



WR-187 Waveguide Electromechanical Relay SPDT/  
DPDT Latching Switch, C Band 5.85 GHz Max. Freq.,  
22,000 Watts, CPR Flat, 28V, Self Cut Off

## Waveguide Electromechanical Relay Switches Technical

PEWGS6028

### Features

- 3.95 to 5.85 GHz SPDT Waveguide Switch
- Optional DPDT Configuration
- WR-187 Waveguide
- Insertion Loss: 0.02 dB Max
- Isolation: 80 dB min
- +28 Vdc Nominal Voltage
- Input Power Rating up to 22 KW CW max
- Latching 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 PEWGS6028 electromechanical WR-187 waveguide switch operates across a wide frequency range from 3.95 GHz to 5.85 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 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, 80 dB min Isolation, 1.05:1 max VSWR, and an operating life of 250K cycles minimum. The design operates across a temperature range of -40°C to +85°C, requires +28Vdc nominal bias voltage, and has an input power rating of up to 22 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 6 pin MIL-SPEC DC bias connector with mate included.

### Electrical Specifications

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	3.95		5.85	GHz
Operating Voltage	21	28	32	Volts
Actuating Current @ 28 Volts			1	A
VSWR			1.05:1	
Insertion Loss			0.02	dB
Isolation	80			dB
Switching Time		150		ms
Input Power (CW)			22	kWatts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-187 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, C Band 5.85 GHz Max. Freq., 22,000 Watts, CPR Flat, 28V, Self Cut Off PEWGS6028](#)



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**Mechanical Specifications**

