



Transfer Electromechanical Relay Latching Switch  
 DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V,  
 Indicators, TTL, Diodes, Solder Pins

## Electromechanical Relay Switches Technical Data Sheet

**PE71S6498**

### Features

- Transfer Electromechanical Relay Switch
- DC to 12 GHz Frequency Range
- Latching Actuator with Self Cut-Off
- TTL Logic Control
- Suppression Diodes
- Indicators
- 2M Lifecycle Rating
- Insertion Loss 0.2 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.25:1 max
- +28 Volt DC Bias
- Solder Terminal Pins for DC Command 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 PE71S6498 is a Transfer electromechanical relay switch that operates across a wide frequency range from DC to 12 GHz and can handle up to 160 Watts of average power in a break before make condition. The 50 Ohm design is rated for 2 million lifecycles and features a Latching Self Cut-Off Actuator that magnetically latches in place after the control voltage is removed. For power sensitive applications, this is the best actuator option. Additional features include TTL control logic, suppression diodes which limit voltage spikes or reverse current, and indicators to monitor the switch position. Impressive typical performance includes 0.2 dB insertion loss and isolation greater than 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 command control functions. 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	Transfer
Actuator Type	Latching
Actuator Options	Indicators, TTL Logic
TTL Control	on: 2.4 to 5.5 Volts off: 0 to 0.8 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12.4	GHz
Operating Voltage		+28		Volts
Actuating Set Current @ +28 Volts			250	mA
VSWR		1.3:1	1.7:1	
Insertion Loss		0.2	0.7	dB

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 Latching Switch DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V, Indicators, TTL, Diodes, Solder Pins PE71S6498](#)



Transfer Electromechanical Relay Latching Switch  
DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V,  
Indicators, TTL, Diodes, Solder Pins

## Electromechanical Relay Switches Technical Data

**PE71S6498**

Isolation	60	70		dB
Input Power (CW) (at 12.4 GHz)			160	Watts

### 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
-------------------	----------

### 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)
-------	--

Vibration	MIL-STD-202 Method 204, Condition D, 10G RMS (non oper)
-----------	---

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

### Plotted and Other Data

Notes:

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 Latching Switch DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V, Indicators, TTL, Diodes, Solder Pins PE71S6498](#)

