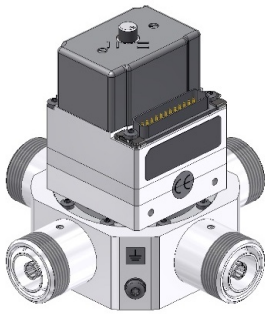
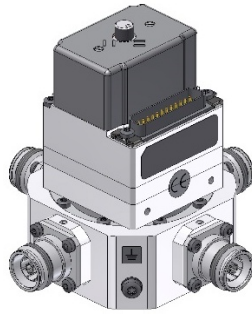


Coaxial Two Way Switch (DPDT) with low Intermodulation || BN 754081, 754082



BN 754081



BN 754082

Product manual: M36326

**Radio frequency characteristics**

Interface type (4 connections)	BN 754081: 7-16-f (50 Ω) BN 754082: 4.3-10-f (50 Ω)	
Characteristic impedance	50 Ω	
Frequency range	330 MHz to 690 MHz	690 MHz to 2,69 GHz
Return loss, min.	15 dB	20 dB
Isolation, min.	60 dB	55 dB
Insertion loss, max.	0.2 dB	0.1 dB
Average power capability * at ambient temperature -10 to +45°C	300 W supports hot switching	
Peak voltage capability *	1.0 kV	
Intermodulation (IM3) at 2x 20 W, max. / typ.	-165 dBc / -168 dBc	

**Electrical and mechanical data**

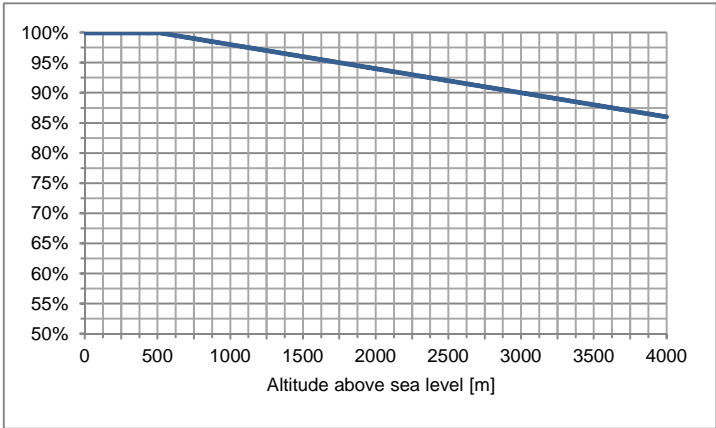
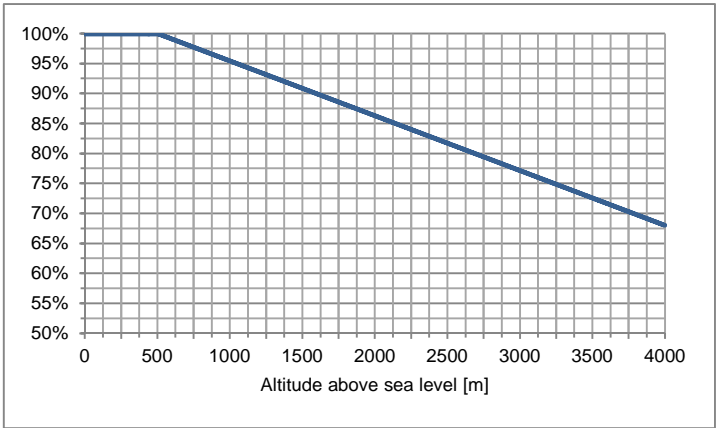
Switch type	Two way switch, DPDT	
Actuator type	Solenoid drive, latching, self cutoff	
Connector J1 ** for operating voltage, control, interlock contacts and signaling	25 pole connector according to DIN 41652 / IEC 807-2	
Operating	Operating voltage	21.6 to 28 V DC
	Operating current, typ. ***	1.1 A
	Stand by current, max. ***	25 mA
	Nominal fuse	The switch must be externally fused by time-delay, 2 A
Control	Control voltage	U In LOW = 0 to 4 V DC / -0.7 mA ( 0 - active ) U In HIGH = 8 to 32 V DC
	Nominal fuse	The circuit must be externally limited to 0.5 A
Interlock contacts Signal contacts	Maximum ratings	SELV circuits according to IEC EN 60950-1, 42.4 V ACpk / 60 V DC / 0.5 A
	Nominal fuse	The circuit must be externally limited to 0.5 A

