



## Transfer, IP64 Rated Electromechnical Relay Failsafe Switch, DC to 12 GHz, Up to 600W, 28VDC, N

### Electromechnical Relay Switches Technical Data Sheet

**PE71S6553**

#### Features

- Single Pole Double Throw (SP2T) Ruggedized Electromechnical Relay Switch
- IP64 Level 1 Rated
- DC to 18 GHz Frequency Range
- Failsafe 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 PE71S6553 is a Ruggedized Transfer electromechnical 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 specifically 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 has a Failsafe actuator and is rated for 1 million lifecycles. 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  
Failsafe

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Set Current			300	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 Electromechnical Relay Failsafe Switch, DC to 12 GHz, Up to 600W, 28VDC, N PE71S6553](#)



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

## Electromechanical Relay Switches Technical Data

**PE71S6553**

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)

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, IP64 Rated Electromechanical Relay Failsafe Switch, DC to 12 GHz, Up to 600W, 28VDC, N PE71S6553](#)

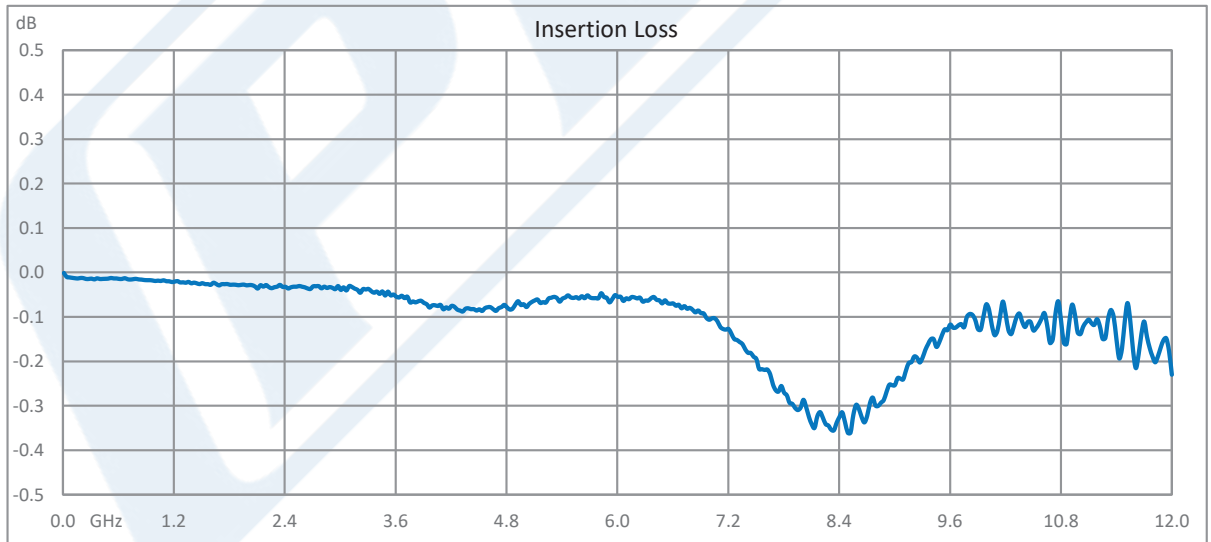
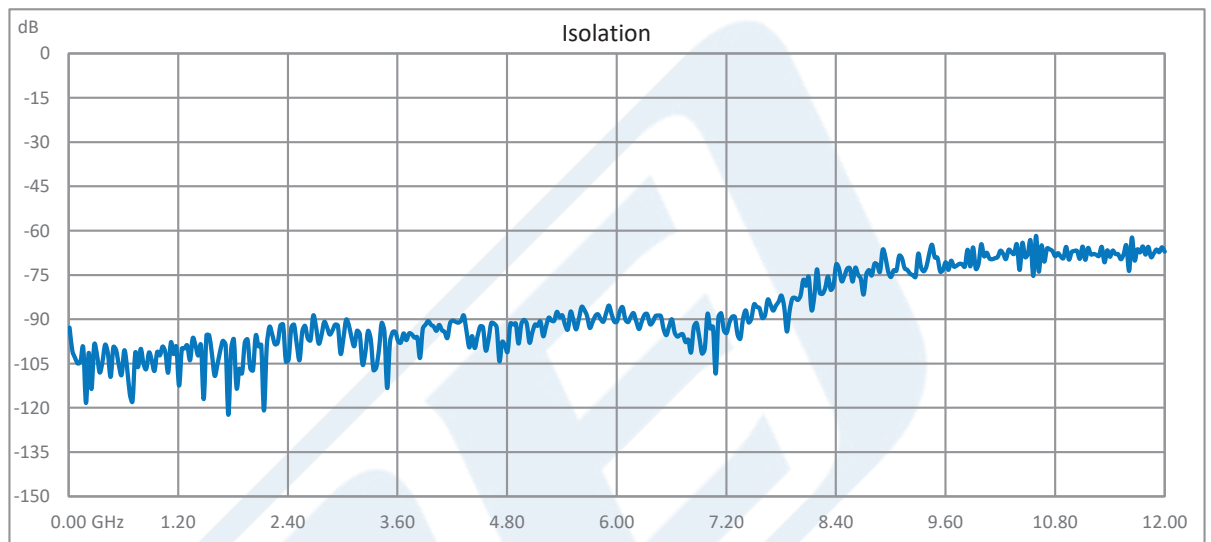


