MAGVENTION · COAXIAL SWITCHES · DC – 67 GHZ

Coaxial Switches DC to 67 GHz

Electromechanical coaxial switches from Magvention: from SPDT to 1P18T, with connectors from SMA to 1.85 mm as well as N, TNC, SC, 4.3-10 and 7-16. Available as failsafe, latching or normally open versions, optionally with 50 Ω termination, TTL control and position indicators.



The range at a glance

Switch types

SPDT, DPDT (transfer) and multi-throw switches from 1P3T to 1P18T

Connectors

SMA, 2.92 mm, 2.4 mm, 1.85 mm, PCB as well as N, TNC, SC, 4.3-10 and 7-16

Actuator types

Failsafe, latching and normally open, coil voltage 12, 18, 24 or 28 V

Options

50 Ω termination, high performance, high power, extended temperature, TTL, indicators, USB, BCD

Customized solutions

Magvention specializes in customized RF switching solutions, with rapid product development and short lead times. Talk to us.

Your partner in Europe

bq-microwave is the distributor of Magvention for Europe. Consulting, quotation and order processing from one source.

Selection matrix

HIGHEST FREQUENCY IN GHZ PER SWITCH TYPE AND CONNECTOR · SERIES BELOW

Type	SMA	2.92 mm	2.4 mm	1.85 mm	PCB	N	TNC	SC	4.3-10	7-16
SPDT	26.5 MC1 · MC2	45 MC1 · MC2	50 MC1 · MC2	67 MC1 · MC2	18 MC1	12.4 MC4 · MCD · MCV	12.4 MC4p	6 MC4	8 MC4	4 MC4
DPDT	26.5 MC5	40 MC5	50 MC5			12.4 MC7				
1P3T–1P4T	18 MCQ · MCK							5 MCA · MC64		
1P3T–1P6T	26.5 MC3 · MCP · MCF	40 MC3 · MCP · MCF	50 MC3 · MCF	67 MCF	18 MCP	12.4 MC6	o. r. MC6	6.5 MC6	6 MC6	
1P7T–1P8T	18 MC98 · MC88	40 MC98 · MC88				8 MCH		8 MCH		
1P7T–1P10T	18 MCJ · MC0	26.5 MCJ · MC0								
1P9T–1P12T	18 MCL · MCM					1 MCG				
1P13T–1P18T	3 MCR									

o. r. = on request. All series and versions in detail on the following pages.

SPDT switches

1P2T · SMA TO 1.85 MM · UP TO 67 GHZ





The SPDT switches of the MC1 and MC2 series cover the range up to 67 GHz with SMA, 2.92 mm, 2.4 mm and 1.85 mm connectors. The MC2 series is available with or without internal 50 Ω termination, the MC1 also as low-profile, PCB-mount and manual versions.

Model	Connector	Frequency (GHz)	Actuator	Feature
MC1-S26	SMA	26.5	Failsafe, latching	
MC1-K40	2.92 mm	40	Failsafe, latching	
MC1h-K45	2.92 mm	45	Failsafe, latching	High performance
MC1-U50	2.4 mm	50	Failsafe, latching	
MC1-V67	1.85 mm	67	Failsafe, latching	
MC1-s	SMA	26.5	Failsafe, latching	Low profile
MC1-PCB	PCB	18	–	Low profile
MC1 manual	SMA	26.5	Manual	
MC2-S	SMA	26.5	Failsafe, latching	With/without 50 Ω termination
MC2-K	2.92 mm	40	Failsafe, latching	With/without 50 Ω termination
MC2T-U50	2.4 mm	50	Latching	With/without 50 Ω termination
MC2T-V67	1.85 mm	67	Latching	With/without 50 Ω termination

DPDT transfer switches

SMA TO 2.4 MM AND N · UP TO 50 GHZ





The DPDT transfer switches of the MC5 series operate with SMA, 2.92 mm and 2.4 mm up to 50 GHz, the MC7 with N connectors up to 12.4 GHz, also as a high-power version.

