



Transfer Electromechanical Relay Failsafe Switch DC to 12.4 GHz, 2M Lifecycles, N, 160 Watts, 28V, Solder Pin

Electromechanical Relay Switches Technical Data Sheet

PE71S6496

Features

- Transfer Electromechanical Relay Switch
- DC to 12 GHz Frequency Range
- Failsafe Actuator
- 2M Lifecycle Rating
- Insertion Loss 0.2 dB typ
- Isolation > 70 dB typ
- VSWR as low as 1.25:1 max
- +28 Volt DC Bias
- Solder Terminal Pins for DC Control
- N Type Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 160 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 PE71S6496 is a Transfer electromechanical relay switch that operates across a wide frequency range from DC to 12 GHz and can handle up to 160W of average power in a break before make condition. The 50 Ohm design is rated for 2 million lifecycles and features a Failsafe Actuator. Impressive typical performance includes 0.2 dB insertion loss and isolation greater than 70 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 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 (TA = +25°C, DC Voltage = +28 Vdc)

Switch Type Actuator Type		Transfer Failsafe		
Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12.4	GHz
Operating Voltage		+28		Volts
Actuating Set Current @ +28 Volts			160	mA
VSWR		1.3:1	1.7:1	
Insertion Loss		0.2	0.7	dB
Isolation	60	70		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: [Transfer Electromechanical Relay Failsafe Switch DC to 12.4 GHz, 2M Lifecycles, N, 160 Watts, 28V, Solder Pin PE71S6496](#)



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Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 1	1 to 4	4 to 12			GHz
VSWR, Max	1.25:1	1.3:1	1.7:1			
Insertion Loss, Max	0.2	0.3	0.7			dB
Isolation, Min	70	70	60			dB

Mechanical Specifications

Size

Length	2.52 in [64.01 mm]
Width/Diameter	3.12 in [79.25 mm]
Height	1.75 in [44.45 mm]
Weight	0.1 lbs [45.36 g]

Connectors

RF Connector Type	N Female
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Environmental Specifications

Temperature

Operating Range	-25 to +65 deg C
Storage Range	-55 to +100 deg C

Shock	MIL-STD-202 Method 213, Condition D, 500G (non oper)
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Vibration	MIL-STD-202 Method 204, Condition D, 10G RMS (non oper)
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Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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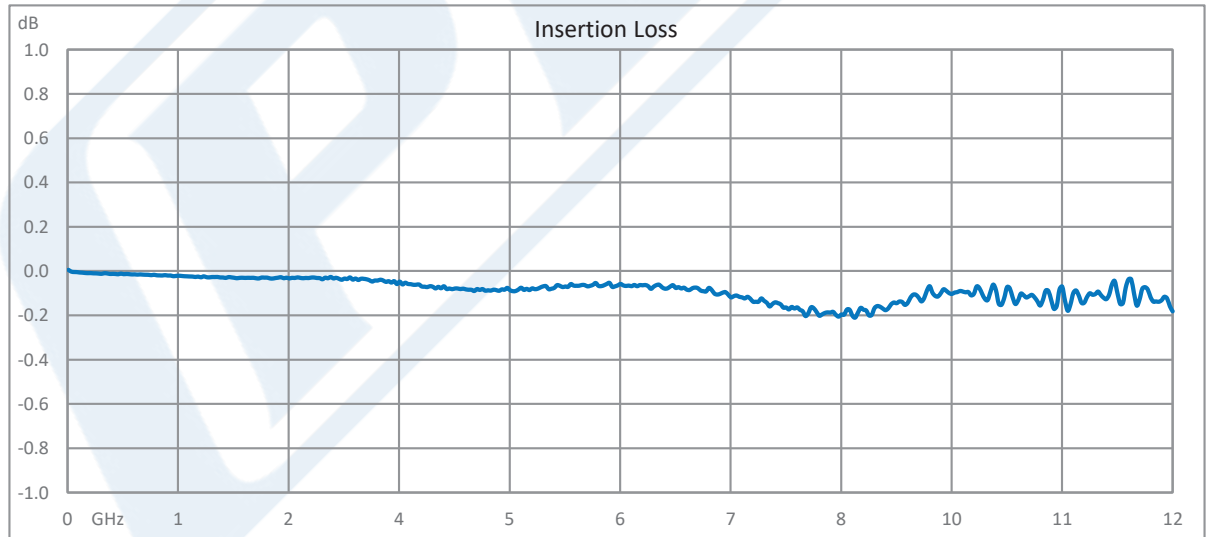
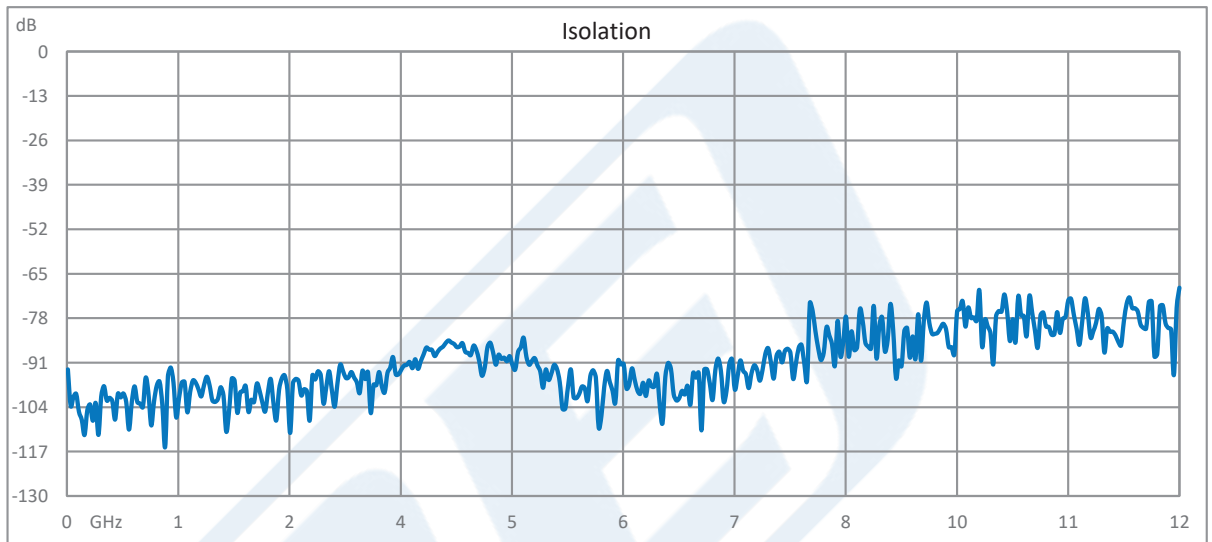