Transfer, IP64 Rated Electromechanical Relay Failsafe Switch, DC to 12 GHz, Up to 600W, 28VDC, N

## Electromechanical Relay Switches Technical Data

**PE71S6553**

### Typical Performance Data



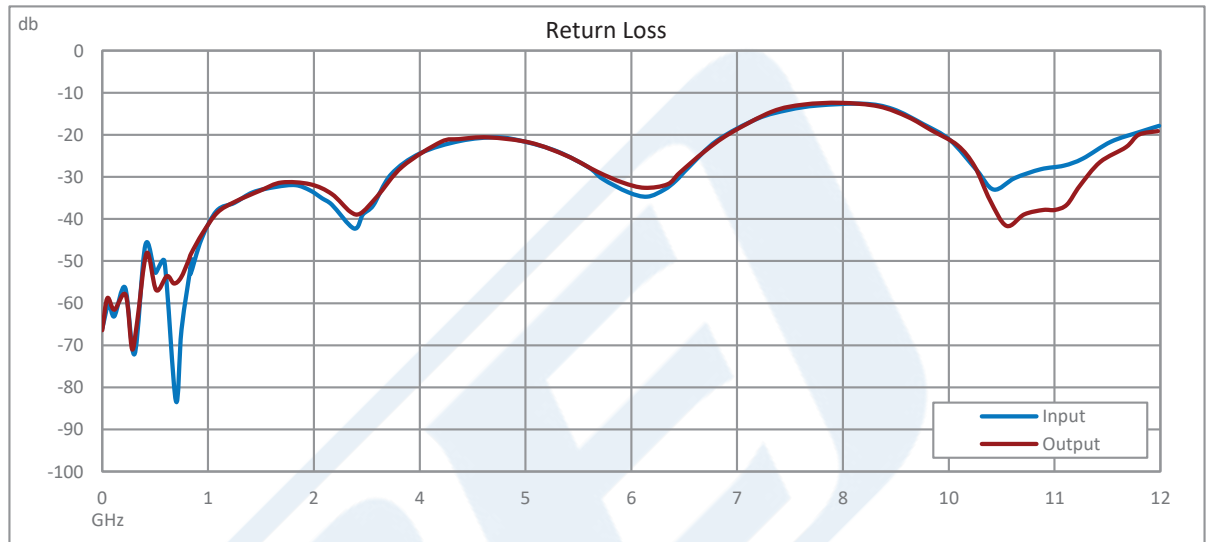
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Transfer, IP64 Rated Electromechanical Relay Failsafe Switch, DC to 12 GHz, Up to 600W, 28VDC, N PE71S6553](#)



