

Q LNB 37.50 - 42.50 GHz Wideband

Key features



- Input frequency range 37.50 to 42.50 GHz
- External reference with fallback to Internal ref.
- Low phase noise and noise figure
- Single LO frequency
- Superwide IF frequency output
- Monitoring & Control interface as standard
- Automatic temperature Gain compensation

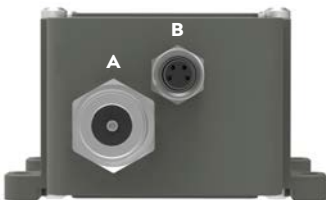


Description

The Q-Band LNB of the future, today. Packed full of our latest technology, our device provides coverage within the full Q-Band satcom downlink frequency range in one unit.

Standard features include Monitoring and Control via Modbus allowing a multitude of unique field configurable features and functions making this device both versatile and future proof.

LNB connectors (standard)



Connector A (standard)

Type: N-female, or SMA-female
Functions: L-Band out, DC in, External ref. in

Connector B (standard)

Type: M8 female, 4 pin, A-coded
Functions: Alarm and M&C

LNB connectors (optional)



Connector C (optional)

Type: SMA-female only
Functions: Ext. ref. in and/or DC input

Connector B (standard)



- 1 = Alarm open collector (max. 200 mA) or optionally DC input.
- 2 = A pos+ RS485
- 3 = B neg- RS485
- 4 = Common (GND)
- 5 = Shield

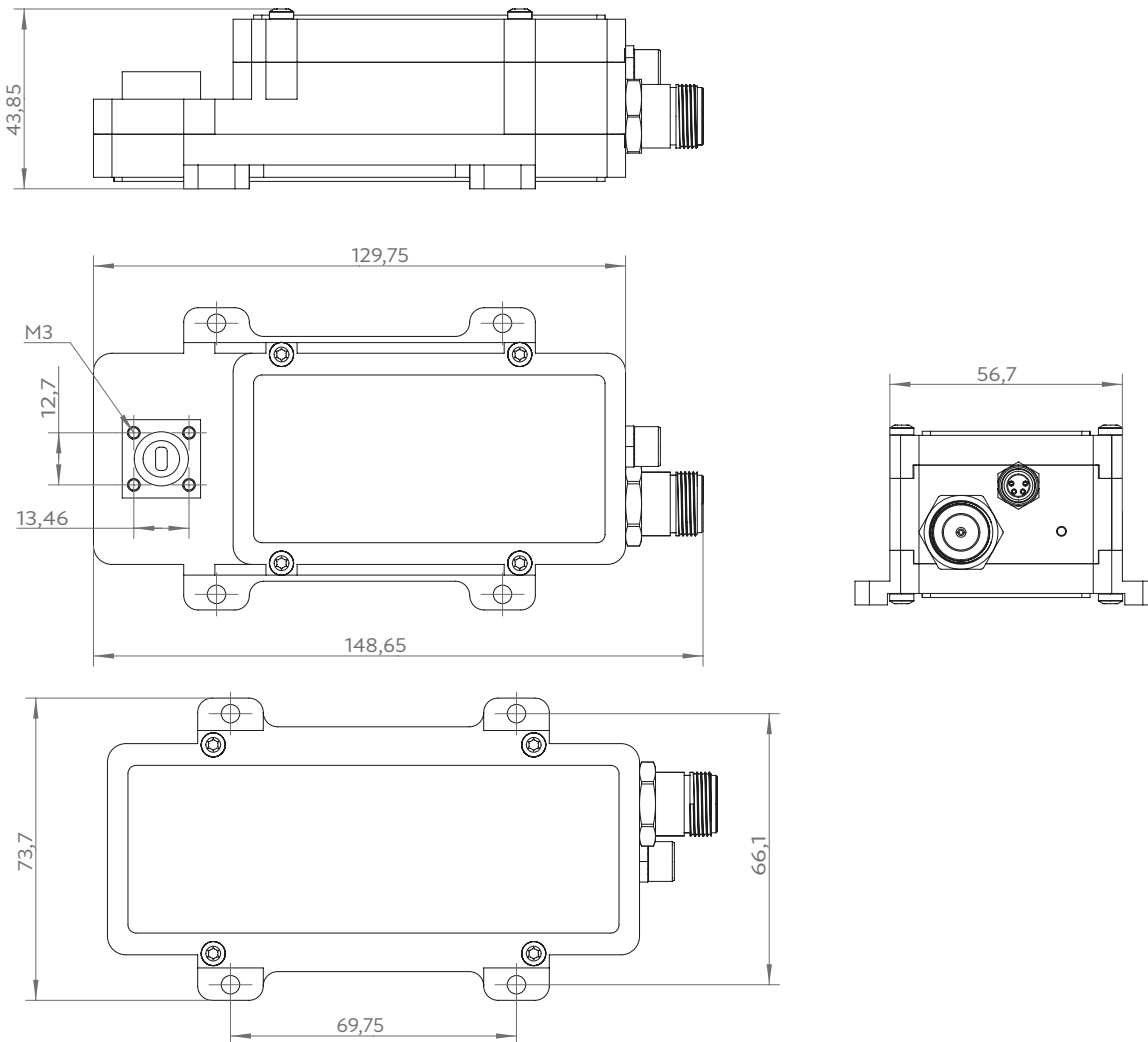
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Technical specifications

