

Rotary Joint || BN 835090



Radio frequency characteristics

Interface type / material / surface finish	N-f (50 Ω) / copper alloy / silver plated
Interface orientation	style I
Frequency range	DC to 18 GHz
Peak power capability	15 kW
Average power capability	200 W @ DC to 2 GHz / 100 W @ 2 to 8 GHz 75 W @ 8 to 15 GHz / 70 W @ 15 to 18 GHz
VSWR, max.	1.06 @ DC to 2 GHz / 1.10 @ 2 to 8 GHz 1.18 @ 8 to 15 GHz / 1.22 @ 15 to 18 GHz
VSWR variation over rotation, max.	0.05
Insertion loss, max.	0.08 dB @ DC to 2 GHz / 0.12 dB @ 2 to 8 GHz 0.15 dB @ 8 to 15 GHz / 0.20 dB @ 15 to 18 GHz
Insertion loss variation over rotation, max.	0.05 dB
Phase variation over rotation, max.	2 deg.
DC carrying capability	0.5 A, 48 VDC @ full RF avg. power 5.0 A, 48 VDC @ RF avg. power 5 W

Conditions: Operating altitude if not pressurized, max. 2.500 m

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Mechanical characteristics

Rotating speed, max. / nominal	300 / 200 rpm
Life, min.	5 x 10 ⁶ revolutions
Torque (room / min. temperature), max.	0.3 Nm / 0.3 Nm @ start-up 0.3 Nm / 0.3 Nm @ rotation
Interface loads, max.	±60 N in axial direction ±60 N in radial direction
Case material	copper alloy
Case surface finish	nickel plated
IP protection level	IP65 / IP54 in upside down position
Weight, approx.	0.14 kg
Marking	adhesive label

Environmental conditions

Operation	
Ambient temperature range	-40 to +60°C
Relative humidity, max.	95% (non-condensing)
Storage	
Ambient temperature range	-55 to +85°C
Relative humidity, max.	95% (non-condensing)

Applicable Documents

Drawing	835090-0E Issue A
Technical information	"Rotary Joints – Glossary", Technical Document TD-00021, Spinner GmbH