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

## Electromechanical Relay Switches Technical Data

**PE71S6553**



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 Failsafe Switch, DC to 12 GHz, Up to 600W, 28VDC, N PE71S6553](#)

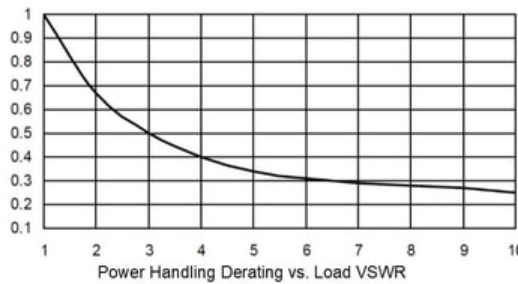
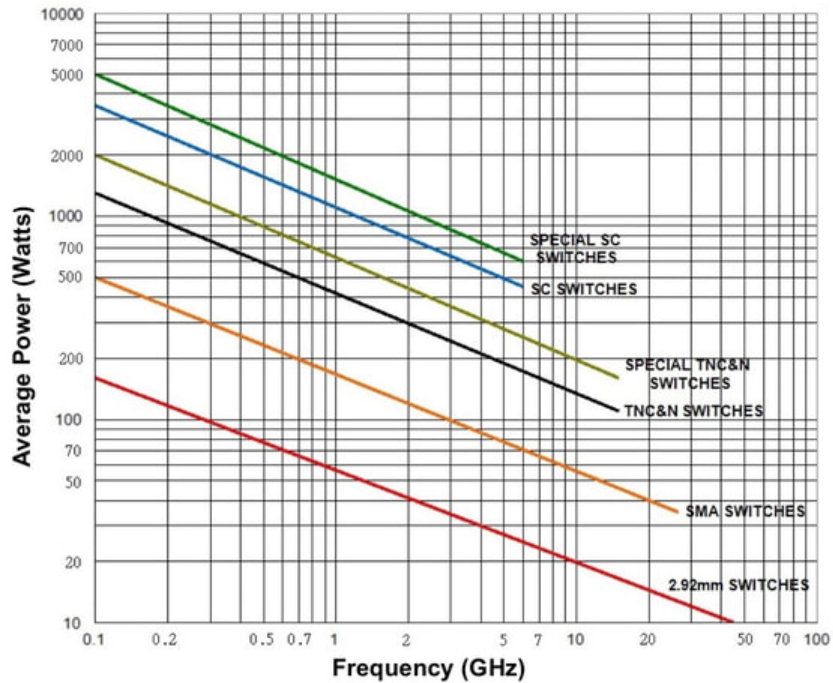


Transfer, IP64 Rated Electromechanical Relay Failsafe Switch, DC to 12 GHz, Up to 600W, 28VDC, N

**Electromechanical Relay Switches Technical Data**

**PE71S6553**

**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

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 Failsafe Switch, DC to 12 GHz, Up to 600W, 28VDC, N PE71S6553](#)



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

## Electromechanical Relay Switches Technical Data

**PE71S6553**

Transfer, IP64 Rated Electromechanical Relay Failsafe 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.

