



## SPDT Electromechanical Relay Failsafe Switch DC to 12.4 GHz, N, 160 Watts, 12V Control, Indicators, TTL, Diodes

### Electromechanical Relay Switches Technical Data Sheet

PE71S6160

#### Features

- Single Pole Double Throw Relay Switch
- DC to 12.4 GHz Frequency Range
- 1M Cycle Min Operating Life
- Failsafe Actuator
- TTL Logic Driver, Position Indicators, Suppression Diodes
- Insertion Loss 0.6 dB max
- Isolation 60 dB min
- 160 Watts Avg Power Max
- Switching Sequence Break Before Make

#### Applications

- Test & Measurement
- Communications System
- Instrumentation

#### Description

The PE71S6160 is a Single Pole Double Throw Electromechanical Relay Switch that operates from DC to 12.4 GHz and has a rating of 160 Watts input power (CW) in a Break Before Make condition. The design features a Failsafe Actuator with TTL Logic Driver, Position Indicators, Suppression Diodes and is rated for 1M Life Cycles for high reliability operation. Insertion loss is specified from 0.2 dB max and Isolation from 80 dB min, with +12 Vdc operating voltage and performance is guaranteed over -55°C to +85°C. The package interface uses solder terminals and N Female connectors.

#### Electrical Specifications

Switch Type	SPDT, Reflective
Actuator Type	Failsafe
Switching Sequence	Break Before Make
Actuator Options	Indicators, TTL Logic, Diodes
TTL Control	on: 2.4 to 5 Volts off: 0 to 0.8 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12.4	GHz
Impedance		50		Ohms
Operating Voltage		12		Volts
Actuating Current @ 12 Volts		270		mA
VSWR			1.6:1	
Insertion Loss			0.6	dB
Isolation	60			dB
Input Power (CW) (at 12.4 GHz)			160	Watts

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 12.4 GHz, N, 160 Watts, 12V Control, Indicators, TTL, Diodes PE71S6160](#)



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### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 2	2 to 4	4 to 12.4			GHz
VSWR, Max	1.15:1	1.2:1	1.6:1			
Insertion Loss, Max	0.2	0.25	0.6			dB
Isolation, Min	80	80	60			dB

### Mechanical Specifications

#### Size

Length	2.2 in [55.88 mm]
Width/Diameter	2.46 in [62.48 mm]
Height	0.9 in [22.86 mm]
Weight	0.53 lbs [240.4 g]
Body Material and Plating	Aluminum
Package Type	Connectorized Module
Operating Life	1,000,000 Cycles
Switching Time	50 ms Max

#### Connectors

RF Connector Type	N Female
RF Connector Contact Material and Plating	Beryllium Copper, Gold
RF Connector Body Material and Plating	Passivated Stainless Steel
Control Connector	Solder Pin

### Environmental Specifications

#### Temperature

Operating Range	-55 to +85 deg C
ESD Sensitivity	ESD Sensitive Material. Transport material in Approved ESD bags. Handle in approved ESD Workstation.



Environmental Specification Notes:  
Designed to meet MIL-DTL-3928

### Compliance Certifications (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

Not RoHS Compliant

### Plotted and Other Data

Notes:

