



SP4T NO DC to 12 GHz Electro-Mechanical Relay
Switch, Up To 600W, 12V, 2M Lifecycles, N

Electromechanical Relay Switches Technical Data Sheet

PE71S6434

Features

- Single Pole Four Throw Electromechanical Relay Switch
- DC to 12 GHz Frequency Range
- Normally Open Actuator
- 2M Lifecycle Rating
- Insertion Loss 0.3 dB typ
- Isolation > 90 dB typ
- VSWR 1.25:1 typ
- +12 Volt DC Bias
- 15 Pin D-SUB Connector for DC Control
- N Type Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 600 Watt Average Power Handling
- 50 Ohm Design
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request
- Rugged Design meets Mil-STD-202 Test Conditions

Applications

- Aerospace & Defense
- Test & Measurement
- Microwave Radio Systems
- Military & Commercial Communication Systems
- Research & Development
- SATCOM
- Wireless Communications
- Enterprise
- IoT

Description

The PE71S6434 is a Single Pole Four Throw (SP4T) electromechanical relay switch that operates across a wide frequency range of DC to 12 GHz and can handle up to 600 Watts of CW input power in a break before make condition. The 50 Ohm design is rated for 2 million lifecycles and features a Normally Open Actuator where the selected position remains active with constant voltage, all positions are open when voltage is removed. Impressive typical performance includes 0.4 dB insertion loss and isolation greater than 90 dB. This switch requires +12Vdc bias voltage and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports N Type female connectors and a 15 pin D-SUB connector for DC control. And for highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for shock and random vibration.

Electrical Specifications

Switch Type SP4T
Actuator Type Normally Open
Switching Sequence Break before Make

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12	GHz
Impedance		50		Ohms
Operating Voltage	11	12	13	Volts
Actuating Set Current @ 12 Volts At +20°C			200	mA
VSWR		1.25:1	1.4:1	
Insertion Loss		0.3	0.5	dB
Isolation	70	90		dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP4T NO DC to 12 GHz Electro-Mechanical Relay Switch, Up To 600W, 12V, 2M Lifecycles, N PE71S6434](#)



SP4T NO DC to 12 GHz Electro-Mechanical Relay
Switch, Up To 600W, 12V, 2M Lifecycles, N

Electromechanical Relay Switches Technical Data

PE71S6434

Input Power (CW)	600	Watts
Switching Time	20	ms Max

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 1	1 to 4	4 to 8	8 to 12		GHz
VSWR, Max	1.25:1	1.3:1	1.4:1	1.4:1		
Insertion Loss, Max	0.3	0.4	0.4	0.5		dB
Isolation, Min	90	80	80	70		dB

Mechanical Specifications

Size

Body Material and Plating	Aluminum
Package Type	Connectorized
Operating Life	2,000,000 Cycles

Connectors

RF Connector Type	N Female
Control Connector	Solder Terminals

Environmental Specifications

Temperature

Operating Range	-25 to +65 deg C
Storage Range	-55 to +100 deg C

Humidity
Shock

Moisture Resistance
MIL-STD-202 Method 213, Cond. D 500G Non Operating

Vibration

MIL-STD-202 Method 204, Cond. D 10G RMS Non Operating

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP4T NO DC to 12 GHz Electro-Mechanical Relay Switch, Up To 600W, 12V, 2M Lifecycles, N PE71S6434](#)

