

Coaxial Two Way Switch (DPDT) | BN 941964



Typical illustration

Radio frequency characteristics

Interface type (4 connections)	8 3/16" RFC1)		
Characteristic impedance	75 Ω		
Frequency range	10 MHz	100 to 230 MHz	230 to 620 MHz
VSWR, max.	1.06	1.06	1.08
Isolation, min.	75 dB	75 dB	70 dB
Insertion loss, max.	0.03 dB		
Average power capability RFC2) at ambient temperature -10 to +45°C	950 kW	200 kW	120 kW
Peak voltage capability RFC2)	24 kV		

RFC1) Interface compatible to IEC, Myat, Dielectric

RFC2) Standard conditions: - Dielectric: Dry air under standard pressure at sea level ($p = 1013 \text{ hPa}$)
 - Load VSWR, max. 1.0 (no standing wave)
 - No modulation, sinusoidal carrier only

Electrical and mechanical characteristics

Switch type	Two way switch, DPDT	
Actuator type	Motor drive, latching, self cutoff	
Connector J2 EMC1) for mains connection	5 pole SPINNER connector BN 126920, certified according to VDE-Reg. No. B687, DIN EN 61984: 2009-11; EN 61984: 2009	
Mains connection	L, N, PE, TN-System	
Operating	Operating voltage	187 to 253 V AC 50/60 Hz
	Operating current, typ. EMC2)	1.5 A
	Nominal fuse	The switch must be secured externally by a time-delay fuse, 2 A
Connector J1 EMC1) for control, interlock contacts and signaling	25 pole connector according to DIN 41652 / IEC 807-2	
Control	Control voltage	ES1 circuits according to EN 62368-1, 8 to 31 V DC
	Control current, typ.	12 mA at control voltage 24 V DC
	Current limiting	The circuit must be limited externally to 0.5 A
Signal contacts Interlock contacts	Lead time typ. EMC2)	500 ms (the interlock/signal contacts open 500 ms before and close 500 ms after switching of the RF contacts)
	Maximum ratings	ES1 circuits according to EN 62368-1, 42.4 V ACpk / 60 V DC / 0.5 A
	Current limiting	The circuit must be limited externally to 0.5 A

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Switching time, typ. ^{EMC2)}	3 s
Command hold time, min.	3 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)
Lifetime, min.	100,000 cycles (200,000 operations)
Weight, approx.	70 kg

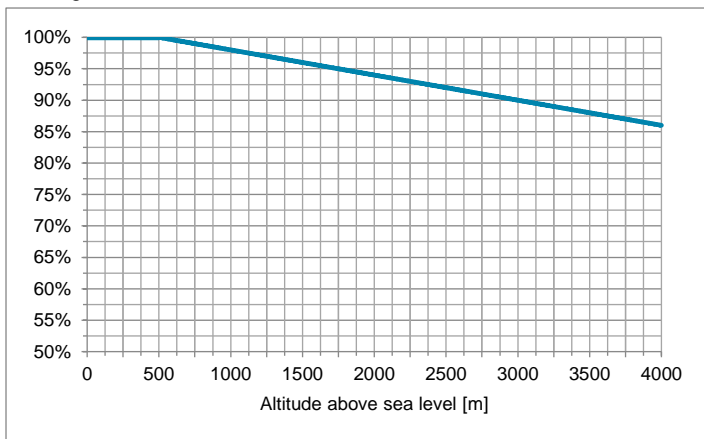
EMC1) Suitable mating connector included
 EMC2) At room temperature and nominal voltage 230 V AC, 50 Hz

Environmental conditions

Operational conditions	ETSI EN 300 019-1-3 V2.3.2 (2009-1) class 3.1 N
Ambient temperature ^{EC1)}	-10 to +60°C
Condensation	Not allowed
Relative humidity, max.	95%