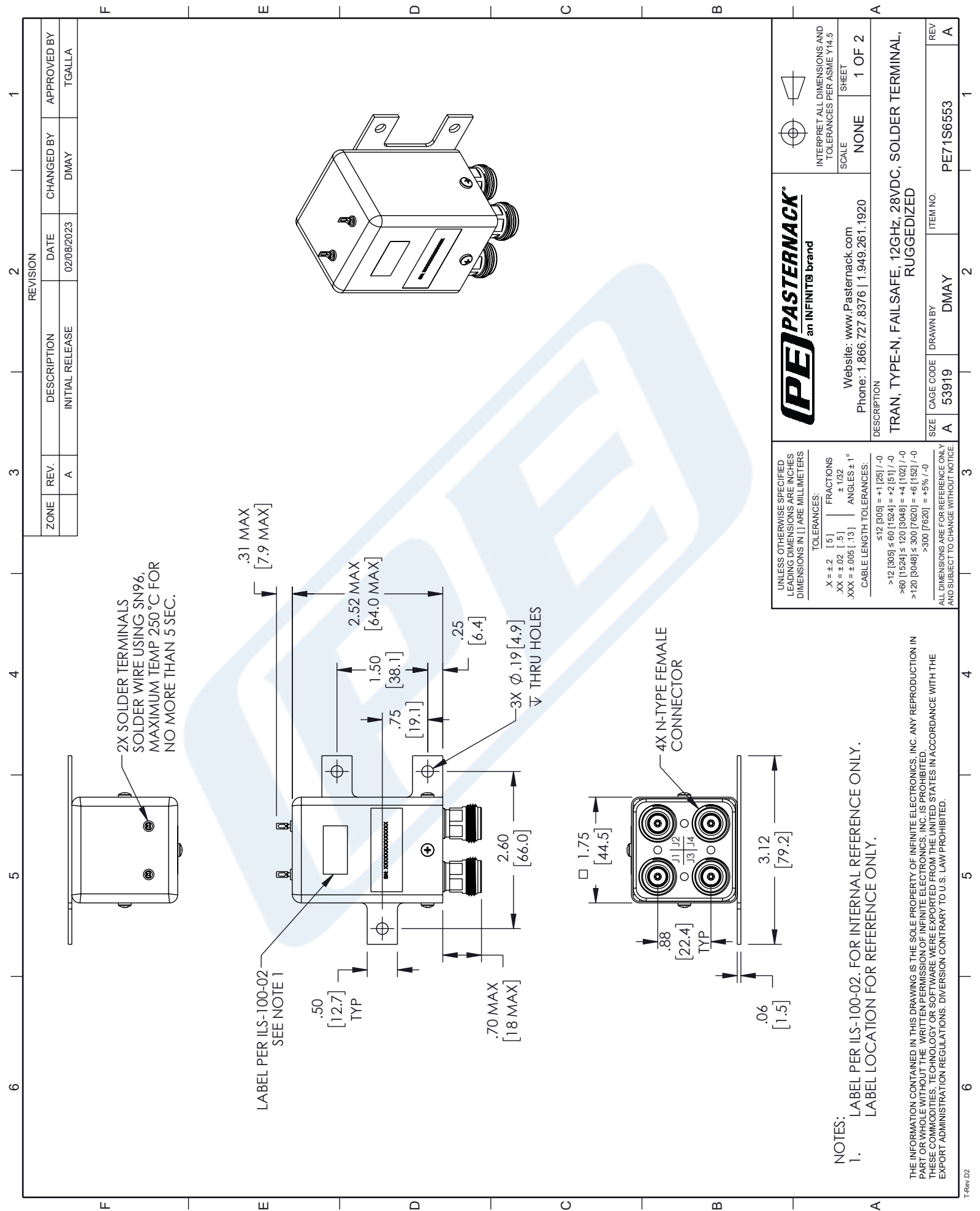
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Transfer, IP64 Rated Electromechanical Relay Failsafe Switch, DC to 12 GHz, Up to 600W, 28VDC, N PE71S6553](https://www.pasternack.com/transfer-electromechanical-relay-failsafe-switch-12-ghz-up-to-600w-28vdc-n-pe71s6553)

URL: <https://www.pasternack.com/transfer-electromechanical-relay-failsafe-switch-12-ghz-n-pe71s6553-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.