Template TD-00002P

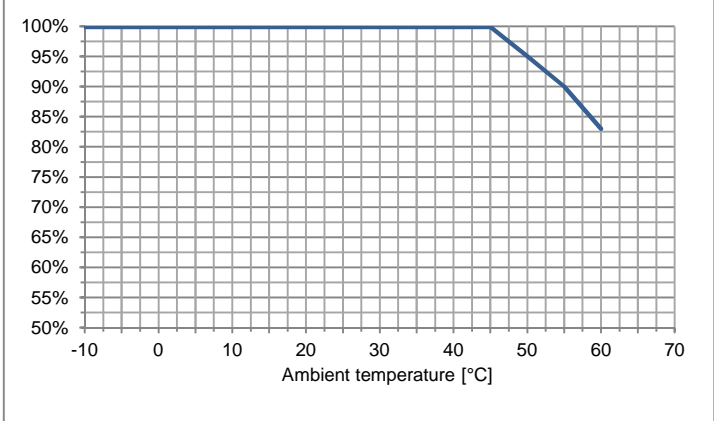
Coaxial Two Way Switch (DPDT) with low Intermodulation || BN 754081, 754082

Switching time, typ.***	100 ms
Command hold time, min.	100 ms (during this time, the voltage at control input must not change)
Switching frequency, max.	30 operations per minute
Life, min.	500,000 operations
Weight, approx.	1.75 kg

**Environmental conditions**

<b>Operational conditions</b>	ETSI EN 300 019-1-3 V2.3.2 (2009-1) class 3.1 N																				
Ambient temperature ****	-10 to +60°C																				
Condensation	Not allowed																				
Relative humidity, max.	95%																				
Derating of input power with increasing altitude	<p>The maximum input power can be applied up to 500 m or 1600 ft above sea level unless noted otherwise in the data sheet. Above this height the maximum input power must be reduced as shown in the diagram.</p>  <table border="1"> <caption>Input Power Derating Data</caption> <thead> <tr> <th>Altitude [m]</th> <th>Power (%)</th> </tr> </thead> <tbody> <tr><td>0</td><td>100</td></tr> <tr><td>500</td><td>100</td></tr> <tr><td>1000</td><td>97.5</td></tr> <tr><td>1500</td><td>95</td></tr> <tr><td>2000</td><td>92.5</td></tr> <tr><td>2500</td><td>90</td></tr> <tr><td>3000</td><td>87.5</td></tr> <tr><td>3500</td><td>85</td></tr> <tr><td>4000</td><td>82.5</td></tr> </tbody> </table>	Altitude [m]	Power (%)	0	100	500	100	1000	97.5	1500	95	2000	92.5	2500	90	3000	87.5	3500	85	4000	82.5
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Derating of voltage with increasing altitude	<p>The maximum voltage can be applied up to 500 m or 1600 ft above sea level unless noted otherwise in the data sheet. Above this height the maximum input power must be reduced as shown in the diagram.</p>  <table border="1"> <caption>Voltage Derating Data</caption> <thead> <tr> <th>Altitude [m]</th> <th>Voltage (%)</th> </tr> </thead> <tbody> <tr><td>0</td><td>100</td></tr> <tr><td>500</td><td>100</td></tr> <tr><td>1000</td><td>92.5</td></tr> <tr><td>1500</td><td>85</td></tr> <tr><td>2000</td><td>77.5</td></tr> <tr><td>2500</td><td>70</td></tr> <tr><td>3000</td><td>62.5</td></tr> <tr><td>3500</td><td>55</td></tr> <tr><td>4000</td><td>47.5</td></tr> </tbody> </table>	Altitude [m]	Voltage (%)	0	100	500	100	1000	92.5	1500	85	2000	77.5	2500	70	3000	62.5	3500	55	4000	47.5
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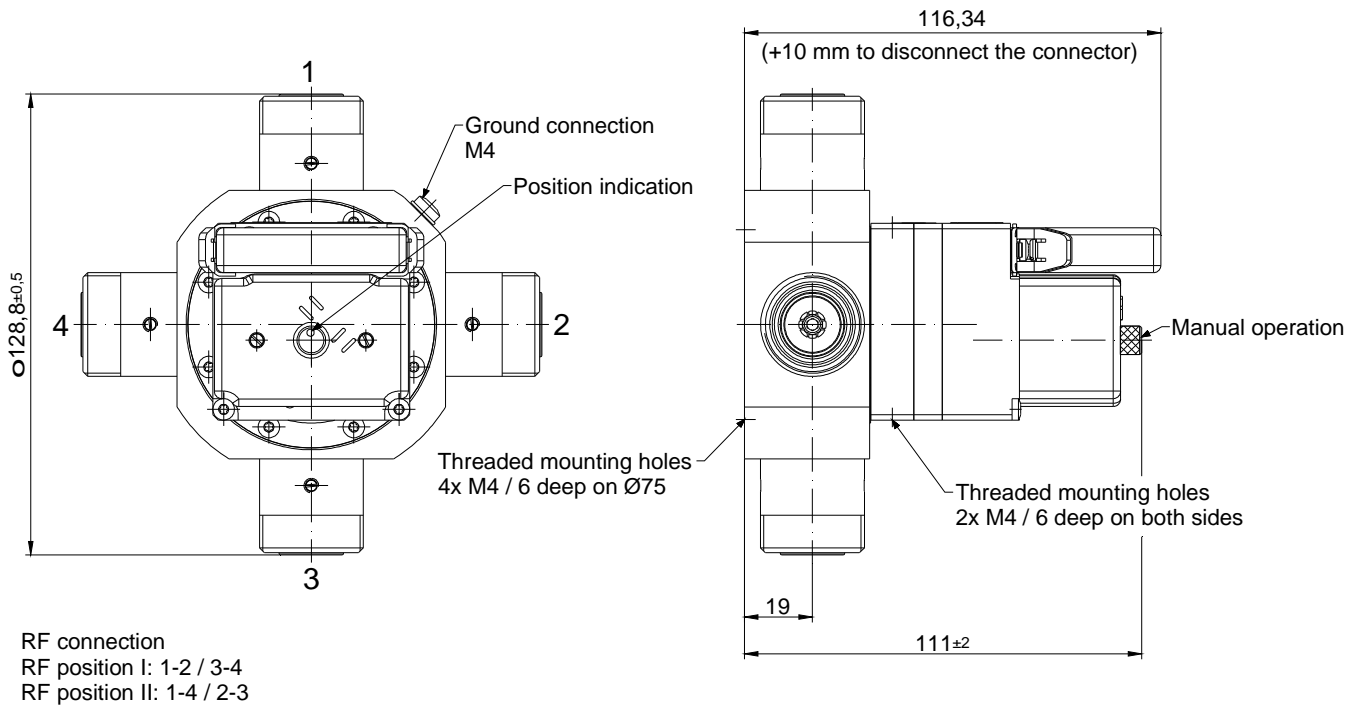
Coaxial Two Way Switch (DPDT) with low Intermodulation || BN 754081, 754082

