

Rotary Joint || BN 635058



Radio frequency characteristics

Channel designation	Inner channel (CH1)	Outer channel (CH2)
Interface type / material / surface finish	per R120 special flange / aluminum alloy / chromated	SMA-f (50 Ω) / copper alloy / gold plated
Interface orientation	style I	style U
Frequency range	14 to 14.5 GHz	DC to 4 GHz
Peak power capability	10 kW	1 kW
Average power capability	100 W	10 W
VSWR, max.	1.2	1.2 @ DC to 2.5 GHz 1.25 @ 2.5 to 4.0 GHz
VSWR variation over rotation, max.	0.1	0.05
Insertion loss, max.	0.2 dB	0.2 dB @ DC to 2.5 GHz 0.3 dB @ 2.5 to 4.0 GHz
Insertion loss variation over rotation, max.	0.05 dB	0.05 dB @ DC to 2.5 GHz 0.1 dB @ 2.5 to 4.0 GHz
Phase variation over rotation, max.	-	-
Isolation, min.	50 dB	
DC carrying capability	-	0.5 A, 48VDC @ full RF-power 2 A, 48VDC @ 5W

Conditions: *Operating altitude if not pressurized, max. 1.000 m*

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Mechanical characteristics

Rotating speed, max. / nominal	60 / 30 rpm
Life, min.	10 x 10 ⁶ revolutions
Torque (room / min. temperature), max.	0.25 Nm / - Nm @ start-up 0.2 Nm / - Nm @ rotation
Interface loads, max.	±0 N in axial direction ±0 N in radial direction
Case material	aluminum alloy
Case surface finish	chromate conversion coat
IP protection level	IP40
Weight, approx.	0.4 kg
Marking	adhesive label

Environmental conditions

Operation	
Ambient temperature range	-55 to +71°C
Relative humidity, max.	95% (non-condensing)
Storage	
Ambient temperature range	-55 to +85°C
Relative humidity, max.	95% (non-condensing)

Applicable Documents

Drawing	635058-0E Issue C
Technical information	"Rotary Joints – Glossary", Technical Document TD-00021, Spinner GmbH