# PE71S6553 CAD Drawing

Transfer, IP64 Rated Electromechanical Relay Failsafe 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

**PE PASTERNAK**  
an INFINITI® brand

Website: [www.Pasternack.com](http://www.Pasternack.com)  
Phone: 1.866.727.8376 | 1.949.261.1920

SCALE: NONE  
SHEET: 1 OF 2

DESCRIPTION: TRAN, TYPE-N, FAILSAFE, 12GHz, 28VDC, SOLDER TERMINAL, RUGGEDIZED

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

TOLERANCES:  
 X = ±.2 [5] FRACTIONS  
 .XX = ±.02 [.5] ±.1/32  
 .XXX = ±.005 [.13] ANGLES ± 1°

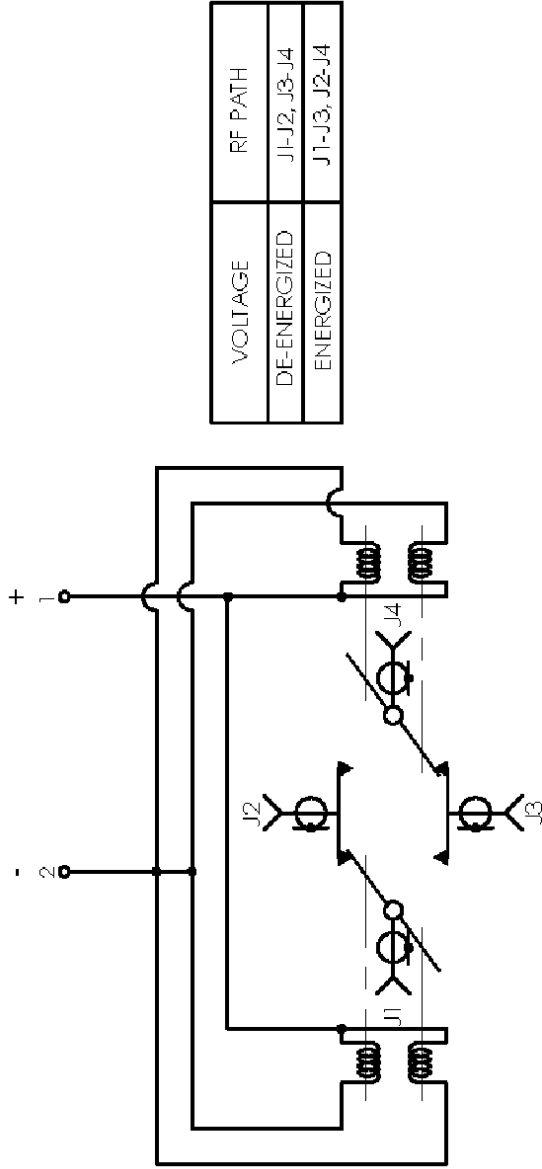
CABLE LENGTH TOLERANCES:  
 ≤12 [305] = +1 [25] / -0  
 >12 [305] ≤ 60 [1524] = +2 [51] / -0  
 >60 [1524] ≤ 120 [3048] = +4 [102] / -0  
 >120 [3048] ≤ 300 [7620] = +6 [152] / -0  
 >300 [7620] = +5% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE

ITEM NO. PE71S6553  
CABLE CODE DMAY  
DRAWN BY DMAY  
REV A

# PE71S6553 CAD Drawing

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



**SCHEMATIC**

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

TOLERANCES:  
 X = ±.2 [ .5 ] FRACTIONS  
 .XX = ±.02 [ .5 ] ANGLES ± 1°  
 .XXX = ±.005 [ .13 ]

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

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE.



Website: [www.Pasternack.com](http://www.Pasternack.com)  
 Phone: 1.866.727.8376 | 1.949.261.1920

**DESCRIPTION**

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

SIZE A CAGE CODE 53919 DRAWN BY DMAY ITEM NO. PE71S6553 REV A

SCALE NONE SHEET 2 OF 2

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED. 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.