



SPDT Failsafe DC to 12 GHz Electro-Mechanical Relay Switch, 600W, 28V, 2M Lifecycles, N

Electromechanical Relay Switches Technical Data Sheet

PE71S6438

Features

- Single Pole Double Throw Electromechanical Relay Switch
- DC to 12 GHz Frequency Range
- Failsafe Actuator
- 2M Lifecycle Rating
- Insertion Loss 0.4 dB typ
- Isolation > 80 dB typ
- VSWR 1.40:1 typ
- +28 Volt DC Bias
- Terminal Pins 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 PE71S6438 is a Single Pole Double Throw (SPDT) 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 features a Failsafe Actuator and is rated for 2 million lifecycles. Impressive typical performance includes 0.4 dB insertion loss and isolation 80 dB. This switch requires +28Vdc 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 solder terminal 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		12	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Set Current @ 28 Volts At +20°C			220	mA
VSWR		1.3:1	1.4:1	
Insertion Loss		0.4	0.5	dB
Isolation	70	80		dB
Input Power (CW)			600	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 12 GHz Electro-Mechanical Relay Switch, 600W, 28V, 2M Lifecycles, N PE71S6438](#)



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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 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	Moisture Resistance
Shock	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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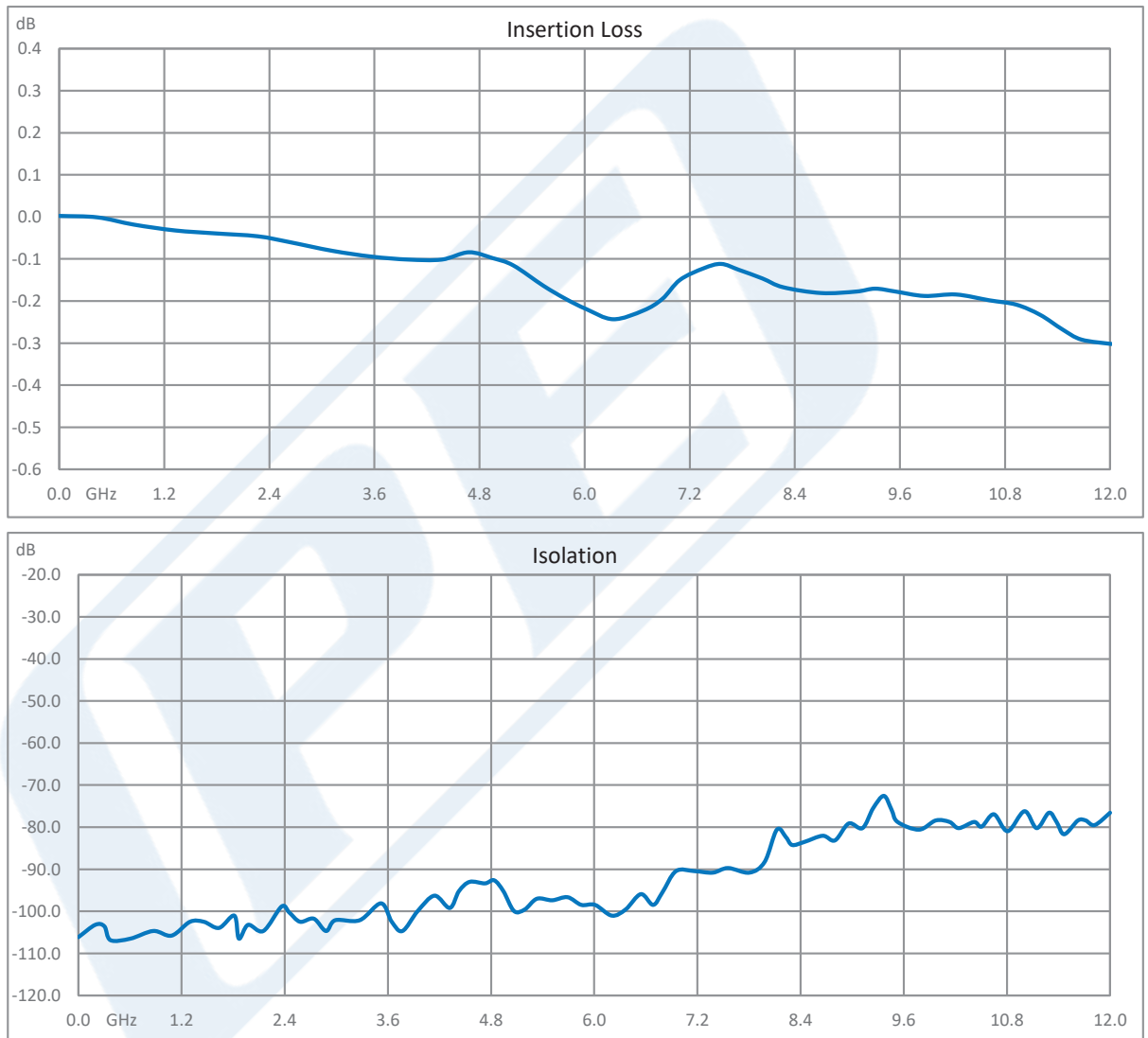


