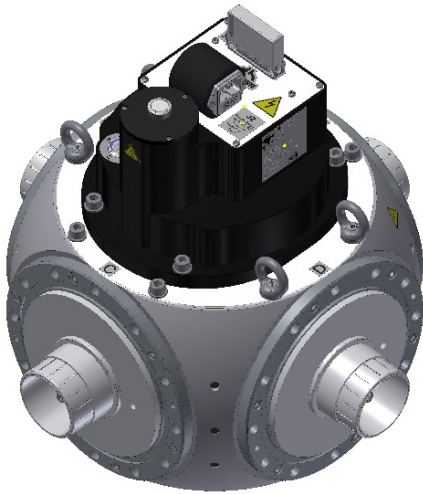


Coaxial Two Way Switch (DPDT) || BN 941989C0110



Product manual: M36025

Radio frequency characteristics

Interface type (4 connections)	6 1/8" EIA according to EN 122150 (threaded flanges)			
Characteristic impedance	50 Ω			
Frequency range	1 MHz	10 MHz	100 to 230 MHz	230 to 800 MHz
VSWR, max.	1.06	1.06	1.06	1.08
Isolation, min.	75 dB	75 dB	75 dB	70 dB
Insertion loss, max.	0.03 dB			
Average power capability * at ambient temperature -10 to +45°C	1000 kW	350 kW	110 kW	60 kW
Peak voltage capability *	18.6 kV			

Electrical and mechanical data

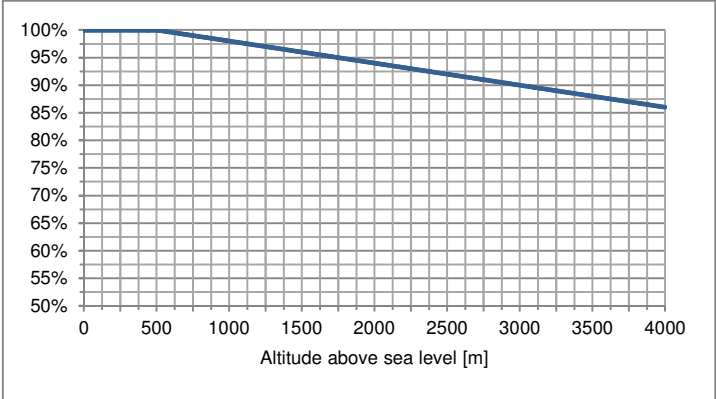
Switch type	Two way switch, DPDT	
Actuator type	Motor drive, latching, self cutoff	
Connector J2 ** for mains connection	IEC appliance inlet C14 according to IEC 60320-1	
Mains connection	L, N, PE, TN-System	
Operating	Operating voltage	95 to 140 V AC 50/60 Hz
	Current, typ. ***	1.5 A
	Nominal fuse	F1 / F2: 2 A T
Connector J1 ** for control, interlock contacts and signaling	25 pole connector according to DIN 41652 / IEC 807-2	
Control	Control voltage	SELV circuits according to IEC EN 60950-1, 8 to 31 V DC
	Current, typ.	12 mA at control voltage 24 V DC

Template TD-00002P

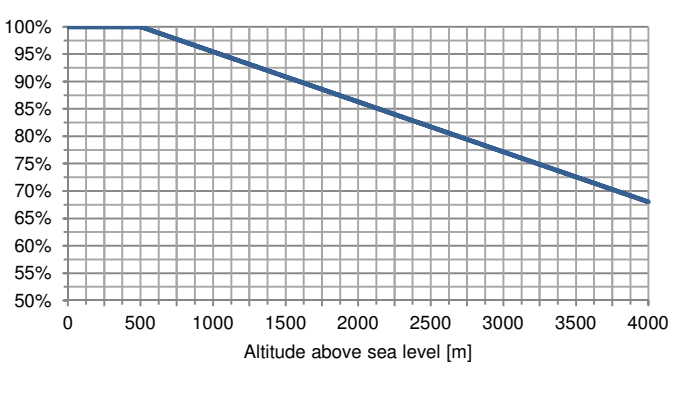
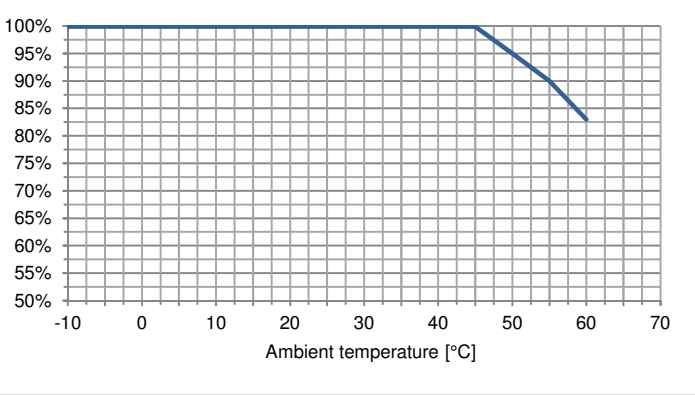
Coaxial Two Way Switch (DPDT) || BN 941989C0110