**Size**

Operating Life 250,000 Cycles  
Operating Pressure 30 psig

**Configuration**

Waveguide Size WR-187  
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

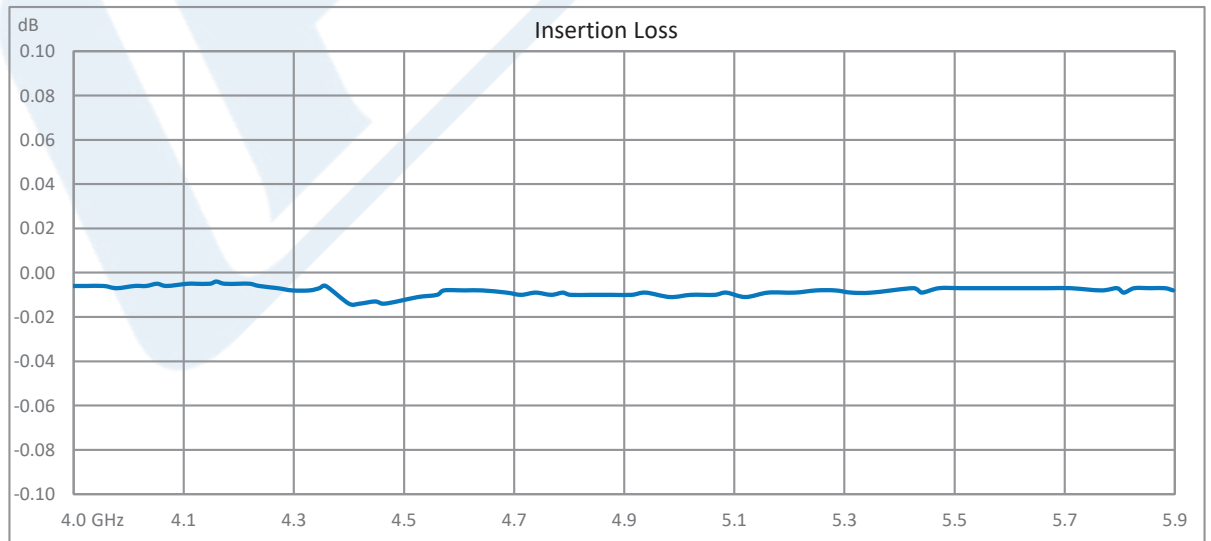
Humidity 0 to 100%, Fully Weatherized

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**



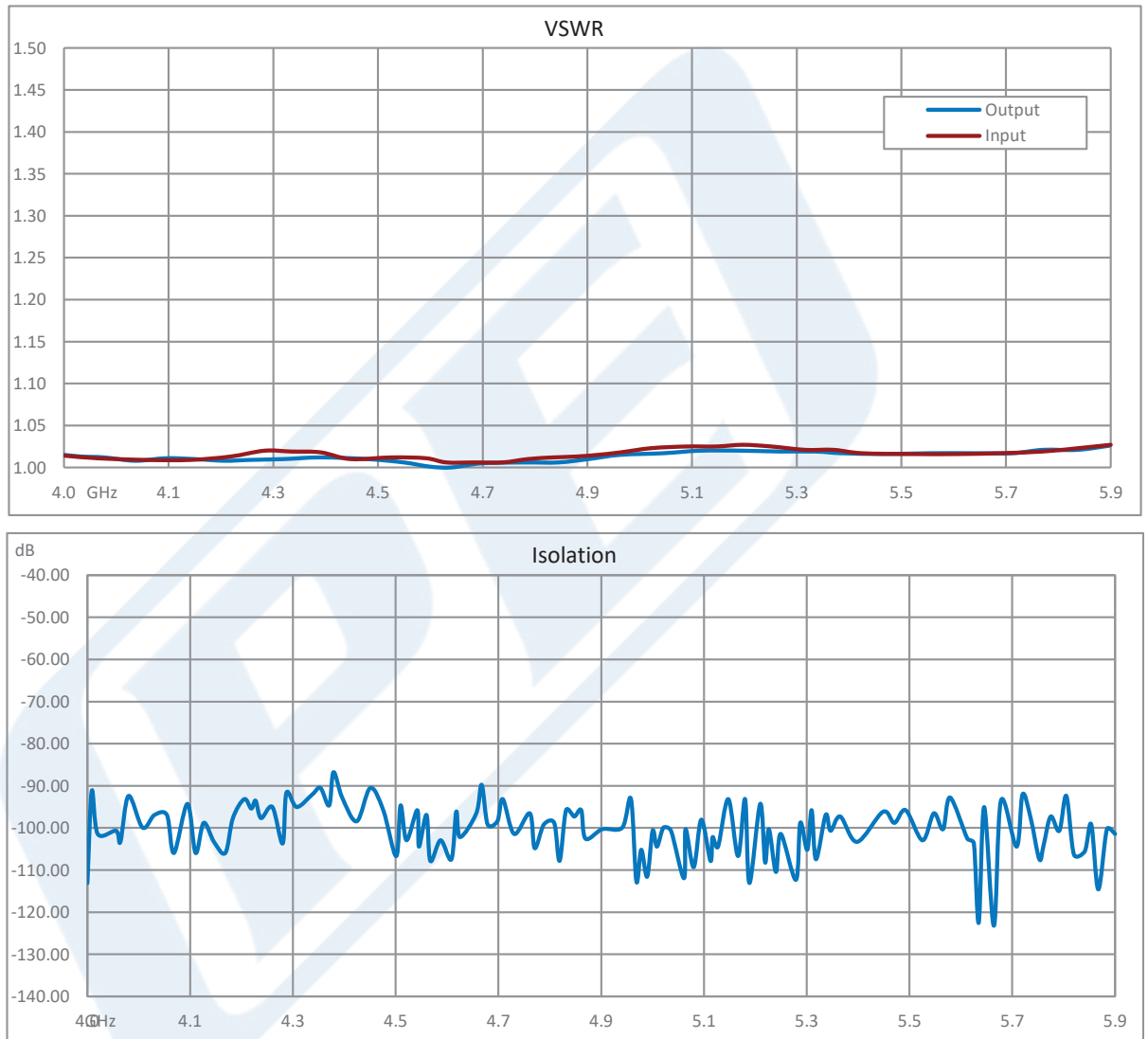
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WR-187 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, C Band 5.85 GHz Max. Freq., 22,000 Watts, CPR Flat, 28V, Self Cut Off from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and 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-187 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, C Band 5.85 GHz Max. Freq., 22,000 Watts, CPR Flat, 28V, Self Cut Off PEWGS6028](https://www.pasternack.com/wr-187-waveguide-electromechanical-relay-spdt-dpdt-latching-switch-5.85-ghz-pewgs6028-p.aspx)

URL: <https://www.pasternack.com/wr-187-waveguide-electromechanical-relay-spdt-dpdt-latching-switch-5.85-ghz-pewgs6028-p.aspx>

