



SPDT Electromechanical Relay Failsafe Switch,
DC to 12 GHz, up to 600W, 12V, N

Electromechanical Relay Switches Technical Data Sheet

PE71S6348

Features

- Single Pole Double Throw
- DC to 12 GHz Frequency Range
- Isolation greater than 90 dB typical
- 2M Cycle Min Operating Life
- +12 Volt DC
- 600 Watt average Power
- Failsafe Actuator
- -25 to +70°C Operating Temperature
- Insertion Loss as low as 0.2 dB Max
- VSWR as low as 1.25:1 max
- N Female RF connectors
- 9 Pin D-Sub Connector for DC Control
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request

Applications

- High Performance Relay Switch
- Military Communications
- Communications Systems
- Test & Measurement

Description

The PE71S6348 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 design features a Failsafe actuator and is rated for 2M life cycles for high reliability operation. Impressive performance includes insertion loss less than 0.15 dB typical and isolation greater than 90 dB typical. The Failsafe actuator has a +12 Vdc bias voltage, and operates over a temperature range of -25°C to +70°C. The rugged and compact package assembly supports N Female connectors and a 9 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 SPDT
Actuator Type Failsafe
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		200		mA
VSWR		1.25:1	1.4:1	
Insertion Loss		0.3	0.5	dB
Isolation	70	90		dB
Input Power (CW)			200	Watts
Switching Time			20	ms Max

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Electromechanical Relay Failsafe Switch, DC to 12 GHz, up to 600W, 12V, N PE71S6348](#)



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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
Input Power, Typ (CW)	600	300	230	200		Watts

Mechanical Specifications

Size

Body Material and Plating
Package Type

Aluminum
Connectorized

Operating Life

2,000,000 Cycles

Connectors

RF Connector Type
RF Connector Contact Material and Plating
RF Connector Body Material and Plating
Control Connector

N Female
Beryllium Copper, Gold
Aluminum, Nickel
9-Pin D-Subminiature

Environmental Specifications

Temperature

Operating Range
Storage Range

-25 to +70 deg C
-55 to +100 deg C

Shock

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

Vibration

MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

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

Plotted and Other Data

Notes:

