



WR-159 Waveguide Electromechanical Relay SPDT/
 DPDT Latching Switch, C Band 7.05 GHz Max.
 Freq., 12,000 Watts, CPR Flat, 12V, TTL

Waveguide Electromechanical Relay Switches Technical

PEWGS6035

Features

- 4.90 to 7.05 GHz SPDT Waveguide Switch
- Optional DPDT Configuration
- WR-159 Waveguide
- Insertion Loss: 0.02 dB Max
- Isolation: 70 dB min
- +12 Vdc Nominal Voltage
- Input Power Rating up to 12 KW CW max
- Latching TTL Logic Self Cut Off Actuator
- Position Indicator and Manual Override Access
- Fully Weatherized Package
- Quick Connect Circular DC Connector with Mate
- -40°C to +85°C Operating Temperature

Applications

- Electronic Warfare
- Electronic Countermeasures
- Microwave Radio
- VSAT
- Radar
- Space Systems
- Test Instrumentation
- Research and Development

Description

The PEWGS6035 electromechanical WR-159 waveguide switch operates across a wide frequency range from 4.90 GHz to 7.05 GHz and is configured for single pole double throw (SPDT) operation. A shorting plate on port 3 can be removed for optional double pole double throw (DPDT) operation. This innovative design features a latching TTL Logic controlled Self Cut Off actuator and patented motor drive with arc suppression. The motor drive housing supports a viewable position indicator window and a cover that can be removed for manual override access.

Impressive performance includes 0.02 dB max insertion loss, 70 dB min Isolation, 1.10:1 max VSWR, and an operating life of 250K cycles minimum. The design operates across a temperature range of -40°C to +85°C, requires +12Vdc nominal bias voltage, and has an input power rating of up to 12 KW CW maximum. The waveguide ports have standard CPR Flat Flanges. The rugged package design is fully weatherized for up to 100% humidity exposure and supports a quick connect circular 10 pin MIL-SPEC DC bias connector with mate included.

Electrical Specifications

Switch Type	SPDT/DPDT
Actuator Type	Latching
Actuator Options	TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window

Description	Minimum	Typical	Maximum	Units
Frequency Range	4.9		7.05	GHz
Operating Voltage	10	12	20	Volts
Actuating Current @ 12 Volts			1	A
VSWR			1.1:1	
Insertion Loss			0.06	dB
Isolation	70			dB
Switching Time		150		ms
Input Power (CW)			12	kWatts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-159 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, C Band 7.05 GHz Max. Freq., 12,000 Watts, CPR Flat, 12V, TTL PEWGS6035](#)



WR-159 Waveguide Electromechanical Relay SPDT/
DPDT Latching Switch, C Band 7.05 GHz Max.
Freq., 12,000 Watts, CPR Flat, 12V, TTL

Waveguide Electromechanical Relay Switches Technical

PEWGS6035

Mechanical Specifications

Size

Operating Life 250,000 Cycles
Operating Pressure 30 psig

Configuration

Waveguide Size WR-159
Flange Type CPR Flat
Body Material and Plating Aluminum, Gold
Body Plating Specification MIL-DTL-5541

Environmental Specifications

Temperature

Operating Range -40 to +85 deg C
Storage Range -55 to +100 deg C

Humidity 0 to 100%, Fully Weatherized

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

Plotted and Other Data

Notes:

WR-159 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, C Band 7.05 GHz Max. Freq., 12,000 Watts, CPR Flat, 12V, TTL 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: [WR-159 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, C Band 7.05 GHz Max. Freq., 12,000 Watts, CPR Flat, 12V, TTL PEWGS6035](#)

URL: <https://www.pasternack.com/wr-159-waveguide-electromechanical-relay-spdt-dpdt-latching-switch-7.05-ghz-pewgs6035-p.aspx>