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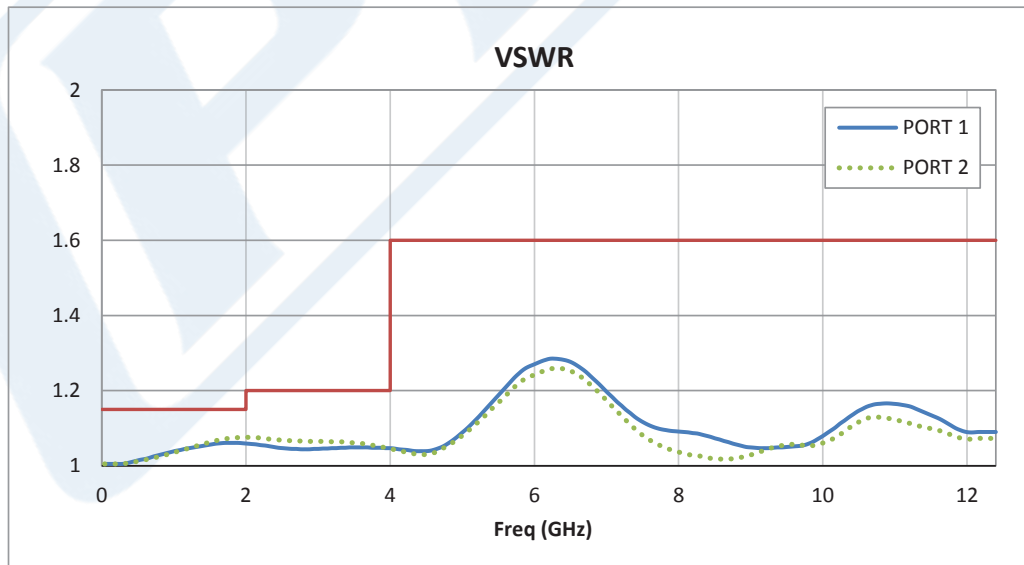
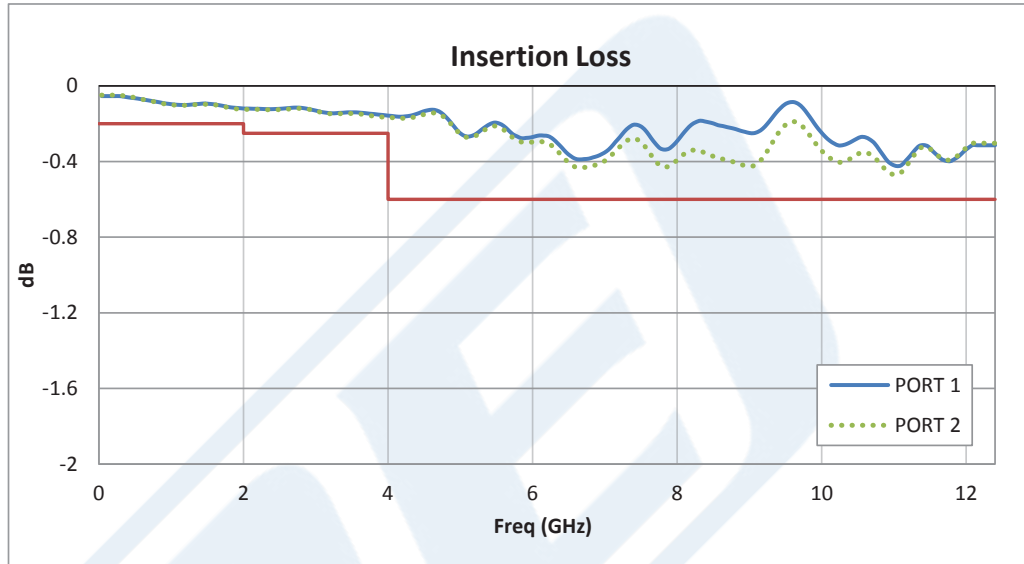


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Electromechanical Relay Switches Technical Data