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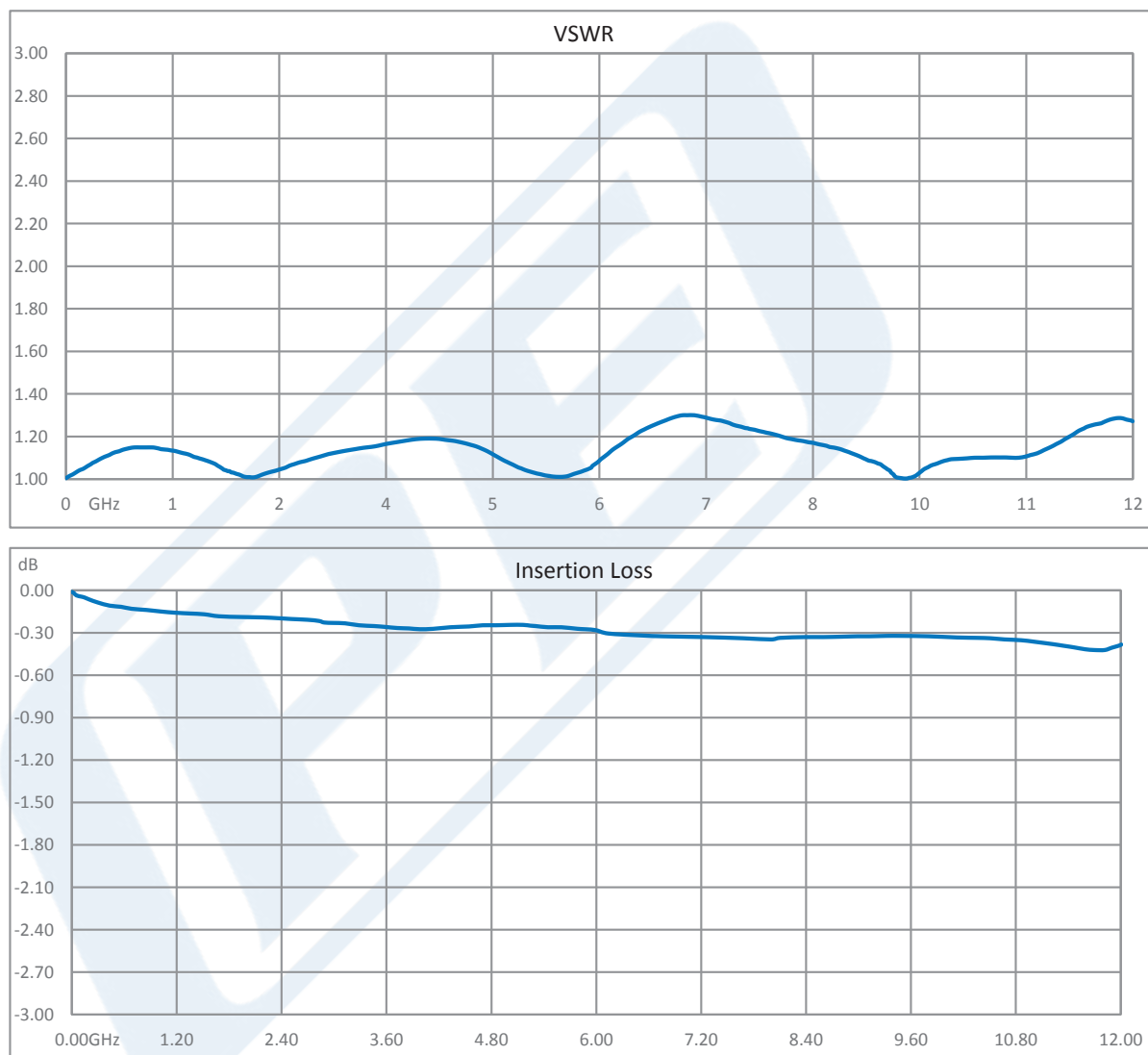