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Typical Performance Data



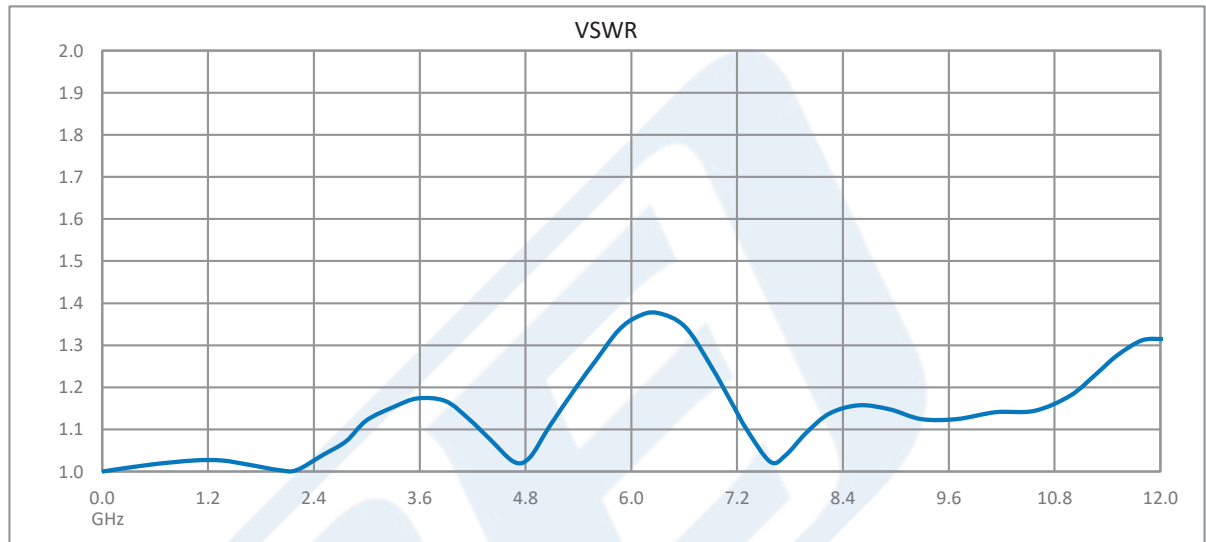
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SPDT Failsafe DC to 12 GHz Electro-Mechanical Relay Switch, 600W, 28V, 2M Lifecycles, N from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability 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: [SPDT Failsafe DC to 12 GHz Electro-Mechanical Relay Switch, 600W, 28V, 2M Lifecycles, N PE71S6438](https://www.pasternack.com/spdt-failsafe-dc-to-12-ghz-electro-mechanical-relay-switch-600w-28v-2m-lifecycles-n-pe71s6438)

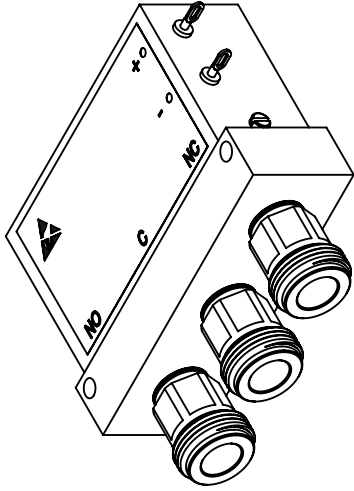
URL: <https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-12-ghz-600w-28v-n-pe71s6438-p.aspx>

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.

