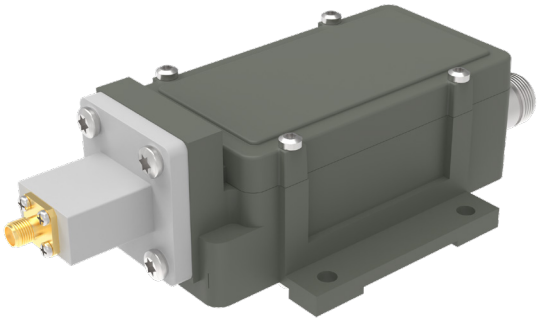
Ku BDC 12.70-15.50 GHz 1-4 Band Uplink Monitoring

Key features



- Auto LO ref Ext. 10 MHz, fallback to Internal ref
- Single Band or Multiband
- Two models, 0-15dB and 20-35 dB gain
- Input frequency range 12.70–15.50 GHz
- Excellent Phase Noise
- Alarm and Monitoring & Control as standard

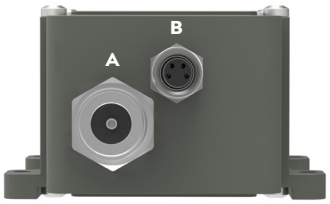
M&C monitoring and control interface

Description

The new professional 12.70–15.50 GHz BDC/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. Two models, one with 0–15 dB gain and one with 20–35 dB gain.

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 several devices in the same Modbus network for Alarm and Monitoring & Control functionality.

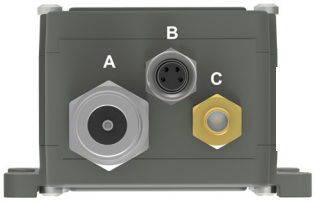
BDC connectors (standard)



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

BDC 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

Explore our full product range in this category

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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**	**13.50**
	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	14.50-15.50
	LO freq. GHz	11.75	11.80	12.00	12.50	12.55	12.80	13.00	13.05	13.10	13.50
	IF out MHz	950-2450	950-2450	950-2450	950-2450	950-2450	950-2450	950-2450	950-2450	950-2400	950-1950
	Multiband	Any combination of above LOs or customized, max 8 Sub-bands via Legacy mode									
	Bands switching	Legacy 13/15/18/24 V and 22 kHz tone, or via RS485 Modbus RTU									
INPUT	Input	SMA 50Ω via transistion									
	Input P1dB	+ 5 dBm (for gain 0 to 15 dB)					- 15 dBm (for gain 20 to 35 dB)				
	Input IP3	+ 15 dBm (for gain 0 to 15 dB)					0 dBm (for gain 20 to 35 dB)				
	Input VSWR	1.9:1 max. 12.70 - 15.50 GHz					1.9:1 max. 12.70 - 15.00 GHz, 2.6:1 max 15.00 - 15.50 GHz				
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. @ RF input									
	Gain	0 to 15 dB					20 to 35 dB				
	Flatness each band	±1.5 dB typ., ± 2 dB max.									
	Noise figure	30 dB typ. (for gain 0 to 15 dB)					10 dB typ. (for gain 20 to 35 dB)				
	Phase Noise	10 Hz -35dBc/Hz • 100 Hz -63dBc/Hz • 1 kHz -83dBc/Hz • 10 kHz -93dBc/Hz • 100kHz -96dBc/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									
	Spuriouses in band	W/o signal -70 dBm max., with -10 dBm output signal -65 dBc max.									
	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, all models except 13.10 and 13.50 (see above)									
	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 or F-type 75Ω									
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 (pullup 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 hour, Quality level: Commercial, Temperature used for MTBF calculation: +35°C Ambient									
	Dimensions	166 x 80 x 48 mm									
	Weight	425 g									
	Temperature range	Storage and operating: -40 to +80°C, -40 to +176° F									
OPTIONS	Options	Separate SMA connector for DC input WR 75 input (without SMA transition) Custom number of bands (2 to 8 bands) Custom LOs Custom input frequencies Custom gain (up to 55 dB)									