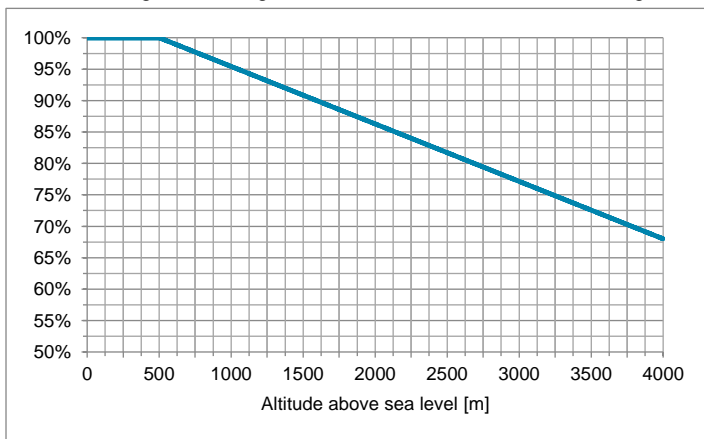
The maximum input power can be applied up to 500 m or 1600 ft above sea level unless noted otherwise in the data sheet. Above this height the maximum input power must be reduced as shown in the diagram.

Derating of input power with increasing altitude



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.

Derating of voltage with increasing altitude



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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>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 (%)																						
-10	100																						
0	100																						
10	100																						
20	100																						
30	100																						
40	100																						
45	100																						
50	95																						
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>I according to IEC EN 61140</p>																						
<p>IP protection level</p>	<p>IP40 according to IEC EN 60529 (all interfaces terminated)</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>																						

EC1) Extended temperature range on request

Applicable documents

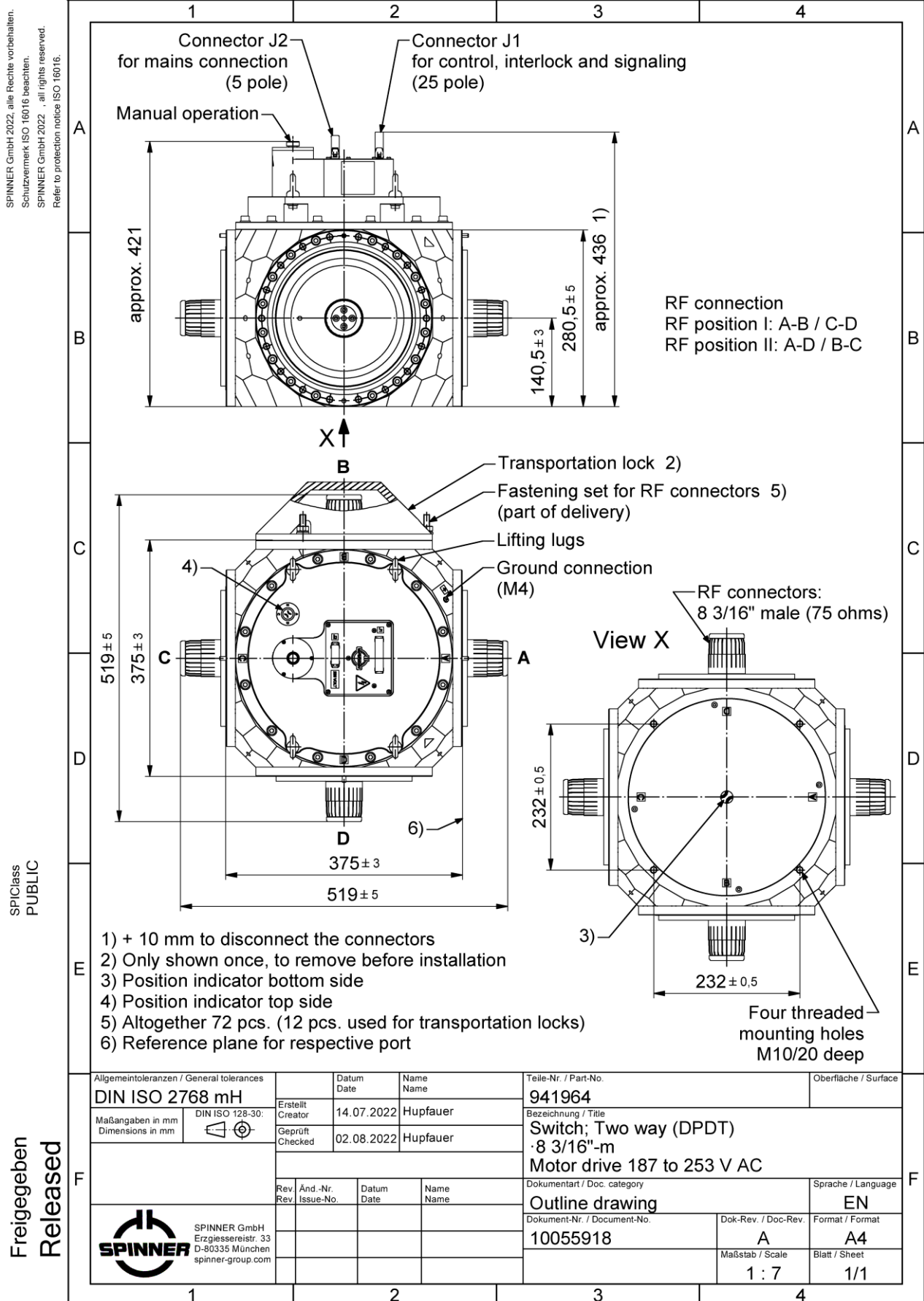
<p>Product manual</p>	<p>M36478</p>
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Outline (all dimensions in millimeter)