PE71S6160

Typical Performance Data



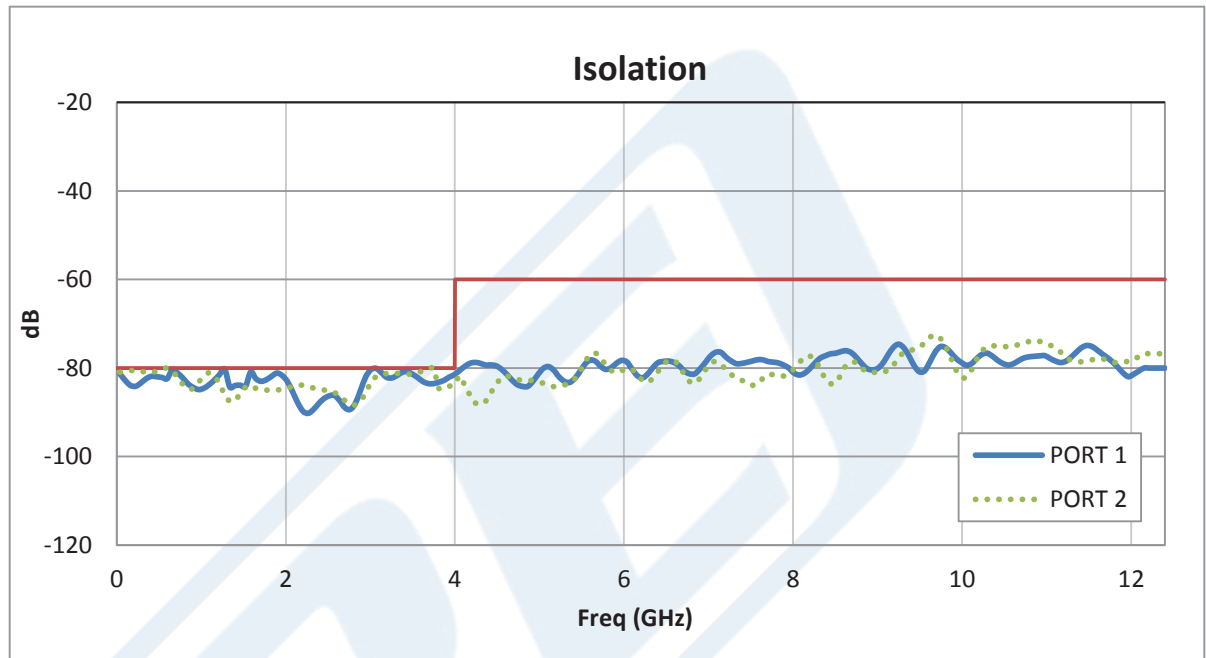
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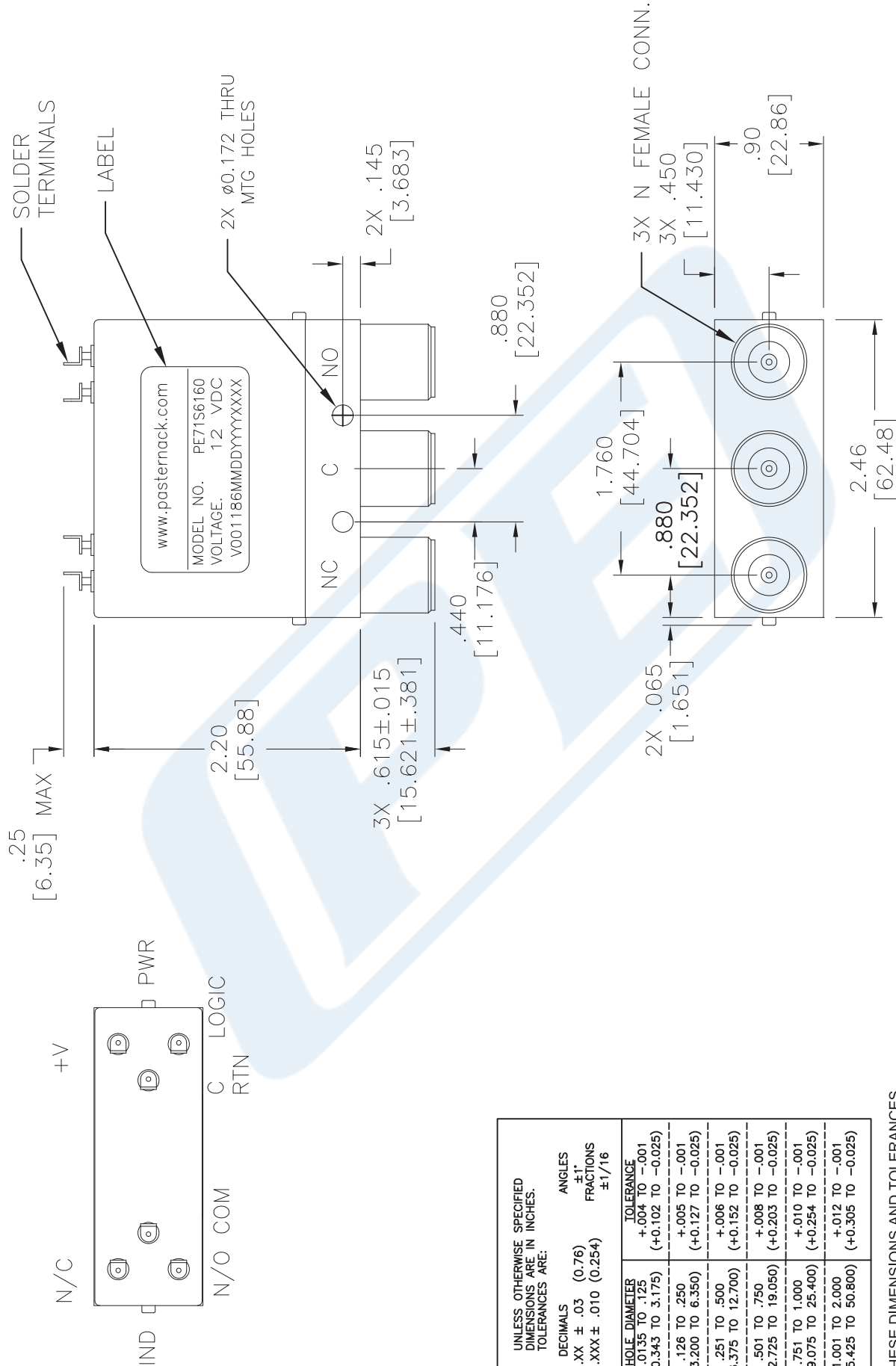
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# PE71S6160 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch DC to 12.4 GHz,  
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		ANGLES	
DECIMALS		±1°	FRACTIONS
.XX ± .03 (0.76)			±1/16
.XXX ± .010 (0.254)			
HOLE DIAMETER	TOLERANCE		
.0135 TO .125 (0.343 TO 3.175)	+ .004 TO -.001 (+0.102 TO -0.025)		
.126 TO .250 (3.200 TO 6.350)	+ .005 TO -.001 (+0.127 TO -0.025)		
.251 TO .500 (6.375 TO 12.700)	+ .006 TO -.001 (+0.152 TO -0.025)		
.501 TO .750 (12.725 TO 19.050)	+ .008 TO -.001 (+0.203 TO -0.025)		
.751 TO 1.000 (19.075 TO 25.400)	+ .010 TO -.001 (+0.254 TO -0.025)		
1.001 TO 2.000 (25.425 TO 50.800)	+ .012 TO -.001 (+0.305 TO -0.025)		