Model	Connector	Frequency (GHz)	Actuator	Feature
MC5-S	SMA	26.5	Failsafe, latching	
MC5-K	2.92 mm	40	Failsafe, latching	
MC5-U	2.4 mm	50	Failsafe, latching	
MC7-N	N	12.4	Failsafe, latching	
MC7p-N	N	12.4	Failsafe, latching	High power

Typical data using the MC1-K40 as an example

ACCORDING TO THE MAGVENTION DATASHEET

Property	Value
Contact material	gold plated
Switching sequence	break before make
Switching time (max.)	15 ms
Impedance	50 Ω
Temperature range	–25 to +65 °C (standard), –55 to +85 °C (option e)
Operation life	3,000,000 cycles (standard), 5,000,000 (option h)
Vibration (operating)	10G RMS, 20–2000 Hz
Shock (non-operating)	50G, half sine, 11 ms

Frequency (GHz)	VSWR (max.)	Insertion loss (dB, max.)	Isolation (dB, min.)
DC–6	1.20	0.20	70
6–12	1.30	0.25	70
12–18	1.40	0.40	60
18–26.5	1.70	0.70	55
26.5–32	1.90	0.80	50
32–40	1.90	0.90	50

Multi-throw switches

1P3T TO 1P18T · SMA TO 1.85 MM · UP TO 67 GHZ







Multi-throw switches from 1P3T to 1P18T, as normally open or latching versions, terminated versions up to 67 GHz and mini designs.

Model	Throws	Connector	Frequency (GHz)	Actuator	Feature
MCQ3-S18	1P3T	SMA	18	Latching	
MCK-S18	1P4T	SMA	18	Normally open	
MC3-S22	1P3T–1P6T	SMA	22	Normally open	
MC3-S26	1P3T–1P6T	SMA	26.5	Normally open	
MC3-K40	1P3T–1P6T	2.92 mm	40	Normally open	
MC3-U50	1P6T	2.4 mm	50	Normally open	
MCP-S18	1P3T–1P6T	SMA / PCB	18	Normally open	Mini design
MCP-K40	1P3T–1P6T	2.92 mm	40	Normally open	Mini design
MCF6T-S18	1P3T–1P6T	SMA	18	Normally open, latching	With/without 50 Ω termination
MCF6T-K40	1P3T–1P6T	2.92 mm	40	Normally open, latching	With/without 50 Ω termination
MCF6Th-K40	1P6T	2.92 mm	40	Normally open, latching	Terminated, high performance
MCF6T-U50	1P3T–1P6T	2.4 mm	50	Normally open, latching	With/without 50 Ω termination
MCF6T-V67	1P3T–1P6T	1.85 mm	67	Normally open, latching	With/without 50 Ω termination
MC98-S18	1P7T–1P8T	SMA	18	Normally open	Also with USB control
MC98-K40	1P7T–1P8T	2.92 mm	40	Normally open	
MC88T-S18	1P7T–1P8T	SMA	18	Normally open, latching	With/without 50 Ω termination
MC88T-K40	1P8T	2.92 mm	40	Normally open, latching	With/without 50 Ω termination
MC88Th-K40	1P8T	2.92 mm	40	Normally open, latching	Terminated, high performance
MCJ10-S18	1P8T–1P10T	SMA	18	Normally open	
MCJ10-K26	1P7T–1P10T	2.92 mm	26.5	Normally open	
MC010T-S18	1P9T–1P10T	SMA	18	Normally open, latching	With/without 50 Ω termination
MC010T-K26	1P9T–1P10T	2.92 mm	26.5	Normally open, latching	With/without 50 Ω termination
MCL12-S16	1P11T–1P12T	SMA	16	Normally open	
MCM12T-S18	1P11T–1P12T	SMA	18	Normally open, latching	With/without 50 Ω termination
MCR18-S03	1P13T–1P18T	SMA	3	Normally open	

