



DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA

## Electromechanical Relay Switches Technical Data Sheet

PE71S6405

### Features

- Double Pole Three Throw
- DC to 18 GHz Frequency Range
- Isolation greater than 85 dB typical
- 5M Cycle Min Operating Life
- +28 Volt DC
- 90 Watt average Power
- Latching Actuator
- 1 Watt Indicators
- -25 to +70°C Operating Temperature
- Insertion Loss as low as 0.15 dB Max
- VSWR as low as 1.2:1 max
- SMA Female RF connectors
- Solder Pins for DC Control
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request

### Applications

- High Performance Relay Switch
- Military Communications
- Communications Systems
- Test & Measurement

### Description

The PE71S6405 is a Double Pole Three Throw (DP3T) electromechanical relay switch that operates across a wide frequency range of DC to 18 GHz and can handle up to 90 Watts of CW input power in a break before make condition. The design features a Latching actuator with 1W Indicators, and is rated for 5M life cycles for high reliability operation. Insertion loss is specified as low as 0.15 dB maximum and Isolation up to 85 dB minimum. Operating voltage is +28 V and performance is guaranteed over -25°C to +70°C. The rugged and compact package assembly supports SMA Female connectors and solder pins. The model is guaranteed to meet MIL-STD-202 environmental test conditions for shock and random vibration.

### Electrical Specifications

Switch Type	DP3T
Actuator Type	Latching
Switching Sequence	Break before Make
Actuator Options	Indicators
Indicator Rating	1 Watt / 32 Volts / 125 mA

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Set Current @ 28 Volts		90		mA
VSWR		1.2:1	1.4:1	
Insertion Loss		0.15	0.35	dB
Isolation	65	85		dB
Input Power (CW)			60	Watts
Switching Time			20	ms Max

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA PE71S6405](#)



DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA

## Electromechanical Relay Switches Technical Data

PE71S6405

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 6	6 to 12	12 to 18			GHz
VSWR, Max	1.2:1	1.3:1	1.4:1			
Insertion Loss, Max	0.15	0.25	0.35			dB
Isolation, Min	85	70	65			dB
Input Power, Typ (CW)	90	75	60			Watts

### Mechanical Specifications

#### Size

Body Material and Plating

Aluminum

Package Type

Connectorized

Operating Life

5,000,000 Cycles

#### Connectors

RF Connector Type

SMA Female

RF Connector Contact Material and Plating

Beryllium Copper, Gold

RF Connector Body Material and Plating

Aluminum, Nickel

Control Connector

Solder Pin

### Environmental Specifications

#### Temperature

Operating Range

-25 to +70 deg C

Storage Range

-55 to +100 deg C

Shock

MIL-STD-202 Method 213, Cond. D 500G Non Operating

Vibration

MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

**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: [DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA PE71S6405](#)

