



Transfer, IP64 Rated Electromechanical Relay Latching  
Switch, DC to 12 GHz, Up to 600W, 28VDC, N

## Electromechanical Relay Switches Technical Data Sheet

**PE71S6554**

### Features

- Single Pole Double Throw (SP2T) Ruggedized Electromechanical Relay Switch
- IP64 Level 1 Rated
- DC to 18 GHz Frequency Range
- Latching Actuator
- 1M Lifecycle Rating
- Insertion Loss 0.2 dB typ
- Isolation > 70 dB typ
- VSWR as low as 1.25:1 max
- Solder Terminal Pins for DC Control
- +28 Volt DC Bias
- N Type Female Connectors
- -54°C to +85°C Operating Temperature
- Up to 600 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 PE71S6554 is a Ruggedized Transfer electromechanical relay switch that operates across a frequency range from DC to 12 GHz and can handle up to 600 Watts of average power in a break before make condition. The 50 Ohm design is IP64 compliant with a Level 1 moisture seal and specially designed to operate reliably in harsh usage environments and conditions, such as over extreme temperatures and wet or dusty environments. Intrusion protection offers full protection against dust and other particulates. Moisture protection enables resistance to splashes in all directions. The switch is rated for 1 million life cycles and has a Latching Actuator that magnetically latches in place after the control voltage is removed. For power sensitive applications, this is the best actuator option. Impressive typical performance includes 0.2 dB insertion loss and isolation greater than 70 dB. The switch requires + 28 Vdc bias voltage and operates over a wide temperature range of -54°C to +85°C. The rugged and compact package assembly supports female N Type connectors and solder terminal 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  
Latching

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Set Current			250	mA
VSWR		1.4:1	1.7:1	
Insertion Loss		0.2	0.7	dB
Isolation	60	80		dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Transfer, IP64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, Up to 600W, 28VDC, N PE71S6554](#)



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Switching Time <20 ms Typ

### 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	1.95 in [49.53 mm]
Width/Diameter	2.75 in [69.85 mm]
Height	0.92 in [23.37 mm]
Weight	0.244 lbs [110.68 g]

#### Connectors

RF Connector Type	N Female
Control Connector	Solder Terminals

### Environmental Specifications

#### Temperature

Operating Range	-54 to +85 deg C
Storage Range	-55 to +100 deg C

Ingress Protection (IP) Rating  
Shock

IP64  
MIL-STD-202 Method 213, Condition D, 500 G (non oper)  
MIL-STD-202 Method 204, Condition D, 10G RMS (non oper)

Vibration

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

### Plotted and Other Data

Notes:

