

Ku LNB 12.70-15.50 GHz 1-4 Band Uplink Monitoring

Key features



- Autoswitch external 10 MHz reference with fallback to Internal reference
- Single Band or Multiband
- Input frequency range 12.70–15.50 GHz
- Excellent Phase Noise
- Alarm and Monitoring & Control

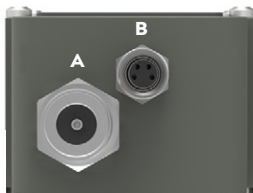


Description

The new professional 12.70–15.50 GHz LNB/TLT from Swedish Microwave is band switchable and ideal for full freedom of sub-bands available. Designed for single sub-band or up to 8 multiple sub-bands. IF range 950-2450 MHz.

Options include customized LO, customized frequency ranges, customized gain, separate DC power input and/or separate input for the external 10 MHz reference. As standard the SMW Monitoring & Control allow you the possibility to cascade multiple devices in the same Modbus network for Alarm and Monitoring & Control functionality.

LNB connectors (standard)



Connector A (standard)

Type: N-f, (option F-f or SMA-f)

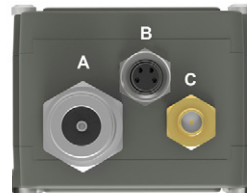
Functions: L-Band out, DC in, External 10 MHz in

Connector B (standard)

Type: M8 female, 4 pin, A-coded

Functions: Alarm and M&C

LNB connectors (optional)



Connector C (optional)

Type: SMA-f only

Functions: Ext. 10 MHz 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

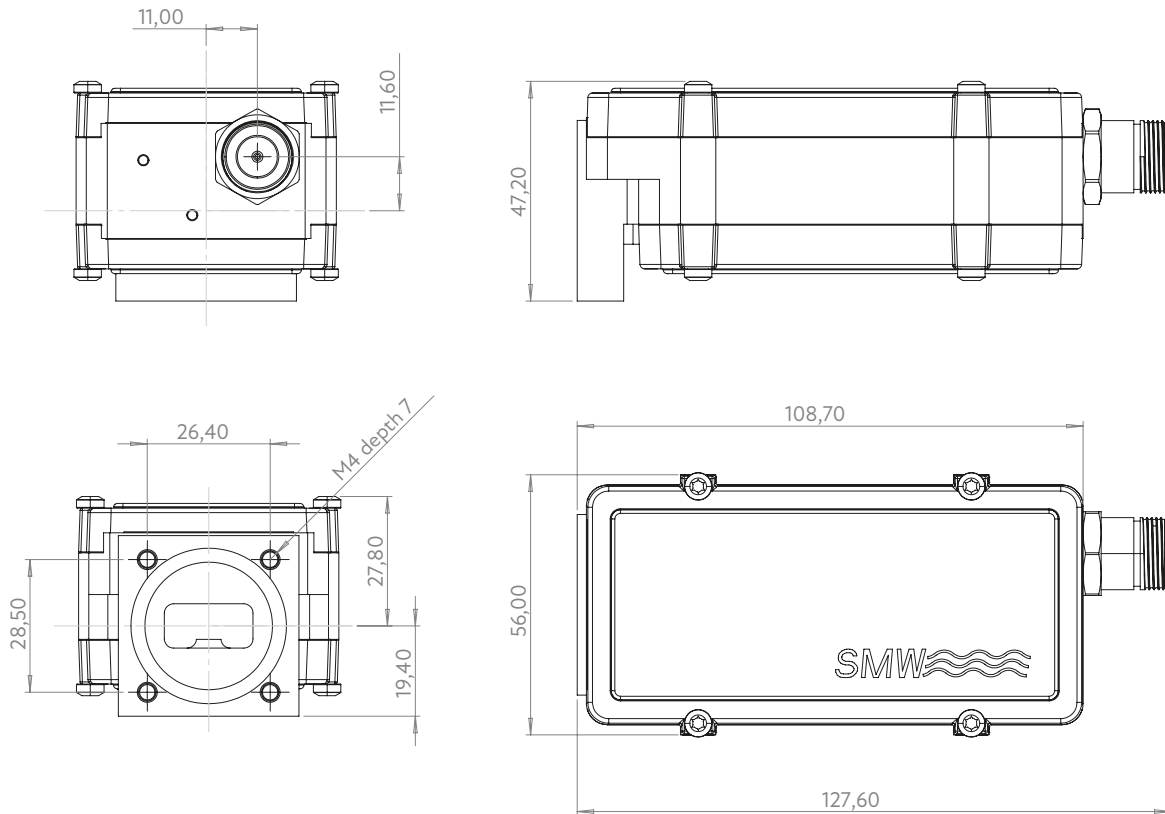
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Technical specifications

