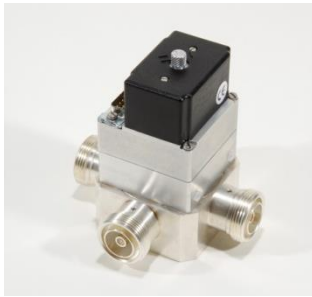


Coaxial Two Way Switch (DPDT) || BN 512690C0062



Fully compatible to BN 512690

Product manual: M36311

Radio frequency characteristics

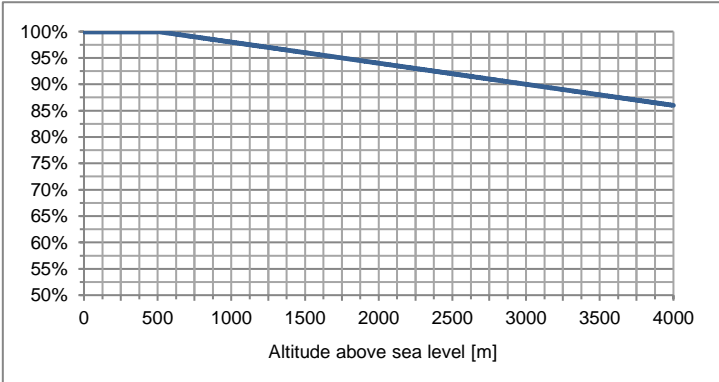
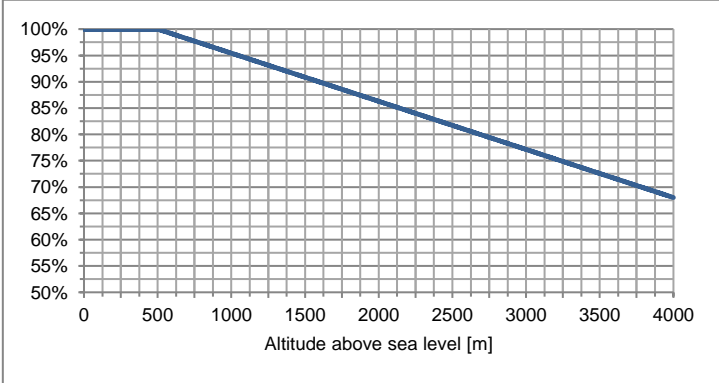
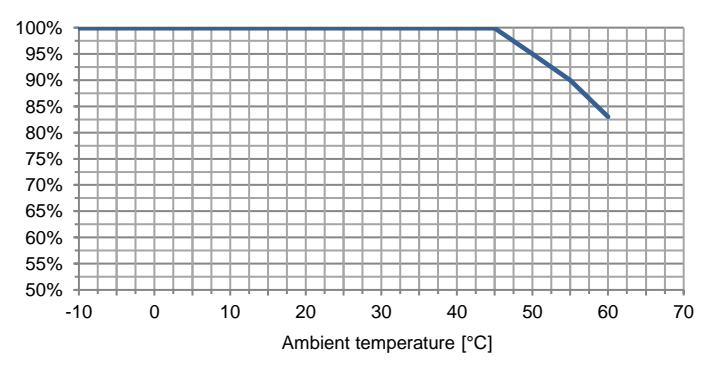
Interface type (4 connections)	7-16-f (50 Ω)					
Characteristic impedance	50 Ω					
Frequency range	0 to 1 GHz	1 to 2 GHz	2 to 3 GHz	3 to 4 GHz	4 to 5 GHz	5 to 6.5 GHz
VSWR, max.	1.04	1.08	1.08	1.12	1.20	typ. 1.20
Isolation, min.	80 dB	80 dB	80 dB	60 dB	50 dB	typ. 40 dB
Insertion loss, max.	0.05 dB	0.05 dB	0.10 dB	0.10 dB	0.10 dB	0.20 dB
Average power capability * at ambient temperature -10 to +45°C	2.0 kW	1.4 kW	1.1 kW	1.0 kW	0.9 kW	0.75 kW
Peak voltage capability *	4.0 kV					

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	Lead time typ.*** (only interlock contacts)	5 ms (the interlock contacts open 5 ms before and close 2 ms after switching of the RF 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
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.	1.2 kg	

