



SPDT Electromechanical Relay Latching Switch,  
DC to 12 GHz, up to 600W, 28V, Indicators, N

## Electromechanical Relay Switches Technical Data Sheet

PE71S6399

### Features

- Single Pole Double Throw
- DC to 12 GHz Frequency Range
- Isolation greater than 90 dB typical
- 5M Cycle Min Operating Life
- +28 Volt DC
- 200 Watt Power Hot Switching
- Latching Actuator
- 1 Watt Indicators
- -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
- Solder Pins 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 PE71S6399 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 430 Watts of CW input power in a break before make condition. The design features a Latching actuator with 1W Indicators, and is rated for 5M life cycles for high reliability operation. Insertion loss is specified as low as 0.3 dB maximum and Isolation up to 90 dB minimum. Operating voltage is +28 V and performance is guaranteed over -25°C to +70°C. The rugged and compact package assembly supports N Female connectors and Solder Pins for DC Control. The model is guaranteed to meet MIL-STD-202 environmental test conditions for shock and random vibration.

### Electrical Specifications

Switch Type	SPDT
Actuator Type	Latching
Switching Sequence	Break before Make
Actuator Options	Indicators
Indicator Rating	1 Watt / 32 Volts / 125 mA

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Set Current @ 28 Volts		90		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 Latching Switch, DC to 12 GHz, up to 600W, 28V, Indicators, N PE71S6399](#)



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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

Aluminum  
Connectorized

Package Type

Operating Life

5,000,000 Cycles

#### Connectors

RF Connector Type

N Female

RF Connector Contact Material and Plating

Beryllium Copper, Gold

RF Connector Body Material and Plating

Aluminum, Nickel

Control Connector

Solder Pin

### Environmental Specifications

#### Temperature

Operating Range

-25 to +70 deg C

Storage Range

-55 to +100 deg C

Shock

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

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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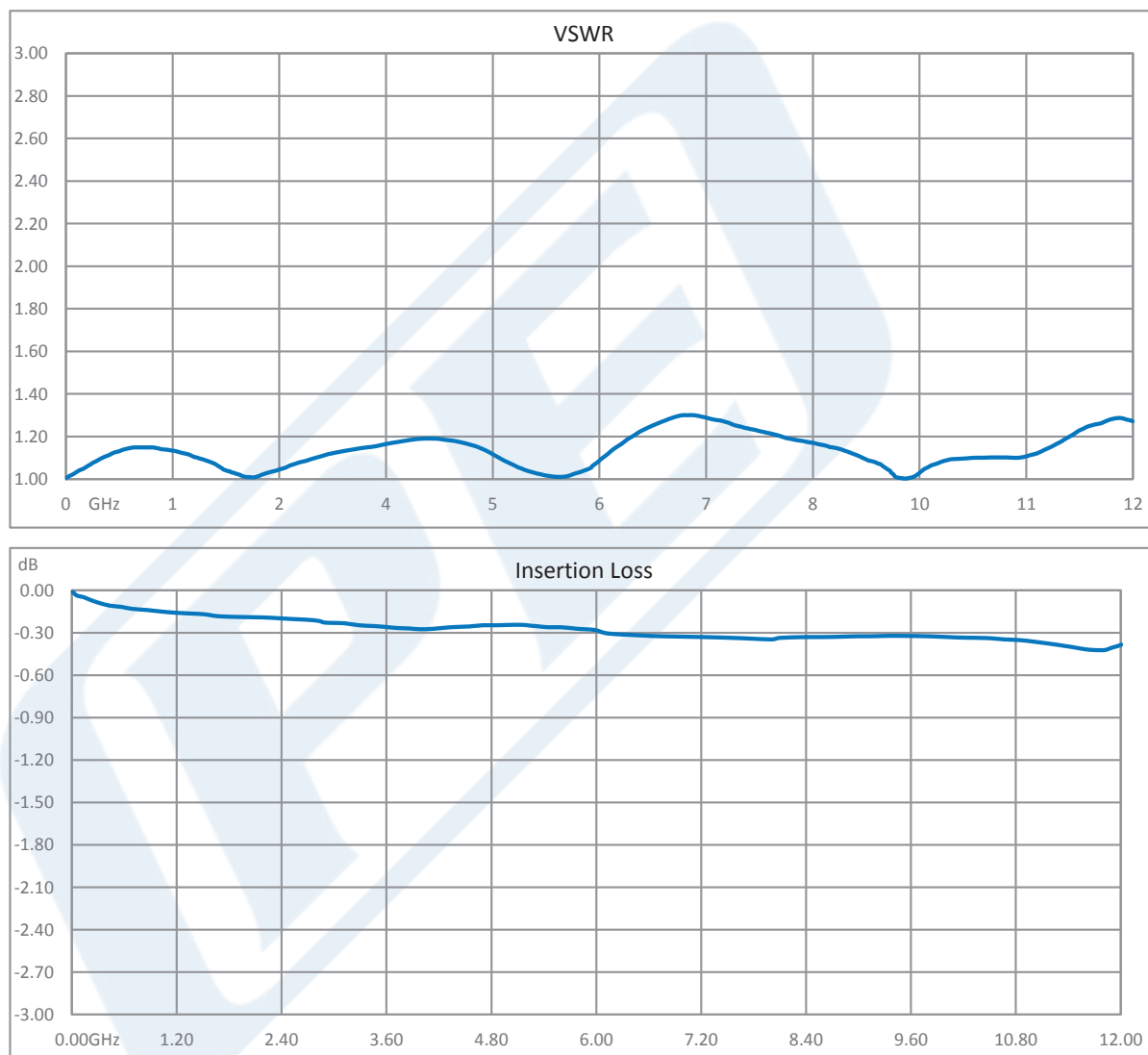