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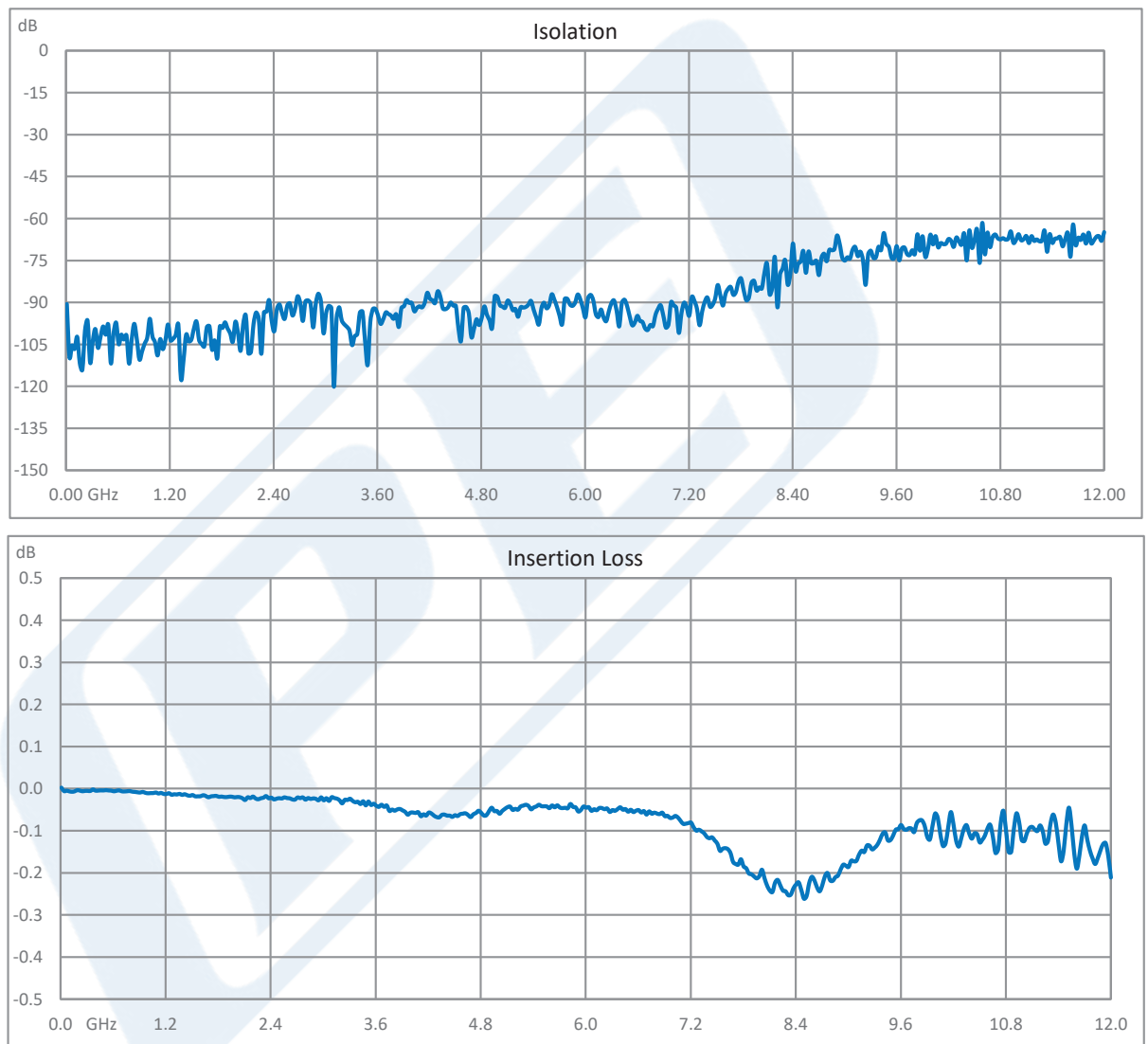


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## Electromechanical Relay Switches Technical Data

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Typical Performance Data



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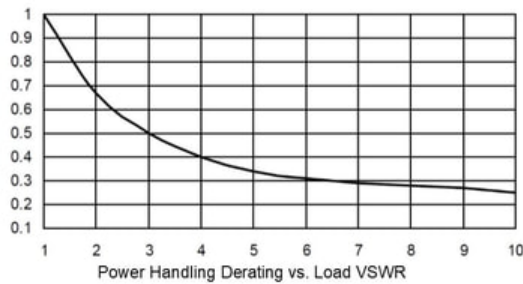
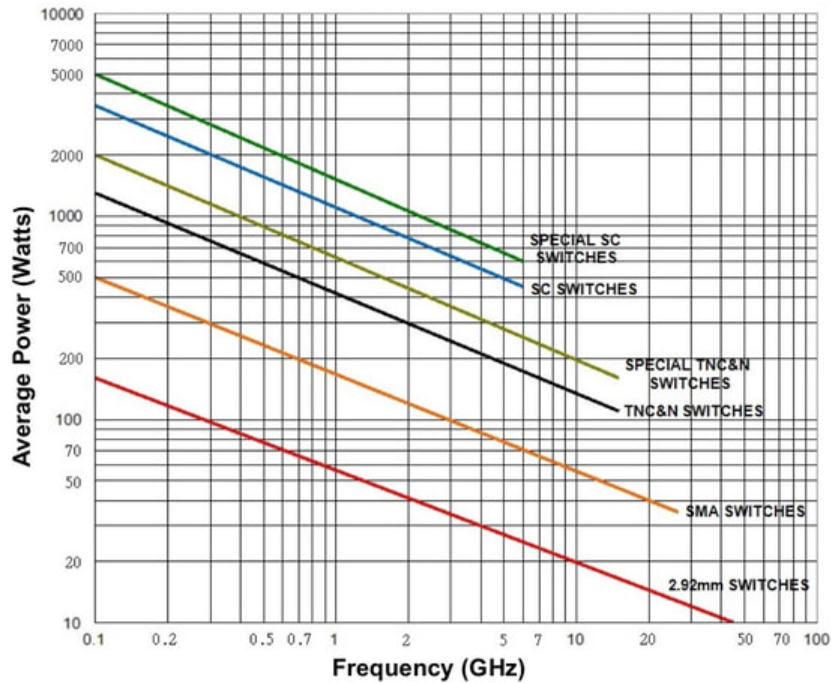


