

Coaxial Two Way Switch (DPDT) || BN 640082



Product manual: M36023

**Radio frequency characteristics**

Interface type (4 connections)	1 5/8" EIA according to EN 122150 (threaded flanges)				
Characteristic impedance	50 Ω				
Frequency range	0 to 100 MHz	100 to 230 MHz	230 to 860 MHz	860 MHz to 1.6 GHz	1.6 to 2.0 GHz
VSWR, max.	1.03	1.03	1.05	1.08	1.08
Isolation, min.	80 dB	80 dB	80 dB	70 dB	60 dB
Insertion loss, max.	0.05 dB	0.05 dB	0.05 dB	0.10 dB	0.10 dB
Average power capability *	20 kW	13.5 kW	7.0 kW	5.2 kW	4.65 kW
Peak voltage capability *	5.1 kV				

**General electrical and mechanical data**

Connector J2 ** for mains connection		5 pole SPINNER connector BN 126920, VDE-Reg. No. B687
Mains connection		L, N, PE, TN-System
Operating	Operating voltage	230 V AC ±10% 50/60 Hz
	Current, max. ***	0.5 A
	Nomimnal fuse	The switch must be externally fused with 1 AT by the user
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, max. ***	22 mA
	Nominal fuse	The circuit must be externally fused with 0.5 A by the user

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Signal contacts	Maximum ratings	SELV circuits according to IEC-EN-60950-1, 42.4 V ACpk / 60 V DC / 0.5 A
Interlock contacts		
	Nominal fuse	The circuit must be externally fused with 0.5 A by the user
Switching time, max. ***		0.12 sec
Command hold time, min.		0.12 sec (during this time, the voltage at control input must not change)
Switching frequency, max.		10 operations/min
Life, min.		250,000 operations
Weight, approx.		5 kg

