Stackable and hollow shaft non contacting

Rotary joints suitable for stacking are available in two different choke coupled versions.

One exampe is the around-the-mast version, "pancake", with low height and large centre hole, 85 mm. It is available with type N/SMA or type N/N connectors. Another example is a "double pancake" with two channels.

The other type, SL 6805, is a more compact version with centre hole of only 10 mm. This enables you to stack 4–5 joints in a row. A typical bandwidth is 10 percent.

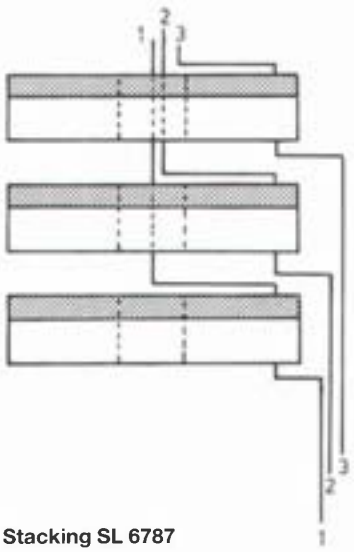
Technical data

Type of connectors	Frequency range GHz	Model	Power[1] peak kW	Power[1] avg W	VSWR max	WOW in VSWR	Insertion loss dB max	Starting torque Nm max	Material	Weight kg	Dimensions H	Dimensions D	Centre Ø
Single channel													
type N/SMA	1.01–1.10	**SL 6787**	10	10	1.3	1.10	0.5	1.0	Al	6	61	300	85
type N/N	1.0 –1.10	**SL 6802**	10	10	1.3	1.10	0.5	1.3	Al	6	61	300	85
type SMA	3±150 MHz	**SL 6805**	0.01	0.5	1.3	1.08	0.5	0.3	Brass	0.5	70	65	10
type SMA/SMA	3.0–3.6	**SL 21600**	1	1	1.3	1.05	0.5	0.3	Al	0.4	51	86	13
Dual channel													
type N	1.25–1.35	**SL 6795**	10	10	1.3	1.08	0.5	1.4	Al	6	101	300	51
type N	1.0 –1.1		10	10	1.3	1.08	0.5						

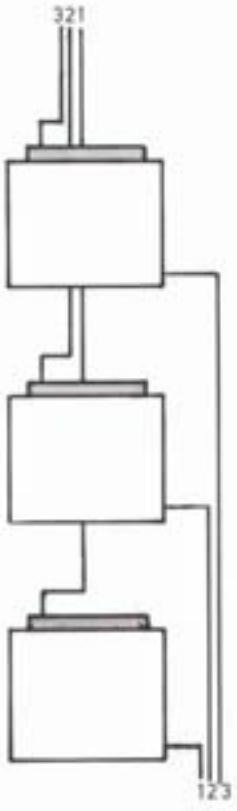
[1] The power capacity of rotary joints are given for +25°C 0.1 MPa (1 ATA) 2μs pulsewidth, 500 Hz repetition rate and matched load.

Temperature: operational −30°C to + 85°C
storage −40°C to +100°C

Life: Min 50 million revolutions with periodic lubrication.



Stacking SL 6787



Stacking SL 6805

Coaxial rotary joints

DC-40 GHz

The series of single-channel coaxial rotary joints consists of 5 models in different frequency ranges DC-40.0 GHz.They are intended for use in systems for medium power. The joints are weatherized to withstand severe environmental conditions.

Contact types

The sliding-contact types are designed with spring loaded precious metal contacts and are very compact. These types have the frequency range extended down to DC.

Choke-type

The PM 7893 choke joint has low torque and improved noise characteristics. It is recommended for high speed applications up to 2000 rpm.

Multichannel

Coaxial rotary joints are available up to 12 GHz, both contacting and non contacting types.

Single-channel

See also page 55 for coaxial stackable rotary joints.