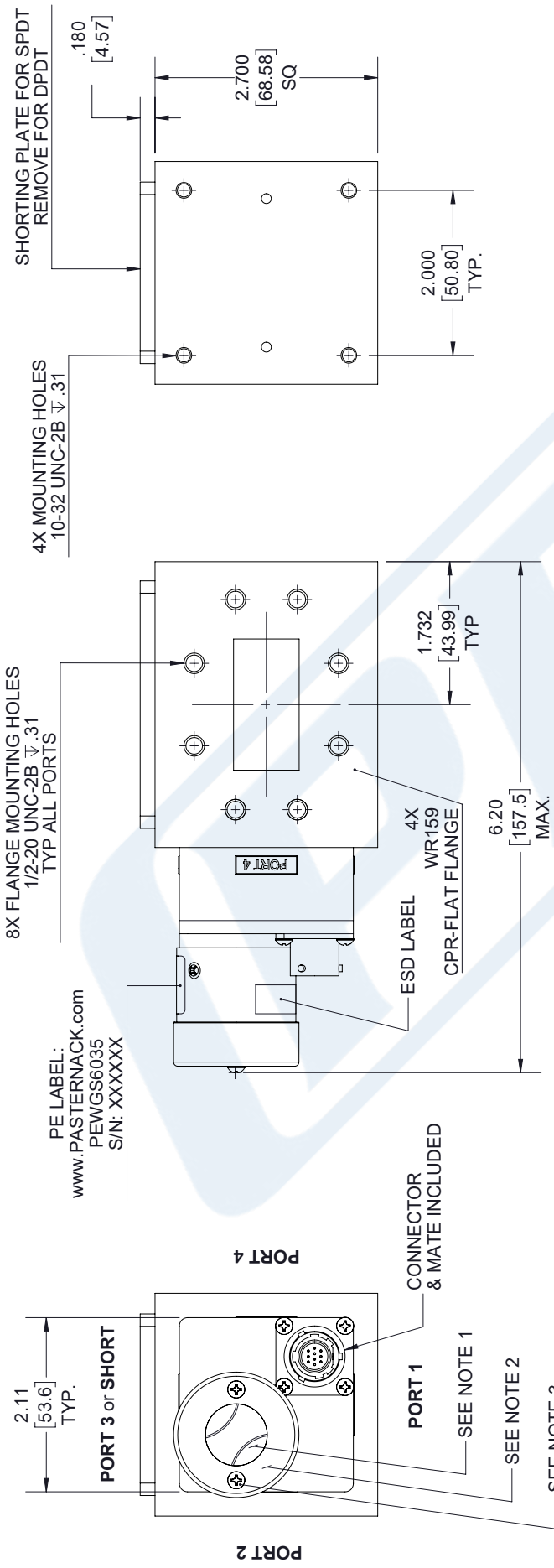
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such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

PEWGS6035 CAD Drawing

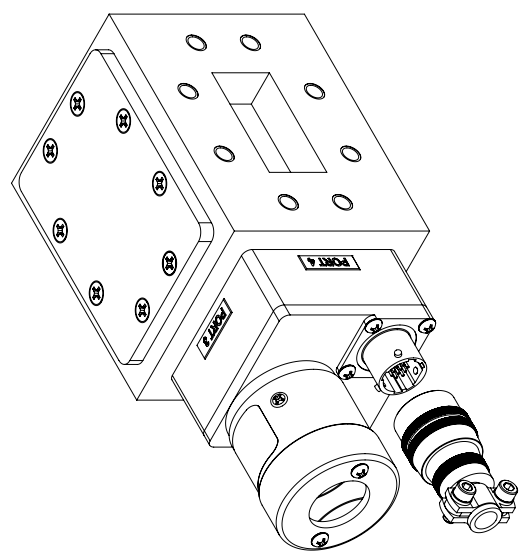
WR-159 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch,
C Band 7.05 GHz Max. Freq., 12,000 Watts, CPR Flat, 12V, TTL

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	07/16/19	T. GALLA

- NOTES:
- MANUAL OVERRIDE & POSITION INDICATOR.
 - WEATHERIZED COVER WITH CLEAR VIEWING WINDOW.
 - FOR ACCESS TO MANUAL OVERRIDE LOOSEN (2) CAPTIVE SCREWS.



PE LABEL:
www.PASTERNAK.com
PEWGS6035
S/N: XXXXXX

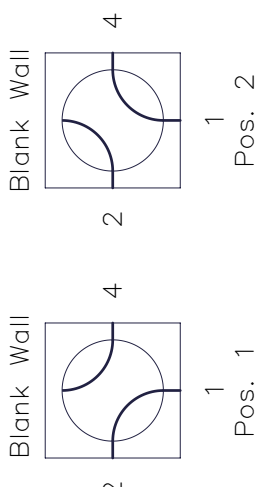


<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS</p> <p>TOLERANCES:</p> <table border="0"> <tr> <td>X±.2</td> <td>[5.08]</td> <td>FRACTIONS</td> </tr> <tr> <td>.XX±.01</td> <td>[.25]</td> <td>±.132</td> </tr> <tr> <td>.XXX±.005</td> <td>[.13]</td> <td>ANGLES ± 1°</td> </tr> </table> <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p> <p>THIRD-ANGLE PROJECTION</p>	X±.2	[5.08]	FRACTIONS	.XX±.01	[.25]	±.132	.XXX±.005	[.13]	ANGLES ± 1°	<p>PE PASTERNAK an INFINITO brand</p> <p>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</p>	<p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.</p>
	X±.2	[5.08]	FRACTIONS								
.XX±.01	[.25]	±.132									
.XXX±.005	[.13]	ANGLES ± 1°									
<p>SIZE A</p> <p>CAGE 53919</p> <p>DRAWN BY K.DANG</p> <p>PART NUMBER PEWGS6035</p> <p>REV A</p>	<p>SHEET 1 OF 2</p> <p>SCALE N/A</p>										

