2016-1096 Fixed Frequency Downconverter, 965.5 MHz

The 2016-1096 UHF-band Downconverter converts 965.5±36 MHz Fixed to 140±36 MHz with low group delay and flat frequency response. Synthesized local oscillators (LO) provide very low phase noise and ±0.01 ppm stability frequency selection. Multi-function push button switches select the gain, and other variable parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow) or the TX carrier is muted (yellow). Gain is adjustable manually over a 0 to +50 dB range as adjusted by the front panel multi-function push-button switches. Remote operation allows selection of gain and other variable parameters. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are Type N (female) for the RF input and BNC (female) for IF output and optional external reference input / output. The External 10 MHz reference Option also includes a 10 MHz output connector, which provides the selected (internal or external) 10 MHz reference signal output. The unit is powered by a 90-260 VAC power supply, and housed in a 1 3/4" X 19" X 16" rack mount chassis.

**EQUIPMENT SPECIFICATIONS**

**Input Characteristics (RF)**
- Impedance/Return Loss: 50Ω/12 dB
- Frequency: 965.5 MHz (±36 MHz) Fixed
- Noise Figure, max.: 15 dB (max gain)
- Input Level Range: -70 to -20 dBm
- Input 1dB compression: -15 dBm

**Output Characteristics (IF)**
- Impedance/Return Loss: 75Ω/18 dB
- Frequency: 140 ± 36 MHz
- Output level/max linear: -20dBm / -10dBm
- Output 1 dB compression: -5 dBm

**Channel Characteristics**
- Gain range (adjustable): 0.0 to +50.0 dB
- Image Rejection: > 50 dB, min.
- Frequency Response: 965.5 MHz ; ± 0.5 dB, 72 MHz BW
- Spurious Response: < -60 dBc, in band, typical; -55 dBc max.
- Group Delay, max: 0.0035 ns/MHz² parabolic; 0.025 ns/MHz linear; 1 ns ripple
- Frequency Sense: Inverting or Non-inverting, selectable

**Synthesizer Characteristics**
- Frequency Accuracy: ± .01 ppm internal reference
- Frequency Step: None; Fixed Frequency, non-tunable
- 10 MHz In/Out Level: 3 dBm ± 3 dB (option E)
- Phase Noise: @ Freq 10Hz 100Hz 1kHz 10kHz 100kHz 1MHz
  - dBC/Hz 10Hz 100Hz 1kHz 10kHz 100kHz 1MHz
  - dBc 65 77 82 90 102 110

**Controls, Indicators**
- Freq/Gain Selection: direct readout LCD; manual or remote selection
- Pwr; Alarm; Remote: Green LED; Red LED; Yellow LED
- Remote: RS232C, 9600 baud (RS485, option Q)

**Available Options**
- E - External 10 MHz ref input & output
- Q - RS485 Remote Interface

**Connectors/Impedance**
- RF Connector: N-type (female)
- IF Connector: BNC (female)
- 10MHz Connectors: BNC (female) 50Ω/75Ω (option E)
- Alarm/Remote Connector: DB9 (female) - NO or NC contact closure on Alarm
- Size: 19 inch, 1RU standard chassis 1.75"high X 16.0" deep
- Power: 90-260 VAC, 47-63 Hz, 45 W max

*10°C to 40°C; Specifications subject to change without notice*