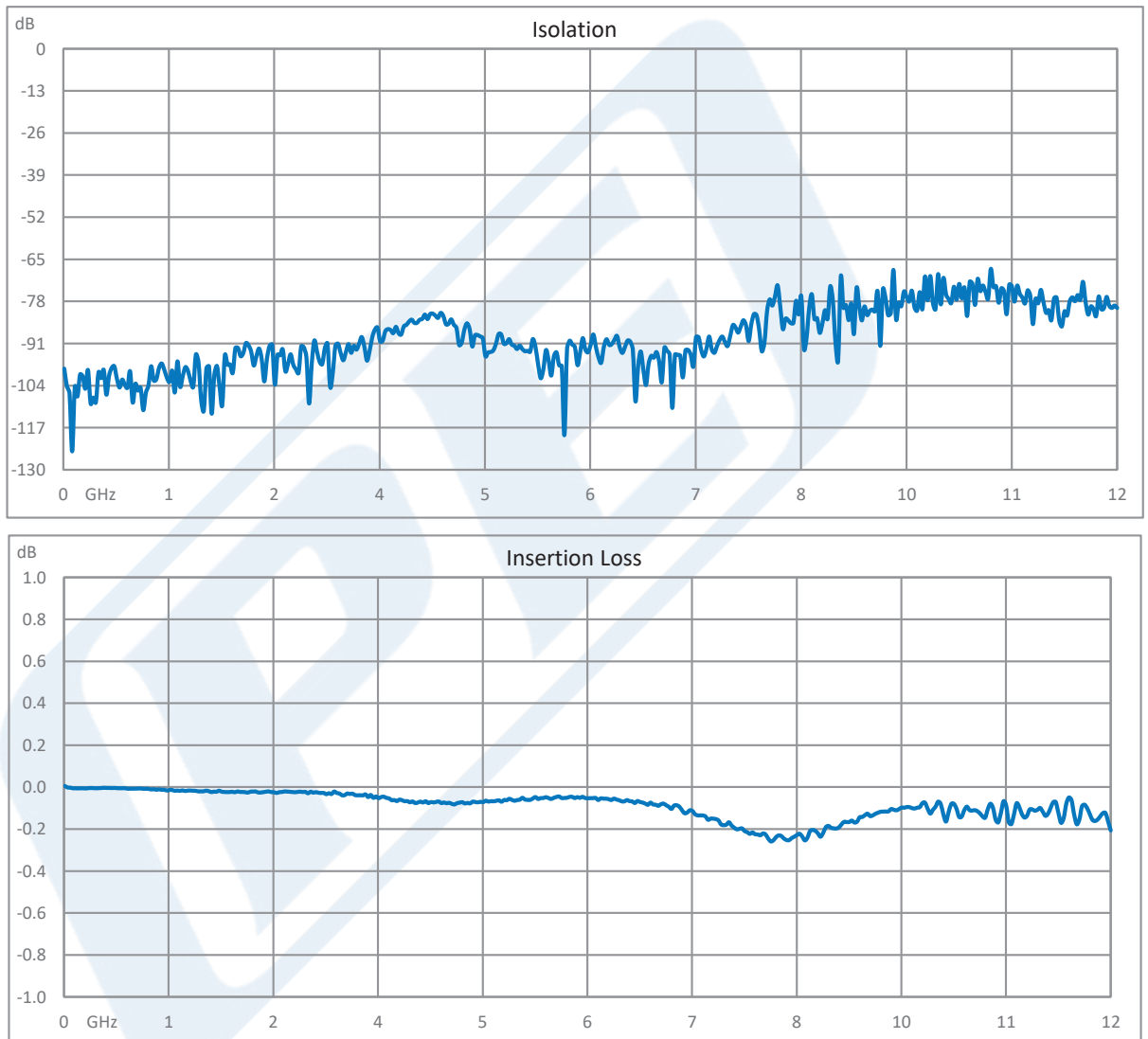


Transfer Electromechanical Relay Latching Switch  
DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V,  
Indicators, TTL, Diodes, Solder Pins

**Electromechanical Relay Switches Technical Data**

**PE71S6498**

**Typical Performance Data**



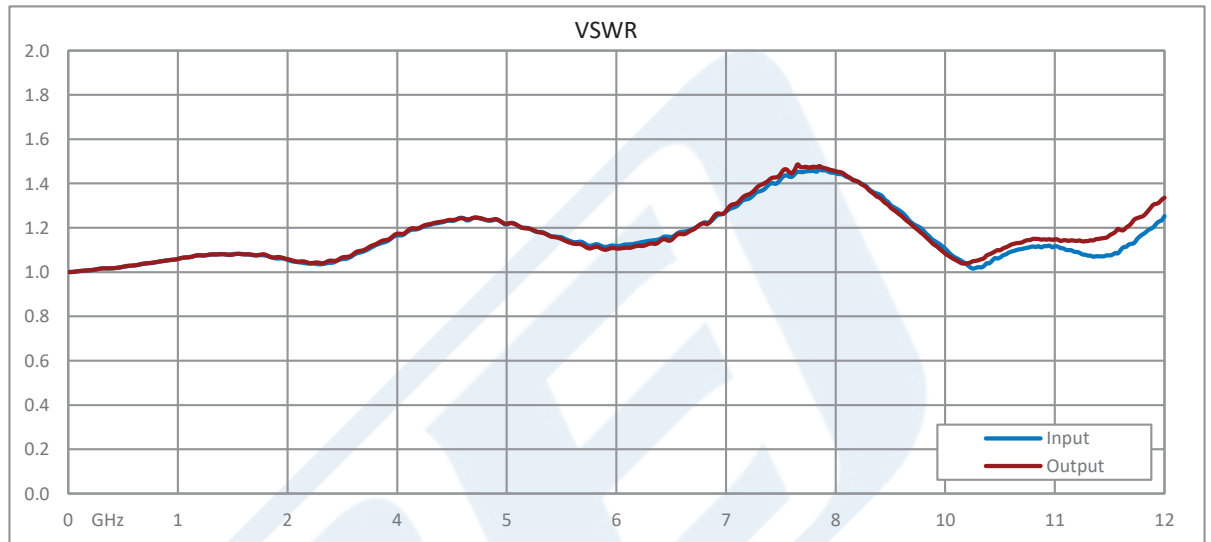
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Transfer Electromechanical Relay Latching Switch DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V, Indicators, TTL, Diodes, Solder Pins PE71S6498](#)



Transfer Electromechanical Relay Latching Switch  
DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V,  
Indicators, TTL, Diodes, Solder Pins