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Coaxial Two Way Switch (DPDT) | BN 941964

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

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 switch damage.

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

Betriebsspannung
Operating voltage
187 ... 253 V AC 50/60 Hz

Achtung:
Gerät ist extern mit 2 AT abzuschirmen!
Attention:
The switch must be externally fused by time-delay 2 A.

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

HF-Pos. I
RF pos. I

HF-Pos. II
RF pos. II

*) Bei Raumtemperatur und Nennspannung 230 V AC
*) At room temperature and nominal voltage 230 V AC

*) Bei Verwendung als Umschalter muss ein Anschluss abgeschlossen werden.
*) If used as a change-over switch (SPDT) 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

Aggregatbezeichnung / General description DIN ISO 2768mH		Name Hupflauer		Date 28.02.2019		Teil-Nr. / Part No. B33073	
Maßstab / Scale 1:1		Gezeichnet Hupflauer		Geprüft Hupflauer		Dokumenttyp / Document type Drive	
Material / Material Edelstahl B		Bearb. / Mach. Edelstahl B		Draht / Wire Edelstahl B		Sonderanforderungen / Special requirements EN	
Produktionsart / Production type Startindex		Dokument-Nr. / Document No. B33073-CD		Motor drive: U _s = 187 to 253 V AC		Formel / Formula A3	
Produktionsjahr / Production year 28.02.2019		Dokument-Nr. / Document No. B33073-CD		Motor drive: U _s = 187 to 253 V AC		Blatt / Sheet 1/1	

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Cable socket

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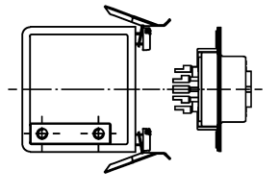
Unterliegt KM-Klasse: 2
Subject to KM-Class: 2
ref. WN 50 245

Freigegeben

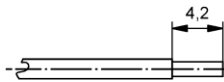
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Anleitung für den Kabelanschluss Instructions for cable connection

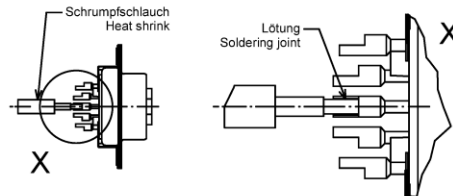
1.
 Entfernen des Schutzgehäuses
 Removing of the protective housing



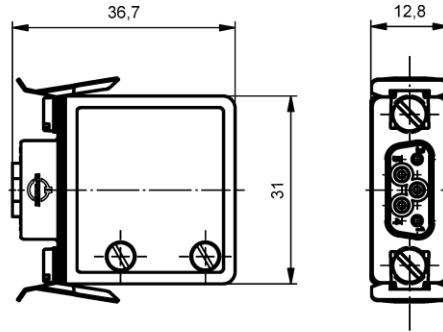
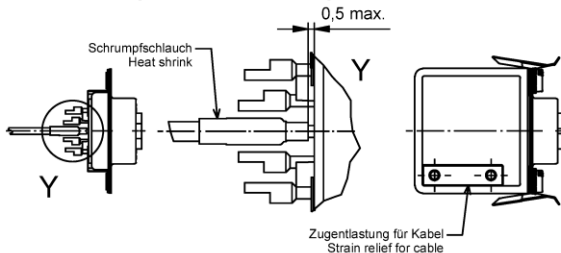
2.
 Absetzen der Kabellitzen
 Trimming of the cable strands