	MODELS	37.50-40.00	40.00-42.50
INPUT	Input frequency	37.50 - 40.00 GHz	40.00 - 42.50 GHz
	LO frequency	36.55 GHz	39.05 GHz
	Input WG	Waveguide WR22. Various flanges available on request	
	Input VSWR	2.3:1 max. w/o isolator	
	DC input	+11 to +26 V through output connector or optional connector (SMA). Power consumption 5W max.	
	LO reference	Ext. 10 MHz ref, Sine wave, Level -10 to +10 dBm, (Internal ref; ±35 ppm -40 to +80°C, -40 to +176°F)	
	LO Leakage	-60 dBm max. @ waveguide input, -40dBm max. @ IF output	
	Gain	50 dB as default, adjustable 40-55 dB via M&C	
	Gain variation over 24h	±0.1 dB @ 23°C	
	Gain over temperature	±2 dB max., Automatic temperature Gain compensation	
INTERNAL	Flatness	± 2 dB max.	
	Noise figure	2.8 dB typ., 3.6 dB max. @ 23°C	
	Ultra Low Phase Noise	1 Hz -22dBc/Hz • 10 Hz -32dBc/Hz • 100 Hz -60dBc/Hz • 1 kHz -75dBc/Hz • 10 kHz -85dBc/Hz • 100kHz -93dBc/Hz • 1MHz -120Bc/Hz • 10MHz -128dBc/Hz max.	
	Image Rejection	23 dB min.	
	Max input level	-20 dBm survival continuous power in range 25.0-55.0 GHz	
	Desensitization	min. -25 dBm, the absolute level out of band that decreases NF by 0.1 dB in the band 47-52 GHz and 27-31 Ghz (uplink Ka)	
	Spuriouses in band	W/o signal -75 dBm max., with -10 dBm output signal -60 dBc max.	
	Group delay	max. +/- 1ns @ 500 MHz bw, max. +/- 2ns @ 1500 MHz bw	
OUTPUT	IF output	950-3450 MHz	
	Output P1dB	+15 dBm min.	
	Output IP3	+25 dBm min.	
	Output VSWR	1.7:1 max.	
	Output Connector	N-type 50Ω standard, Option: SMA-type 50Ω	
GENERAL	Alarm functions	Sum alarm, set via M&C to alarm in any combination of: LNA failure, Total current, LO lock (Ext/Int/n/a), signal power high/low, Supply voltage low. Open collector 3.3 to 28 V, max. 200 mA (pull-up 10 k Ohm at host side), pin 1 in M8 connector.	
	Monitoring & Control	Via MODBUS RTU RS485 electrical interface, see sep. document for details. NOTE! Mates with M8 male connector/Cable, use only shielded cables ≥CAT5	
	Dimensions	144 x 74 x 45 mm (N-connector)	
	Weight	375 g	
	Temperature range	Storage and operating: -40 to +80°C, -40 to +176°F	
	Miscellaneous	Enclosed conductive O-ring, mounting screws (M3 x 8) 4 pcs	
OPTIONS	Options	- Separate SMA connector for External ref. and/or DC input - Models with external LO ref. source 50, 100 or 144 MHz - Pressurizable 0.1 bar max.	

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Technical Drawing



Designed and
Manufactured



IN SWEDEN

SMW 

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INC

SMW authorized distributor

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