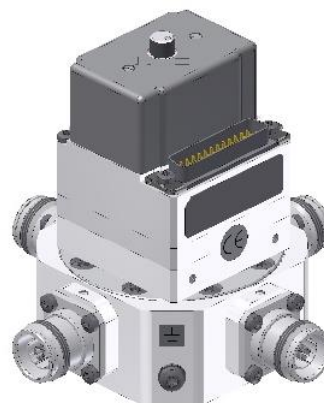


Coaxial Two Way Switch (DPDT) with low Intermodulation | BN 754082



Typical illustration

Radio frequency characteristics

| | | |
|----------------------------------------------------------------------------------|------------------------------------------------|----------------|
| Interface type (4 connections) | 4.3-10 female (50 Ω) according to IEC 61169-54 | |
| Characteristic impedance | 50 Ω | |
| Frequency range | 690 MHz to 2.69 GHz | 3.4 to 3.8 GHz |
| Return loss, min. | 20 dB | 20 dB |
| Isolation, min. | 55 dB | 50 dB |
| Insertion loss, max. | 0.1 dB | 0.1 dB |
| Average power capability ^{RFC1)} at ambient temperature -10 to +45°C | 300 W supports hot switching | |
| Peak voltage capability ^{RFC1)} | 1.0 kV | |
| Intermodulation (IM3) at 2x 20 W, max. / typ. | -165 dBc / -168 dBc | |

*RFC1) 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*

Electrical and mechanical characteristics

| | | |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Switch type | Two way switch, DPDT | |
| Actuator type | Solenoid drive, latching, self cutoff | |
| Connector 1 ^{EMC1)} for operating voltage, control, and signaling | 25 pole connector according to DIN 41652 / IEC 807-2 | |
| Operating | Operating voltage | 21.6 to 28 V DC |
| | Operating current, typ. ^{EMC2)} | 1.1 A |
| | Standby current, max. ^{EMC2)} | 25 mA |
| | Nominal fuse | The switch must be secured externally by a time-delay fuse, 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 |
| | Current limiting | The circuit must be limited externally to 0.5 A |
| Signal 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 |
| Switching time, typ. ^{EMC2)} | 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 | |

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| | |
|-----------------|--------------------|
| Lifetime, min. | 500,000 operations |
| Weight, approx. | 1.75 kg |

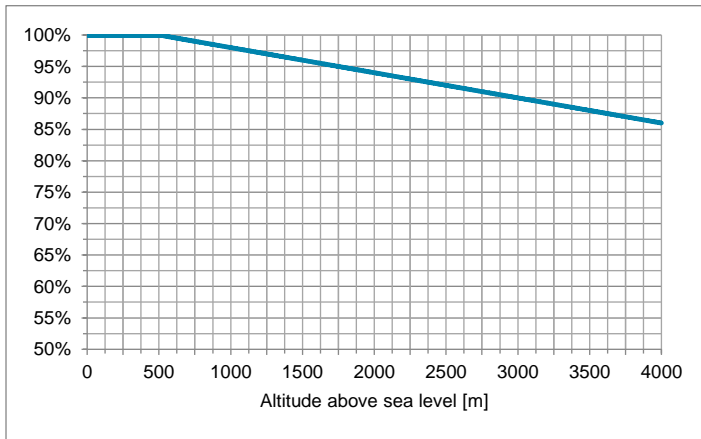
EMC1) Suitable mating connector included
 EMC2) At room temperature and nominal voltage 24 V DC

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% |

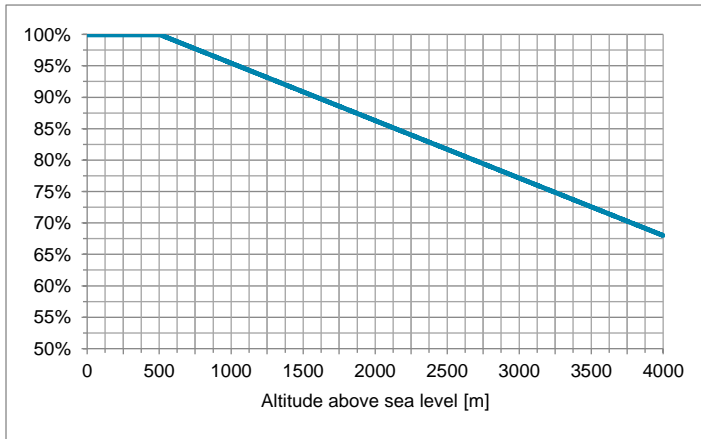
The maximum input power can be applied up to 500 m or 1600 ft above sea level unless noted otherwise in the data sheet. Above this height the maximum input power must be reduced as shown in the diagram.

