



SPDT Failsafe DC to 18 GHz Electro-Mechanical Relay Switch, 90W, 12V, 2M Lifecycles, SMA

Electromechanical Relay Switches Technical Data Sheet

PE71S6436

Features

- Single Pole Double Throw Electromechanical Relay Switch
- DC to 18 GHz Frequency Range
- Failsafe Actuator
- 2M Lifecycle Rating
- Insertion Loss 0.25 dB typ
- Isolation > 75 dB typ
- VSWR 1.3:1 typ
- +12 Volt DC Bias
- Terminal Pins for DC Control
- SMA Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 90 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 PE71S6436 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across a wide frequency range of DC to 18 GHz and can handle up to 90 Watts of CW input power in a break before make condition. The 50 Ohm design features a Failsafe Actuator and is rated for 2 million lifecycles. Impressive typical performance includes 0.25 dB insertion loss and isolation greater than 85 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 SMA female connectors and terminal solder pins 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 SPDT
 Actuator Type Failsafe
 Switching Sequence Break before Make

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Operating Voltage	11	12	13	Volts
Actuating Set Current @ 12 Volts At +20°C			200	mA
VSWR		1.3:1	1.4:1	
Insertion Loss		0.25	0.35	dB
Isolation	65	75		dB
Input Power (CW)			90	Watts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Failsafe DC to 18 GHz Electro-Mechanical Relay Switch, 90W, 12V, 2M Lifecycles, SMA PE71S6436](#)



SPDT Failsafe DC to 18 GHz Electro-Mechanical
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Electromechanical Relay Switches Technical Data

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Switching Time	20	ms Max
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Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 6	6 to 12	12 to 18			GHz
VSWR, Max	1.2:1	1.3:1	1.4:1			
Insertion Loss, Max	0.15	0.25	0.35			dB
Isolation, Min	85	75	65			dB

Mechanical Specifications

Size

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

Connectors

RF Connector Type	SMA 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:

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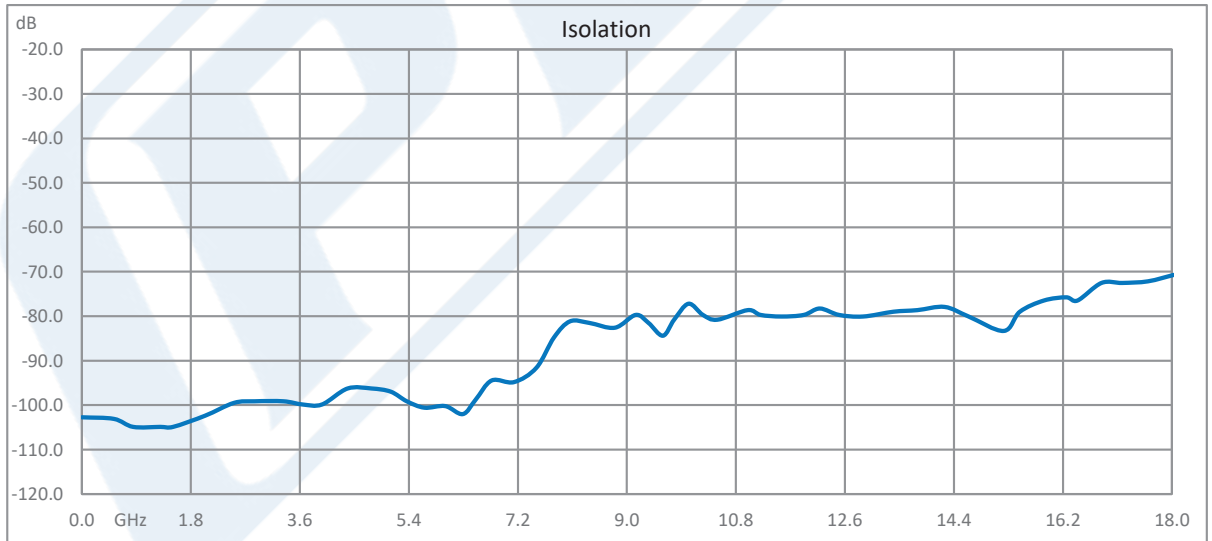
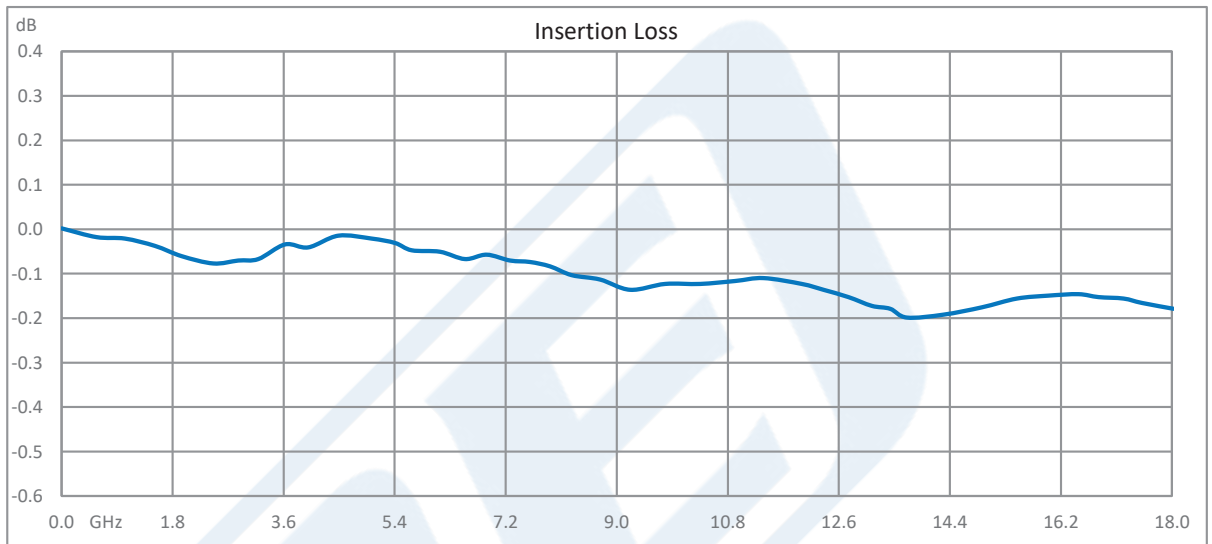