High power and large connectors

N, TNC, SC, 4.3-10 AND 7-16





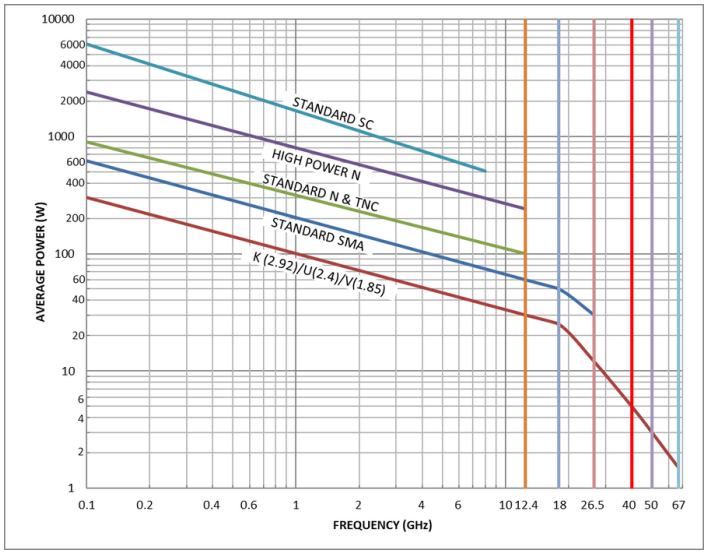


For higher power levels, SPDT and multi-throw switches with N, TNC, SC, 4.3-10 and 7-16 connectors are available, some as high-power versions (option p).

Model	Throws	Connector	Frequency (GHz)	Actuator	Feature
MC4-N12	SPDT	N	12.4	Failsafe, latching	
MC4p-N12	SPDT	N	12.4	Failsafe, latching	High power
MC4p-T12	SPDT	TNC	12.4	Failsafe, latching	High power
MC4-C06	SPDT	SC	6	Failsafe, latching	
MC4-R08	SPDT	4.3-10	8	Failsafe, latching	
MC4-D04	SPDT	7-16	4	Failsafe, latching	
MC4p manual	SPDT	N	12.4	Manual	High power
MCD-N04	SPDT	N	4	Failsafe, latching	
MCVpe-N02	SPDT	N-V	2	Latching	High power, ext. temperature
MC64-C	1P4T	SC	1	Normally open	
MCA4-C05	1P3T–1P4T	SC	5	Normally open, latching	
MC6np-N	1P3T–1P6T	N	12.4	Normally open	High power
MC6-C	1P3T–1P6T	SC	6.5	Normally open	
MC6-R	1P3T–1P6T	4.3-10	6	Normally open	
MCH8-N	1P7T–1P8T	N	8	Normally open	
MCH8p-N	1P7T–1P8T	N	8	Normally open	High power
MCH8-C	1P7T–1P8T	SC	8	Normally open	
MCG12-N	1P9T–1P12T	N	1	Normally open	

Power handling

AVERAGE POWER VS. FREQUENCY · 20 °C, SEA LEVEL, VSWR 1:1, COLD SWITCHING



Derating for mismatch

VSWR	Factor
1.5 : 1	0.96
2.0 : 1	0.88
2.5 : 1	0.84
3.0 : 1	0.75
3.5 : 1	0.70
4.0 : 1	0.64
4.5 : 1	0.60
5.0 : 1	0.56

For a VSWR above 1:1, the permissible power is multiplied by the respective factor.

How to read the part number

EXAMPLE FROM THE MAGVENTION CATALOG: MCVPE-N02L28-3KDM

MCV	p	e	N	02	L	28	3	K	D	M
Series (SPDT, N-V)	High power	Ext. temperature	N connector	DC to 2 GHz	Latching	28 V	Self-cutoff and TTL	Indicator	D-sub connector	Moisture seal

Options at a glance

Actuator type

F = failsafe, L = latching, N = normally open. Coil voltage 12, 18, 24 or 28 V.

Control

With suppression diodes, TTL, self-cutoff (latching only), BCD or USB.

Special options

T = 50 Ω termination, h = high performance, e = extended temperature, p = high power, -a = auto-reset, -r = reset all.

Further options

K = indicators, D = D-sub, L = low PIM, p = positive common, M = moisture seal, s = low profile (MC1, MC3).

Switch matrices

On request, Magvention also supplies switch matrices, standard or customized.

Customized solutions

Magvention specializes in customized RF switching solutions, with rapid product development and short lead times. Talk to us.

All data as specified by the manufacturer Magvention (catalog January 2026). Detailed datasheets with drawings and pinouts are available from bq-microwave.

Your contact for Magvention

Looking for the right switch or a special version? We are happy to advise you and clarify details directly with Magvention.

+49 151 252 901 28 · info@bq-microwave.de · www.bq-microwave.de