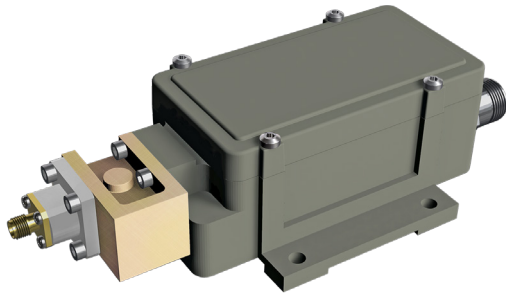


Ka BDC 17.30-22.30 GHz 1 Band

Key features



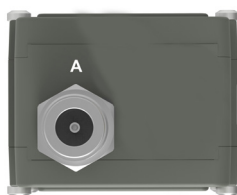
- Auto Switch between External or Internal reference
- High P1dB and IP3
- Excellent Phase noise meets all profiles of DVB-S2X.
- Customized LO as option
- Wide operating temperature range
- Alarm and Monitoring & Control as option



Description

The Ka-Band Singleband BDC is the choice when you need to receive only one sub-band within the frequency range of 17.30 to 22.30 GHz and want to combine with a LNA or already have a LNA. As an option the SMW M&C give you the possibility to cascade several units in a Modbus RTU RS485 network for Alarm and Monitoring & Control functionality.

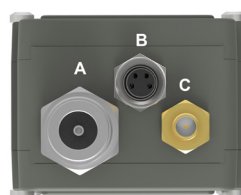
LNB connector (standard)



Connector A (standard)

Type: N female, (option F female or SMA female)
Functions: L-Band out, DC in, External 10 MHz in

LNB connectors (optional)



Connector B (optional)

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

Connector B (optional)



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

Connector C (optional)

Type: SMA female only
Functions: Ext. 10 MHz in and/or DC input



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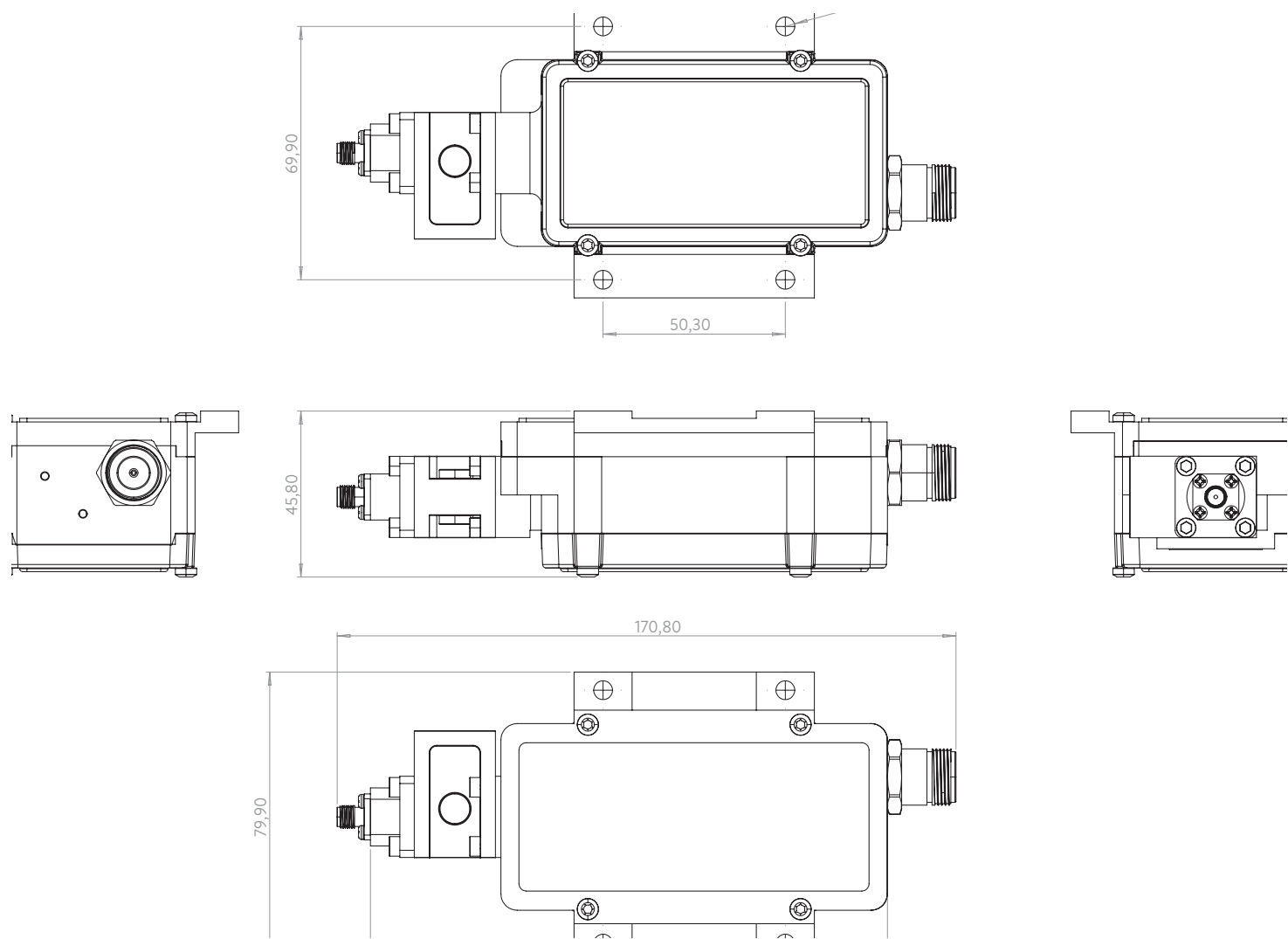
Ka BDC 17.30-22.30 GHz 1 Band

