# 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 *<br>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 **<br>for operating voltage, control,<br>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 )<br>U In $_{HIGH}$ = 8 to 32 V DC |
| | Nominal fuse | The circuit must be externally limited to 0.5 A |
| Interlock contacts<br>Signal contacts | Lead time typ.***<br>(only interlock contacts) | 5 ms (the interlock contacts open 5 ms before and<br>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 |

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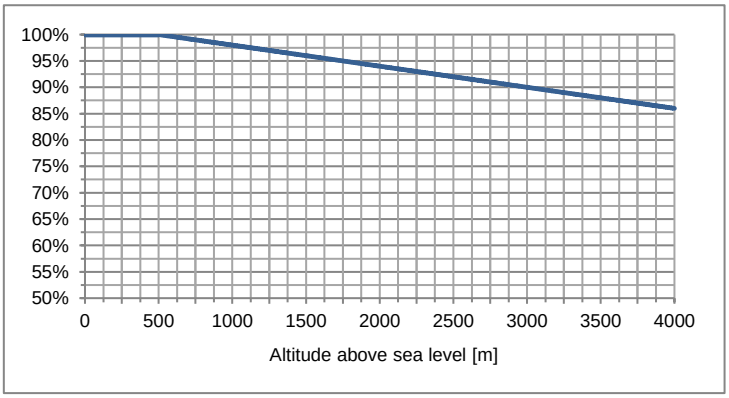
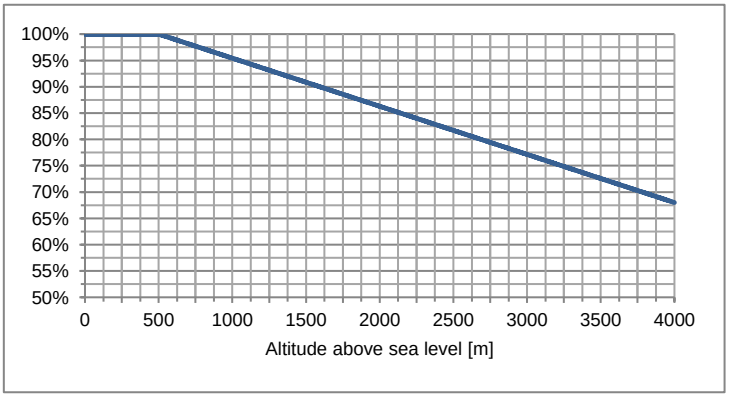
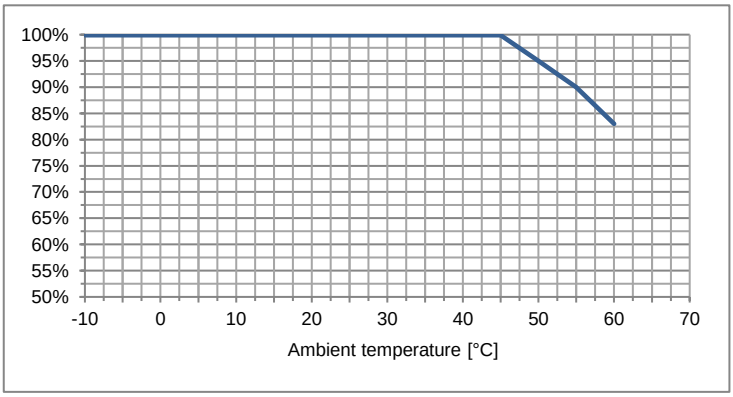
## Environmental conditions

| **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 | The maximum input power can be applied up to 500 m or 1600 ft above sea level unless noted otherwise in the data sheet.<br>Above this height the maximum input power must be reduced as shown in the diagram.<br>  |
| Derating of voltage 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.<br>Above this height the maximum input power must be reduced as shown in the diagram.<br>  |
| Derating of input power with increasing ambient temperature | The maximum input power can be applied up to +45°C ambient temperature unless noted otherwise in the data sheet.<br>Above this ambient temperature the maximum input power must be reduced as shown in the diagram.<br>  |