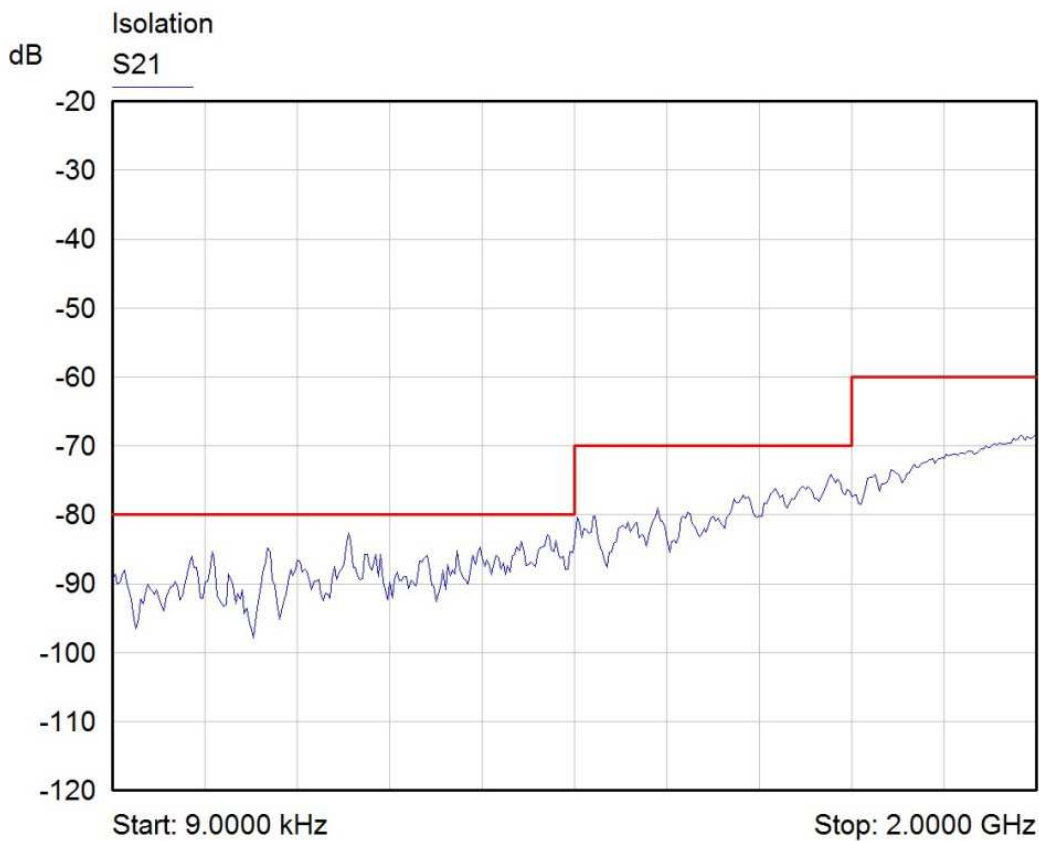
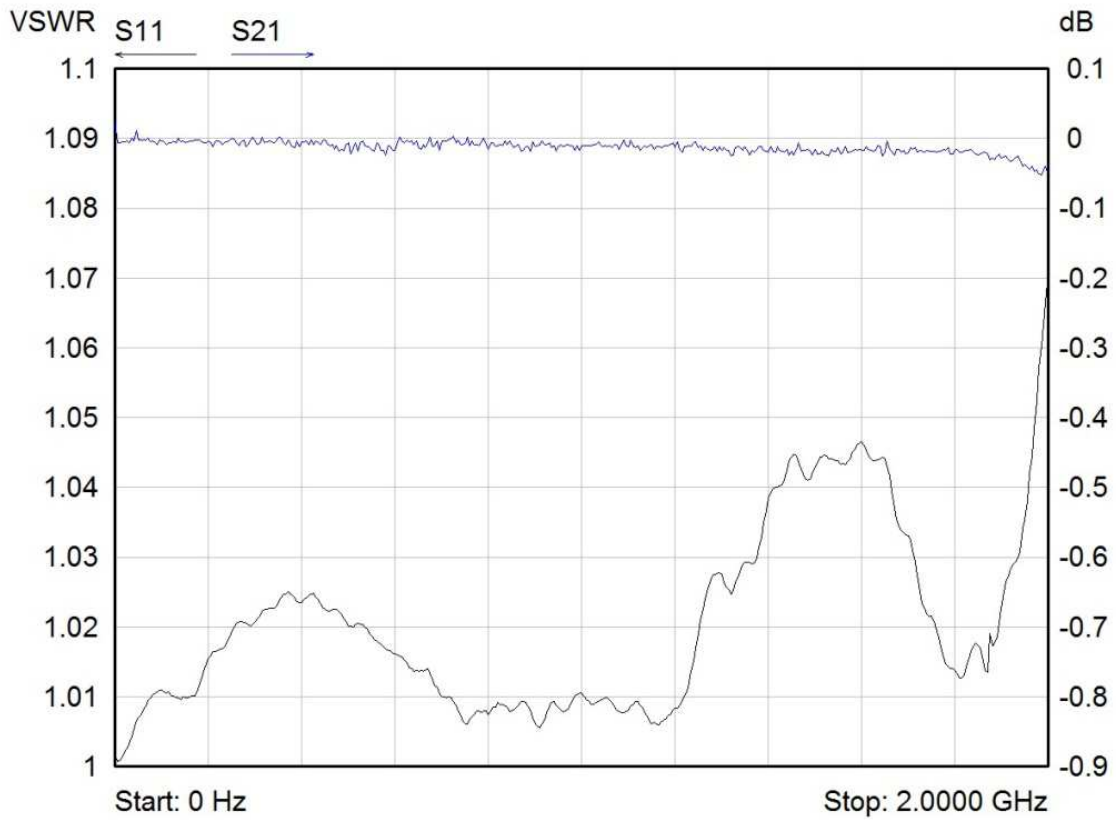
**General environmental conditions**

Operation	
Protection class	I according to IEC-EN-61140
Degree of protection	IP40 according to IEC-EN-60529 (all interfaces connected with appropriate gaskets)
Ambient temperature range	-10 to +50°C
Relative humidity, max.	95% (non-condensing)
Operational environment	Operation sites with limited access, indoor use only
Installation position	optional
Storage	
Ambient temperature range	-50 to +80°C
Relative humidity, max.	95% (non-condensing)

- \* *Standard conditions:  
Derating of input power above sea level: -1 % / 250 ft  
Dielectric: Dry air under standard pressure at sea level (p = 1013 hPa)  
Environmental temperature: max. 40°C  
Load VSWR: max. 1.0 (no standing wave)  
No modulation, sinusoidal carrier only*
- \*\* *Suitable mating connector included*
- \*\*\* *At room temperature and nominal voltage 230 V AC*

