2016-02-500 Downconverter, 500 - 2000 MHz, 30 MHz IF

The 2016-02-500 Downconverter converts 500 to 2000 MHz to 30 MHz in 1 MHz steps with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection. Multi-function push button switches select the input frequency, gain, and other parameters. Front panel LEDs provide indication of DC power, PLL alarm or Remote operation. Gain is adjustable manually (MGC) over a 0 to +30 dB range. The frequency and gain are remotely selectable. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are Type F female for the RF, and BNC female for the IF and optional external 10 MHz reference input and output (option E). Other connector options are available. The 2016-02-500 is powered by a 100-240 ±10% VAC power supply, and is contained in a 1 3/4” X 19” X 16” rack mount chassis.

### EQUIPMENT SPECIFICATIONS*

#### Input Characteristics (RF)
- **Impedance/Return Loss**: 75Ω /10 dB
- **Frequency**: 500 to 2000 MHz
- **Noise Figure, max.**: 15 dB (max gain)
- **Level Range**: -35 to -5 dBm
- **1dB compression**: +5 dBm

#### Output Characteristics (IF)
- **Impedance/Return Loss**: 75Ω/18 dB
- **Frequency**: 30 ± 5 MHz
- **Level range**: -10 dBm to 0 dBm
- **1 dB compression**: +10 dBm

#### Channel Characteristics
- **Gain range (adjustable)**: 0 to +30.0 dB, 1dB steps
- **Image Rejection**: > 50 dB, min.
- **Frequency Response**: ± 2.0 dB, 500 to 2000 MHz; ± 0.5 dB, 10 MHz BW
- **Spurious Response**: < -50 dBc, in band
- **Group Delay, max.**: 4 ns parabolic; 4ns linear; 1 ns ripple
- **Frequency Sense**: Non-inverting

#### Synthesizer Characteristics
- **Frequency Accuracy**: ± 1.0 ppm internal reference (±.01 ppm, option H)
- **Frequency Step**: 1.0 MHz minimum
- **10 MHz In/Out Level**: +3 dBm ± 3 dB (option E)
- **Phase Noise @ F (Hz) >**: 100, 1K, 10K, 100K, 1M dBC/Hz

#### Controls, Indicators
- **Freq/Gain Selection**: direct readout LCD; manual or remote selection
- **Power; Alarm; Remote**: Green LED; Red LED; Yellow LED
- **Remote**: RS232C, 9600 baud (RS485, option Q; Ethernet, option W8)

### Other
- **RF, IF Connectors**: Type F (female), BNC (female), 75Ω
- **10MHz Connectors**: BNC (female), 75Ω; works with 50 or 75 ohm impedance (option E)
- **M & C Connector**: DB9 (female) - NO or NC contact closure on Alarm
- **Size**: 19 inch, 1RU standard chassis 1.75” high X 16.0” deep
- **Power**: 100-240 ±10% VAC, 47-63 Hz, 45 W max

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