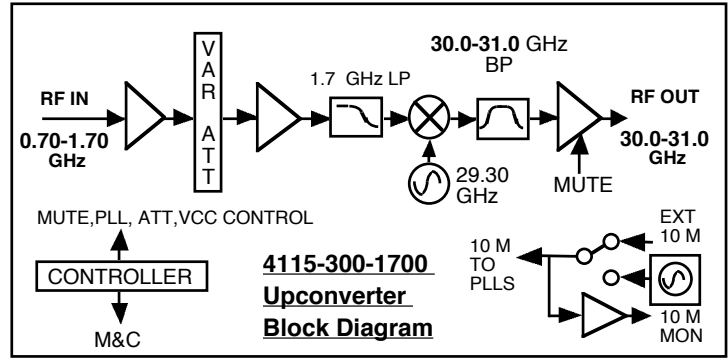
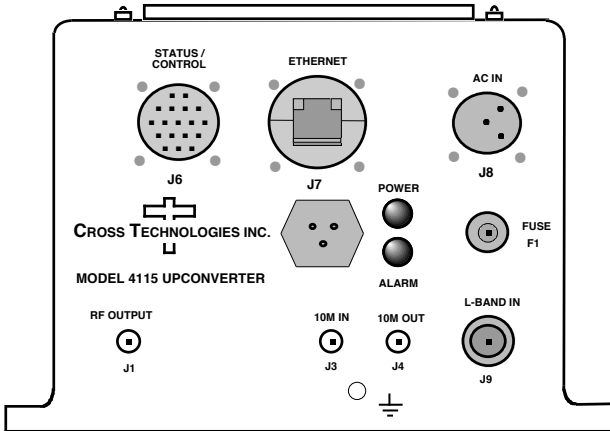


4115-300-1700 Block Upconverter - Weather Resistant*

The 4115-300-1700 Block Upconverter converts **0.70-1.70 GHz** to **30.0-31.0 GHz** with a **29.30 GHz** local oscillator (LO). Front panel LEDs indicate DC Power, and PLL Alarm. The maximum gain is +30 dB. Connectors are (all female) 2.92 mm for RF Out, Type N for RF In (shown as L-Band), and SMA for the external reference input and output. Gain and internal 10 MHz frequency are controlled by the Ethernet M&C or via the Status/Control connector. **In AUTO, the 10 MHz reference stays in external if the external level is in the +2 to +8 dBm range.** It is powered by a 100-240 ± 10% VAC power supply, and mounted in a 8"W X 6"H X 16"D Weather Resistant* enclosure.



EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss 50Ω/14 dB
 Frequency (GHz) **0.70-1.70**
 Noise Figure, Max. 20 dB max gain
 Input Level range -40 to -15 dBm

Output Characteristics

Impedance/Return Loss 50 Ω /14 dB, **Mute & UnMute**
 Frequency (GHz) **30.0-31.0**
 Output Level Range -15 to 0 dBm
 Output 1 dB compr. +10 dBm, **max gain, at Fc**
Mute >60 dB @ 0 dBm output (On alarm and via M&C)

Channel Characteristics

Gain, max., at Fc +30 ±3 dB, (+30 to 0 dB variable in 0.5 ± 0.5 dB steps)
 Spurious, Inband SIG. REL. <-50dBc, -15 to 0dBm out; 2XFc<-45dBc; SIG. INDEP., <-60dBm;
 Spurious, Out of band <-55 dBm; **27-29.9 and 31.1-34 GHz out, max gain**
 Intermodulation <-50 dBc for two carriers at Fc ±2 MHz spacing, each at -5 dBm out, **max gain**
 Frequency Response ±2 dB, over RF band; ± 0.5 dB, 40 MHz BW
 Frequency Sense Non-inverting

LO Characteristics

LO Frequency 29.30 GHz
 Frequency Accuracy ± 0.05 ppm max over temp internal reference; ext. ref. input
 10 MHz level In/Mon +2 to +8 dBm in; Monitor Output = input level ± **1.0 dB**, 50 ohms

Phase Noise @ F (Hz) >	10	100	1K	10K	100K	1M
dBc/Hz	32	62	72	82	92	102

Controls, Indicators

Gain, 10M Freq. Gain and internal 10 MHz frequency via Ethernet M&C (w/SNMP) or Status/Control connector.
 PLL Alarm Red LED, External contact closure
 Power Green LED

Connectors*	Connector Part #	Mating Connector Part #	Additional Connector Specifications*		
Status/Control Connector	MS3112E14-18S	MS3116F14-18P	RF Out, RF Mon. Connectors 2.92 mm, 40 GHz (female) 50Ω	L-Band Connector Type N (female) 50Ω	10MHz Connectors SMA (female) 50Ω
Ethernet Connector/RJ45	RJF21B	RJF6G			
AC Input Connector**	CL1M1102	CL1F1101			

*All Connectors are Weather Resistant

Size 8"W X 6"H X 16"D Weather Resistant* Enclosure
 Power 100-240 ±10% VAC, 47 - 63 Hz, 25 watts maximum

*Weather Resistant enclosures are designed to be water resistant for installation in an outdoor enclosure /antenna hut OR mounted outdoors on an antenna assembly at their specified temperature ranges. They are designed to be located "out in the elements" (water, sleet, snow, etc.) but they are *not* designed to be "submerged under" water.

Options
W21 - -30°C to +60°C

*+0 to +50 degrees C; Specifications subject to change without notice.