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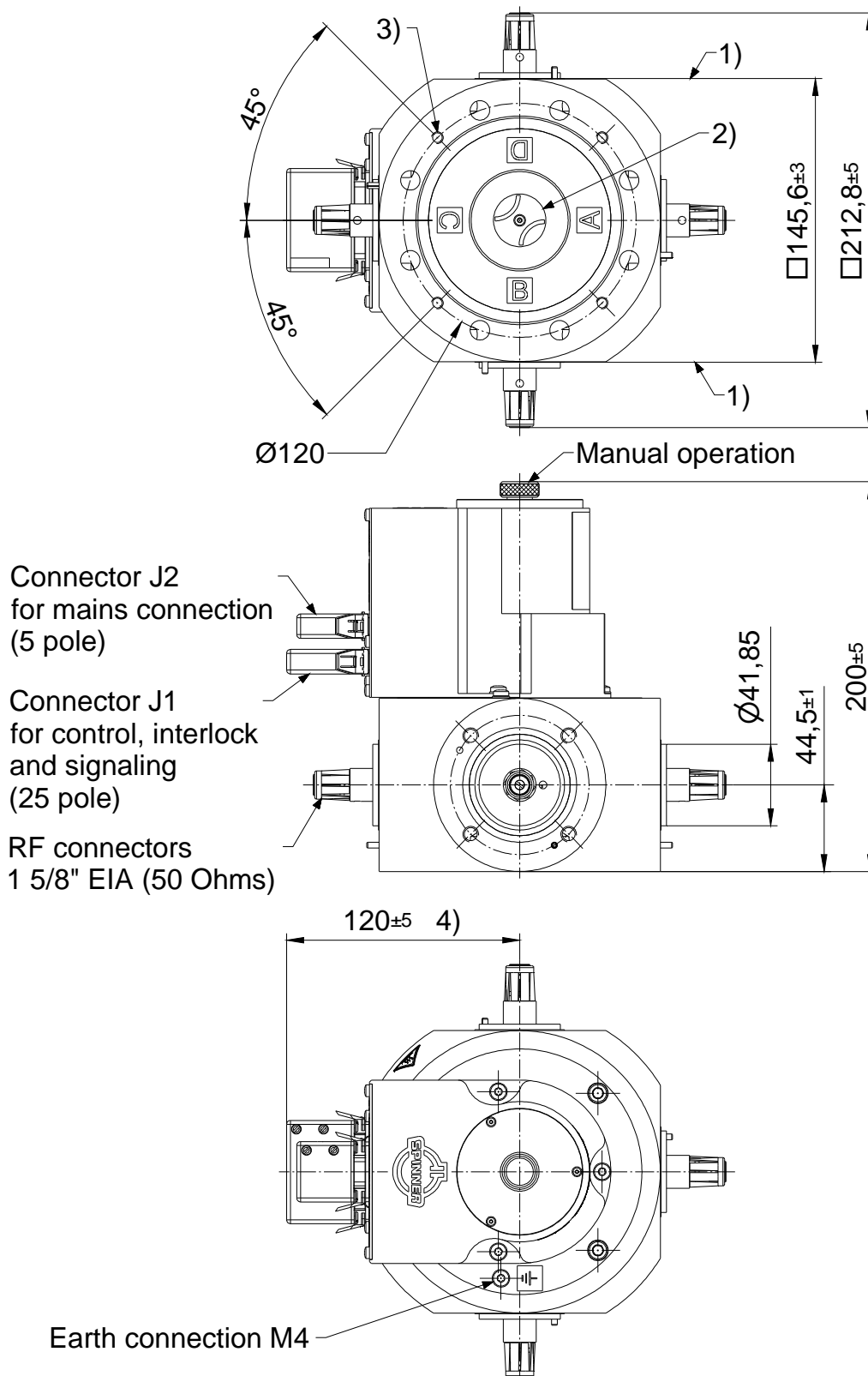
## Typical Diagrams



Template TD-00002J

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Outline and dimensions (all dimensions in millimeters)



Connector J2  
for mains connection  
(5 pole)

Connector J1  
for control, interlock  
and signaling  
(25 pole)

RF connectors  
1 5/8" EIA (50 Ohms)

Earth connection M4

- 1) Reference plane
- 2) Position indicator, bottom side
- 3) four threaded mounting holes M6/12 deep
- 4) + 10 mm to disconnect the connectors

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## Circuit diagram (B42000-CD, Issue B)

25-pol. Stecker (DIN 41652)  
Maximal zulässige Werte 42.4 V AC  $\sqrt{2}$  / 60 V DC / 0.5 A

25 pole connector (DIN 41652)  
Maximum ratings 42.4 V AC $\sqrt{2}$  / 60 V DC / 0.5 A

Trägersicherheitskontakte  
interlock contacts

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 cannot be driven at the same time, because this leads to a damage of the switch.

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

Betriebsspannung  
operating voltage  
230 V AC  $\pm 10\%$  50/60 Hz

Achtung!  
Gerät ist extern mit 2 AT abzuschirmen!  
attention!  
external fuse 2 AT is required!