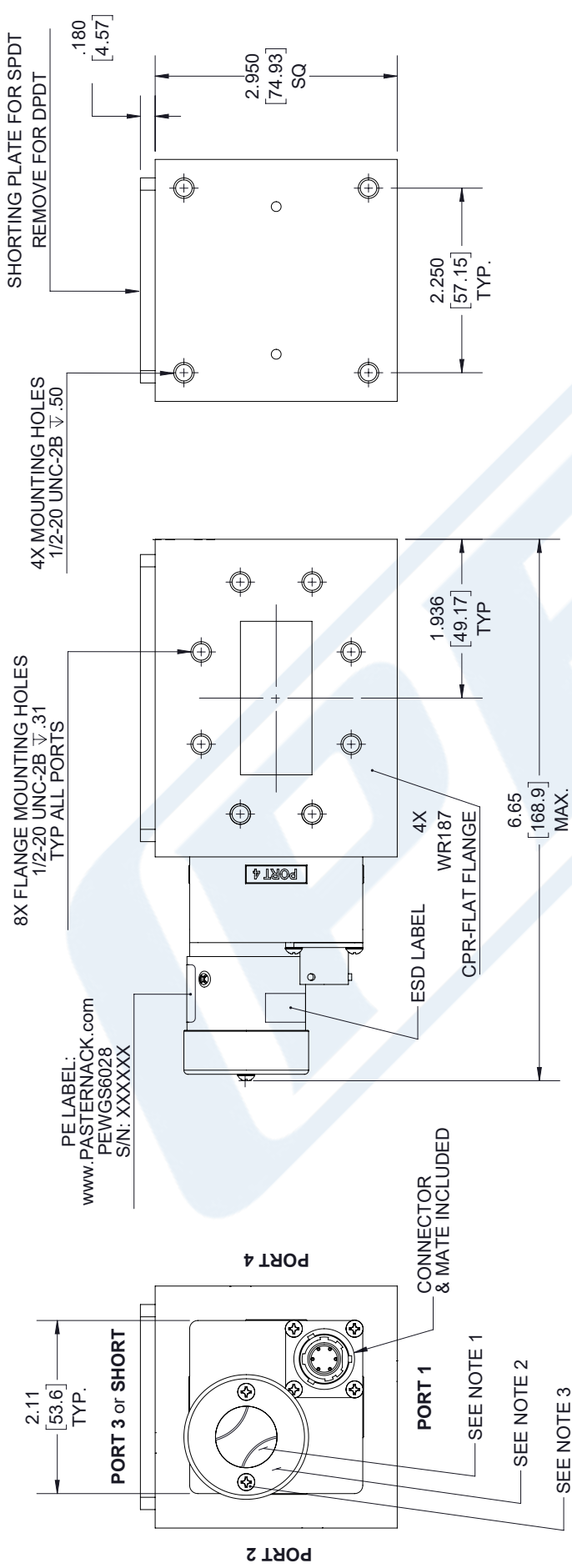
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such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

# PEWGS6028 CAD Drawing

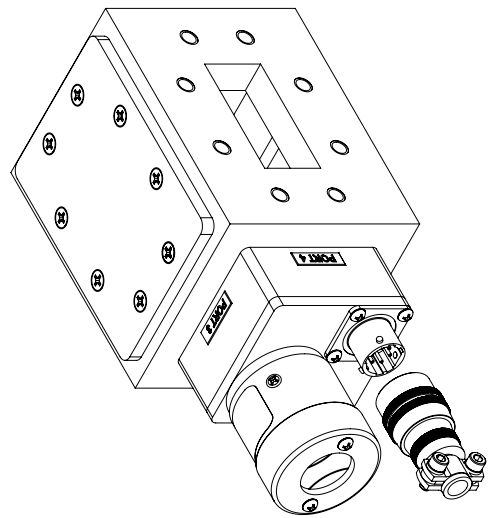
WR-187 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch,  
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	07/16/19	T. GALLA

- 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  
PEWGS6028  
S/N: XXXXXX

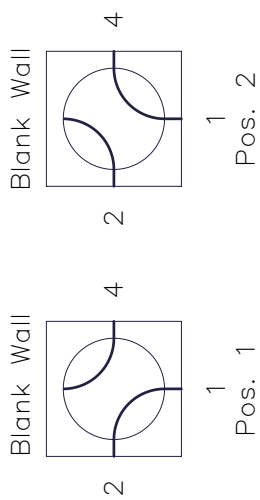


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	X±.2	[5.08]	FRACTIONS							
.XX±.01	[.25]	±.132								
.XXX±.005	[.13]	ANGLES ± 1°								
<p>www.pasternack.com   e-mail: sales@pasternack.com</p> <p>SIZE A</p> <p>CAGE 53919</p> <p>DRAWN BY K.DANG</p> <p>PART NUMBER PEWGS6028</p> <p>REV A</p>										