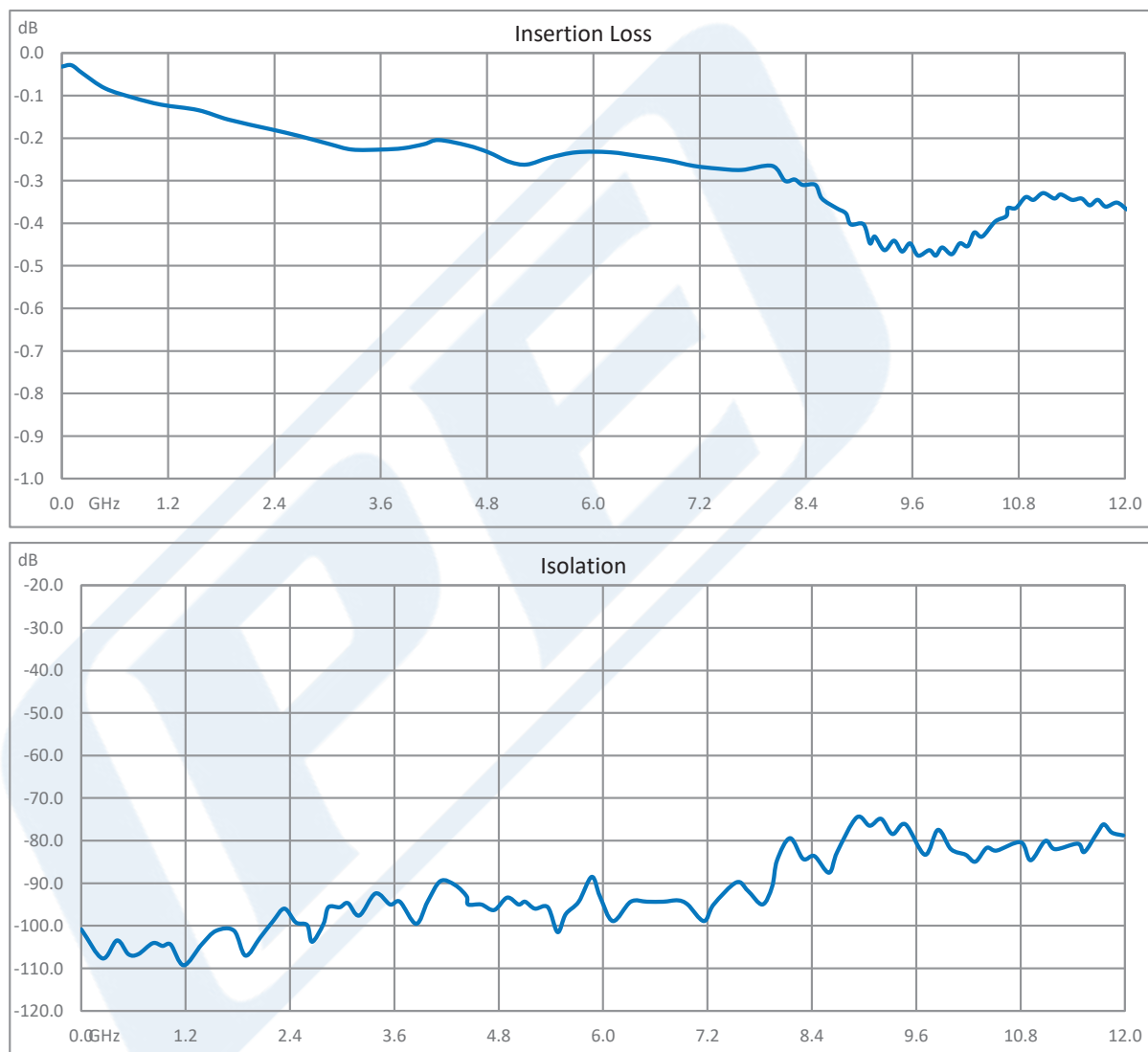


SP4T NO DC to 12 GHz Electro-Mechanical Relay
Switch, Up To 600W, 12V, 2M Lifecycles, N

Electromechanical Relay Switches Technical Data

PE71S6434

Typical Performance Data



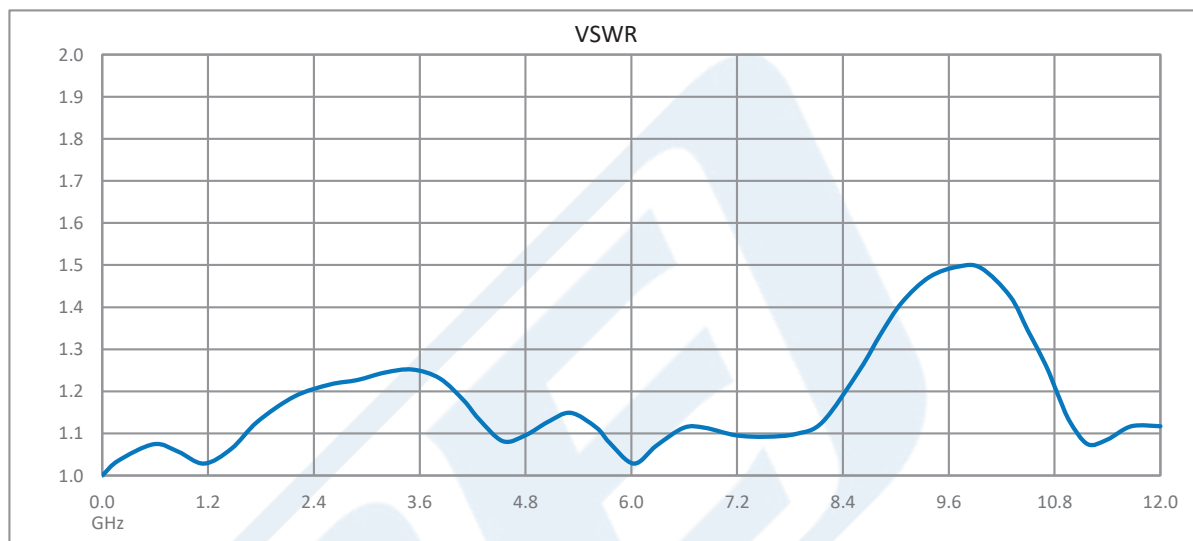
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP4T NO DC to 12 GHz Electro-Mechanical Relay Switch, Up To 600W, 12V, 2M Lifecycles, N PE71S6434](#)