## Electromechanical Relay Switches Technical Data

**PE71S6498**



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 Latching Switch DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V, Indicators, TTL, Diodes, Solder Pins PE71S6498](#)

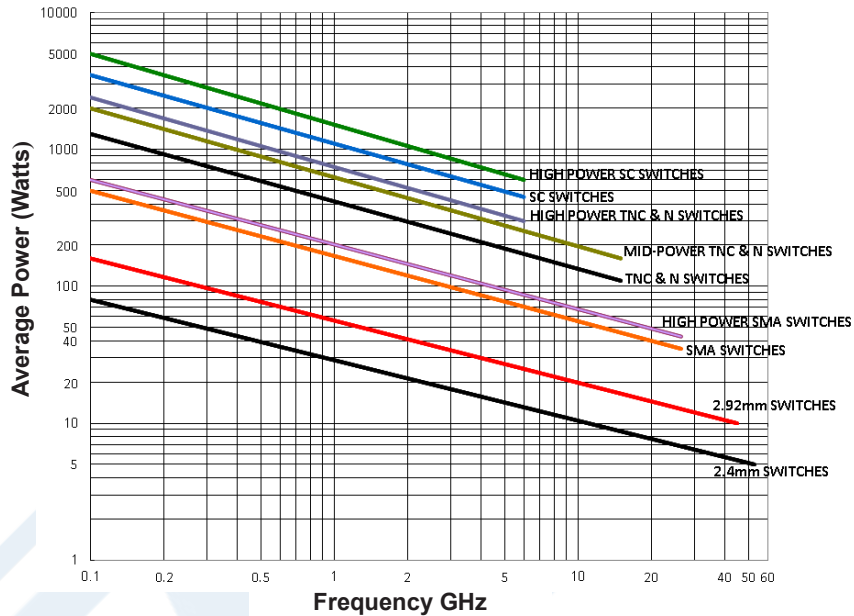


Transfer Electromechanical Relay Latching Switch  
DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V,  
Indicators, TTL, Diodes, Solder Pins

**Electromechanical Relay Switches Technical Data**

**PE71S6498**

**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

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 Latching Switch DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V, Indicators, TTL, Diodes, Solder Pins PE71S6498](#)



Transfer Electromechanical Relay Latching Switch  
DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V,  
Indicators, TTL, Diodes, Solder Pins

## Electromechanical Relay Switches Technical Data

**PE71S6498**

Transfer Electromechanical Relay Latching Switch DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V, Indicators, TTL, Diodes, Solder Pins 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: [Transfer Electromechanical Relay Latching Switch DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V, Indicators, TTL, Diodes, Solder Pins PE71S6498](https://www.pasternack.com/transfer-electromechanical-relay-latching-switch-dc-to-12.4-ghz-2m-cycles-n-160-watts-28v-indicators-ttl-diodes-solder-pins-pe71s6498)

URL: <https://www.pasternack.com/transfer-electromechanical-relay-latching-switch-12.4-ghz-160w-28v-indicators-ttl-n-pe71s6498-p.aspx>

