

Ka BDC 27.00-31.00 GHz 2-4 Band Uplink Monitoring

Key features



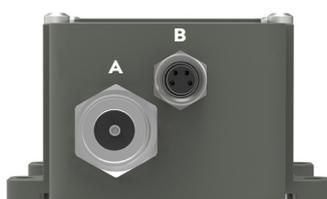
- 2, 3 or 4 switchable LO Bands
- External reference with fallback to Internal ref.
- Low power consumption
- Alarm and Monitoring & Control as standard
- Automatic temperature gain compensation
- Transition WR28 to K2.92



Description

The Swedish Microwave Ka-Band BDC is based on a well proven technology platform. The product is designed to monitor uplink transmissions.

BDC connectors standard



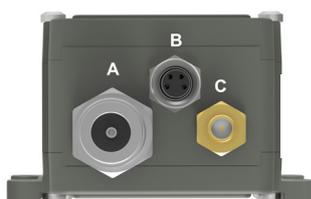
Connector A (standard)

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

BDC connector optional



Connector C (optional)

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



- 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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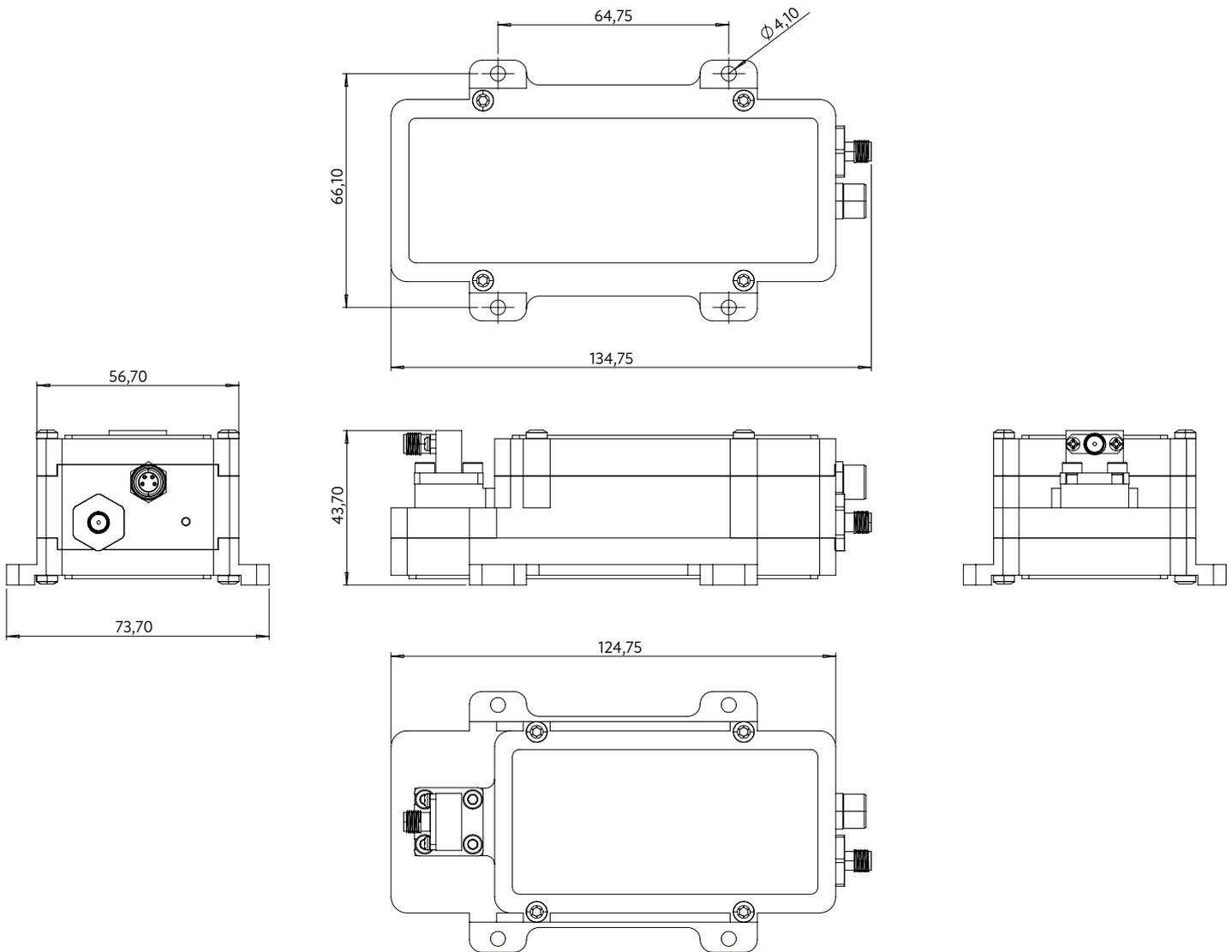
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Technical specifications