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Typical Performance Data



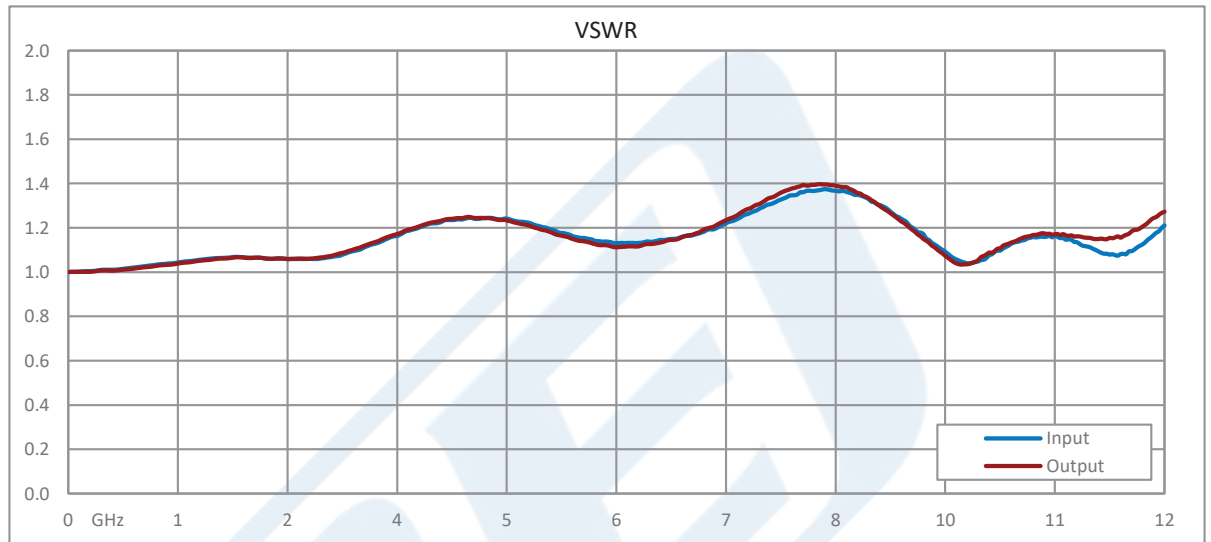
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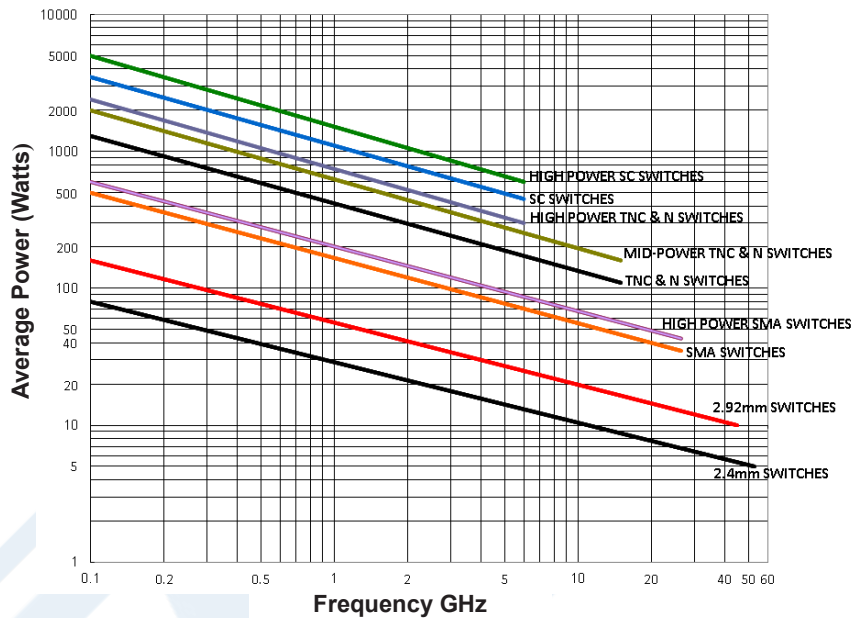