Type of connectors	Frequency range GHz	Model	Power[1] peak kW	Power[1] avg kW	VSWR max	WOW in VSWR	Insertion loss dB max
type K female/female	DC-40	**PM 7889/11**	2 1	50 W at 1 GHz 25 W at 10 GHz	(DC-26 GHz) 1.75 31–36 GHz 2.5	1.0 (DC-26) 1.00 1.5 31–36 1.1	(DC-26GHz) 1.0 31–36 GHz 1.5
type N[2] male/female	DC-12.4	**PM 7890**	10	0.5 (DC-3 GHz) 0.2 (3–12 GHz)	1.30 (DC-8 GHz) 1.50 (8–12.4 GHz)	1.03	0.2 (DC-8 GHz) 0.3 (8–12.4 GHz)
type SMA female/female	DC-18.0	**PM 7892**	1.0	0.05	1.30 (DC-12 GHz) 1.50 (12–18 Ghz)	1.02	0.3 (DC-12 GHz) 0.6 (12–18 GHz)
type N male/female	2–10	**PM 7893**	5.0	0.1	1.40	1.03	0.3
type TNC female/female	DC-11	**PM 7895**	3.0	0.4 (DC-3 GHz) 0.2 (3–11 GHz)	1.30 (DC-8 GHz) 1.50 (8–11 GHz)	1.03	0.2 (DC-8 GHz) 0.3 (8–11 GHz)
type SMA female/female	8.5–9.6	**SL 6778**	3.0	0.05	1.5	1.05	0.3

[1] The power capacity of rotary joints are given for +25°C
0.1 MPa (1 ATA) 2 μs pulsewidth, 500 Hz repetition rate and matched load.

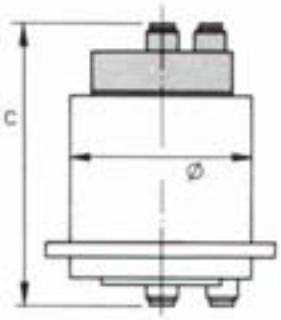
[2] PM 7890/01 female/female.

Multichannel coaxial rotary joints

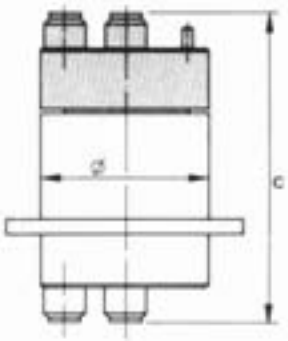
See also page 55 for coaxial stackable rotary joints.

Channel no	Style	Size	Frequency range GHz	Model	Power[1] peak kW	cap avg W	VSWR	WOW	Insertion loss dB	Starting torque Nm	Material	Weight kg	Dimensions in mm A	B	C	ø
1	I	**N-type**	DC-12	**SL 6758**	15	50	1.50	1.05	0.5	0.2	Al	1.0	–	–	113	65
2		**N-type**	DC-3		15	50	1.70	1.08	0.5							
1	I	**N-type**	1.0–1.5	**SL 6770**	10	10	1.25	1.05	0.3	0.5	Al	–	–	–	136	90
2		**N-type**	1.0–1.15		10	10	1.30	1.08	0.4							
1	I	**N-type**	1.0–1.1	**SL 6781**	10	25	1.25	1.08	0.4	1.5	Al	8	–	–	380	108
2		**N-type**	1.0–1.1		10	25	1.25	1.08	0.6							
3		**N-type**	1.0–1.1		10	25	1.25	1.08	0.6							

[1] The power capacity of rotary joints are given for +25°C 0.1 MPa (1 ATA) 2 μs pulsewidth, 500 Hz repetition rate and matched load.



SL 6770



SL 6758

Starting torque Nm max	Rot speed rpm	Material	Weight g	Dimensions C	ø
0.014	200	Stainless steel	60	51	15
0.05	500	Stainless steel	130	78.5	23
0.03	350	Stainless steel	40	55	15
0.02	2000	Stainless steel	140	82	23
0.05	500	Stainless steel	96	70.8	23
0.03	500	Brass/Gold	50	35	13