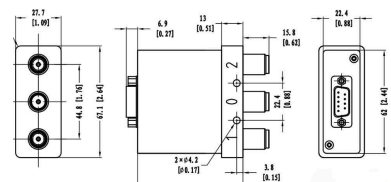


DC–12.4 GHz Electromechanical SPDT RF Switch, Failsafe/Latching Options

CW power handling is 350 W over DC–5 GHz and 250 W over 5–12.4 GHz. Failsafe or latching options use break-before-make switching with a ≤15 ms switching time.



General specifications

Parameter	Value	Unit
Model number	LCSPDT-DC12400-N-H	-
Switch type	SPDT	-
Frequency range	DC–12.4 (Minimum: 0 GHz. Maximum: 12.4 GHz.)	GHz
Drive mode	Failsafe / latching options	-
Control option	Non-TTL / optional TTL	-
Impedance	50	Ω
Switching sequence	Break-before-make	-
Switching speed	≤15 (Maximum: 15 ms.)	ms
Switching life	2000000 cycles	-

Electrical specifications

Parameter	Value	Unit	Notes
Insertion loss — DC–5 GHz	≤0.3	dB	DC–5 GHz Maximum: 0.3 dB.
Isolation — DC–5 GHz	≥70	dB	DC–5 GHz Minimum: 70 dB.
VSWR — DC–5 GHz	≤1.3	-	DC–5 GHz Maximum: 1.3.
CW power handling — DC–5 GHz	350	W	DC–5 GHz
Insertion loss — 5–12.4 GHz	≤0.5	dB	5–12.4 GHz Maximum: 0.5 dB.
Isolation — 5–12.4 GHz	≥60	dB	5–12.4 GHz Minimum: 60 dB.
VSWR — 5–12.4 GHz	≤1.5	-	5–12.4 GHz Maximum: 1.5.
CW power handling — 5–12.4 GHz	250	W	5–12.4 GHz

Power configuration options

Parameter	Value	Unit	Notes
Failsafe current — 28 V	150	mA	Discrete voltage configuration; no continuous supply range inferred. 28 V
Latching current — 28 V	150	mA	Discrete voltage configuration; no continuous supply range inferred. 28 V

Power configuration options

Parameter	Value	Unit	Notes
Failsafe current — 24 V	180	mA	Discrete voltage configuration; no continuous supply range inferred. 24 V
Latching current — 24 V	180	mA	Discrete voltage configuration; no continuous supply range inferred. 24 V
Failsafe current — 12 V	300	mA	Discrete voltage configuration; no continuous supply range inferred. 12 V
Latching current — 12 V	320	mA	Discrete voltage configuration; no continuous supply range inferred. 12 V

Optional TTL specifications

Parameter	Value	Unit
TTL low voltage	0–0.3 (Minimum: 0 V. Maximum: 0.3 V.)	V
TTL high voltage	3–5 (Minimum: 3 V. Maximum: 5 V.)	V
TTL current	20	mA

Indicator port specifications

Parameter	Value	Unit	Notes
Indicator withstand voltage	50	V	Maximum: 50 V.
Indicator current capacity	100	mA	Maximum: 100 mA.
Indicator resistance	15	Ω	Maximum: 15 Ω.

Integration guidance

Parameter	Value	Unit
Supply and ground connection	Connect VDC and GND before operation.	-