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Power Handling vs. Frequency



Power Handling De-rating vs. Load VSWR



Power Handling Chart and Derating Curves based on the following Test and Environmental Conditions:
 Ambient temperature: 20-25°C
 Altitude: Sea Level to 1,000 feet
 Relative Humidity: 50-55%
 Load VSWR: ≤ 1.20:1
 Operation: Cold Switching

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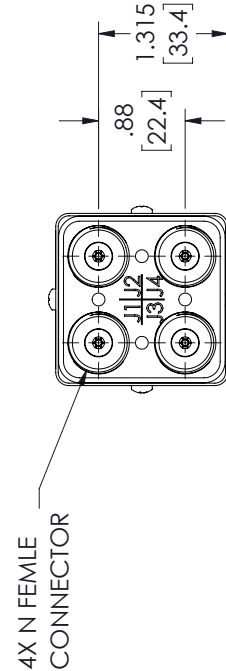
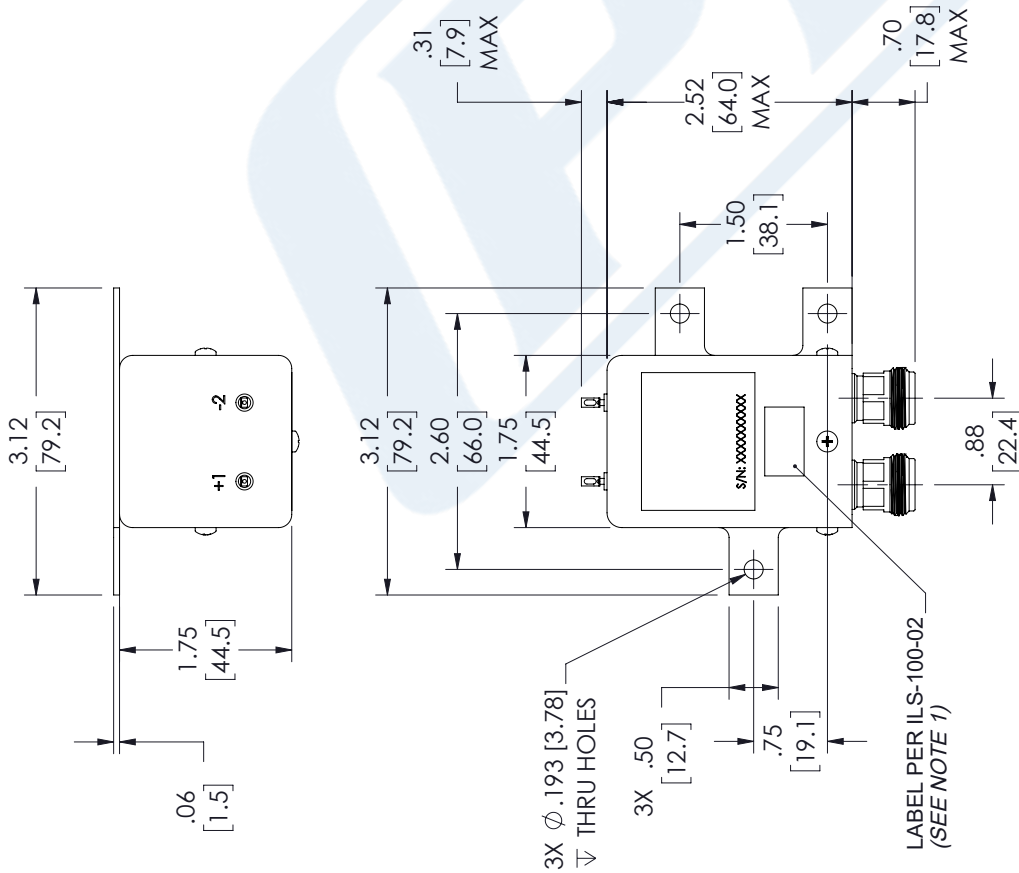
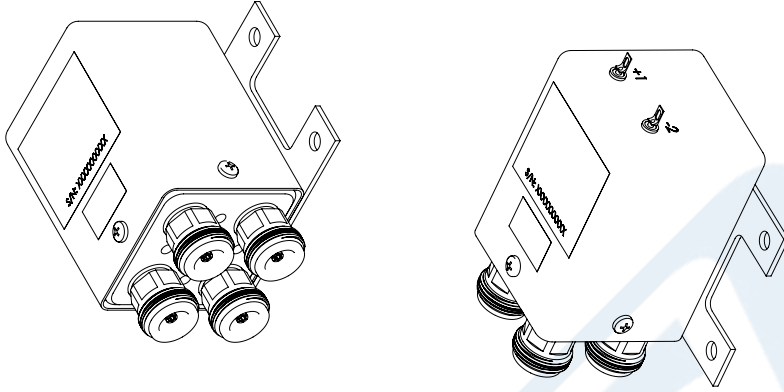
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PE71S6496 CAD Drawing