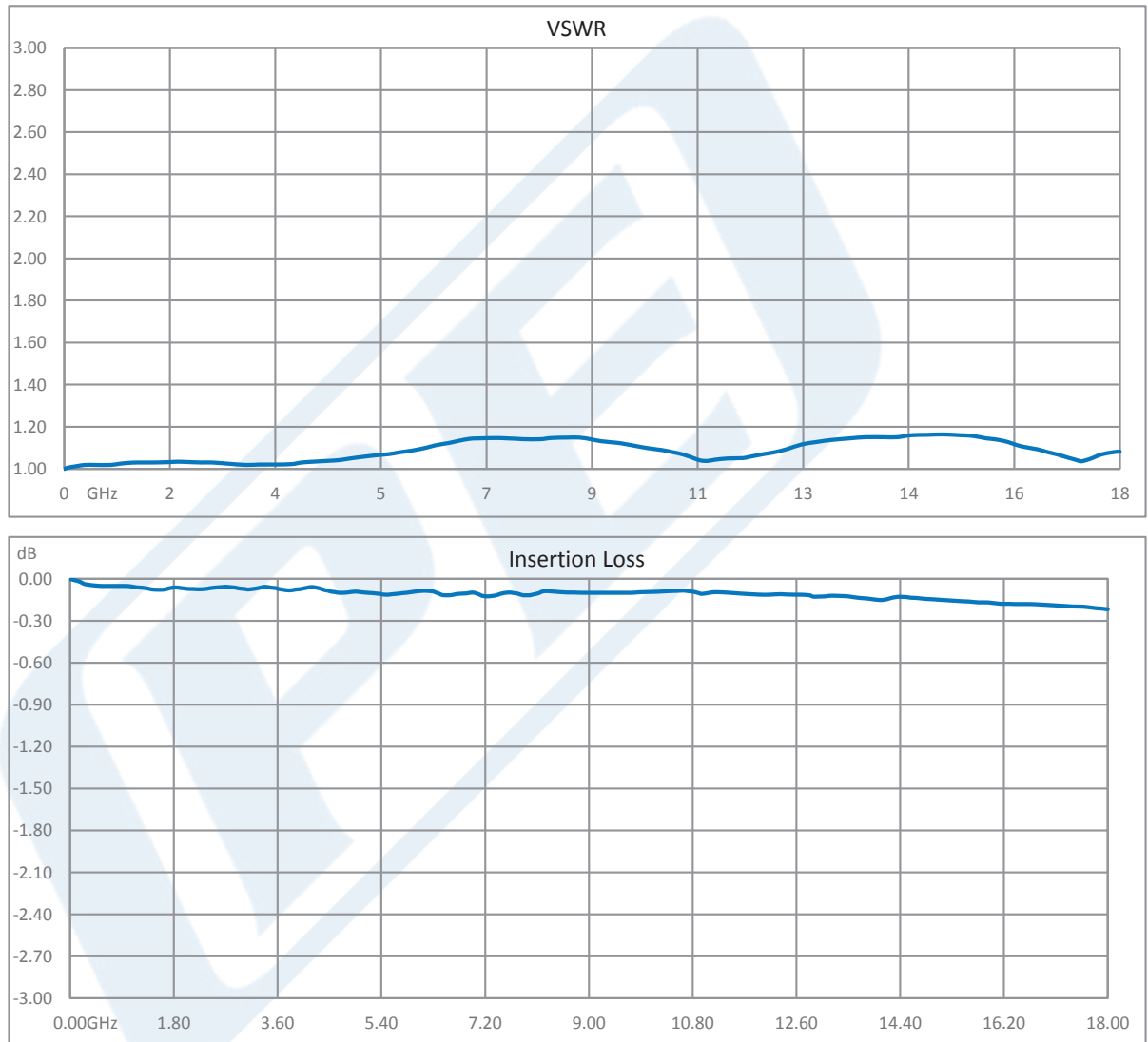


DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA

Electromechanical Relay Switches Technical Data

PE71S6405

Typical Performance Data



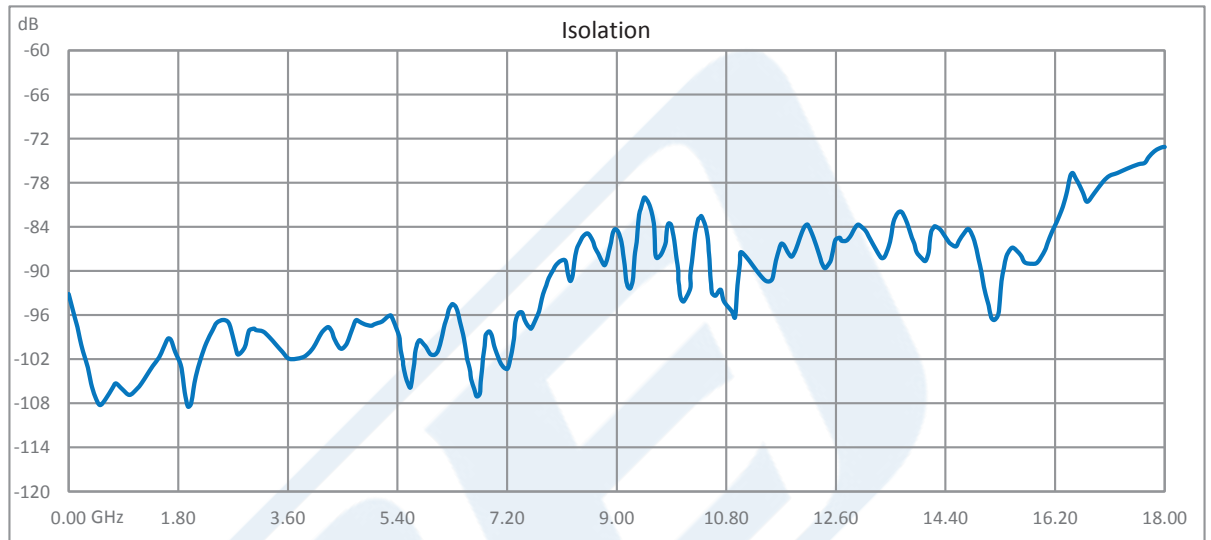
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA PE71S6405](#)