Technical specifications

	MODEL/LO	16.35	16.75	17.20	17.25	18.20	18.25	18.75	19.20	19.25	20.20	20.25
INPUT	Input freq. GHz	17.30-18.30	17.70-18.70	18.20-19.20	18.20-19.20	19.20-20.20	19.20-20.20	19.70-20.20	20.20-21.20	20.20-21.20	21.20-22.20	21.20-22.20
	IF MHz	950-1950	950-1950	1000-2000	950-1950	1000-2000	950-1950	950-1450	1000-2000	950-1950	1000-2000	950-1950
	Input	SMA female 50Ω										
	DC Input	+12 to +26 V through output connector or separate SMA connector (optional), power consumption 5W max.										
	Input VSWR	1.9:1 max. with Isolator (included)										
INTERNAL	LO ref.	Auto LO ref. External 10 MHz ref / Internal ±2.5 ppm -40 to +80°C										
	External LO ref.	Sine Wave, Sine wave, Level -10 to +10 dBm. Supplied through output connector.										
	LO Leakage	-60 dBm max. @ RF input, -40 dBm max. @ IF output										
	Gain	30 to 60 dB typ. in 5 dB steps, factory programmable										
	Gain variation over 24h	±0.1 dB @ 23°C										
	Flatness	±0.4 dB within 30 MHz, ±2 dB max. full band										
	Noise figure	2 to 4 dB, depending on gain										
	Phase Noise	-35 dBc @ 10 Hz -65 dBc @ 100 Hz -80 dBc @ 1 kHz -85 dBc @ 10 kHz -95 dBc @ 100 kHz -112 dBc @ >1 MHz typ.										
	Integrated Phase Noise Model 19.20/19.25	Single sideband phase noise integrated over the bandwidth from 10 Hz to 16 kHz relative to carrier center frequency: < 3.4° RMS (two-sided value <4.8° RMS).										
	Spurioues in band	W/o signal -75 dBm max. With -10 dBm output signal -65 dBc max.										
	Group delay	± 1ns max.										
OUTPUT	Image Rejection	30 dB min.										
	IF output	950-1950 MHz or 1000-2000 MHz, (950-2250 MHz optional)										
	Output P1dB	+ 5 dBm min. @ 30 to 40 dB gain, +15 dBm min. @ 45 to 60 dB gain										
	Output IP3	+15 dBm min. @ 30 to 40 dB gain, +25 dBm min. @ 45 to 60 dB gain										
	Output VSWR	1.7:1 typ.										
GENERAL	Output Connector	N-type 50Ω , SMA-type 50Ω or F-type 75Ω										
	Alarm functions (optional)	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 (optional)	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										
	Dimensions	171 x 80 x 46 mm (N-connectors), including isolator										
	Weight	418 g (N-connector) including isolator										
	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										
OPTIONS	Temperature range	Storage and operating: -40 to +80°C, -40 to 176° F										
	Options	Separate SMA connector for DC input or Ext. 10 MHz reference Alarm and Monitoring & Control Customized gain Customized LO Extended IF Input frequency from 17.20 GHz										

Ka BDC 17.30-22.30 GHz 1 Band

Technical Drawing



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.

