

Down Converter Barrel Gain Selectable

CODFM – Video, Audio Telemetry and IP Products

April 2016 Data Sheet



Available in two variants, DCBGSB (Broadcast), N-Type to BNC and DCBGS (Surveillance) TNC to TNC

Other Bands are available – Please contact DTC for more information.

Specification:

Input

RF Input from ANT	50 Ohm
DCBGS	TNC Female
DCBGSB	N-Type Female

Output

UHF Output to RX	75 Ohm (150~850MHz) DCBGS TNC Female
DCBGSB	BNC Female

RF

Frequency Bands	1.0 to 8.9GHz
Max. RF Input Power	35mW (+15dBm) No damage.
Max. RF Input Power	(P1dB) 100uW (-10dBm) Normal operation.

Noise Figure (applies to all)

DCBGS- XXXXXX	3.5dB
DCBGSB- XXXXXX	3.5dB
DCEBGSB- XXXXXX	3.5dB (Extended Barrel)

Gain

Typical	10dB Low Gain 30dB High Gain
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All DTC receivers operating at frequencies above 850MHz require down converters. DTC barrel down converters are connected directly under the antenna and draw power remotely from the receiver. Down converters are supplied as selectable high/low gain, which dictates how much cable they can drive (typically 10-15m for the low gain and 50-100m for high gain). For precise cable run length calculations contact DTC. DTC down converters offer excellent low noise performance, are designed for permanent outdoor deployment and mounting kits are also available.

Down Converter Barrel Gain Selectable (DCBGS)

The DTC selectable barrel down converter has optimum performance in all situations. It is easy to mount with magnetic, cable-tie and screw-hole fixings for maximum flexibility. LED indicator for gain (high/low/off). Powered from the receiver via co-axial cable (BNC/TNC) and connects to receiver via standard 75Ω cable.

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RF LO

DCBGS-100150	1800MHz, High side LO
DCBGS-160202	2350MHz, High side LO
DCBGS-175238	2600MHz, High side LO
DCBGS-203255	1720MHz, Low side LO
DCBGS-310360	2750MHz, Low side LO
DCBGS-440500	4150MHz, Low side LO
DCBGS-550600	5200MHz, Low side LO
DCBGS-640700	6150MHz, Low side LO
DCBGS-700750	6650MHz, Low side LO
DCBGS-810860	7750MHz, Low side LO
DCBGS-840890	8050MHz, Low side LO

DCBGSB-100150	1800MHz, High side LO
DCBGSB-160202	2350MHz, High side LO
DCBGSB-203255	1720MHz, Low side LO
DCBGSB-310360	2750MHz, Low side LO
DCBGSB-440500	4150MHz, Low side LO
DCBGSB-550600	5200MHz, Low side LO
DCBGSB-640700	6150MHz, Low side LO
DCBGSB-700750	6650MHz, Low side LO
DCBGSB-810860	7750MHz, Low side LO
DCBGSB-840890	8050MHz, Low side LO

DCEBGSB-198270	1850MHz, Low side LO
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Physical

Dimension	105mm x 48mm approx.
Weight Base Unit	225g

Power

DC Power Input Max.	DC from Receiver 6V nominal. 14.5V
Power Consumption	2.2 to 3W depending on gain mode

Controls/Indicators

Gain Switch (Std/High)	Rotary 4 position switching mechanism in base
	<ol style="list-style-type: none"> 1. Low Gain, LED Green 2. Low Gain, LED off 3. High Gain, LED Red 4. High Gain, LED off

Cable Lengths (between Down-converter and Receiver)

The maximum length of cable depends on the RX frequency, as this dictates the down-converted UHF frequency which the cable has to carry. The theoretical cable lengths in the chart below show best and worst case, dependant on the frequency used:

Cable	Max Distance (typical)
RG59	48-82m
RG6	82-133m
LMR400-75	127-233m
LDF4-75	227-387m

Products are available to security users in licensed frequency bands. These products are not approved for use by unlicensed users. Commercial products are available if used in appropriate licensed frequency bands.

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