<p>Derating of input power with increasing ambient temperature</p>	<p>The maximum input power can be applied up to +45°C ambient temperature unless noted otherwise in the data sheet. Above this ambient temperature the maximum input power must be reduced as shown in the diagram.</p>  <table border="1"> <caption>Derating of input power data</caption> <thead> <tr> <th>Ambient temperature [°C]</th> <th>Input Power (%)</th> </tr> </thead> <tbody> <tr><td>-10</td><td>100</td></tr> <tr><td>0</td><td>100</td></tr> <tr><td>10</td><td>100</td></tr> <tr><td>20</td><td>100</td></tr> <tr><td>30</td><td>100</td></tr> <tr><td>40</td><td>100</td></tr> <tr><td>45</td><td>100</td></tr> <tr><td>50</td><td>95</td></tr> <tr><td>55</td><td>90</td></tr> <tr><td>60</td><td>83</td></tr> </tbody> </table>	Ambient temperature [°C]	Input Power (%)	-10	100	0	100	10	100	20	100	30	100	40	100	45	100	50	95	55	90	60	83
Ambient temperature [°C]	Input Power (%)																						
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0	100																						
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30	100																						
40	100																						
45	100																						
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55	90																						
60	83																						
<p>Max. altitude above sea level</p>	<p>4,000 m or 13,120 ft according to IEC EN 60664-1</p>																						
<p>Protection class</p>	<p>III according to IEC EN 61140</p>																						
<p>IP protection level</p>	<p>IP40 according to IEC EN 60529 (all interfaces equipped with appropriate gaskets)</p>																						
<p>Installation position</p>	<p>Any</p>																						
<p><b>Transport conditions</b></p>	<p>ETSI EN 300 019-1-2 V2.1.4 (2003-04) class 2.2</p>																						
<p>Ambient temperature</p>	<p>-25 to +70°C</p>																						
<p>Rain, condensation, icing</p>	<p>Not allowed</p>																						
<p><b>Storage conditions</b></p>	<p>ETSI EN 300 019-1-1 V2.1.4 (2003-04) class 1.2</p>																						
<p>Ambient temperature</p>	<p>-10 to +60°C</p>																						
<p>Rain, condensation, icing</p>	<p>Not allowed</p>																						