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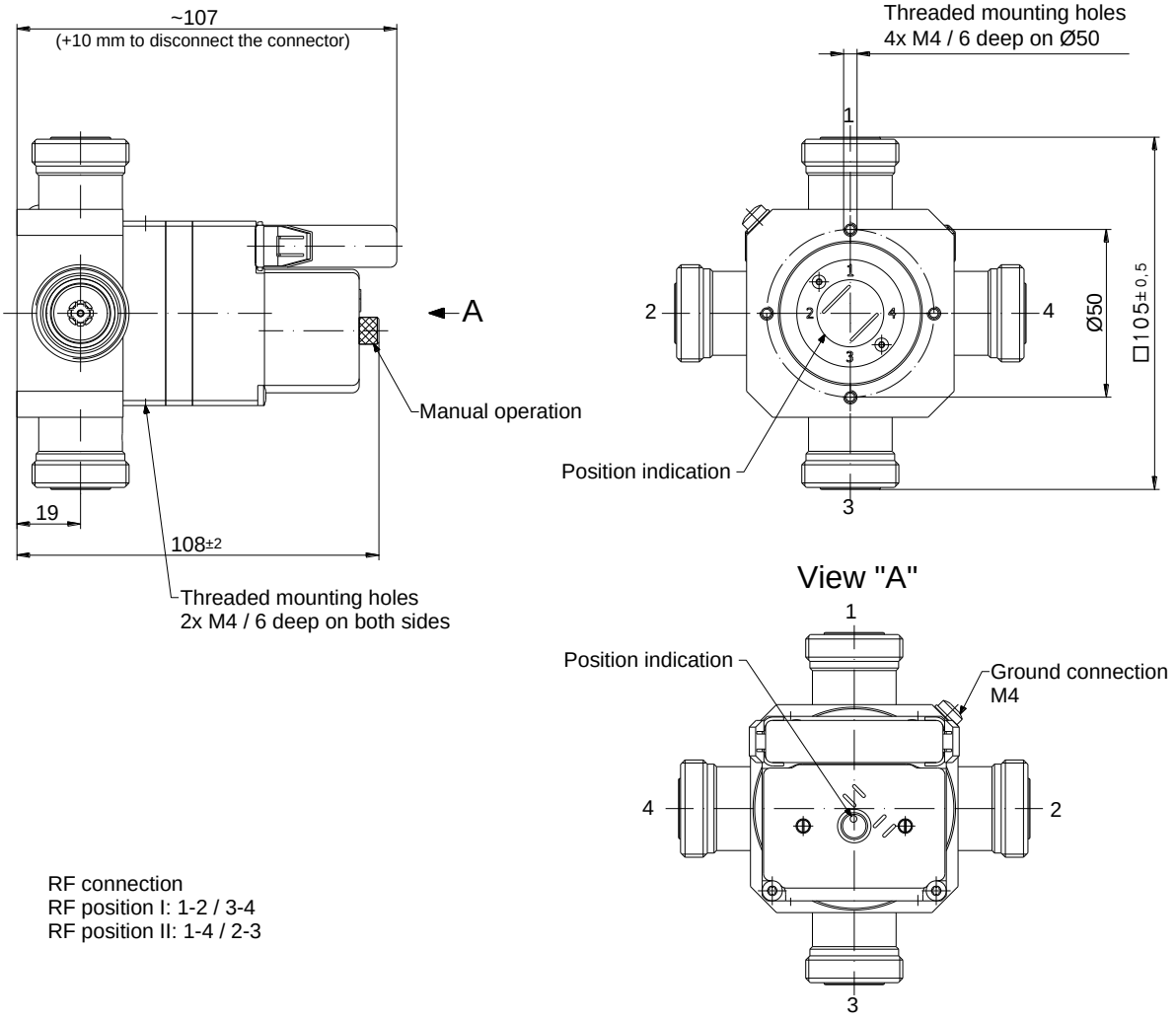
| | |
|---|---|
| Max. altitude above sea level | 4,000 m or 13,120 ft according to IEC EN 60664-1 |
| Protection class | III according to IEC EN 61140 |
| IP protection level | IP40 according to IEC EN 60529<br>(all interfaces equipped with appropriate gaskets) |
| Installation position | Any |
| **Transport 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

Template TD-00002P

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## Circuit diagram (B24140-CD, Issue D)