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Electromechanical Relay Switches Technical Data

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Typical Performance Data



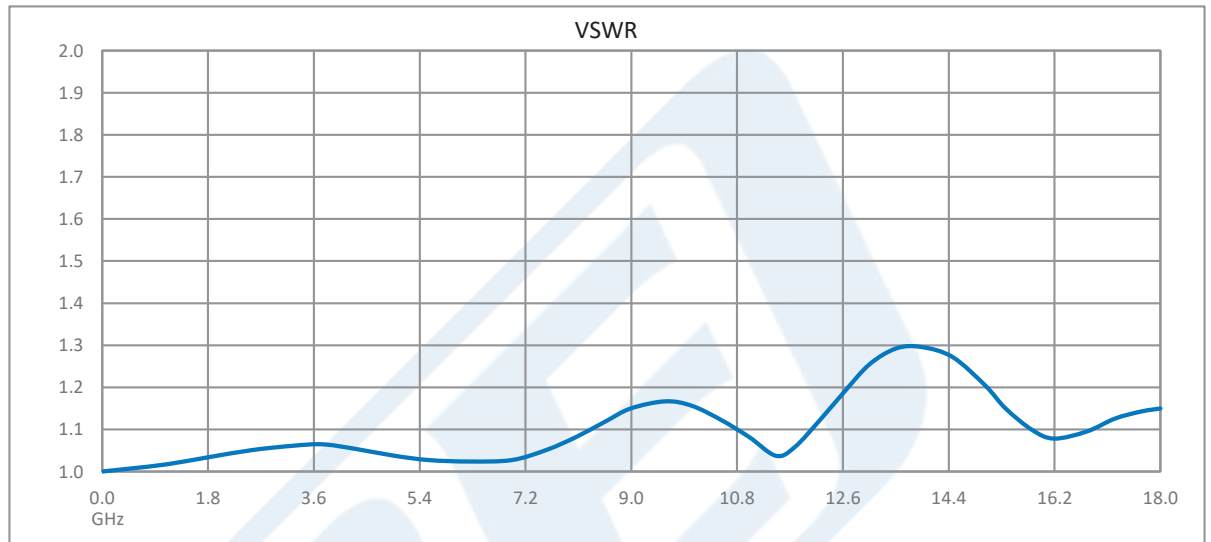
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SPDT Failsafe DC to 18 GHz Electro-Mechanical Relay Switch, 90W, 12V, 2M Lifecycles, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability 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: [SPDT Failsafe DC to 18 GHz Electro-Mechanical Relay Switch, 90W, 12V, 2M Lifecycles, SMA PE71S6436](https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-18-ghz-90w-12v-sma-pe71s6436-p.aspx)