Transfer Electromechanical Relay Failsafe Switch DC to 12.4 GHz, 2M Lifecycles, N, 160 Watts, 28V, Solder Pin

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	05/17/2022	T. GALLA



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TOLERANCES:
 .X = ±.2 [5.08] FRACTIONS ±.1/32
 .XX = ±.02 [.51] ±.1/32
 .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%L / -0

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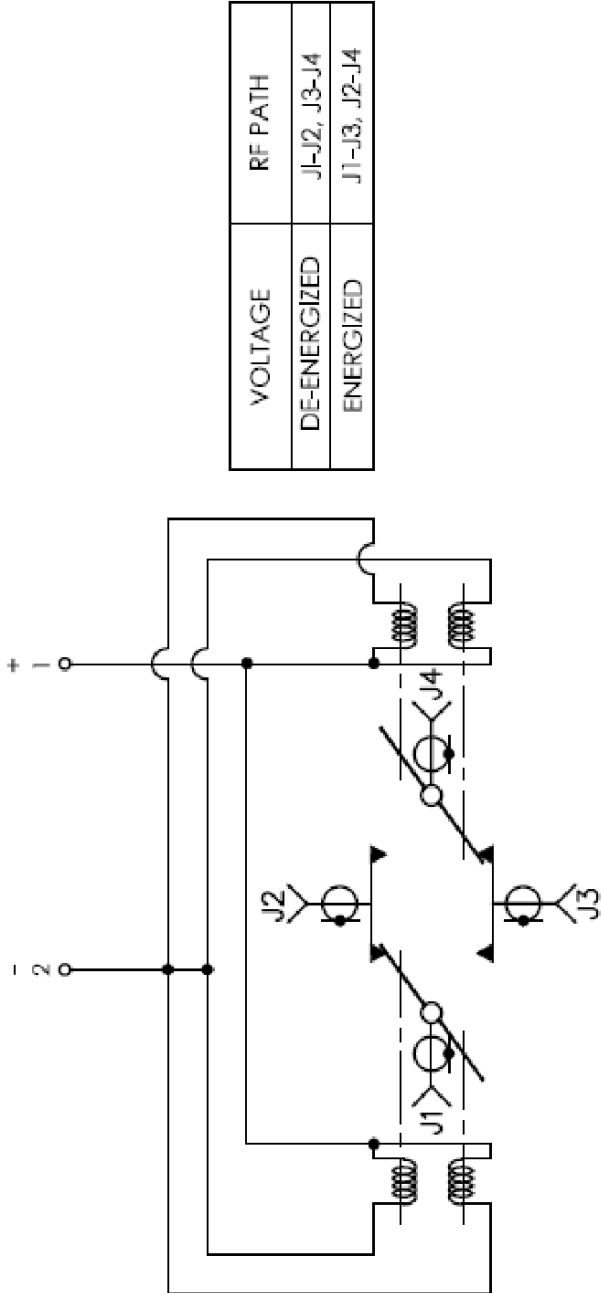
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SIZE A CAGE CODE 53919 DRAWN BY KGLEBOVA ITEM NO. PE71S6496 REV A

PE71S6496 CAD Drawing

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L ≤ 12	[305]	= +1 [25] / -0
12 [305] < L ≤ 60	[1524]	= +2 [51] / -0
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120 [3048] < L ≤ 300	[7620]	= +6 [152] / -0
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