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## Electromechanical Relay Switches Technical Data

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**Power Handling vs. Frequency**



Power handling chart and derating curves based on the following conditions:

- Ambient temperature: 40°C or less
- Altitude: Sea level
- Load VSWR: 1.20:1 Maximum
- Relative Humidity: 40-50%
- Cold switching: RF signal off

Note: specifications subject to change without notice

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## Electromechanical Relay Switches Technical Data

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Transfer, IP64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, Up to 600W, 28VDC, 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: [Transfer, IP64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, Up to 600W, 28VDC, N PE71S6554](https://www.pasternack.com/transfer-electromechanical-relay-latching-switch-12-ghz-n-pe71s6554-p.aspx)

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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.



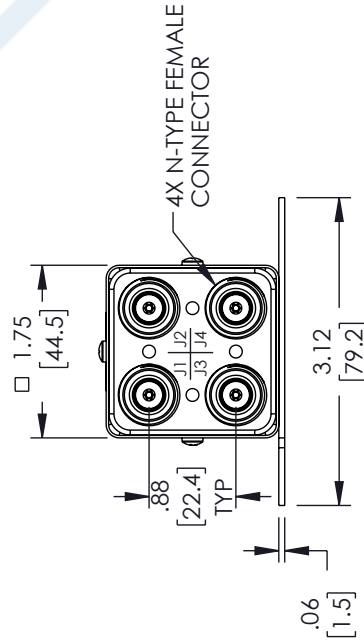
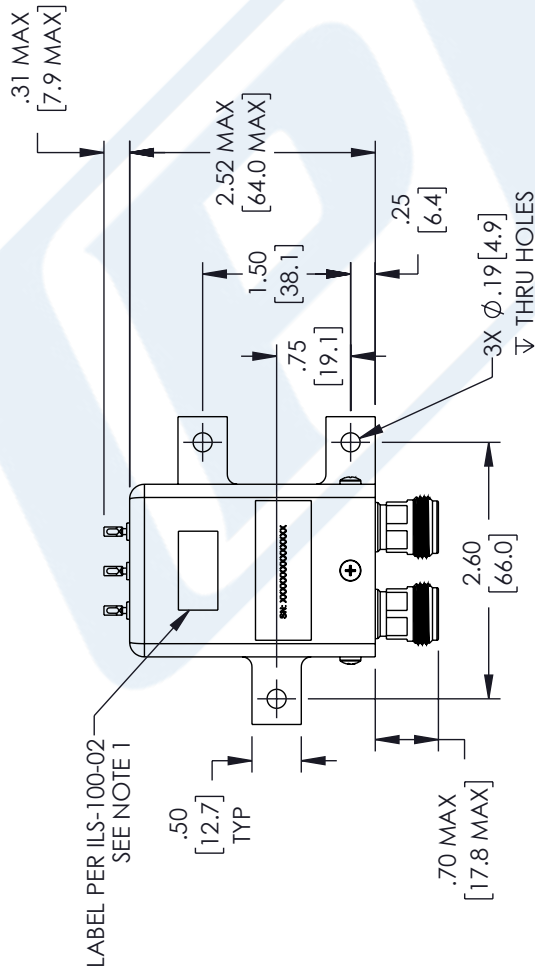
# PE71S6554 CAD Drawing