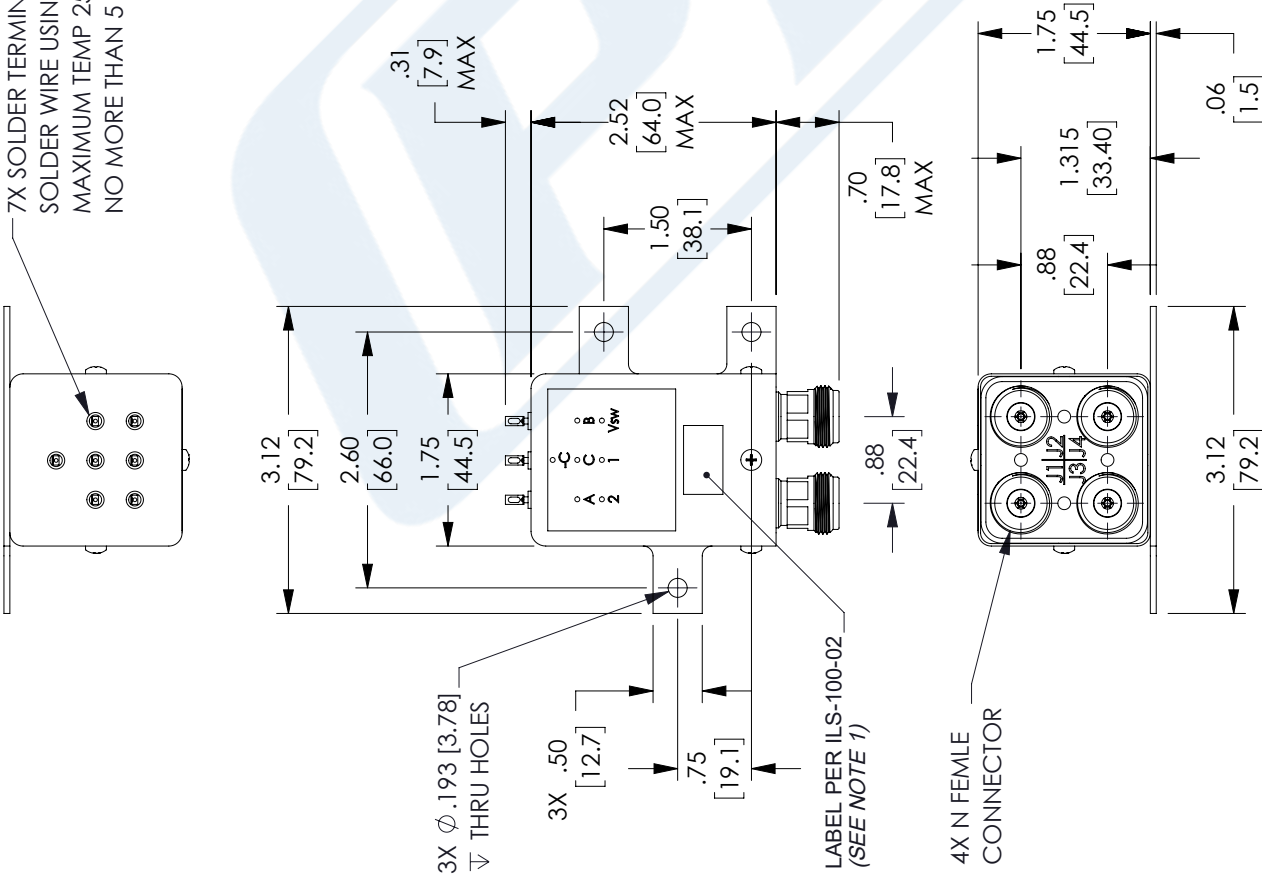
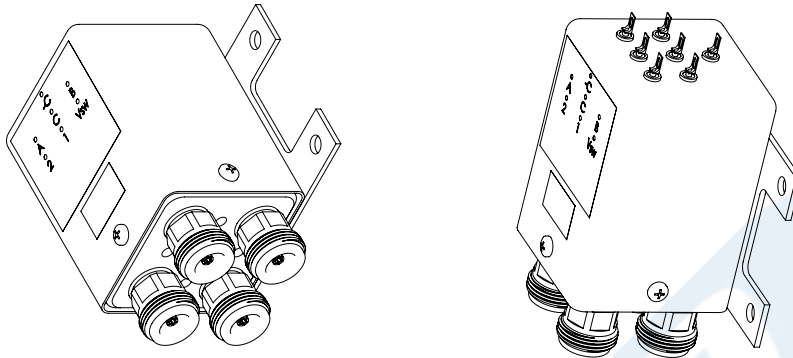
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such 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.

# PE71S6498 CAD Drawing

Transfer Electromechanical Relay Latching Switch DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V, Indicators, TTL, Diodes, Solder Pins

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

7X SOLDER TERMINALS,  
SOLDER WIRE USING SN96,  
MAXIMUM TEMP 250 °C FOR  
NO MORE THAN 5 SEC.



**NOTES:**

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

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

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

TOLERANCES:  
.X = ±.2 [5.08] FRACTIONS  
.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% / -0  
ALL DIMENSIONS SHOWN  
ARE FOR REFERENCE ONLY.



Pasternack Enterprises, Inc.  
P. O. Box 16759, Irvine, CA 92623.  
Phone: 1.949.261.1920 | 1.866.727.8376  
Fax: 1.949.261.7451  
Website: www.pasternack.com  
E-mail: sales@pasternack.com



THE INFORMATION AND  
DESIGN IN THIS DOCUMENT  
IS THE PROPERTY OF  
PASTERNAK CORPORATION  
ALL RIGHTS RESERVED.