Parameter												
MODELS	Model	11.75	11.80	12.00	12.50	12.55	12.80	13.00	13.05	13.10	13.20	13.50
	Input freq. GHz	12.70-14.20	12.75-14.25	13.00-14.50	13.45-14.95	13.50-15.00	13.75-15.25	13.95-15.45	14.00-15.50	14.05-15.50	14.90-15.50	14.50-15.50
	LO freq. GHz	11.75	11.80	12.00	12.50	12.55	12.80	13.00	13.05	13.10	13.20	13.50
	Multiband	Any combination of above LOs or customized, max 8 Bands										
		Legacy 13/15/18/24 V and 22 kHz tone, optionally via RS485 Modbus RTU										
INPUT	Input WG	WR75 / R120. PBR120 flange.										
	Pressurizable	0.1 bar max.										
	Input VSWR	1.9:1 max. 12.75 - 15.00 GHz, 2.6:1 max 15.00 - 15.50 GHz										
	Input max power	0 dBm instantaneous (not continuous)										
INTERNAL	LO ref.	Auto LO ref. External 10 MHz ref / Internal ±2.5 ppm -40 to +80°C										
	External LO ref.	Sine wave, Level -10 to +10 dBm. Supplied through output connector.										
	LO Leakage	-60 dBm max. @ waveguide input										
	Gain	Factory programmable 0-55 dB nom., in 5 dB steps										
	Flatness each band	±1.5 dB typ., ± 2 dB max.										
	Noise figure	1.3 dB / 92 K max. @ gain 40 to 55 dB (higher NF at lower gain)										
	Phase Noise	10 Hz -35dBc/Hz • 100 Hz -63dBc/Hz • 1 kHz -83dBc/Hz • 10 kHz -85dBc/Hz • 100kHz -95dBc/Hz • 1MHz -118dBc/Hz • >10MHz -120dBc/Hz (max).										
	Image Rejection	40 dB min. @ LO ≤ 12.50 GHz, 30 dB min. @ LO ≤ 13.05 GHz, 25 dB min. @ LO > 13.05 GHz										
	Spurioues in band	W/o signal -70 dBm max., with -10 dBm output signal -65 dBc max.										
	Out of band rejection	20 dB min.										
	Group delay	+/- 0.25ns max. @ 50 MHz bw, +/- 2ns max @ each band										
DC and OUTPUT	DC Input	+11 to +26 V through output connector or separate connector (SMA). 6W max.										
	IF output	950-2450 MHz										
	Output P1dB	+15 dBm min.										
	Output IP3	+25 dBm min.										
	Output VSWR	1.7:1 max.										
GENERAL	Output Connector	N-type 50Ω standard, Option: SMA-type 50Ω or F-type 75Ω										
	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.										
	M & C functions	Via MODBUS RTU RS485 electrical interface, see sep. document for details. NOTE! Mates with M8 male connector/Cable, use only shielded cables ≥CAT 5										
	MTBF	MTBF as per MIL-HDBK-217F Notice 2: Environmental Condition GF (Ground Fixed): >690000 hours, Environmental Condition AIC (Airborne, Inhabited, Cargo): >360000 hours, Quality level: Commercial, Temp used for MTBF calculation: +35 C Ambient										
	Dimensions	128 x 56 x 47 mm (with N-connector)										
	Weight	360 g										
	Temperature range	Storage and operating: -40 to +80°C, -40 to +176° F										
OPTIONS	Miscellaneous	Enclosed conductive O-ring, mounting screws (M4 x 10) 4 pcs (for LNB)										
	Options	Separate SMA connector for DC input Custom number of bands (2 to 8 bands) Custom LOs Custom input frequencies										

Ku LNB 12.70-15.50 GHz 1-4 Band Uplink Monitoring

Technical Drawing



Designed and
Manufactured



IN SWEDEN

SMW 

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INC

SMW authorized distributor

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