	Nominal fuse	The circuit must be externally fused with 0.5 A
Signal contacts Interlock contacts	Lead time typ.***	200 ms (the interlock/signal contacts open 200 ms before and close 200 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.***		1.2 s
Command hold time, min.		1.2 s (during this time, the voltage at control input must not change)
Switching frequency, max.		3 cycles per minute, max. 30 cycles per hour (6 operations per minute, max. 60 operations per hour)
Life, min.		250,000 cycles (500,000 operations)
Weight, approx.		38 kg

Environmental conditions

Operational conditions	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>Derating of input power with increasing altitude</caption> <thead> <tr> <th>Altitude above sea level [m]</th> <th>Input 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>98%</td></tr> <tr><td>1500</td><td>95%</td></tr> <tr><td>2000</td><td>92%</td></tr> <tr><td>2500</td><td>89%</td></tr> <tr><td>3000</td><td>86%</td></tr> <tr><td>3500</td><td>84%</td></tr> <tr><td>4000</td><td>82%</td></tr> </tbody> </table>	Altitude above sea level [m]	Input Power (%)	0	100%	500	100%	1000	98%	1500	95%	2000	92%	2500	89%	3000	86%	3500	84%	4000	82%
Altitude above sea level [m]	Input Power (%)																				
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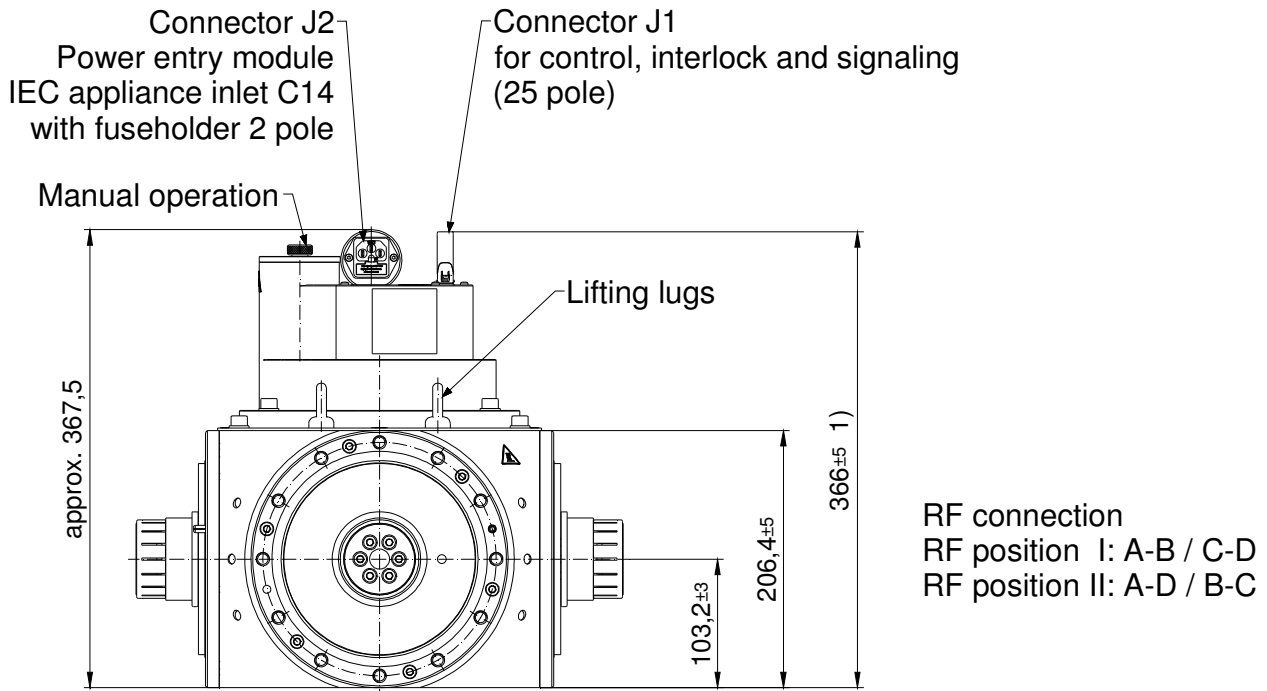
Coaxial Two Way Switch (DPDT) || BN 941989C0110