DP3T Electromechanical Relay Latching Switch, DC  
to 18 GHz, up to 90W, 28V, Indicators, SMA

## Electromechanical Relay Switches Technical Data

PE71S6405



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA PE71S6405](#)

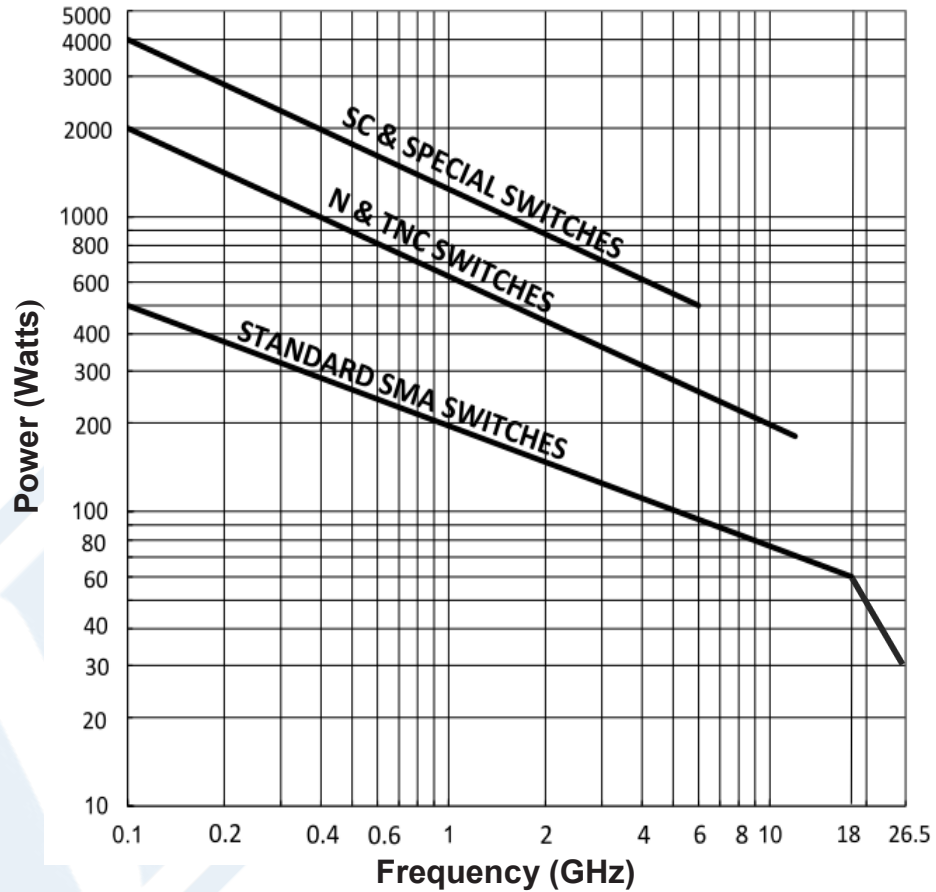


DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA

Electromechanical Relay Switches Technical Data

PE71S6405

**Power Handling vs. Frequency & Connector Type**



**Environmental and Test Conditions:**

- Ambient temperature of 25°C or less
- Altitude: Sea Level
- Load VSWR: 1.20:1 max.
- Cold Switching

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA PE71S6405](#)



DP3T Electromechanical Relay Latching Switch, DC  
to 18 GHz, up to 90W, 28V, Indicators, SMA

## Electromechanical Relay Switches Technical Data

PE71S6405

DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA 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: [DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA PE71S6405](https://www.pasternack.com/dp3t-electromechanical-relay-latching-switch-18-ghz-up-to-90w-28v-indicators-sma-pe71s6405)

URL: <https://www.pasternack.com/dp3t-electromechanical-relay-latching-switch-18-ghz-60w-28v-indicators-sma-pe71s6405-p.aspx>