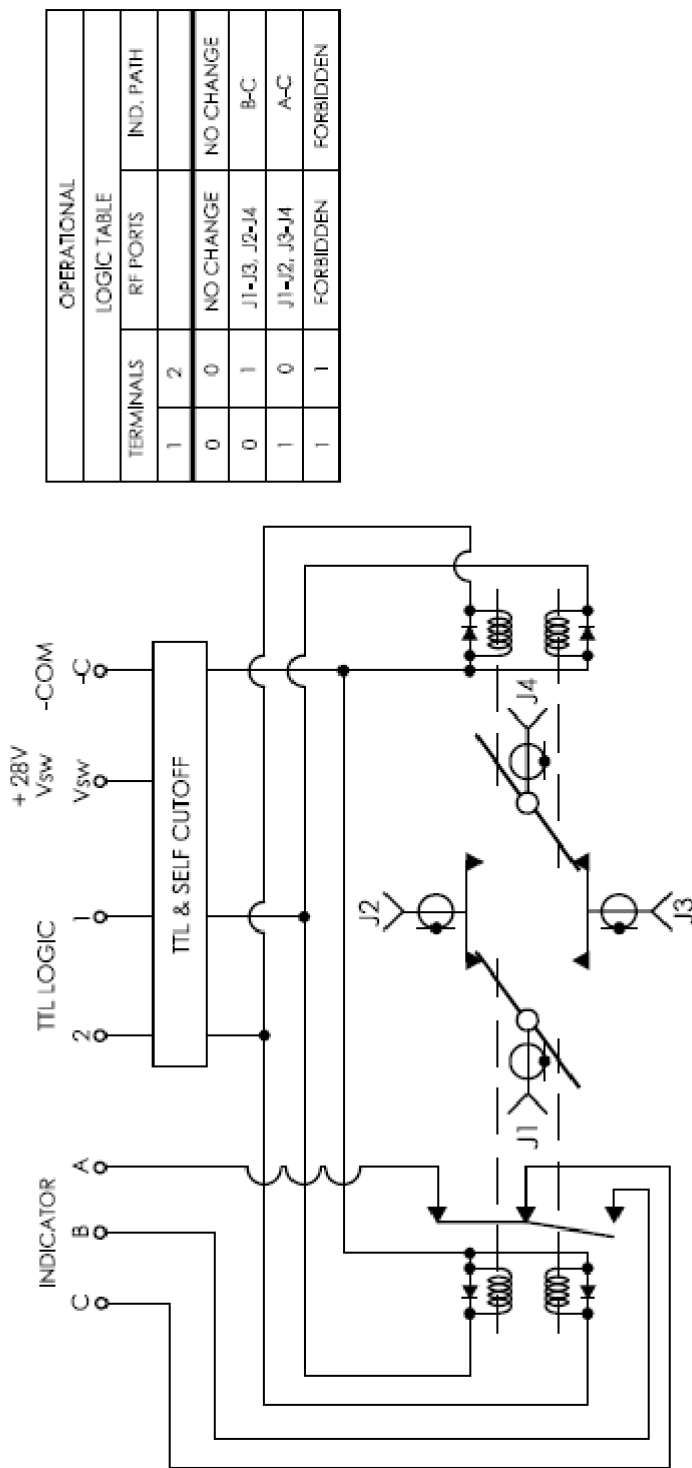
SHEET 1 OF 2  
SCALE N/A

SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	53919	KGLEBOVA	PE71S6498	A



# PE71S6498 CAD Drawing

Transfer Electromechanical Relay Latching Switch DC to 12.4 GHz, 2M Cycles, N, 160 Watts, 28V, Indicators, TTL, Diodes, Solder Pins



OPERATIONAL LOGIC TABLE		
TERMINALS	RF PORTS	IND. PATH
1	2	
0	0	NO CHANGE
0	1	J1-J3, J2-J4
1	0	J1-J2, J3-J4
1	1	FORBIDDEN

SCHEMATIC

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

TOLERANCES:  
 .X = ±.2 [ .08]    FRACTIONS ±.1/32  
 .XX = ±.02 [ .51]    ANGLES ± 1°  
 .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%L / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

**PE PASTERNAK**  
an INFINITI® brand

Pasternack Enterprises, Inc.  
P. O. Box 16759, Irvine, CA 92623.  
Phone: 1.949.261.1920 | 1.866.727.8376  
Fax: 1.949.261.7451  
Website: www.pasternack.com  
E-mail: sales@pasternack.com

ITEM NO. PE71S6498

SIZE A CAGE CODE 53919 DRAWN BY KGLEBOVA

THIRD-ANGLE PROJECTION

THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION ALL RIGHTS RESERVED.

SHEET 2 OF 2

SCALE N/A

REV A