

2017-03 L-Band Up/Downconverter

The 2017-03 L-band Up/Downconverter converts 70 MHz to 950-1525 MHz (Up) and 950-1525 MHz to 70 MHz (Down) 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 RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm for up and downconverters (red), remote operation (yellow), and Upconverter mute (yellow). Gain is manually controlled over a –10 to +30 dB range for the upconverter and over a 0 to +50 dB range for the downconverter as adjusted by the front panel multi-function push-button switches. Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for IF and the optional external reference input and output, and Type F female for RF. LNB or SSPB +24 VDC and 10 MHz reference can be inserted on the RF lines as added options. A high stability (±0.01ppm) option is also available. It is powered by a 90-260 VAC power supply and housed in a 1.75" X 19" X 16" 1RU chassis.

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2017-03 Up/Downconverter Front Panel 2017-03 Up/Downconverter Front Panel EQUIPMENT SPECIFICATIONS* DOWNCONVERTER				
EQUIPMENT SPECIFICATIONS* UPCONVERTER	ALARM REMOTE			
EQUIPMENT SPECIFICATIONS* UPCONVERTER	2017-03 Up/Downconverter Front Panel			
Input Characteristics (IF) Input Characteristics (RF) Impedance/Return Loss 75 Ω / 12 dB Impedance/Return Loss 75 Ω / 12 dB Frequency 70 ± 18 MHZ Frequency 950 to 1525 MHz Impedance/Return Loss 75 Ω / 12 dB Input Level Range -20 to -70 dBm Output Characteristics (RF) Input Level Range -20 to -70 dBm Output 1 dB compression -15 dBm To ± 18 MHZ Output 1 dB compression -15 dBm To ± 18 MHZ Output 1 dB compression -55 Ω/12 dB Impedance/Return Loss 75 Ω/14 dB Output 1 dB compression +5 dBm Channel Characteristics 75 Ω/18 dB Frequency 950 to 1525 MHz Output 1 dB compression -36 dBm Gain range (adjustable) -10.0 to +30.0 dB Output 1 dB compression -36 dBm Frequency Response ±1.5 dB, 950 - 1525 MHz; ± 0.5 dB, 36 MHz BW Frequency -00 to +50.0 dB Springe Response ±1.5 dB, 950 - 1525 MHz; ± 0.5 dB, 36 MHz BW Frequency -50 dBn min. Springe Response ±1.5 dB, 950 - 1525 MHz; ± 0.5 dB, 36 MHz BW Frequency Accuracy -20 dBm min.<	EQUIPMENT SPECIFICA	TIONS*		
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Spurious Response< -50 dBc in bandGroup Delay, max0.01 ns/MHz2 parabolic; 0.03 ns/MHz linear; 1 ns rippleSynthesizer CharacteristicsFrequency Accuracy± 1.0 ppm max over temp (±0.01 ppm, option H)Frequency Step1.0 MHz (as low as 1 kHz steps available)Phase Noise (dBc/Hz)< -70 @ 100Hz, 1kHz; < -80 @ 10kHz;			Freq Sense (selectable) Inverting or Non-inverting	
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< -95 @ 100kHz; < -110 @ 1 MHzAvailable Options10 MHz Level (In or Out)3 dBm, ± 3 dB, 75 ohms (option E)E – External 10 MHz ref input & output w/ RF insertionControls, Indicatorsdirect readout LCD; manual or remote selectionH – High Stability (±0.01ppm) internal referenceGain Selectiondirect readout LCD; manual or remote selectionL – LNB Voltage, +24VDC, 0.4 ampsPower; Alarm; RemoteGreen LED; Red LED; Yellow LEDQ – RS485 Remote InterfaceRemoteRS232C, 9600 baud (RS485, option Q)T – Temperature SensorOtherType F (female)BNC (female)IF, 10 MHz ConnectorsType F (female)BNC (female)Alarm/Remote ConnectorDB9 (female) - NO or NC contact closure on AlarmD – 50Ω BNC (RF), 75Ω BNC (IF)Size19 inch, 1RU standard chassis 1.75"H X 16.0"DN – 50Ω N-type (RF), 75Ω BNC (IF)Power90-260 VAC, 47-63 Hz, 45 watts maxM – 50Ω N-type (RF), 50Ω BNC (IF)				
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Gain Selectiondirect readout LCD; manual or remote selection $V - SSPB$ Voltage, +24VDC, 2.5 ampsPower; Alarm; RemoteGreen LED; Red LED; Yellow LED $Q - RS485$ Remote InterfaceRemoteRS232C, 9600 baud (RS485, option Q) $T - Temperature Sensor$ OtherType F (female) $B - 75\Omega$ BNC (RF), 75\Omega BNC (IF)IF, 10 MHz ConnectorsBNC (female) $C - 50\Omega$ BNC (RF), 75\Omega BNC (IF)Alarm/Remote ConnectorDB9 (female) - NO or NC contact closure on Alarm $D - 50\Omega$ BNC (RF), 75\Omega BNC (IF)Size19 inch, 1RU standard chassis 1.75"H X 16.0"D $N - 50\Omega$ N-type (RF), 75\Omega BNC (IF)Power90-260 VAC, 47-63 Hz, 45 watts max $M - 50\Omega$ N-type (RF), 50\Omega BNC (IF)				
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Power 90-260 VAC, 47-63 Hz, 45 watts max M - 50Ω N-type (RF), 50Ω BNC (IF)				
		90-200 VAC, 47-63 HZ, 45 Watts max	M – 5012 N-type (RF), 5012 BNC (IF)	

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

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