Transfer, IP64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, Up to 600W, 28VDC, N

ZONE	REV.	DESCRIPTION	DATE	CHANGED BY	APPROVED BY
	A	INITIAL RELEASE	02/08/2023	DMAY	TGALLA

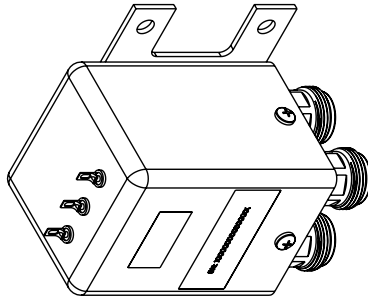
REVISION	1	2	3	4	5	6
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3X SOLDER TERMINALS  
SOLDER WIRE USING SN96,  
MAXIMUM TEMP 250°C FOR  
NO MORE THAN 5 SEC.



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

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

TOLERANCES:  
X = ±.2 [5] FRACTIONS  
.XX = ±.02 [.5] ±.132  
.XXX = ±.005 [.13] ANGLES ± 1°  
CABLE LENGTH TOLERANCES:  
≤12 [305] = ±1 [25] / -0  
>12 [305] ≤ 60 [1524] = +2 [51] / -0  
>60 [1524] ≤ 120 [3048] = +4 [102] / -0  
>120 [3048] ≤ 300 [7620] = +6 [152] / -0  
>300 [7620] = +5% / -0

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DESCRIPTION

TRAN, TYPE-N, LATCHING, 12GHz, 28VDC, SOLDER TERMINAL,  
RUGGEDIZED

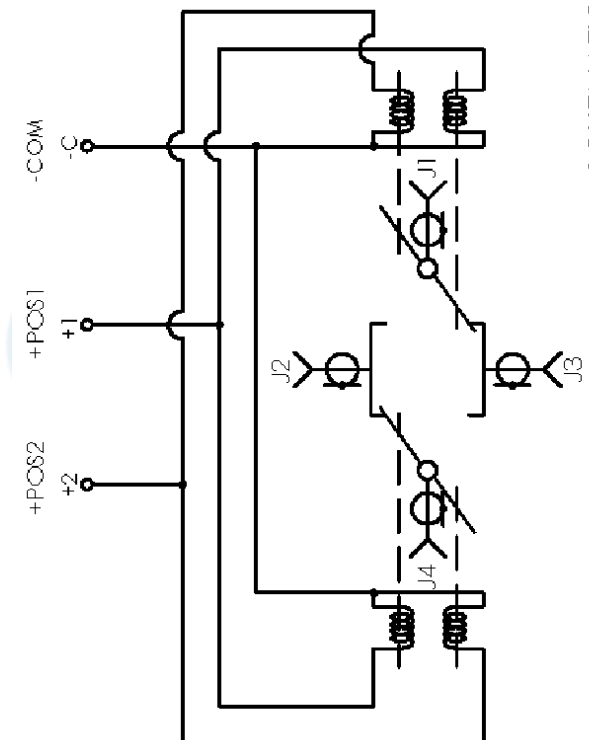


SCALE NONE  
SHEET 1 OF 2

SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	53919	DMAY	PE71S6554	A

PE71S6554 CAD Drawing

Transfer, IP64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, Up to 600W, 28VDC, N



POS	VOLTAGE	RF PATH
POS 1	1-C	J1-J3, J2-J4
POS 2	2-C	J1-J2, J3-J4

SCHEMATIC

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INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5	SCALE	SHEET
NONE	NONE	2 OF 2

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