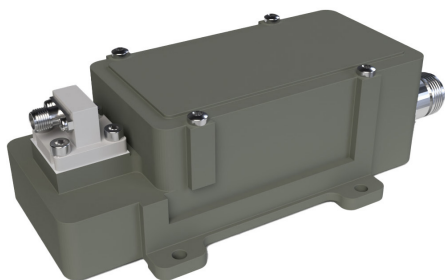


# Ka BDC 25.50-27.00 GHz Earth Observation

## Key features



- Frequency range 25.50-27.00 GHz
- Auto LO ref Ext. 10 MHz, fallback to Internal ref
- High P1dB and IP3
- Wide operating temperature range
- Alarm and Monitoring & Control via Modbus RTU RS485



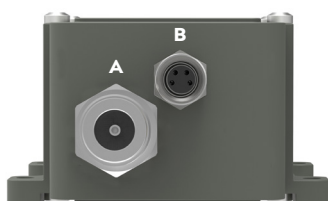
## Description

In the era of Earth Observation we have introduced this great BDC.

As a well known manufacturer of high quality, high performance, cost effective Professional Sat-com Block Downconverter products and related equipment, we wanted to apply our knowledge and experience to develop this product for remote sensing (SRS) covering 1500 MHz IF.

This BDC has Alarm and Monitoring & Control as standard via Modbus RTU RS 485 that allows surveillance from a PC.

**BDC connectors (standard)**



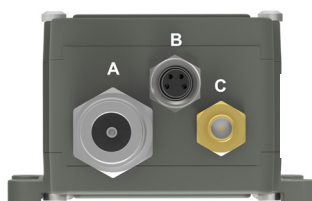
**Connector A (standard)**

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



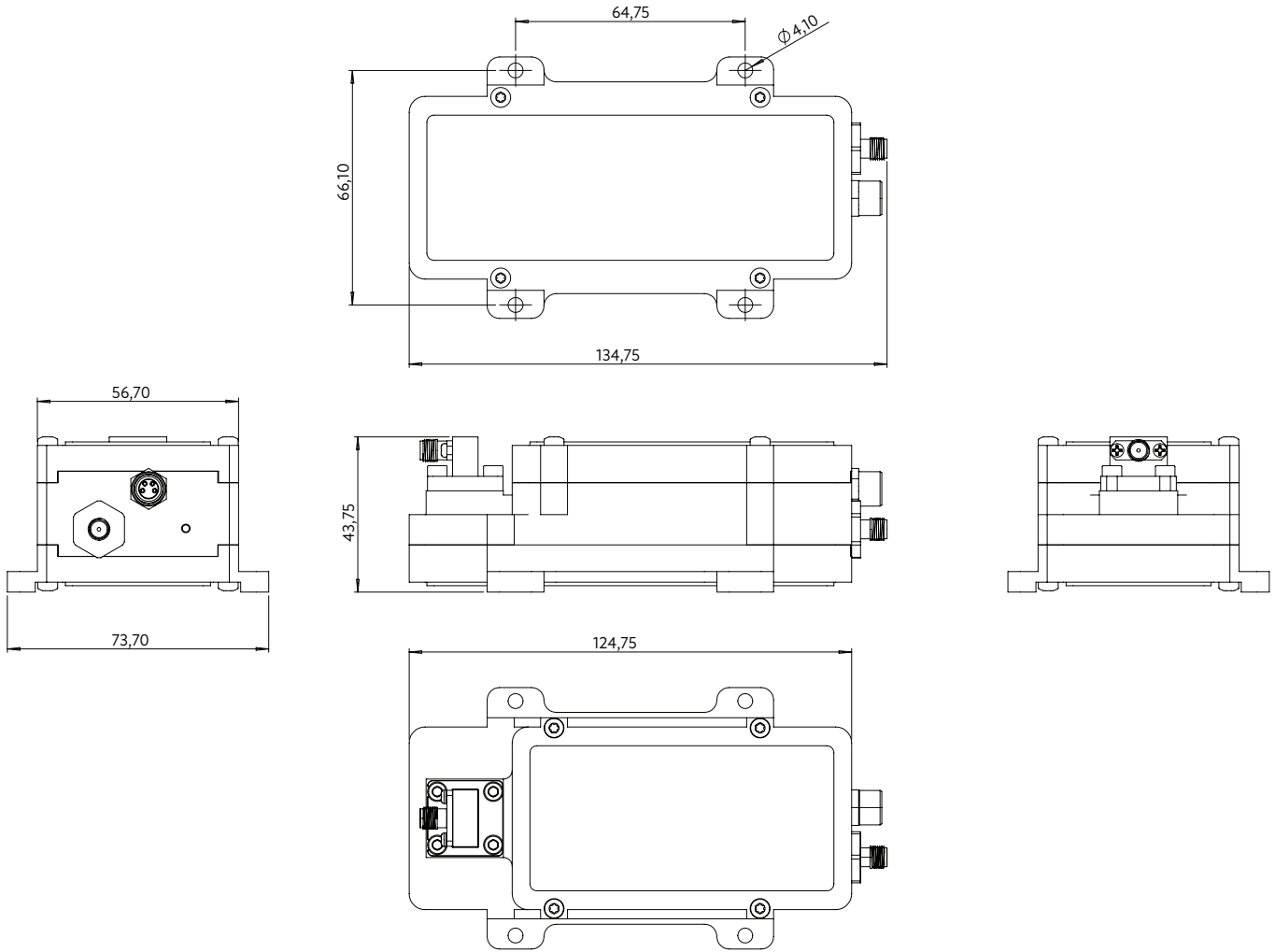
# Ka BDC 25.50-27.00 GHz Earth Observation