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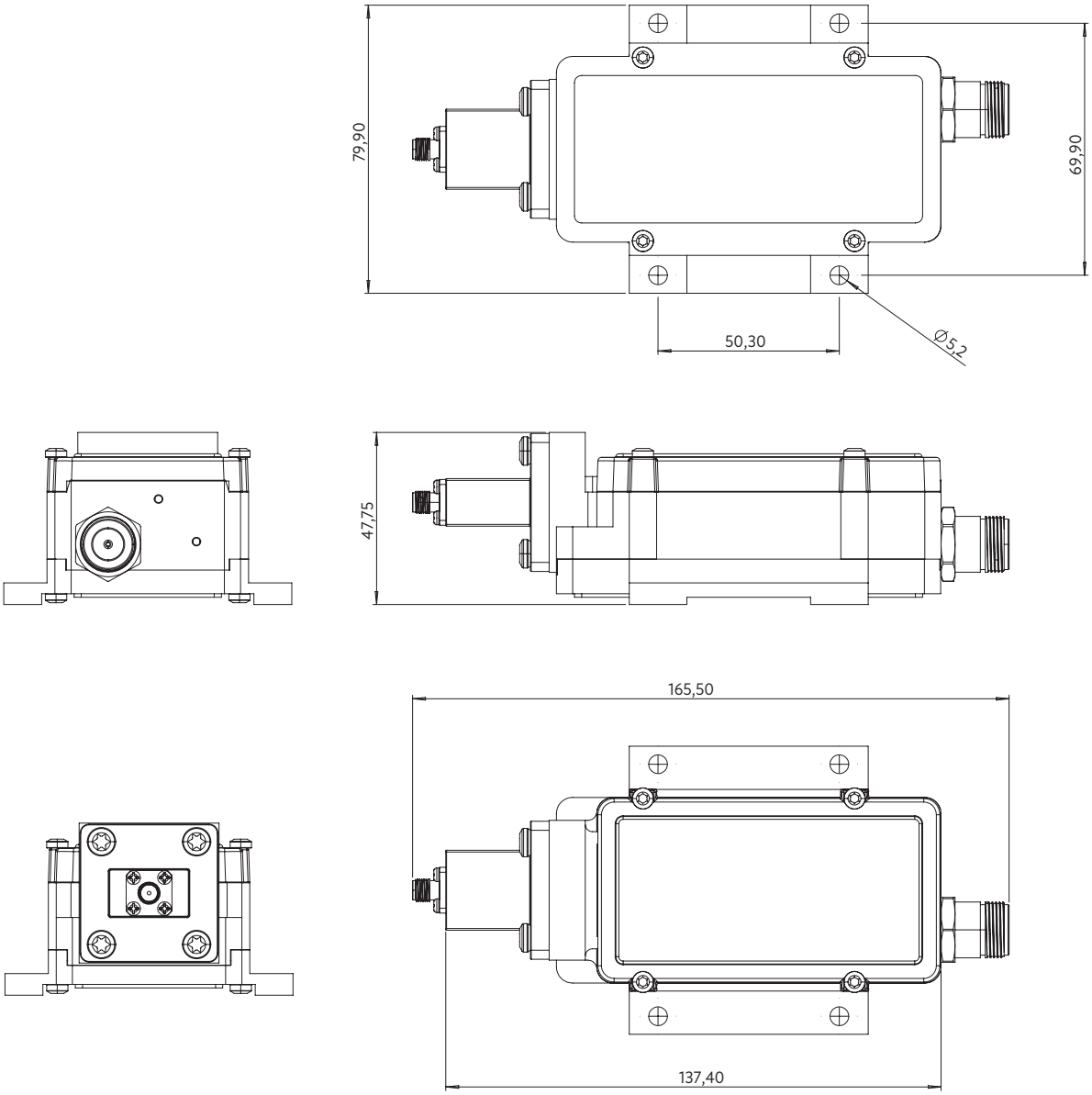
Technical Drawing



Designed and Manufactured IN SWEDEN

Professional Satcom Frequency Converters & Components. All products are fully CE and RoHS compliant and every device includes full documentation of performance tests and quality control. Please contact sales@smw.se to configure or customize to your needs. Visit smw.se or scan QR code to see our full product range and request a quick quote.

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