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>III 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>M36326</p> |
|-----------------------|---------------|

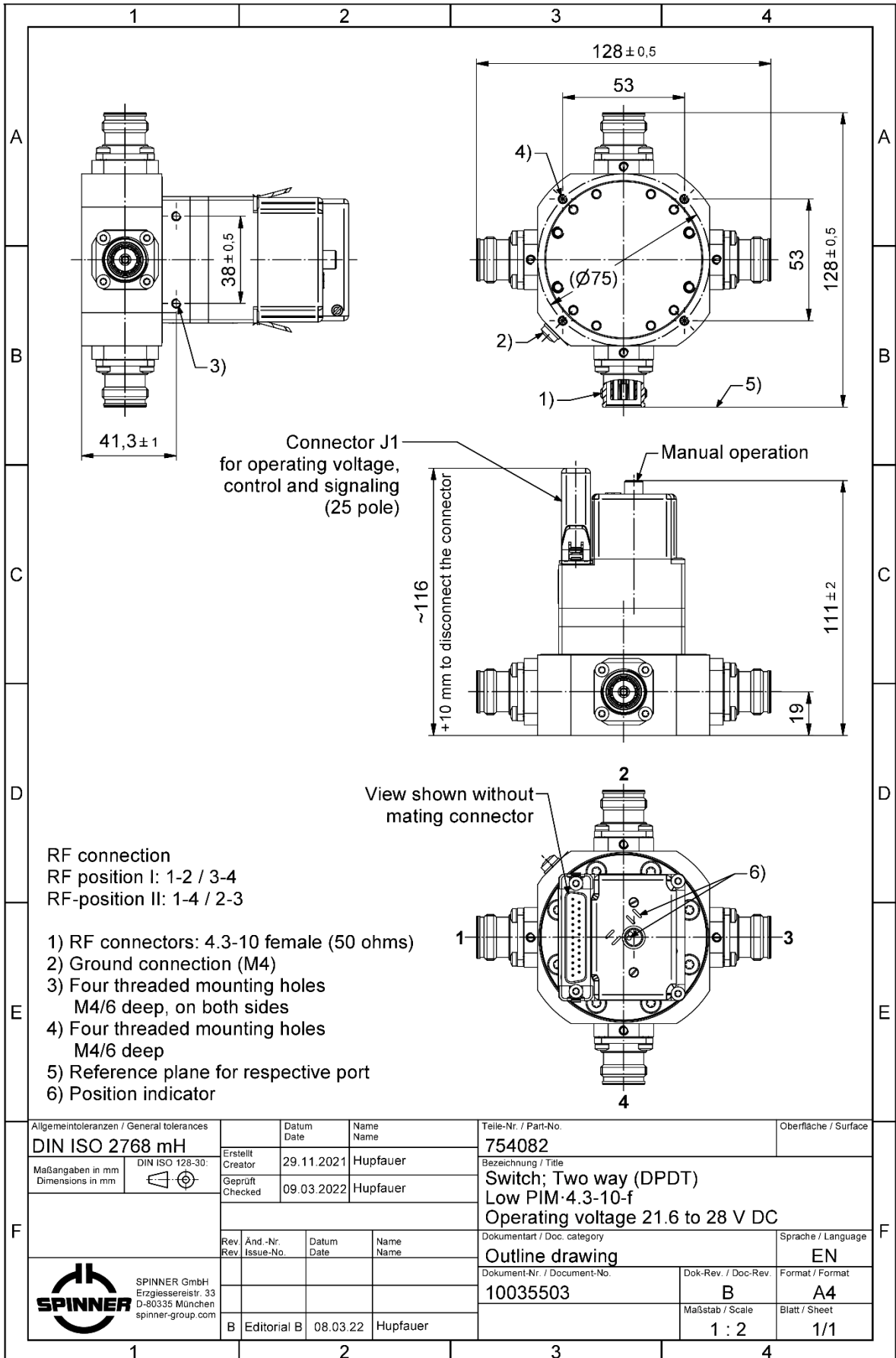
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Outline (all dimensions in millimeter)

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SPINNER GmbH
Erzgiessestr. 33
D-80335 München
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Circuit diagram

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