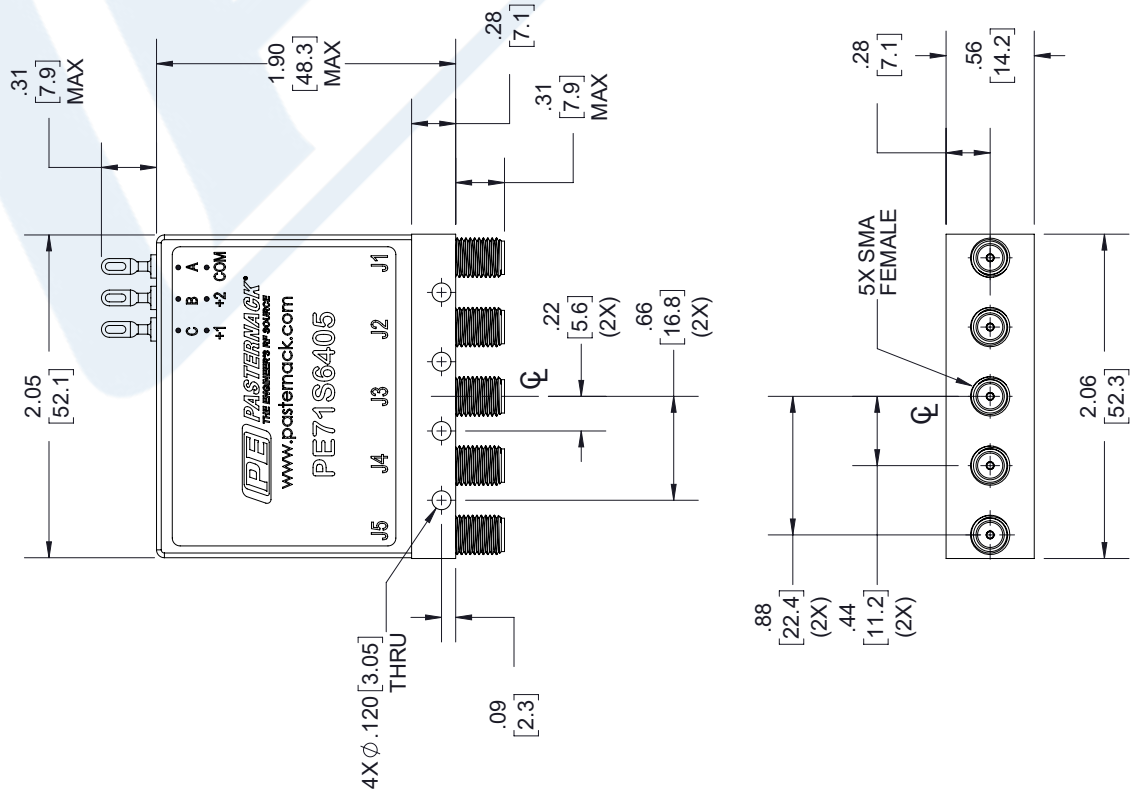
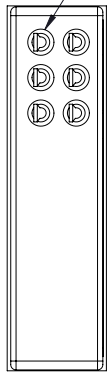
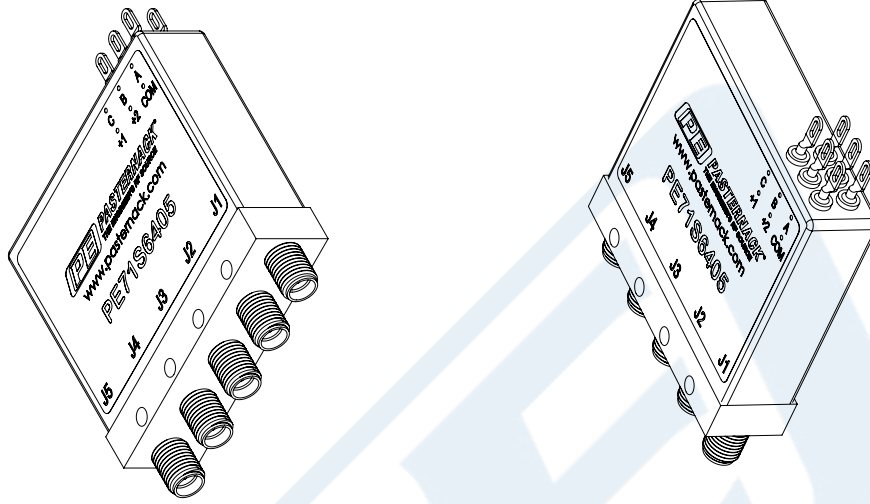
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such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