URL: <https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-18-ghz-90w-12v-sma-pe71s6436-p.aspx>

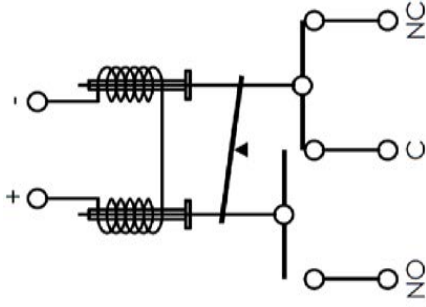
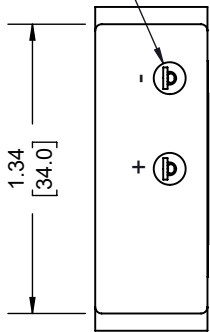
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PE71S6436 CAD Drawing

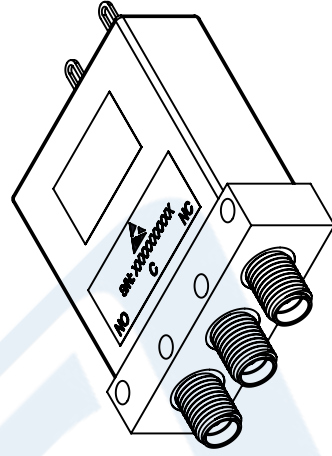
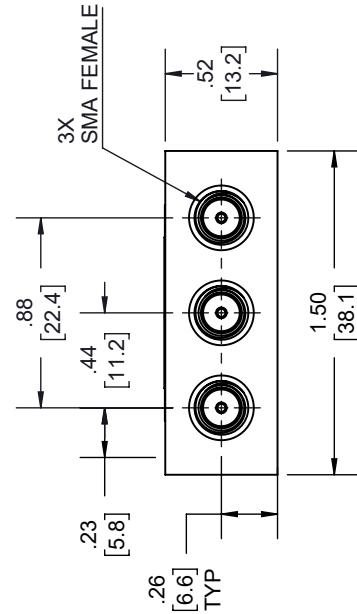
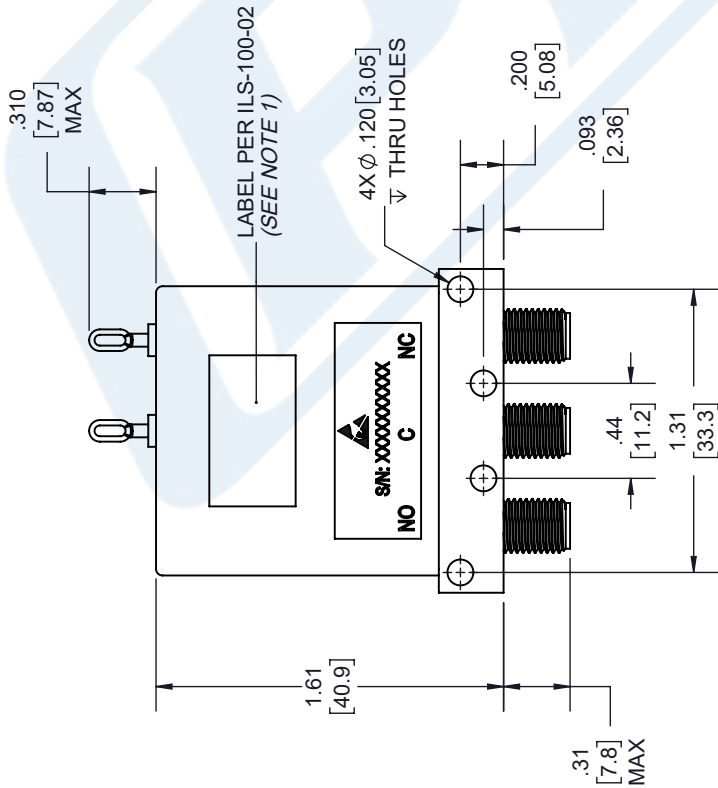
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	11/12/2020	T.GALLA

2X SOLDER TERMINALS.
SOLDER WIRE USING SN96
MAXIMUM TEMP 430°F FOR
NO MORE THAN 5 SEC.



SCHEMATIC (FAILSAFE POSITION)



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

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

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.

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

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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 A CAGE CODE 53919 DRAWN BY K.DANG ITEM NO. PE71S6436 REV A

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

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