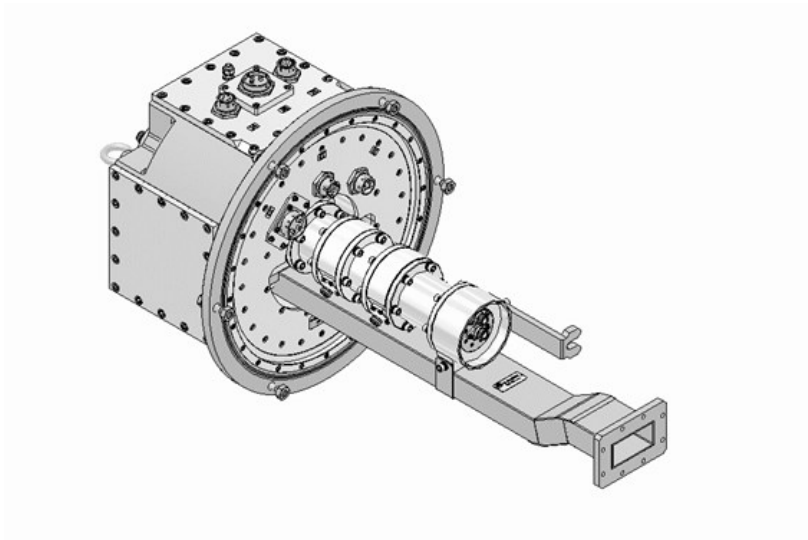


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Radio frequency characteristics

Channel designation	Channel High Power	Channel 1	Channel 2	Channel 3	Channel 4
Interface type / material / surface finish	WR 284 flange acc. 532502-0E/ aluminum alloy / chromated	N-f (50 Ω) / copper alloy / silver plated	N-f (50 Ω) / copper alloy / silver plated	N-f (50 Ω) / copper alloy / silver plated	N-f (50 Ω) / copper alloy / silver plated
Frequency range	2.85 to 3.15 GHz	2.85 to 3.15 GHz	2.85 to 3.15 GHz	0.9 to 1.2 GHz	0.9 to 1.2 GHz
Peak power capability	1 MW ^{RF1)}	10 kW ^{RF3)}	10 kW ^{RF3)}	5 kW ^{RF4)}	5 kW ^{RF4)}
Average power capability	8 kW ^{RF2)}	30 W	30 W	30 W	30 W
VSWR, max.	1.15	1.25	1.25	1.25	1.25
VSWR variation over rotation, max.	0.05	0.05	0.05	na	na
Insertion loss, max.	0.2 dB	0.4 dB	1.0 dB	1.0 dB	1.0 dB
Insertion loss variation over rotation, max.	0.1 dB	10 % of absolute value	10 % of absolute value	na	na
Phase variation over rotation, max. / typ.	2.5 deg.	2.5 deg.	2.5 deg.	na	na
Isolation, min.	60 dB (between all channels)				

^{RF1)} Conditions: - Waveguide pressurized with dry air or N₂ at absolute pressure, min. 0.2 MPa (2 bar) absolute
 - Load VSWR, max. 2
 - Pulse width, max. 45 μs

^{RF2)} Condition: - Load VSWR, max. 1.5

^{RF3)} Condition: - Pulse width, max. 45 μs
 - Load VSWR, max. 2

^{RF4)} Condition: - Pulse width, max. 2 μs
 - Load VSWR, max. 2

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Slip ring characteristics

Group designation		A	B	C	PE
Circuit diagram		See Circuit Diagram (532502-CD Index A)			
Number of channels		5	12	3	1
Number of paths per channel		1	1	3	1
Type of circuit		Hazardous voltage	Hazardous voltage	Hazardous voltage	---
Signal type		AC-Power	DC	AC	---
Current,	AC RMS nominal DC nominal	10 A	1 A	0.5 A	---
Current,	AC RMS peak DC peak	All current paths must tolerate current peaks 12 times the nominal current for not less than 30 ms to protect each path with an appropriate fuse			
Current,	AC RMS max., duration DC max., duration	120 A, 30 ms	12 A, 30ms	6 A, 30ms	120 A, 30 ms
Voltage	AC RMS nominal DC nominal	220/380 V ± 10%	100 V ± 10%	100 V ± 10%	---
Frequency		50Hz	---	10KHz to 10MHz	---
Insulation resistance / 500 V DC		1000 MΩ	1000 MΩ	1000 MΩ	---
Electric strength		2000 V rms / 50 Hz / 1 minute	2000 V rms / 50 Hz / 1 minute	1000 V rms / 50 Hz / 1 minute	---
End-to-end resistance, max.		30 mΩ	200 mΩ	60 mΩ	---
Ohmic noise, max.		50 μV/mA	50 μV/mA	50 μV/mA	---
Crosstalk, min. between group x/y		---	---	50 dB (between paths within group C) at 10 kHz to 10 MHz	---
Nominal impedance		---	---	75 Ω ±5%	---
VSWR, max.		---	---	1.1 at 10 KHz to 3 MHz; 1.3 at 3 MHz to 10 MHz	---
Rotor	Connector	J1 MS27468T15B 05P	J2 MS27468T15B 19P	J3 8 BUS 0R22- 094PN	
Stator	Connector	J4 MS27468T15B 05S	J5 MS27468T15B 19S	J6 8 BUS 7R22- 094PN	
Class of equipment acc. to DIN EN 61140		I			
AC power distribution system		L1, L2, L3, N, PE			
Overvoltage category acc. to DIN EN 60664-1		II			
Electrical safety requirements		Compliant with EN 60950-1 (except all connectors with hazardous voltage)			

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Mechanical characteristics

Differential operating pressure, max. / nominal	0.2 MPa (2 bar) / 0.1 MPa (1 bar)
Leakage rate, max.	50 cm ³ /minute @ nominal differential pressure
Rotating speed, max. / nominal	60 rpm / 30 rpm
Rotating direction (view from the top)	both directions
Life, min.	40 x 10 ⁶ revolutions
Maintenance period	10 x 10 ⁶ revolutions
Overhaul period	20 x 10 ⁶ revolutions
Torque (room / min. temperature), max.	10 Nm / 20 Nm @ start-up 10 Nm / 20 Nm @ rotation
Interface loads, max.	no loads allowed
Case material	aluminum alloy, sea water resistant
Case surface finish	chromate conversion coat per MIL-DTL-5541 type 1 or type 2 Painted RAL7032 pebble grey
IP protection level	IP64
Weight, max.	60 kg
Marking	adhesive label

Environmental conditions

Operation	
Application	ground, fixed
Operating altitude, max.	3.000 m
Ambient temperature range	-40 to +60°C
Relative humidity, max.	95% (at +40 °C)
Shock	25 g / 6 ms half sine, 400 shocks in each direction of 3 orthogonal axes Compliant to MIL-STD-810G
Vibration	20-50 Hz, PSD of 0.02 g ² /Hz falling to 0.001 g ² /Hz at 500 Hz in each of 3 orthogonal axes Duration: 15 min/axis Compliant to MIL-STD-810G
Salt fog	Standard exposure of 48h per MIL-STD-810G
Storage	
Ambient temperature range	-55 to +85°C
Relative humidity, max.	95% (at +40 °C)

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Applicable documents

Drawing	532502-0E, Issue F
Circuit Diagram	532502-CD, Issue D
Product manual	M36324
Technical information	"Rotary Joints – Glossary", Technical Document TD-00021, Spinner GmbH