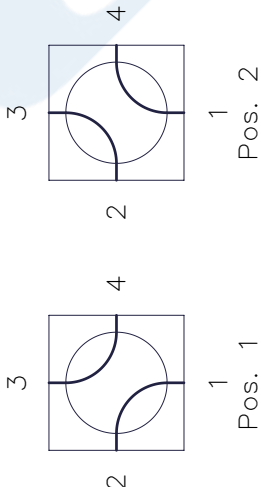
THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

PEWGS6035 CAD Drawing

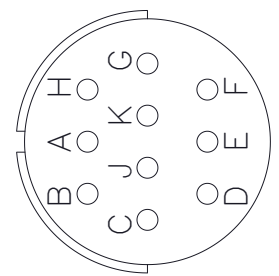
WR-159 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch,
C Band 7.05 GHz Max. Freq., 12,000 Watts, CPR Flat, 12V, TTL



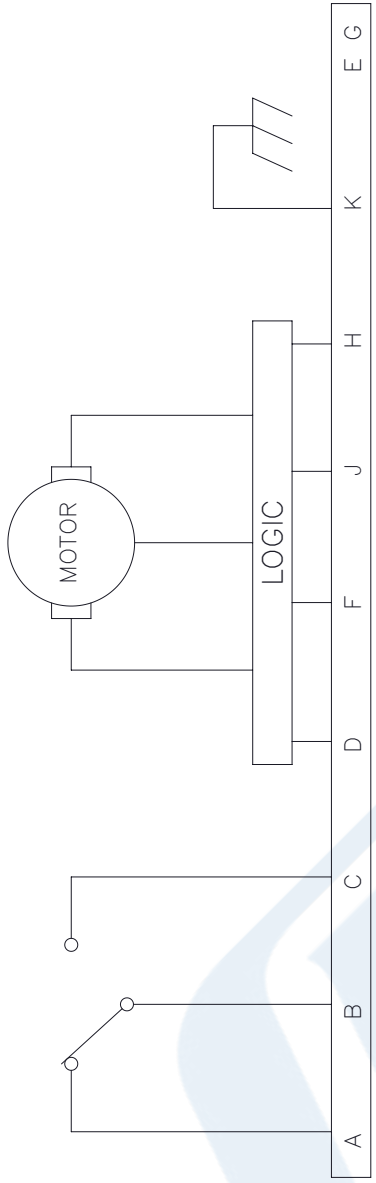
R.F. PATHS—SPDI



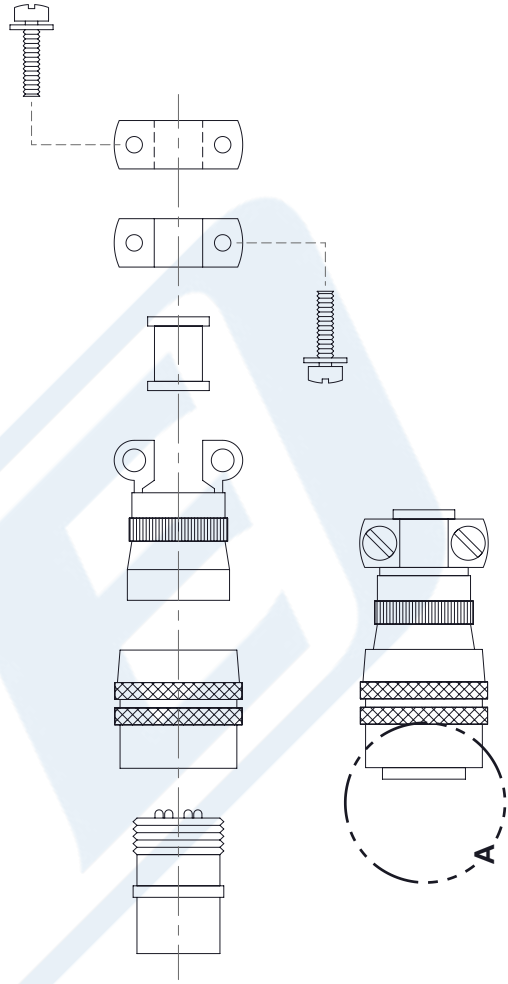
R.F. PATHS—DPDI



VIEW A



Ind. Pos. 1 Ind. Pos. 2
Ind. Common Pos. 2
Pos. 1 Logic Command
Pos. 2 Logic Command
+Vdc Nominal Voltage
-Vdc Nominal Voltage
Case Ground
Spares



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

TOLERANCES:
X±.2 [5.08]
.XX±.01 [.25]
.XXX±.005 [.13]

FRACTIONS
±.132
ANGLES ± 1°

ALL DIMENSIONS SHOWN
ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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

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

SHEET 2 OF 2
SCALE N/A

SIZE A CAGE 53919 DRAWN BY K.DANG PART NUMBER PEWGS6035 REV A

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.