Coaxial Two Way Switch (DPDT) || BN 512690C0062

Environmental conditions

<p>Operational conditions</p>	<p>ETSI EN 300 019-1-3 V2.3.2 (2009-1) class 3.1 N</p>																						
<p>Ambient temperature ****</p>	<p>-10 to +60°C</p>																						
<p>Condensation</p>	<p>Not allowed</p>																						
<p>Relative humidity, max.</p>	<p>95%</p>																						
<p>Derating of input power with increasing altitude</p>	<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>Derating of input power with increasing altitude</caption> <thead> <tr> <th>Altitude above sea level [m]</th> <th>Percentage</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>98%</td></tr> <tr><td>1500</td><td>96%</td></tr> <tr><td>2000</td><td>94%</td></tr> <tr><td>2500</td><td>92%</td></tr> <tr><td>3000</td><td>90%</td></tr> <tr><td>3500</td><td>88%</td></tr> <tr><td>4000</td><td>85%</td></tr> </tbody> </table>	Altitude above sea level [m]	Percentage	0	100%	500	100%	1000	98%	1500	96%	2000	94%	2500	92%	3000	90%	3500	88%	4000	85%		
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<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 with increasing ambient temperature</caption> <thead> <tr> <th>Ambient temperature [°C]</th> <th>Percentage</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>82%</td></tr> </tbody> </table>	Ambient temperature [°C]	Percentage	-10	100%	0	100%	10	100%	20	100%	30	100%	40	100%	45	100%	50	95%	55	90%	60	82%
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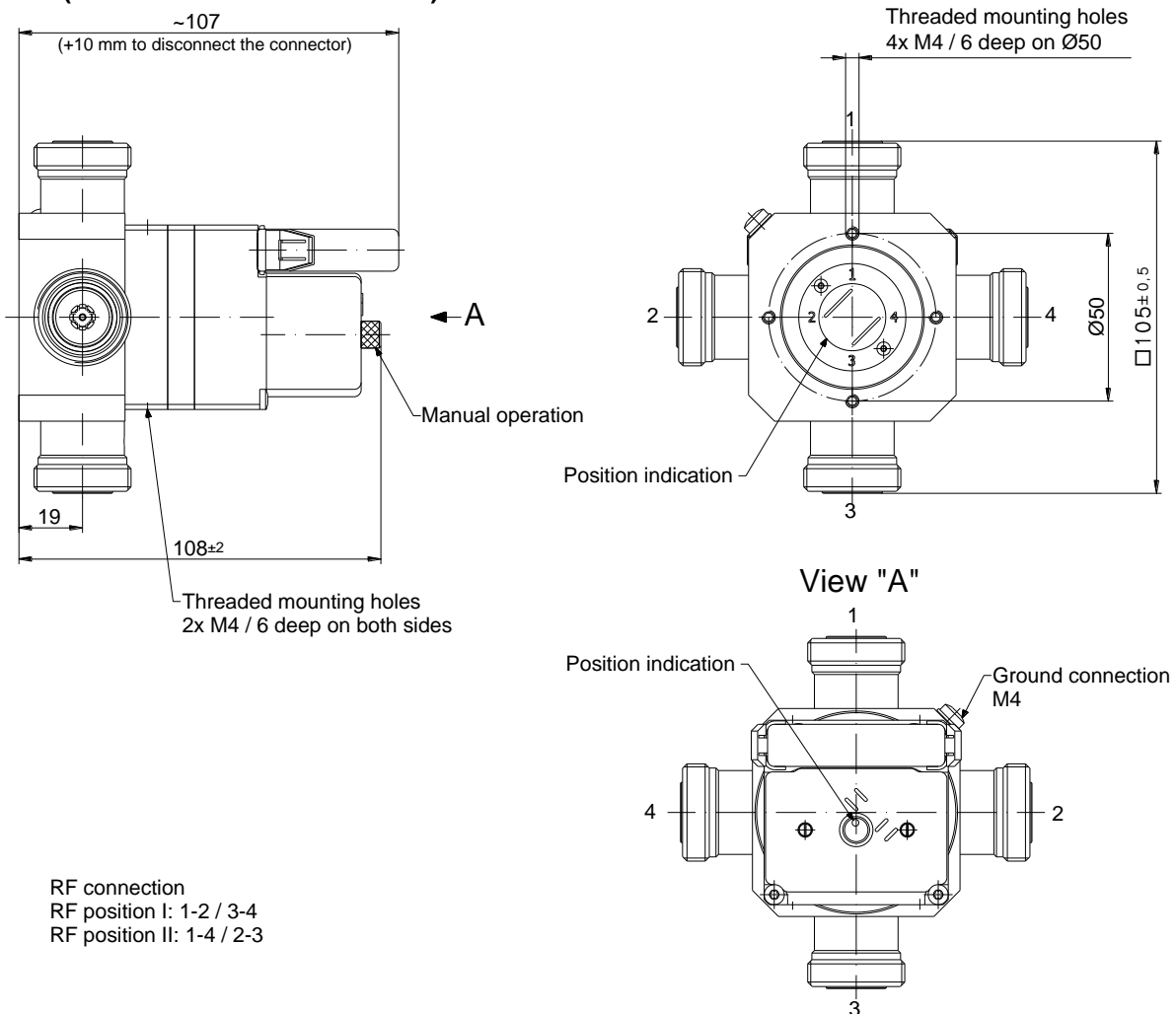
Template TD-00002P