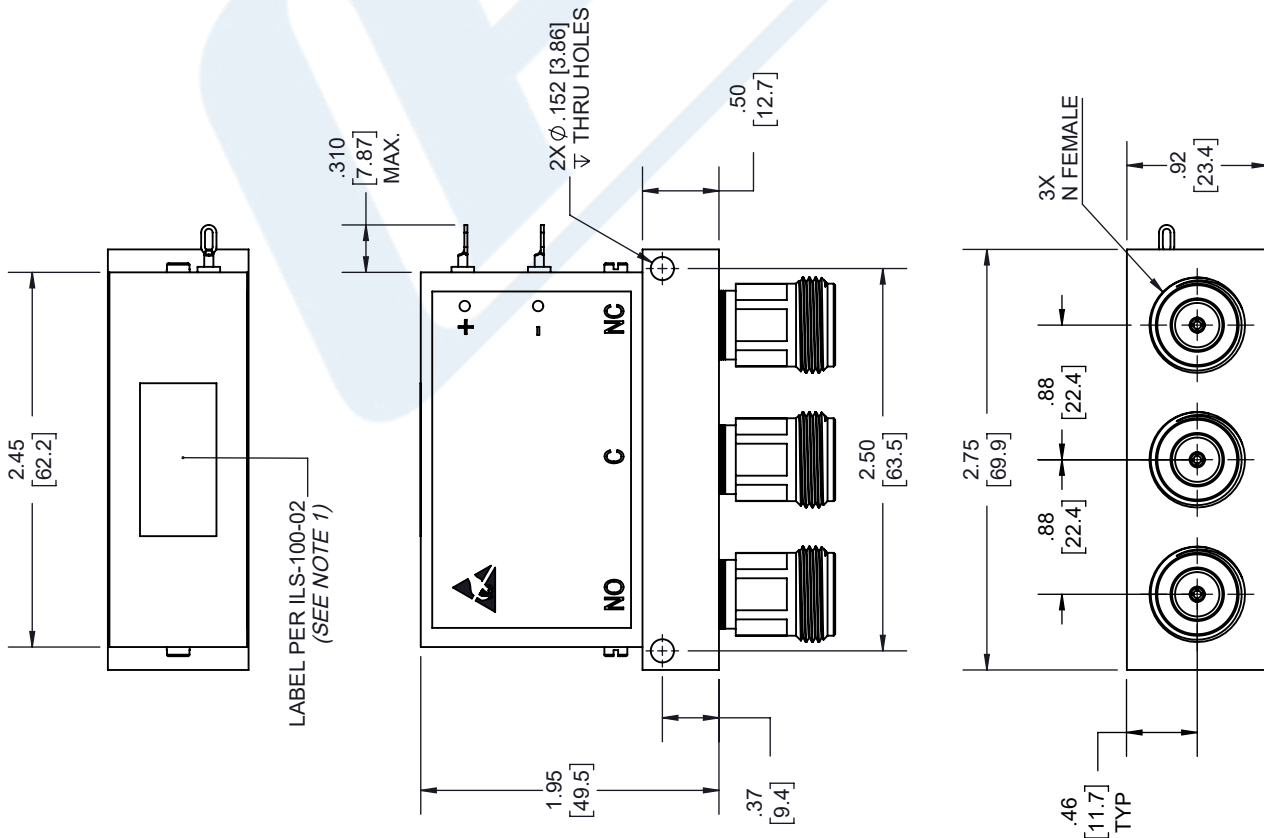
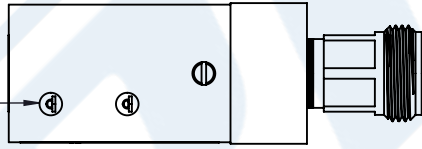
PE71S6438 CAD Drawing

SPDT Failsafe DC to 12 GHz Electro-Mechanical Relay Switch, 600W, 28V, 2M Lifecycles, N

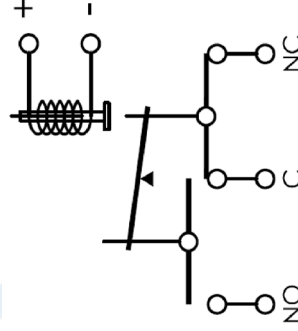
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	11/12/2020	T. GALLA



2X SOLDER TERMINALS.
SOLDER WIRE USING SN96
MAXIMUM TEMP 210 °C FOR
NO MORE THAN 5 SEC.



LABEL PER ILS-100-02
(SEE NOTE 1)



SCHEMATIC SHOWN IN FAILSAFE POSITION

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

TOLERANCES:
 X = ±.2 [5.08] FRACTIONS
 .XX = ±.02 [.51] ±.132
 .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.

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THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	K.DANG	PE71S6438
REV	A		

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

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