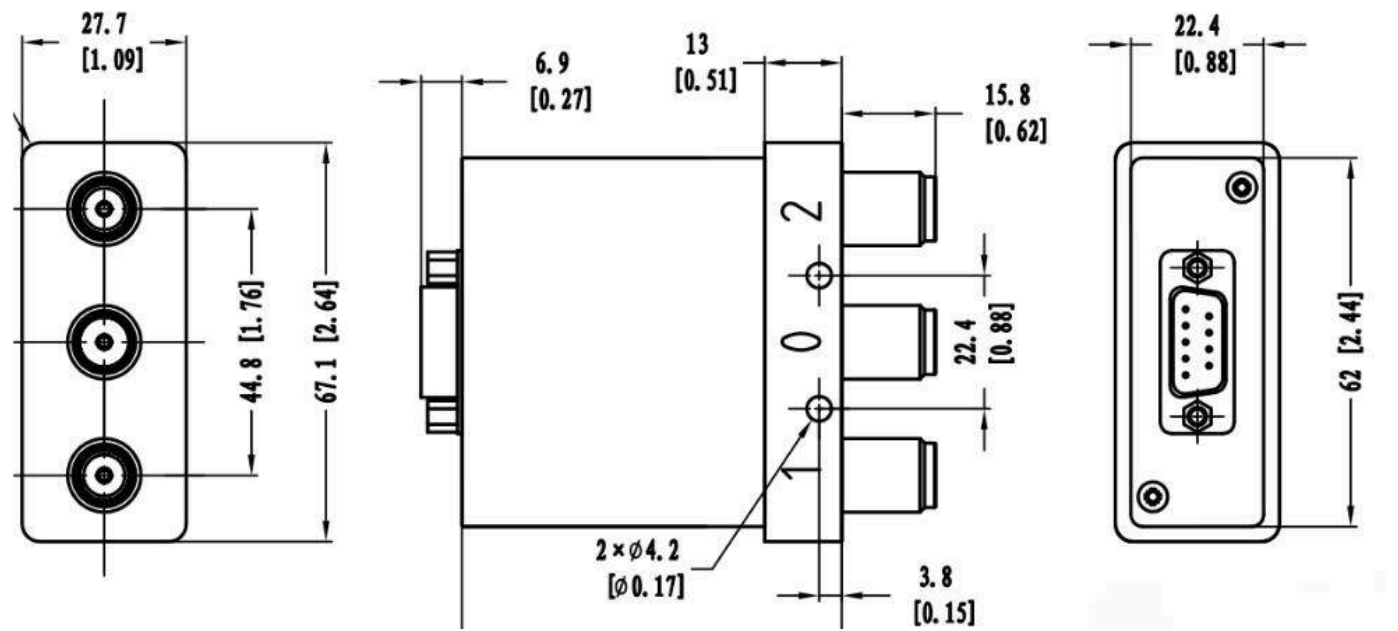
Environmental limits

Parameter	Value	Unit	Notes
Operating temperature	–25–+65	°C	Minimum: -25 °C. Maximum: 65 °C.
Storage temperature	–55–+85	°C	Minimum: -55 °C. Maximum: 85 °C.
Shock	50 G / 11 ms	-	Non-operating shock.
Vibration	10 G RMS / 20–2000 Hz	-	Operating vibration.

Mechanical specifications

Parameter	Value	Unit
RF connectors	N — Female	-
Control connector	Pins / D-Sub 9-pin male	-
Weight	250	g

Mechanical Outline



All dimensions are in mm [in].

Environmental configuration options

Parameter	Value	Unit
Extended temperature option 1	-45--+85 (Extended temperature option; not the standard range. Minimum: -45 °C. Maximum: 85 °C.)	°C
Extended temperature option 2	-55--+85 (Extended temperature option; not the standard range. Minimum: -55 °C. Maximum: 85 °C.)	°C

Control interfaces

Parameter	Value	Unit	Notes
Non-TTL contact — 1	V	-	1
Non-TTL contact — 2	Not applicable	-	2
Non-TTL contact — 3	GND	-	3
Non-TTL contact — 4	Indicator 1	-	4
Non-TTL contact — 5	Indicator 2	-	5
Non-TTL contact — 6	Indicator common	-	6

Control interfaces

Parameter	Value	Unit	Notes
Non-TTL contact — 7	VDC	-	7
Non-TTL contact — 8–9	Not applicable	-	8–9
TTL contact — 1	VDC	-	1
TTL contact — 2	TTL	-	2
TTL contact — 3	GND	-	3
TTL contact — 4	Indicator 1	-	4
TTL contact — 5	Indicator 2	-	5
TTL contact — 6	Indicator common	-	6
TTL contact — 7	TTL	-	7
TTL contact — 8–9	Not applicable	-	8–9

Switching states

Parameter	Value	Unit
Failsafe, power off	RF1-COM	-
Failsafe, power on	RF2-COM	-
Latching V1 path	RF1-COM	-
Latching V2 path	RF2-COM	-
TTL low path	RF1-COM	-
TTL high path	RF2-COM	-

Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.