## Technical specifications

	Name	Input frequency (GHz)	LO frequency (GHz)	Output frequency (MHz)
INPUT	Input data	25.50 - 27.00	23.85 or 24.55	2400 MHz $\pm$ 750 MHz or 950-2450 MHz
	Input	2.92 / K female 50 $\Omega$		
	DC input	+12 to +26 V through RF output connector or separate connector (SMA). Power consumption 6.5W max.		
	Input VSWR	2.1:1 max.		
INTERNAL	LO reference	Auto LO ref. External 10 MHz ref / Internal $\pm$ 2.5 ppm		
	Internal LO ref.	$\pm$ 2.5 ppm max. -40 to +80°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	50 dB typ., Factory programmable 10 - 50 dB		
	Gain variation over 24h	$\pm$ 0.1 dB @ 23°C		
	Gain Flatness	$\pm$ 1.5 dB max.		
	Gain Stability	$\pm$ 1 dB over 24 hours		
	Noise figure	2.2 dB / 139 K typ. 2.5 dB / 226 K max. @ 23°C @ 50 dB gain		
	Phase Noise	-35 dBc @ 10 Hz -60 dBc @ 100 Hz -78 dBc @ 1 kHz -84 dBc @ 10 kHz -93 dBc @ 100 kHz -112 dBc @ 1 MHz -122 dB @ 10 MHz max.		
	Group delay	$\pm$ 1ns max.		
	Image Rejection	40 dB min.		
	OUTPUT	Output P1dB	+15 dBm min.	
Output IP3		+25 dBm min.		
Output VSWR		2.0:1 max.		
Output Connector		N female 50 $\Omega$ standard, Option: SMA female 50 $\Omega$		
GENERAL	Alarm	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 document <a href="#">Monitoring and Control technical interface</a> for details. NOTE! Mates with M8 male connector/Cable, use only shielded cables min CAT5.		
	Dimensions	135 x 74 x 44 mm		
	Weight	441 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 +80°C, -40 to +176°F		
OPTIONS	<ul style="list-style-type: none"> <li>- Customized gain</li> <li>- Separate SMA connector for Ext. 10 MHz LO ref. and / or DC input</li> </ul>			

# Ka BDC 25.50-27.00 GHz Earth Observation

## Technical Drawings



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](mailto:sales@smw.se) to configure or customize the unit to your needs. Visit [smw.se](http://smw.se) or scan QR code to see our full product range and request a quote.