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Typical Performance Data



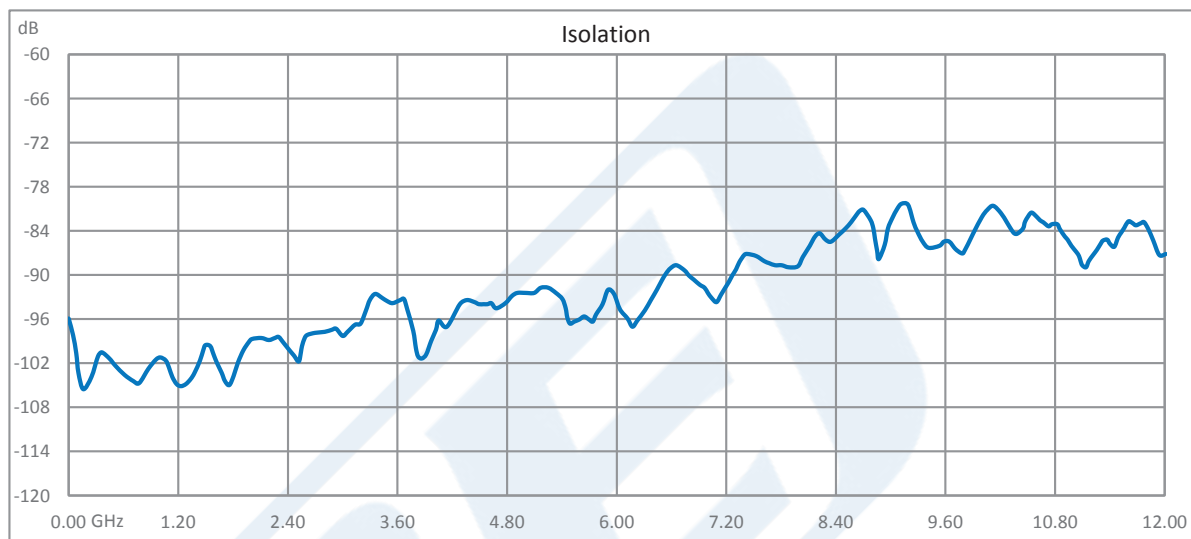
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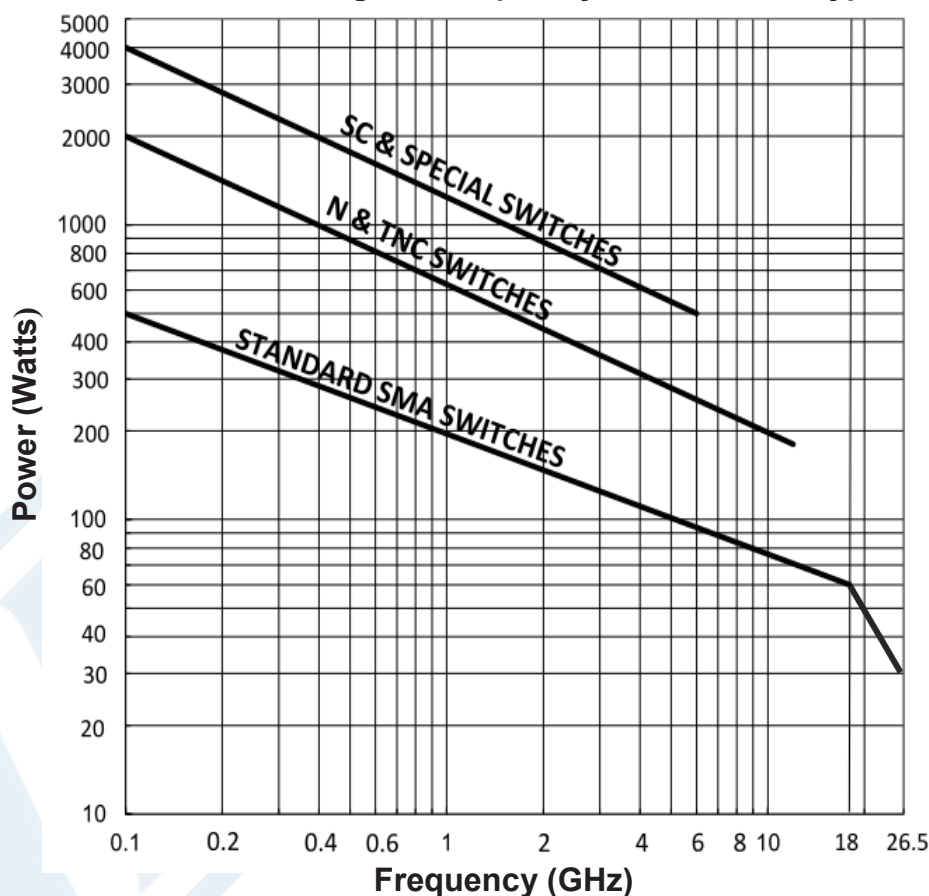


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Power Handling vs. Frequency & Connector Type



Environmental and Test Conditions:

- Ambient temperature of 25°C or less
- Altitude: Sea Level
- Load VSWR: 1.20:1 max.
- Cold Switching

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SPDT Electromechanical Relay Failsafe Switch, DC to 12 GHz, up to 600W, 12V, 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 Electromechanical Relay Failsafe Switch, DC to 12 GHz, up to 600W, 12V, N PE71S6348](https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-12-ghz-200w-12v-n-pe71s6348-p.aspx)

URL: <https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-12-ghz-200w-12v-n-pe71s6348-p.aspx>