	Band 1	Band 2	Band 3	Band 4	
LO (GHz)	26.05	27.05	28.05	29.05	
INPUT	Input frequency (GHz)	27.00-28.50	28.00-29.50	29.00-30.50	30.00-31.00
	Band switching	2-4 Bands of above, 13/18V and 22 kHz tone or via M&C			
	Input	K.2.92 connector female			
	DC Input	+12 to +24 V nominal through RF output connector or separate connector (SMA). Power consumption 6W max.			
	Input VSWR	2.0:1 max.			
INTERNAL	LO reference	External 10 MHz ref. with fallback to Internal ± 30 ppm -40 to +71°C			
	Internal LO ref.	± 30 ppm max. -40 to +71°C			
	External 10 MHz ref.	Sine Wave, Level -10 dBm to +10 dBm. Supplied through output connector or optional separate SMA.			
	LO Leakage	-60 dBm max. @ RF input, -40 dBm max. @ IF output			
	Gain	40 dB typ., custom 0-40 dB via M&C			
	Gain Flatness	± 0.4 dB max. within 30 MHz, ± 2 dB max. over each band @ -40 to +71°C			
	Gain Stability	± 1 dB over 24 hours			
	Temp. compensated	Yes			
	Noise figure @ 23°C	4.0 dB / 438 K			
	Phase Noise	-34 dBc @ 10 Hz -64 dBc @ 100 Hz -84 dBc @ 1 kHz -92 dBc @ 10 kHz -96 dBc @ 100 kHz -113 dBc @ 1 MHz -123 dBc @ >10 MHz typ.			
Group delay	± 1 ns max.				
Image Rejection	37 dB min. (LO \geq 28.05 27 dB min.)				
OUTPUT	Output frequency (MHz)	950-2450	950-2450	950-2450	950-1950
	Output P1dB	+15 dBm min.			
	Output IP3	+25 dBm min.			
	Output VSWR	2.0:1 max.			
Output Connector	N female 50 Ω or SMA female 50 Ω				
GENERAL	Alarm	Sum alarm, set via M&C to alarm in any combination of: High/Low current, LO lock (External/Internal), signal power High/Low, supply voltage Low/High. Open collector 3.3 to 28 V, max. 200 mA (pull-up 10 k Ohm at host side), NO/NC, pin 1 in M8 connector.			
	Monitoring & Control	Via MODBUS RTU RS485 electrical interface, see document Monitoring and Control technical interface for details. NOTE! Mates with M8 male connector/Cable, use only shielded cables min CAT5.			
	Dimensions	144 x 74 x 44 mm (N connector)			
	Weight	430 g (N connector)			
	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			
	Temperature range	Storage and operating: -40 to +71°C, -40 to +160°F			
	Miscellaneous	Enclosed conductive O-ring, mounting screws, Allen head M3*0.5, 8mm long, 4 pcs			
OPTIONS	<ul style="list-style-type: none"> - Customized gain and LO - Separate SMA connector for External ref. and/or power input - Pressurizable 0.1 bar max. 				

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Technical drawing



Designed and
Manufactured



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