3.
 3.a Anbringen der drei Schrumpfschläuche (PIN 2/4/5)
 3.a Placing of the three heat shrinks (pins 2/4/5)
 3.b Löten der fünf Kabellitzen
 3.b Soldering of the five cable strands



4.
 4.a Aufschrumpfen der drei Schrumpfschläuche (PIN 2/4/5)
 4.a Shrinking three heat shrinks (pins 2/4/5)
 4.b Montage des Schutzgehäuses
 4.b Assembling of the protective housing



Technical data

5-polige Kabelkupplung 5 pole cable socket	ohne Schaltleistung Without breaking capacity
Bemessungsspannung Rated voltage	250 V AC
Bemessungsstrom Rated current	2 A
Bemessungsstoßspannung Rated impulse voltage	2.5 kV
Polzahl Number of poles	3P + 2PE
Anschlussart Kind of termination	Lötanschluss Solder termination
Leiterquerschnitt Cross section area	Max. 0.75 mm ² / min. 0.50 mm ²
Kabeldurchmesser Values for cable clamp	Ø 6 mm ... Ø 8 mm
Temperaturbereich Temperature range	-25 °C ... +85 °C
Steckzyklen Operation cycles	10
Schutzart Degree of protection	IP 20 nach / acc. to IEC EN 60529
Verschmutzungsgrad Degree of pollution	2
Max. Einsatzhöhe über N.N. Max. altitude above sea level	4000 m / 13,120 ft nach / acc. to IEC EN 60664-1
Schrumpfschlauch über Pins 2/4/5 Heat shrink above pins 2/4/5	
Zertifiziert nach Certified according to	VDE-Reg.-No. B687 DIN EN 61984: 2009-11; EN 61984: 2009
Zugelassene Steckerleiste Approved plug connector	BN 126920

Beim Anschluss eines Kabels sind die gültigen Sicherheitsvorschriften zu beachten!
Please attend the valid safety rules for assembling!

Konstruktionsänderungen vorbehalten
 Design is subject to change without notice

Maßangaben in mm Dimensions in mm	Projektion E: Projection E:			Maßstab: / Scale:
Allgemeintoleranzen: General tolerances:	DIN ISO 2768mH	Datum: Date:	Name: Name:	Bezeichnung: Title:
Erstellt: Creator:	31.01.2011	Frank	Kabelkupplung cable socket 5-polig / 5 pole, 250 VAC	
Geprüft: Checked:	12.12.2013	Hartmann		
Index: Revision:	Änd.-Nr.: Issue-No.:	Datum: Date:	Name: Name:	Zeichnungs-Nr.: Drawing-No.:
D 01-10772	03.12.2013	Hartmann	Format: Blatt: Format: Sheet: 1 von: of: 1	
C 01-09071	27.02.2013	Hupfauer		
B DIV.CORR	01.02.2011	Frank		
A Startindex	31.01.2011	Frank		
Spinner GmbH Erzgiesserei: 33 D-80335 München		126919-0E		

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Assessories (optional)

Installation kit BN 941964C3000

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Installation kit BN 941964C3000:

Installation instructions for BN 941964C3000-installation kit:

Mittlungs- Abteilung	Projektion E	Name: Hauptauer	Datum: 07.08.2018	Beschreibung: Installation kit for coaxial two way switch (DPDT) 8 3/16" (75 Ohm)	Maßstab / Scale: 1 : 3
Abmessungen in mm Dimensions in mm	DIN ISO 2768mH	Erstellt: 09.08.2018	Geprüft: 09.08.2018	Zuschlags-Nr. Drehung-Nr. 941964C3000-0E A3	Blatt: 1
Allgemeinbezeichnung: General description:	Name: Hauptauer	Datum: 07.08.2018	Gezeichnet: 09.08.2018	Formal: A3	Blatt: 1
Index:	Index-Nr.:	Revisi- on:	Revisio- n:	Zeichnungs-Nr. Drehungs-Nr. 941964C3000-0E A3	Blatt: 1
A 01/2018	A 01/2018	A 01/2018	A 01/2018	Spinner GmbH Eggenlestr. 33 D-80335 München	Blatt: 1

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