Coaxial Two Way Switch (DPDT) || BN 512690C0062

Max. altitude above sea level	4,000 m or 13,120 ft according to IEC EN 60664-1
Protection class	III according to IEC EN 61140
IP protection level	IP40 according to IEC EN 60529 (all interfaces equipped with appropriate gaskets)
Installation position	Any
Transport conditions	ETSI EN 300 019-1-2 V2.1.4 (2003-04) class 2.2
Ambient temperature	-25 to +70°C
Rain, condensation, icing	Not allowed
Storage conditions	ETSI EN 300 019-1-1 V2.1.4 (2003-04) class 1.2
Ambient temperature	-10 to +60°C
Rain, condensation, icing	Not allowed

- * *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*

Outline (all dimensions in millimeters)



RF connection
 RF position I: 1-2 / 3-4
 RF position II: 1-4 / 2-3

Coaxial Two Way Switch (DPDT) || BN 512690C0062

Circuit diagram (B24140-CD, Issue D)

Vorlaufzeit / Lead time:
 Schalter-Typ N: t = 4 ms typ.
 Switch Type N: t = 4 ms typ.
 Schalter-Typ 7-16: t = 5 ms typ.
 Switch type 7-16: t = 5 ms typ.

Nachlaufzeit / Follow-up time:
 Schalter-Typ N: t = 1,5 ms typ.
 Switch Type N: t = 1,5 ms typ.
 Schalter-Typ 7-16: t = 2 ms typ.
 Switch type 7-16: t = 2 ms typ.

Bezeichnung:
 Title: **circuit diagram**
 operating voltage 21.6 to 28 V DC

Zeichnungs-Nr.:
 Drawing-No.: **B24140-CD**

Format:
 Format: **A3**

Skala:
 Scale: **1:1**

25-pol. Stecker (DIN 41652)
 Maximal zulässige Werte 42,4 V AC_{eff} / 60 V DC / 0,5 A
 25 pole connector (DIN 41652)
 Maximum ratings 42,4 V AC_{eff} / 60 V DC / 0,5 A

U_{inL} = 0-4 V DC
J_{inL} ≤ -0,7 mA
U_{inH} = 8-32 V DC
J_{inH} = 0 mA
U_B = 21,6 to 28 V DC / 1,1 A typ.

Schalter dargestellt in HF-Position I
 Switch shown in RF position I

Elektrische Steuerung
 Electrical control

Elektrische Steuerung
 Electrical control

Signalkontakte
 Signal contacts

Trägersicherheitskontakte
 Interlock contacts

HF-Pos. I
 RF pos. I

HF-Pos. II
 RF pos. II

Variante 1 / Version 1
 Direkt-Ansteuerung
 Direct activation

Variante 2 / Version 2
 Transistor-Ansteuerung
 Activation by transistor

Attention!
 Der Schalter ist extern
 mit 2 AT abzuschern.
 time-delay 2 A.

Es darf nicht gleichzeitig
 HF-Pos. I und HF-Pos. II
 angesteuert werden, da
 dies zur Beschädigung
 des Schalters führt.

1) Bei Verwendung als Umschalter muss
 ein Anschluss abgeschlossen werden.
 1) if used as a change over switch (SPDT)
 one port must be terminated.

***) Werte für beide Umschaltrichtungen, bei Raumtemperatur und**
 Nennspannung 24 V DC
 *) Values for both switch over directions, at room temperature and
 nominal voltage 24 V DC

Position, wenn Mikroschalter nicht gedrückt ist
 Position if microswitch is not pushed

NC normally closed
C normally open
NO normally opened

DIN ISO 2768mH
 General tolerances: DIN ISO 2768mH

Erstellt: 02.12.2014
Geprüft: 05.08.2015

Name: Hupfauer
Datum: 05.08.2015

Ad.-Nr.: D 01-14457/03.08.2015
Issue-No.: C 01-13375/03.02.2015
Revision: B1 Text, bez. 15.12.2014
 A1 Startindex 02.12.2014