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### Typical Performance Data



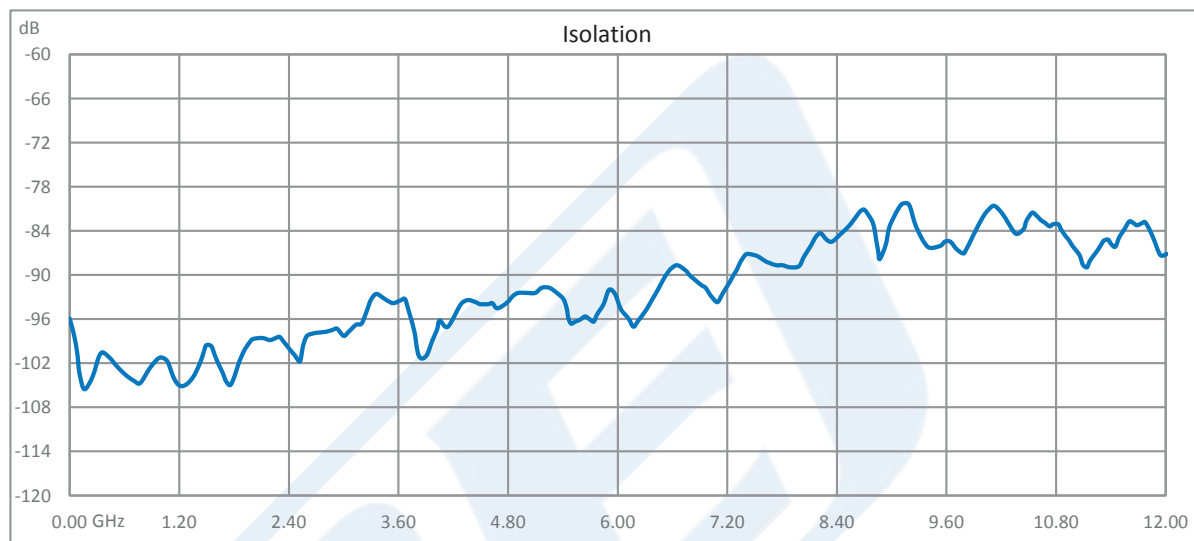
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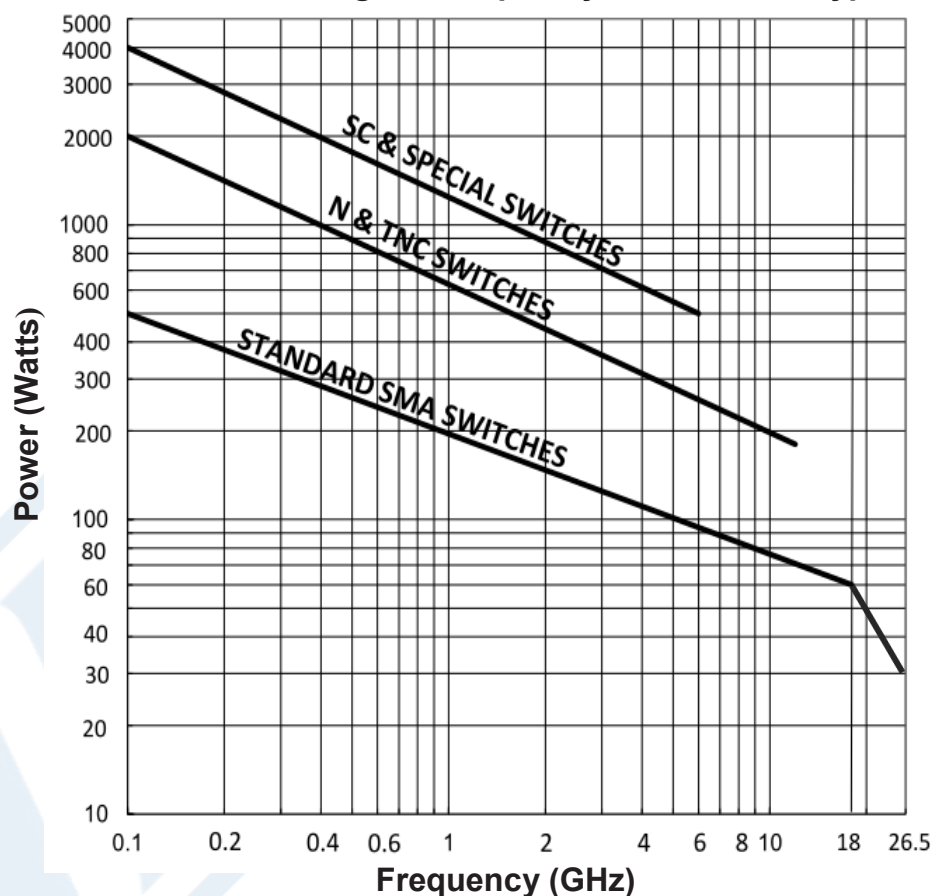


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**Power Handling vs. Frequency & Connector Type**



**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 Latching Switch, DC to 12 GHz, up to 600W, 28V, Indicators, 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.

