



WR-187 Waveguide Electromechanical Relay SPDT/
DPDT Latching Switch, C Band 5.85 GHz Max.
Freq., 22,000 Watts, CPR Flat, 12V, TTL

Waveguide Electromechanical Relay Switches Technical

PEWGS6031

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
- +12 Vdc Nominal Voltage
- Input Power Rating up to 22 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 PEWGS6031 electromechanical WR-187 waveguide switch operates across a wide frequency range from 5.85 GHz to 8.2 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, 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 +12Vdc 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 10 pin MIL-SPEC DC bias connector with mate included.

Electrical Specifications

Switch Type
Actuator Type
Actuator Options

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	3.95		5.85	GHz
Operating Voltage	10	12	20	Volts
Actuating Current @ 12 Volts			1	A
VSWR			1.05:1	
Insertion Loss			0.002	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, 12V, TTL PEWGS6031](#)



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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

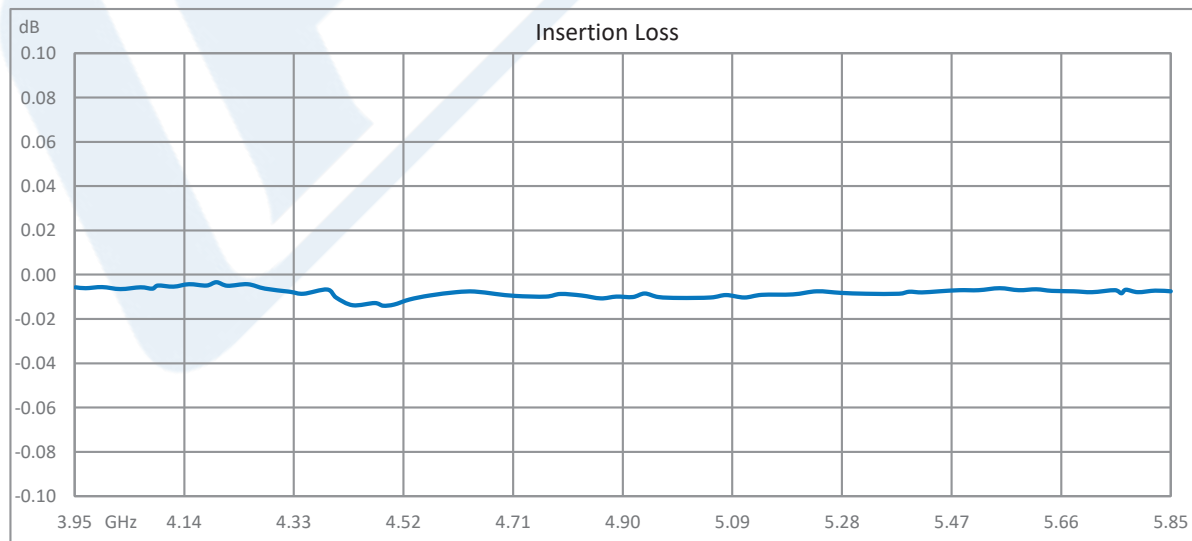
Humidity	0 to 100%, Fully Weatherized
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Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data