# PE71S6405 CAD Drawing

DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	09/24/19	J.GARCIA

6X SOLDER WIRE TO D.C. TERMINALS FOR ALL RoHS SWITCH WE WILL USE SN96. MAXIMUM TEMP 430°C FOR NO MORE THAN 5 SEC.



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

TOLERANCES:  
 X±± .2 [5.08] FRACTIONS ±.132  
 .XX±± .01 [ .25] ANGLES ± 1°  
 .XXX±± .005 [ .13]

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

**PE PASTERNAK**  
 an INFINITO 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  
 www.pasternack.com | e-mail: sales@pasternack.com

SIZE [CAGE CODE] DRAWN BY PART NUMBER REV  
 A 53919 K.DANG PE71S6405 A

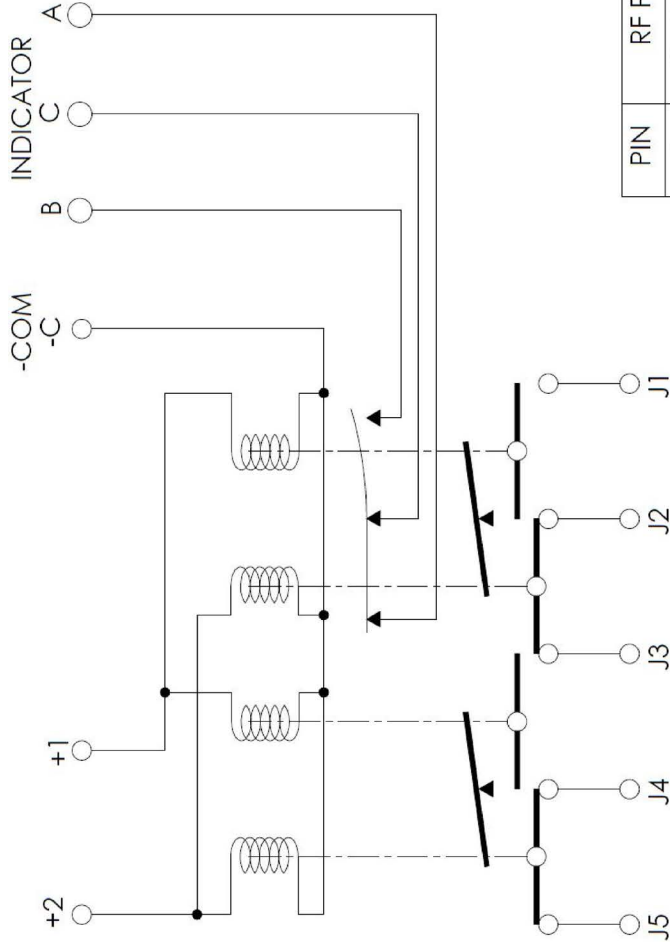
THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.

SHEET 1 OF 2  
 SCALE N/A



# PE71S6405 CAD Drawing

DP3T Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 28V, Indicators, SMA



PIN	RF PATH	INDICATOR
1	J1-J2 , J3-J4	A-C
2	J2-J3 , J4-J5	B-C

SCHEMATIC

(SCHEMATIC SHOWN IN POSITION 2)

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

TOLERANCES:  
X±.2 [5.08]  
.XX±.01 [.25]  
.XXX±.005 [0.13]

FRACTIONS  
±1/32  
ANGLES ± 1°

ALL DIMENSIONS SHOWN  
ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

**PE PASTERNAK**  
THE ENGINEER'S RF SOURCE

PASTERNAK ENTERPRISES, INC.  
P.O. BOX 16759, IRVINE, CA 92623  
Phone: 1.949.261.1920 | 1.866.727.8376  
Fax: 1.949.261.7451  
www.pasternack.com | e-mail: sales@pasternack.com

SIZE A CAGE 53919 DRAWN BY K.DANG PART NUMBER PE71S6405 REV A

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

SHEET 2 OF 2  
SCALE N/A