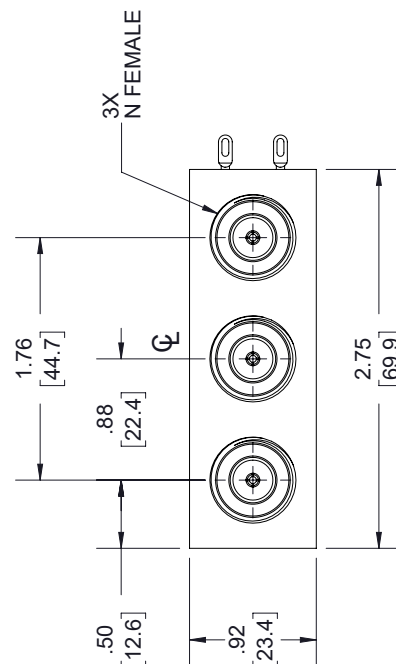
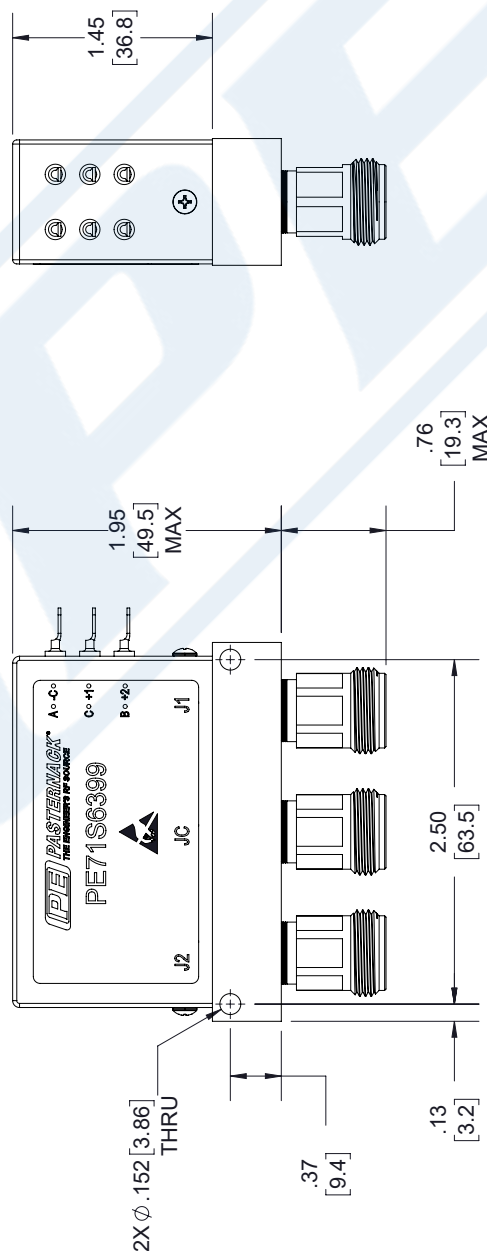
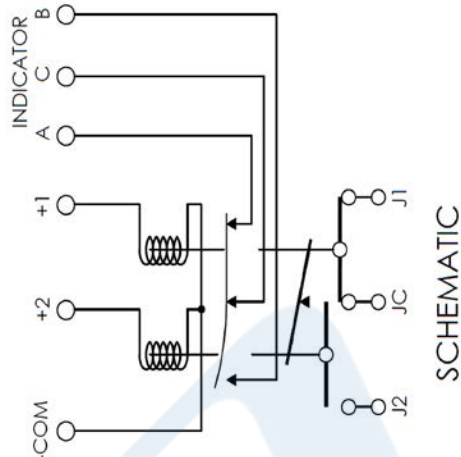
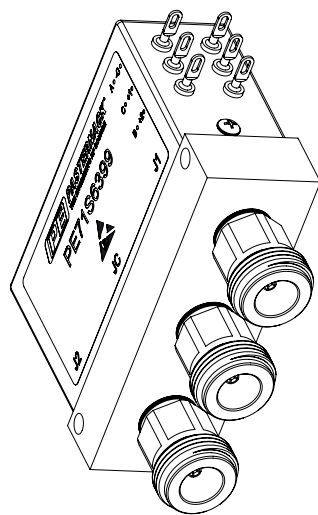
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PCR FMSW6397	1/6/2020	T. GALLA



6X SOLDER TERMINALS  
SOLDER WIRE USING SN96,  
MAXIMUM TEMP 210°C FOR  
NO MORE THAN 5 SEC

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS	TOLERANCES:		
	X = ± 0.2	[ 5.08]	FRACTIONS
	XX = ± 0.02	[ .51]	+ 1/32
	XXX = ± 0.005	[ .13]	ANGLES ± 1°
	CABLE LENGTH (L) TOLERANCES:		
	$L \leq 12 \text{ [3048]} = +1 \text{ [25]} / -0$ $12 \text{ [3048]} < L \leq 60 \text{ [1524]} = +2 \text{ [51]} / -0$ $60 \text{ [1524]} < L \leq 120 \text{ [3048]} = +4 \text{ [102]} / -0$ $120 \text{ [3048]} < L \leq 300 \text{ [7620]} = +6 \text{ [152]} / -0$ $300 \text{ [7620]} < L = +5\% \text{ } L -0$		
	ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.		

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