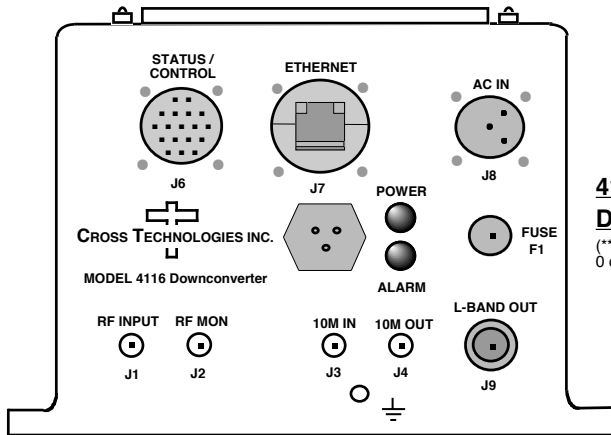
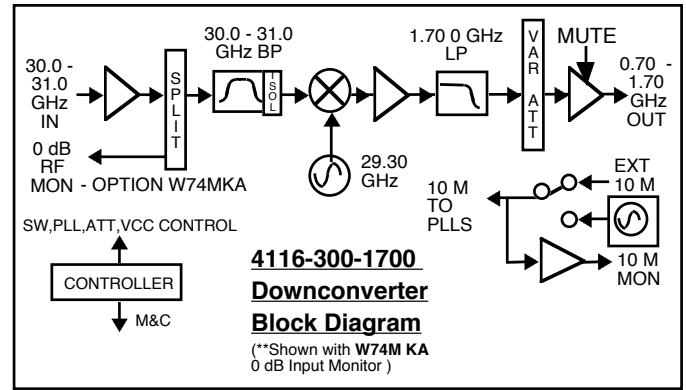


**4116-300-1700 Block Downconverter, Weather Resistant\***

The 4116-300-1700 Block Downconverter converts **30.0 - 31.0 GHz to 0.70 - 1.70 GHz**. Front panel LEDs indicate DC Power and PLL Alarms. The RF to L-band gain is  $+30 \pm 3$  dB maximum **at Fc** and is adjustable in  $0.5 \pm 0.5$  dB steps. Connectors are **2.92 mm** for RF In, RF Monitor and SMA for the external reference input and output, and Type N, female for L-band out. Gain and internal 10 MHz frequency are controlled by the Ethernet M&C. In AUTO, the 10 MHz reference stays in external if the external level is in the +2 to +8 dBm range. The unit is powered by a  $100\text{-}400 \pm 10\%$  VAC power supply, and is mounted in a 8"W X 6"H X 16"D Weather Resistant\* enclosure.



**4116-300-1700  
Downconverter**  
(\*Shown with W74M KA  
0 dB Input Monitor)



**EQUIPMENT SPECIFICATIONS\***

**Input Characteristics**

Impedance/Return Loss 50Ω/14 dB  
 Frequency (GHz) **30.0 - 31.0 GHz**  
 Noise Figure, Max. 20 dB max gain  
 Input Level range -50 to -30 dBm

**Output Characteristics**

Impedance/Return Loss 50Ω/14 dB  
 Frequency **0.70 - 1.70 GHz**  
 Output Level Range -20 to 0 dBm  
 Output 1 dB compr. +10dBm, max gain, **at Fc, Gmax**  
**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)  
 Image Rejection > 60 dB, min  
 Spurious, Inband SIG. REL. <-50dBc, -20 to 0dBm out.; 2XFo<-45dBc; SIG. INDEP., <-60dBm; **0.70 - 1.70 GHz out, Gmax**  
 Spurious, Out of Band <-55 dBm, **0.5-0.70 GHz and 1.70 - 3.0 GHz; at Gmax**  
 Intermodulation <-50 dBc for two carriers at 4 MHz spacing **centered on Fc**, each at -5 dBm out; **at Gmax**  
 Frequency Response **±2.0 dB, 0.70 - 1.70 GHz; ±0.5 dB 40 MHz bandwidth out**  
 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 or Status/Control Connector.  
 Power/PLL Alarm Green LED, Red LED, External contact closure

**Other**

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

Size 8" Wide X 6" High X 16" Deep Weather Resistant\* Enclosure  
 Power 100-400 ±10% VAC, 47 - 63 Hz, 25 watts max.

\*All Connectors are Weather Resistant

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

\*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  
**W74MKA** - 0dB Input Monitor