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

HF-Pos. I  
RF pos. I

HF-Pos. II  
RF pos. II

HF-Kontakte  
RF contacts

Signalkontakte f. HF-Position I  
signal contacts f. RF position I

Signalkontakte f. HF-Position II  
signal contacts f. RF position II

Trägersicherheitskontakte  
interlock contacts

Motor-Schalter-Kontakte  
motor circuit breaker

1) Bei Verwendung als Umschalter wird ein Ausgang gesperrt.  
1) If used as a change-over switch (SPDT) one part will be blanked off.

Achtung: Signalkontakte auch als Trägersicherheitskontakte verwendbar!  
attention: signal contacts can be also used as interlock contacts.

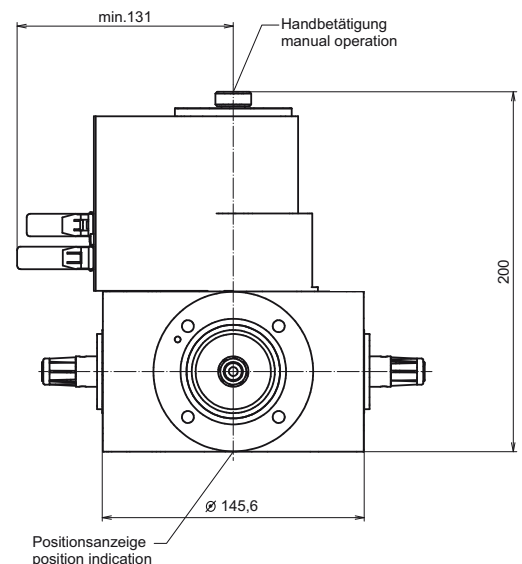
NC  $\equiv$  normally closed  
NO  $\equiv$  normally opened  
Stellung, wenn Mikroschalter nicht gedrückt ist  
Position when microswitch is not pushed

Allgemeintoleranzen: General tolerances:	DIN ISO 2768mH	Datum: Date:	27.07.2009	Name: Name:	Frank
Erstellt: Created:		Geprüft: Checked:		Bezeichnung: Title:	
Name: Name:				circuit diagram	
Date: Date:				for motor drive 230 V AC, 50/60 Hz	
Issue-No.:				control voltage 8 V DC ... 31 V DC	
Revisions: Revision:				Zeichnungs-Mr.:	
A Startindex 27.07.2009/leicht				Drawing-No.:	
Name: Name:				B42000-CD	
Date: Date:				Format: Scale:	
Issue-No.:				A3	
Revisions: Revision:				1:1	

2-WEGE SCHALTER MIT 1 5/8" EIA ANSCHLÜSSEN  
 2-WAY SWITCHES WITH 1 5/8" EIA CONNECTORS

- Motorantrieb
  - optische Positionsanzeige
  - Handbetätigung
  - voreilende Interlock-Kontakte
  - Endlagen-Signalkontakte
- motor drive
  - optical position indicator
  - manual operation
  - advanced interlock contacts
  - end position signal contacts

Bestellnummer Part number	BN 64 00 82	BN 64 00 81
Anschlüsse Connectors	1 5/8" EIA	
Frequenzbereich Frequency range	0 - 2.0 GHz	
Prüfspannung <sup>1)</sup> Proof voltage <sup>1)</sup>	≤ 5.1 kV	
Effektive Leistung <sup>1)</sup> Average power <sup>1)</sup>	100 MHz 230 MHz 860 MHz	≤ 20.0 kW ≤ 13.5 kW ≤ 7.0 kW
VSWR	100 MHz 230 MHz 860 MHz	≤ 1.03 ≤ 1.03 ≤ 1.05
Übersprechdämpfung Isolation	100 MHz 230 MHz 860 MHz	≥ 80 dB
Durchgangsdämpfung Insertion loss	860 MHz	≤ 0.05 dB
Betriebsspannung Operating voltage	230 VAC ± 10 % 50 - 60 Hz	
Steuerspannung Control voltage	8 - 31 VDC	230 VAC ± 10 % 50 - 60 Hz
Stromaufnahme Operating current	≤ 0.5 A	
Umschaltzeit <sup>1)</sup> Switching time <sup>1)</sup>	≤ 100 ms	
Lebensdauer (Schaltungen) Mechanical life (cycles)	≥ 250.000	
Umgebungstemperatur Ambient temperature	-10 °C ≤ $\vartheta$ ≤ +50 °C	
Gewicht Weight	ca. 5.0 kg	



<sup>1)</sup> Siehe Anmerkungen auf Seite 132  
 See notes on page 132