<p>Derating of voltage with increasing altitude</p>	<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 voltage must be reduced as shown in the diagram.</p>  <table border="1"> <caption>Voltage Derating vs Altitude</caption> <thead> <tr> <th>Altitude above sea level [m]</th> <th>Voltage Derating (%)</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>95</td></tr> <tr><td>1500</td><td>90</td></tr> <tr><td>2000</td><td>85</td></tr> <tr><td>2500</td><td>80</td></tr> <tr><td>3000</td><td>75</td></tr> <tr><td>3500</td><td>70</td></tr> <tr><td>4000</td><td>68</td></tr> </tbody> </table>	Altitude above sea level [m]	Voltage Derating (%)	0	100	500	100	1000	95	1500	90	2000	85	2500	80	3000	75	3500	70	4000	68		
Altitude above sea level [m]	Voltage Derating (%)																						
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3000	75																						
3500	70																						
4000	68																						
<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>Input Power Derating vs Ambient Temperature</caption> <thead> <tr> <th>Ambient temperature [°C]</th> <th>Input Power Derating (%)</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>90</td></tr> <tr><td>55</td><td>85</td></tr> <tr><td>60</td><td>82</td></tr> </tbody> </table>	Ambient temperature [°C]	Input Power Derating (%)	-10	100	0	100	10	100	20	100	30	100	40	100	45	100	50	90	55	85	60	82
Ambient temperature [°C]	Input Power Derating (%)																						
-10	100																						
0	100																						
10	100																						
20	100																						
30	100																						
40	100																						
45	100																						
50	90																						
55	85																						
60	82																						
<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>I 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>Transport conditions</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>Storage conditions</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>																						

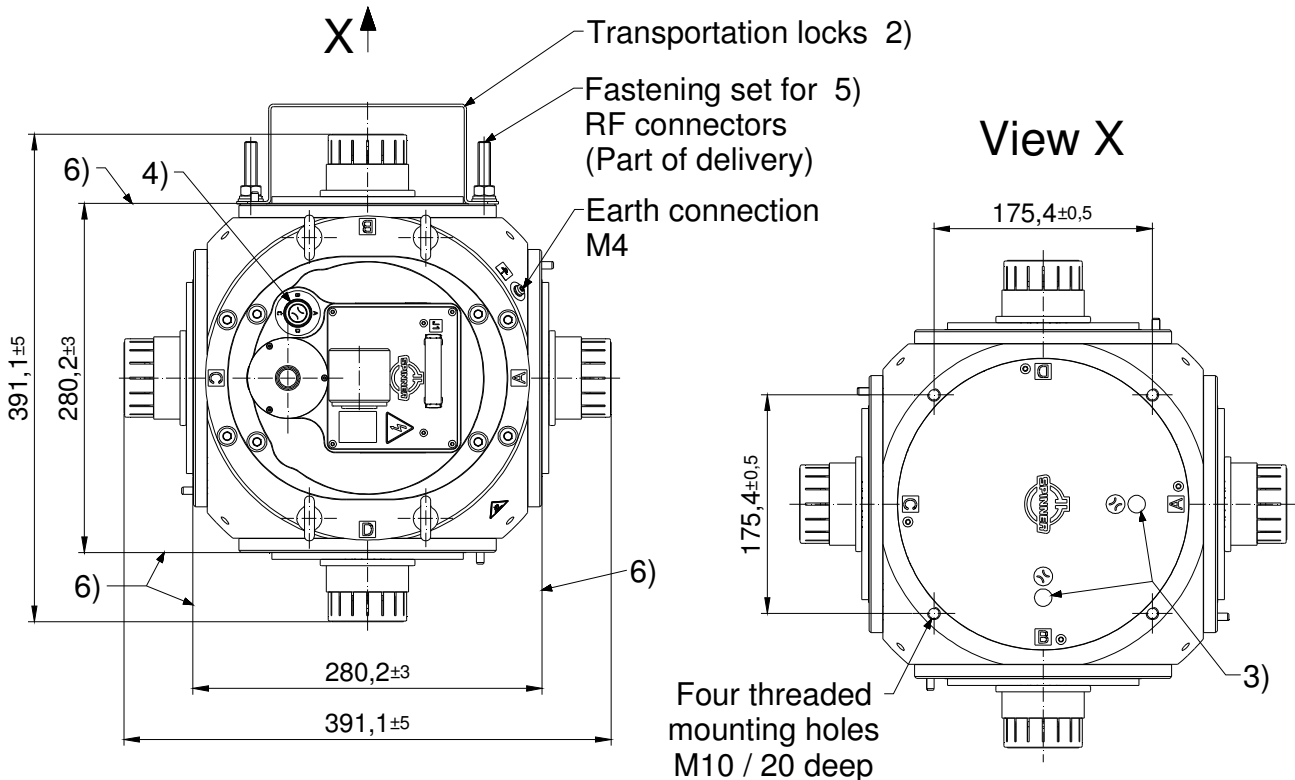
* *Standard conditions:*
Dielectric: Dry air under standard pressure at sea level ($\rho = 1013 \text{ hPa}$)
Load VSWR, max. 1.0 (no standing wave)
No modulation, sinusoidal carrier only
 ** *Suitable US power supply cord and 25 pole mating connector included*
 *** *At room temperature and nominal voltage 120 V AC, 60 Hz*
 **** *Extended temperature range on request*