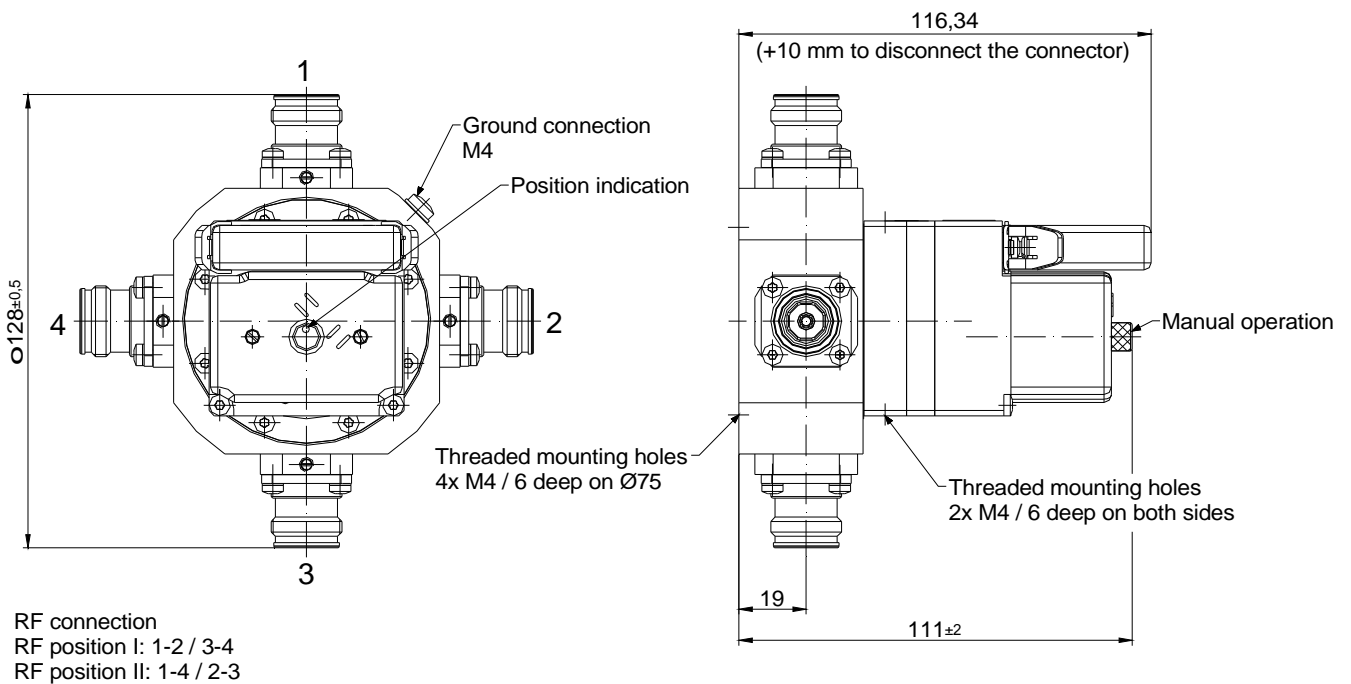
- \* *Standard conditions:*  
*Dielectric: Dry air under standard pressure at sea level (p = 1013 hPa)*  
*Load VSWR, max. 1.0 (no standing wave)*  
*No modulation, sinusoidal carrier only*
- \*\* *Suitable mating connector included*
- \*\*\* *At room temperature and nominal voltage 24 V DC*
- \*\*\*\* *Extended temperature range on request*

Coaxial Two Way Switch (DPDT) with low Intermodulation || BN 754081, 754082

**Outline (all dimensions in millimeters)**  
**BN 754081:**



**BN 754082:**



# Coaxial Two Way Switch (DPDT) with low Intermodulation || BN 754081, 754082

## Circuit diagram (B24140-CD, Issue C)