SP4T NO DC to 12 GHz Electro-Mechanical Relay
Switch, Up To 600W, 12V, 2M Lifecycles, N

Electromechanical Relay Switches Technical Data

PE71S6434



SP4T NO DC to 12 GHz Electro-Mechanical Relay Switch, Up To 600W, 12V, 2M Lifecycles, N from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP4T NO DC to 12 GHz Electro-Mechanical Relay Switch, Up To 600W, 12V, 2M Lifecycles, N PE71S6434](https://www.pasternack.com/sp4t-electromechanical-relay-normally-open-switch-12-ghz-600w-12v-n-pe71s6434-p.aspx)

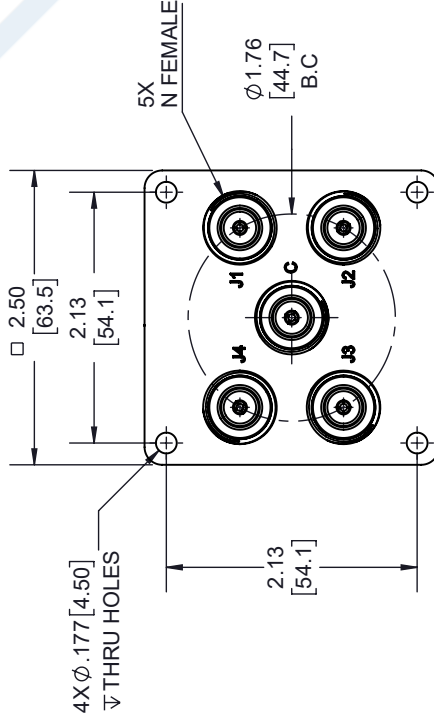
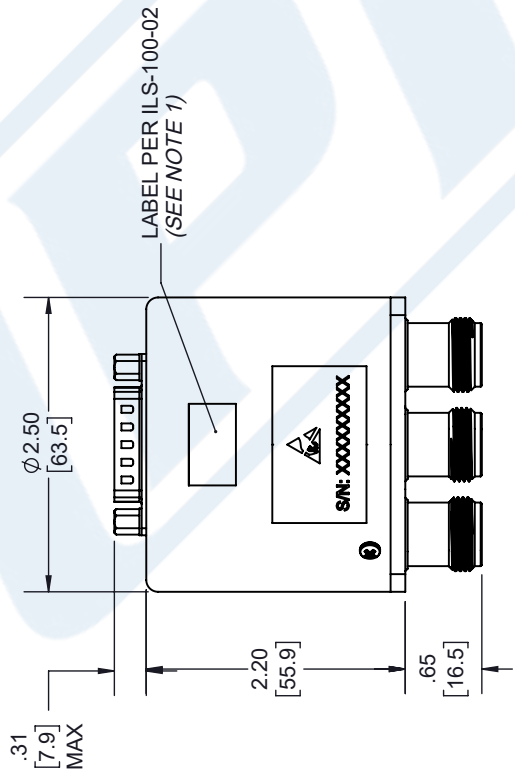
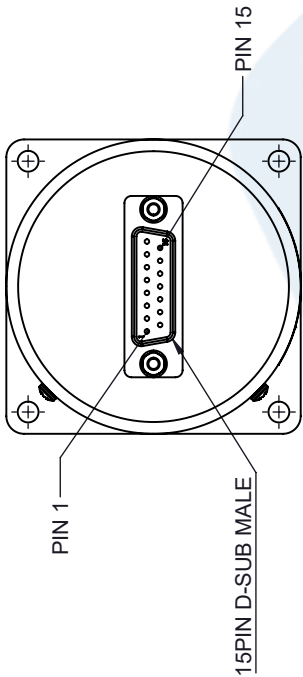
URL: <https://www.pasternack.com/sp4t-electromechanical-relay-normally-open-switch-12-ghz-600w-12v-n-pe71s6434-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE71S6434 CAD Drawing

SP4T NO DC to 12 GHz Electro-Mechanical Relay
Switch, Up To 600W, 12V, 2M Lifecycles, N

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	10/13/2020	T.GALLA



NOTES:

- LABEL PER ILS-100-02. FOR INTERNAL REFERENCE ONLY.
LABEL LOCATION FOR REFERENCE ONLY.