Coaxial Two Way Switch (DPDT) || BN 941989C0110

Outline (all dimensions in millimeters)



RF connection
RF position I: A-B / C-D
RF position II: A-D / B-C



- 1) + 10 mm to disconnect the connectors
- 2) Only shown once, to remove before installation
- 3) Position indicator bottom side - current position is shown by white dot (marking)
- 4) Position indicator top side - current position is shown by pictogram
- 5) Altogether 48 (8 used for transportation locks)
- 6) Reference plane

Coaxial Two Way Switch (DPDT) || BN 941989C0110

Circuit diagram

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

Signalkontakte
Signal contacts

Es darf nicht gleichzeitig HF-Pos. I und HF-Pos. II angesteuert werden, da dies zur Beschädigung des Schalters führt
RF pos. I and RF pos. II must not be accessed at the same time, this will lead to a switch damage

Ansteuerspannung
Control voltage
Uc: 8 ... 31 V DC

Betriebsspannung
Operating voltage
95 ... 140 V AC 50/60 Hz

Gerätestecker-Kombielement IEC Gerätestecker C14 mit 2-pol. Sicherungshalter
Power entry module IEC appliance inlet C14 with fuseholder 2-pole

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

HF-Pos. I
RF pos. I

HF-Pos. II
RF pos. II

1) Bei Verwendung als Umschalter muss ein Anschluss abgeschlossen werden
If used as a change-over switch one port must be terminated

Achtung: Signalkontakte auch als Trägersicherheitskontakte verwendbar.
Attention: Signal contacts can be also used as interlock contacts

NC ≙ normally closed
NO ≙ normally opened
Stellung, wenn Mikroschalter nicht gedrückt ist
Position if microswitch is not pushed

Maßangaben in mm
Dimensions in mm

Algemeintoleranzen: 276BmH
General tolerances:

DIN ISO

Erstellt: 07.02.2018
Date:

Geprüft: 07.12.2018
Date:

Revisur: B 01-20849/04.12.2018
Revision:

Ant.-Nr.: A. Startindex/07.02.2018
Issue-No.:

Projektor E:
Projection E:

Bezeichnung:
Title:
Name:
Date:
Erstellt:
Created:
Geprüft:
Checked:

Maßstab: / Scale:
1:1

Zeichnungs-Nr.: B31291-CD
Drawing-No.:

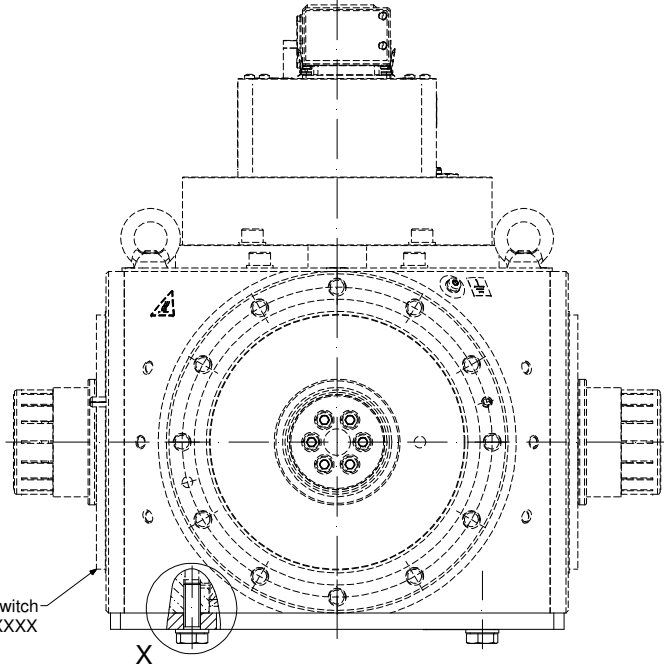
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Format: Sheet: 1 of 1

Coaxial Two Way Switch (DPDT) || BN 941989C0110

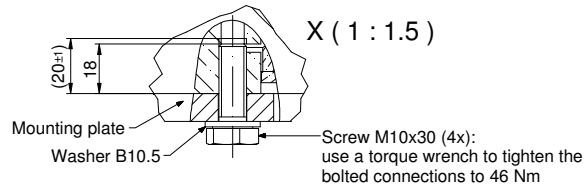
Accessories (optional)

Installation kit BN 941989C3000

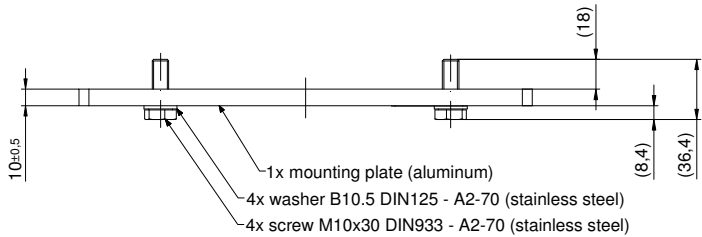
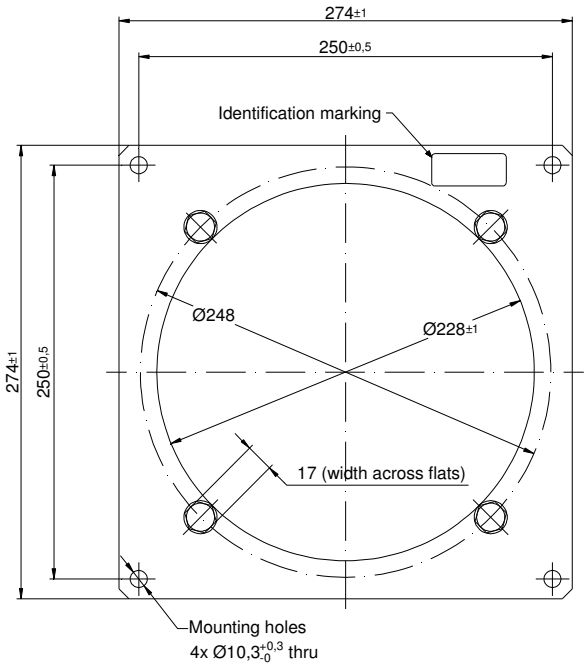
Installation instructions for BN 941989C3000-installation kit:



Coaxial two way switch
BN 941989XXXXX



Installation kit BN 941989C3000:



Do not use the installation kit to support additional mechanical loads.

Maßangaben in mm Dimensions in mm		Projektion E: Projection E:		Bezeichnung: Title:		Maßstab / Scale: 1 : 2,5	
Allgemeintoleranzen: General tolerances: DIN ISO 2768mH		Datum: Date: 14.02.2019	Name: Name: Hupfauer	installation kit for coaxial two way switch (DPDT) 6 1/8" (50 Ohm)			
Erstellt: Creator: Hupfauer	Datum: Date: 18.02.2019	Geprüft: Checked: Hupfauer		Zeichnungs-Nr.: Drawing-No.: 941989C3000-0E		Format: Format: A3	Blatt: Sheet: 1 von: of: 1
A Startindex 4.02.2019 Hupfauer		Spinner GmbH Erzglaserstr. 33 D-80335 München					

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