SPECIFICATIONS**

**Input Characteristics**
- Impedance/Return Loss: 50Ω/10 dB, min. 12 dB typ
- Frequency: 27.6 - 29.1 GHz
- Noise Figure, Max.: 38 dB max gain
- Input Level range: -3 to +7 dBm
- Input Level, no damage: +11 dBm

**Output Characteristics**
- Impedance/Return Loss: 50 Ω /14 dB
- Frequency (GHz): 17.8 - 19.3 GHz
- Output Level Range: -32 to -22 dBm
- Output 1 dB compression: -17 dBm

**Channel Characteristics**
- Gain; Variation over temp: -29 ± 3 dB; ±0.05 dB/deg C
- Input to output isolation: > 50 dB, min
- Spurious, Inband: SIGNAL RELATED<50 dBc, typ, -40 dBc max, -1 dBm IN; Spur >200 MHz from carrier
- Spurious, Inband, 2XLO: SIGNAL INDEPENDENT<80 dBm;
- Spurious, Out of band,2XLO: <45 dBm, at 19.6 GHz at the output
- Intermodulation: <50 dBc for two carriers each at -3 dBm IN
- Frequency Response: ±2 dB, over RF band; ± 1.0 dB, 250 MHz BW
- Frequency Sense: Non-inverting

**LO Characteristics**
- LO Frequency: 9.800 or 9.7904 GHz
- Frequency Accuracy: ± 0.05 ppm max over temp, ± 0.02 ppm /day; internal reference; ext. ref. = input specifications
- 10 MHz level In/Mon: Remains locked to Ext. for +0 to +6 dBm in; Internal 100 MHz reference Output = +3 ± 3 dB, 50 ohms

**Controls, Indicators**
- IN Ch, LO, INT/EXT REF: Direct readout LCD; push-button switches or remote selection Ethernet or RS 232C (standard) PLL, Alarm: Red LED, External contact closure; Power, Remote, Oven: Green LED, Yellow LED, Yellow LED

**Available Options**
- W41 - 20 to +50 degrees C operation
- M&C Interface, RS232 Std.
- Q - RS485 Remote Interface
- W8 - Ethernet - Web Browser Interface
- W18 - Ethernet - Web Browser & w/SNMP
- W28 - Ethernet - direct TCP/IP and/or Telnet addressability

*Specifications subject to change without notice*