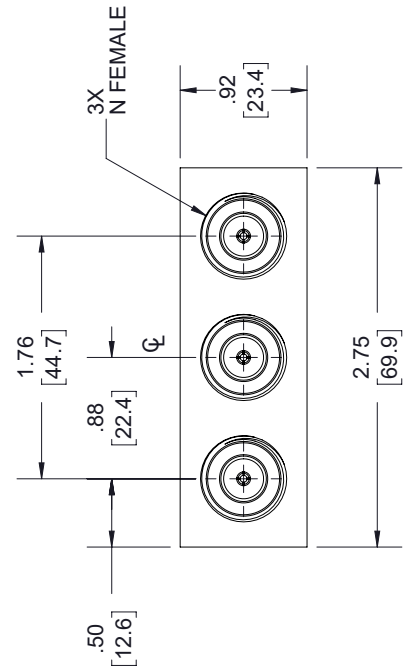
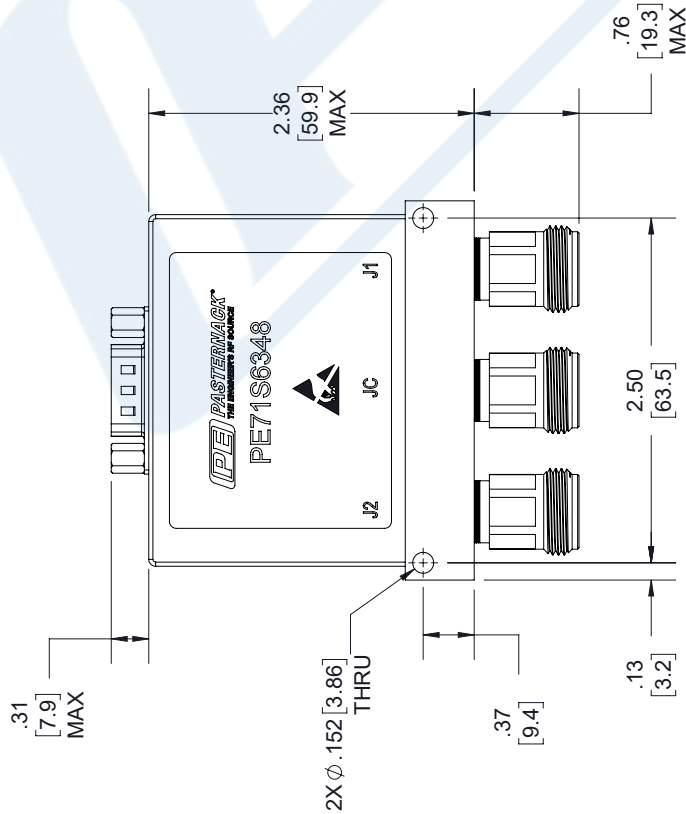
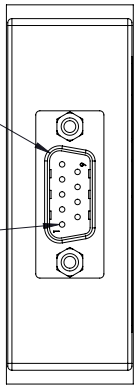
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PE71S6348 CAD Drawing

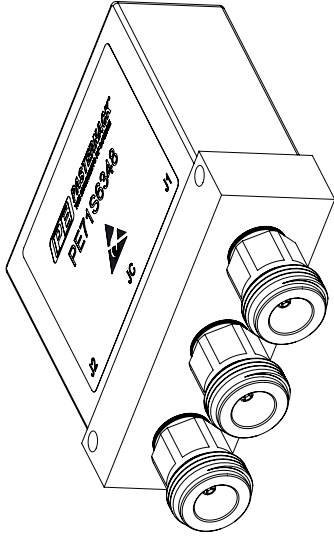
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PCR FMSW6397	1/6/2020	T.GALLA

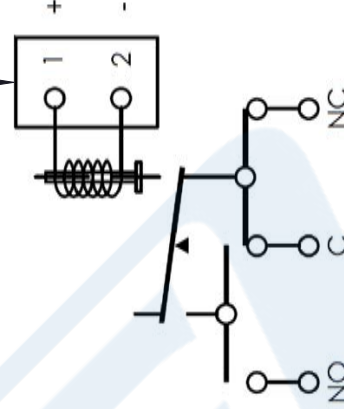
PIN #1
9P "MALE" D-SUB CONNECTOR



SCHEMATIC SHOWN IN FAILSAFE POSITION




9P "MALE" D-SUB CONNECTOR



UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS	
TOLERANCES:	FRACTIONS
.X = ± .2	[.08]
.XX = ± .02	[.51]
.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.	

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SIZE	CAGE CODE
A	53919
DRAWN BY	K.DANG
ITEM NO.	PE71S6348
REV	A

THIRD-ANGLE PROJECTION	
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SHEET	1 OF 1
SCALE	N/A