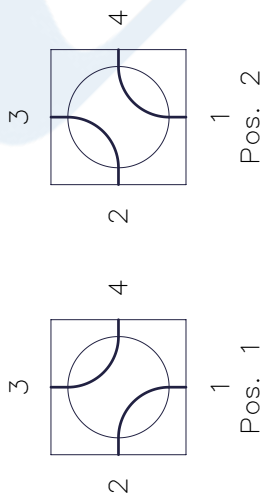
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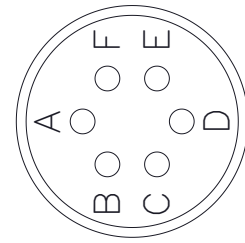
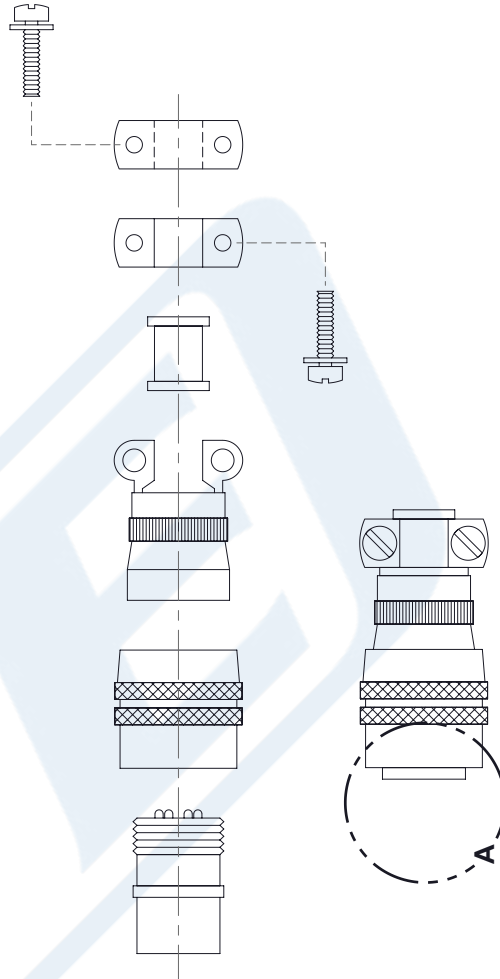
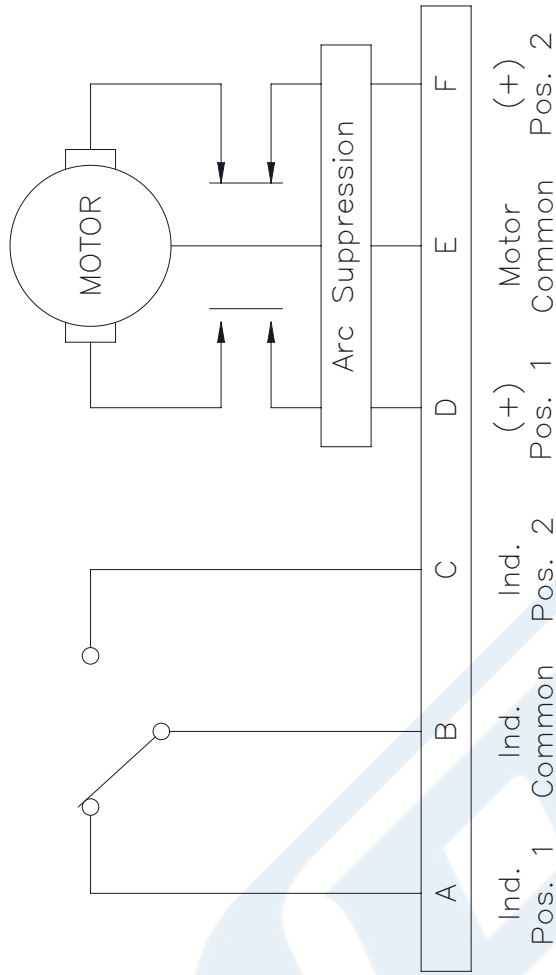
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R.F. PATHS--SRDI



R.F. PATHS--DPDI



VIEW A

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