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

UNLESS OTHERWISE SPECIFIED
LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

X = ± .2	[5.08]	FRACTIONS
.XX = ± .02	[.51]	± 1/32
.XXX = ± .005	[.13]	ANGLES ± 1°

CABLE LENGTH (L) TOLERANCES:

L ≤ 12 [305]	± .1 [25] / -0
12 [305] < L ≤ 60 [1524]	± .2 [51] / -0
60 [1524] < L ≤ 120 [3048]	± .4 [102] / -0
120 [3048] < L ≤ 300 [7620]	± .6 [152] / -0
300 [7620] < L	± .5% / -0

ALL DIMENSIONS SHOWN
ARE FOR REFERENCE ONLY.

PE PASTERNAK
an INFINITE brand

Pasternack Enterprises, Inc.
P.O. Box 16759, Irvine, CA 92623.
Phone: 1.949.261.1920 | 1.866.727.8376
Fax: 1.949.261.7451
Website: www.pasternack.com
E-mail: sales@pasternack.com

THIRD-ANGLE PROJECTION

THE INFORMATION AND
DESIGN IN THIS DOCUMENT
IS THE PROPERTY OF
PASTERNAK CORPORATION
ALL RIGHTS RESERVED.

SHEET 1 OF 2

SCALE N/A

SIZE A

CAGE CODE 53919

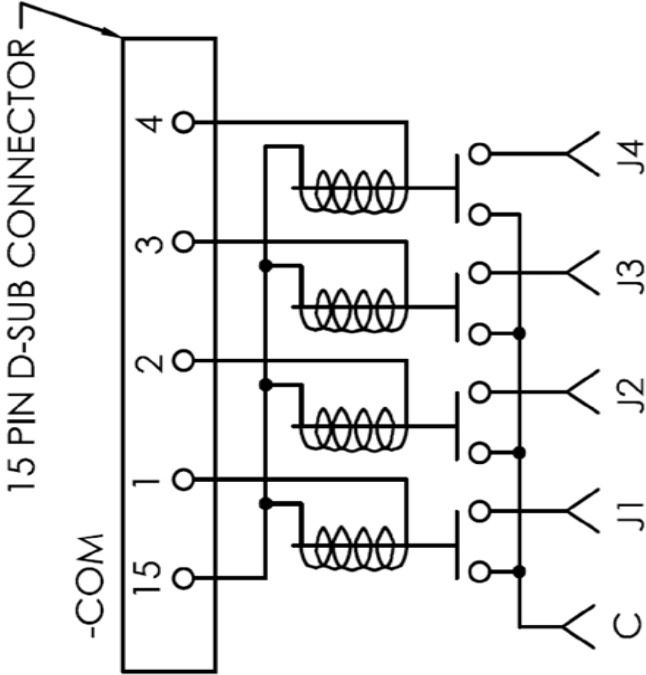
DRAWN BY K.DANG

ITEM NO. PE71S6434

REV A

PE71S6434 CAD Drawing

SP4T NO DC to 12 GHz Electro-Mechanical Relay
Switch, Up To 600W, 12V, 2M Lifecycles, N



RF POSITION
SCHEMATIC

PIN ASSIGNMENT

TERMINALS D-SUB PIN ASSIGNMENT	RF PATH			
	J1	J2	J3	J4
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	OFF	OFF	ON	OFF
4	OFF	OFF	OFF	ON

PIN 15. -COM

UNLESS OTHERWISE SPECIFIED
LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

X = ± .2	[.508]	FRACTIONS
.XX = ± .02	[.51]	± 1/32
.XXX = ± .005	[.13]	ANGLES ± 1°

CABLE LENGTH (L) TOLERANCES:

L ≤ 12	[305]	= +1 [25] / -0
12 [305] < L ≤ 60	[1524]	= +2 [51] / -0
60 [1524] < L ≤ 120	[3048]	= +4 [102] / -0
120 [3048] < L ≤ 300	[7620]	= +6 [152] / -0
300 [7620] < L		= +5% / -0

ALL DIMENSIONS SHOWN
ARE FOR REFERENCE ONLY.

**PASTERNAK**
an INFINITE brand

Pasternack Enterprises, Inc.
P.O. Box 16759, Irvine, CA 92623.
Phone: 1.949.261.1920 | 1.866.727.8376
Fax: 1.949.261.7451
Website: www.pasternack.com
E-mail: sales@pasternack.com

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	K.DANG	PE71S6434



THIRD-ANGLE PROJECTION

THE INFORMATION AND
DESIGN IN THIS DOCUMENT
IS THE PROPERTY OF
PASTERNAK CORPORATION
ALL RIGHTS RESERVED.

SHEET	2	OF	2
SCALE	N/A		
REV	A		