\* THESE DIMENSIONS AND TOLERANCES SUPERSEDE NOTE #1 ON TITLE BLOCK.

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DWG TITLE  
**PE71S6160**

FSCM NO. 53919

CAD FILE 051315

SCALE N/A

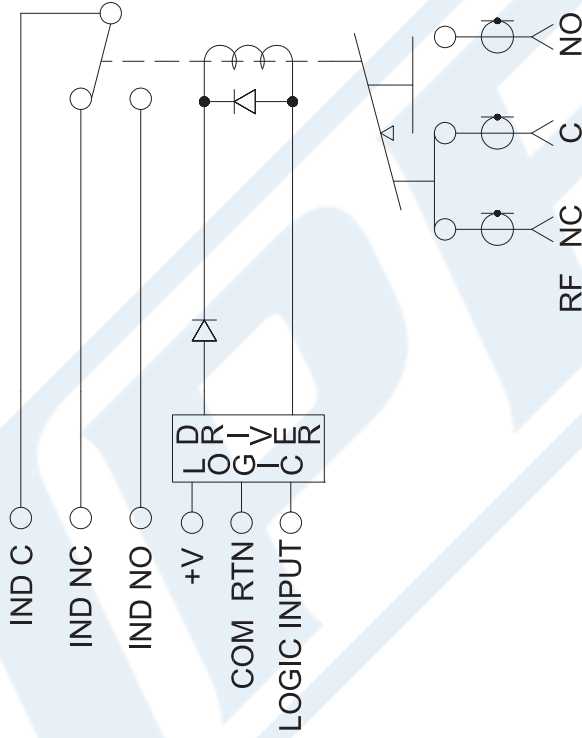
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2233

NOTES:  
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.  
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.  
3. DIMENSIONS ARE IN INCHES [mm].

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SPDT Electromechanical Relay Failsafe Switch DC to 12.4 GHz,  
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SCHEMATIC FAILSAFE IN NORMALLY CLOSED POSITION

DWG TITLE

**PE71S6160**

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