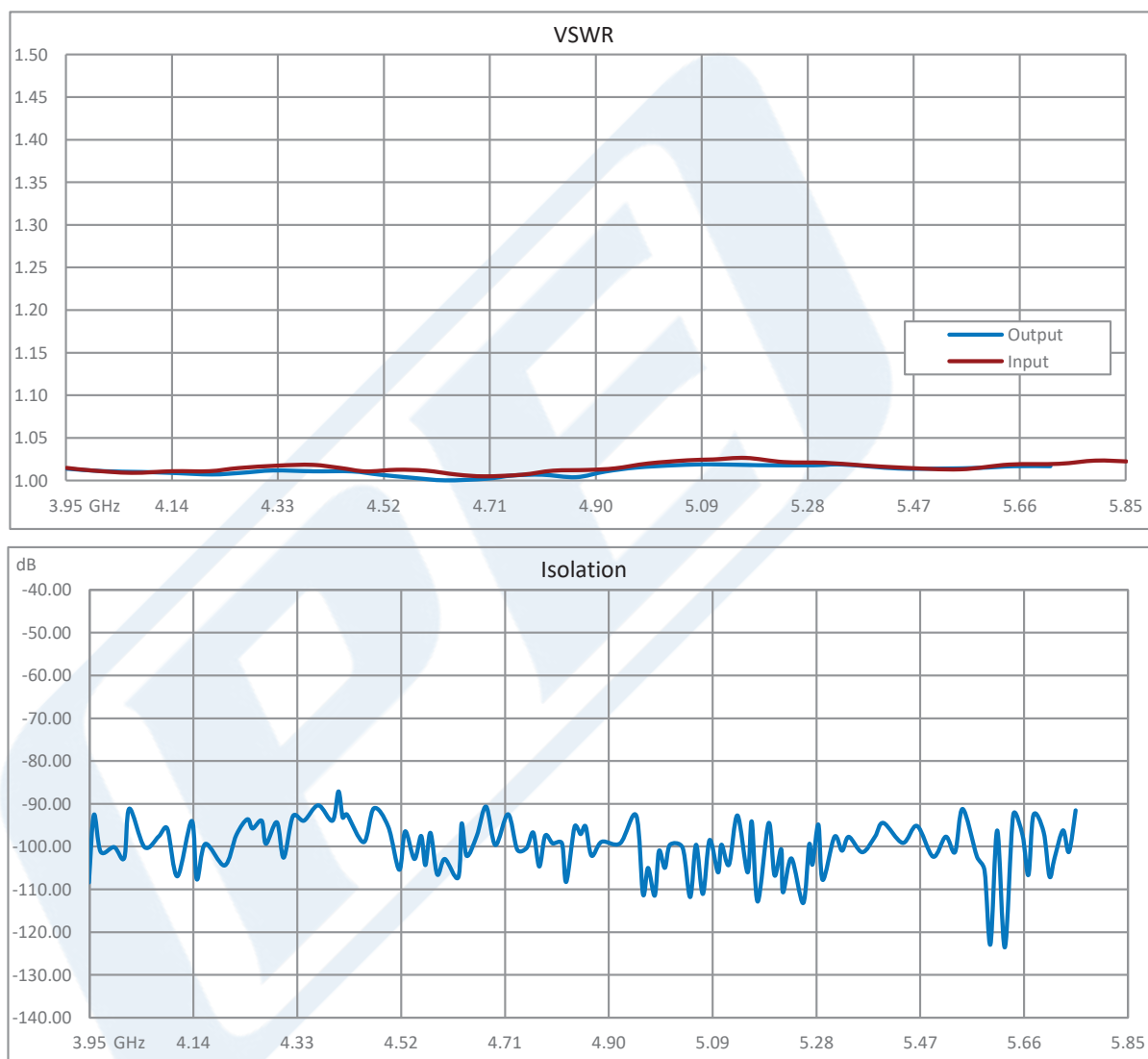
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WR-187 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, C Band 5.85 GHz Max. Freq., 22,000 Watts, CPR Flat, 12V, TTL from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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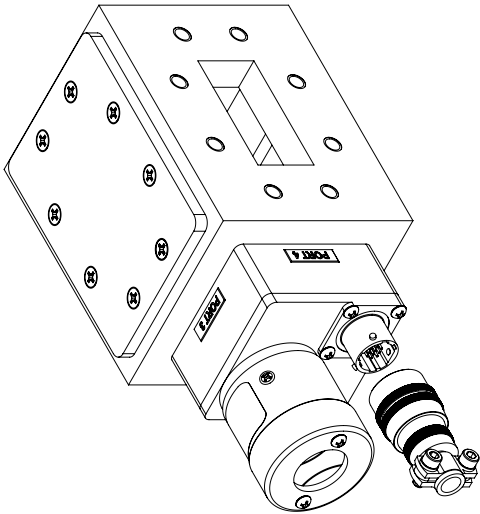
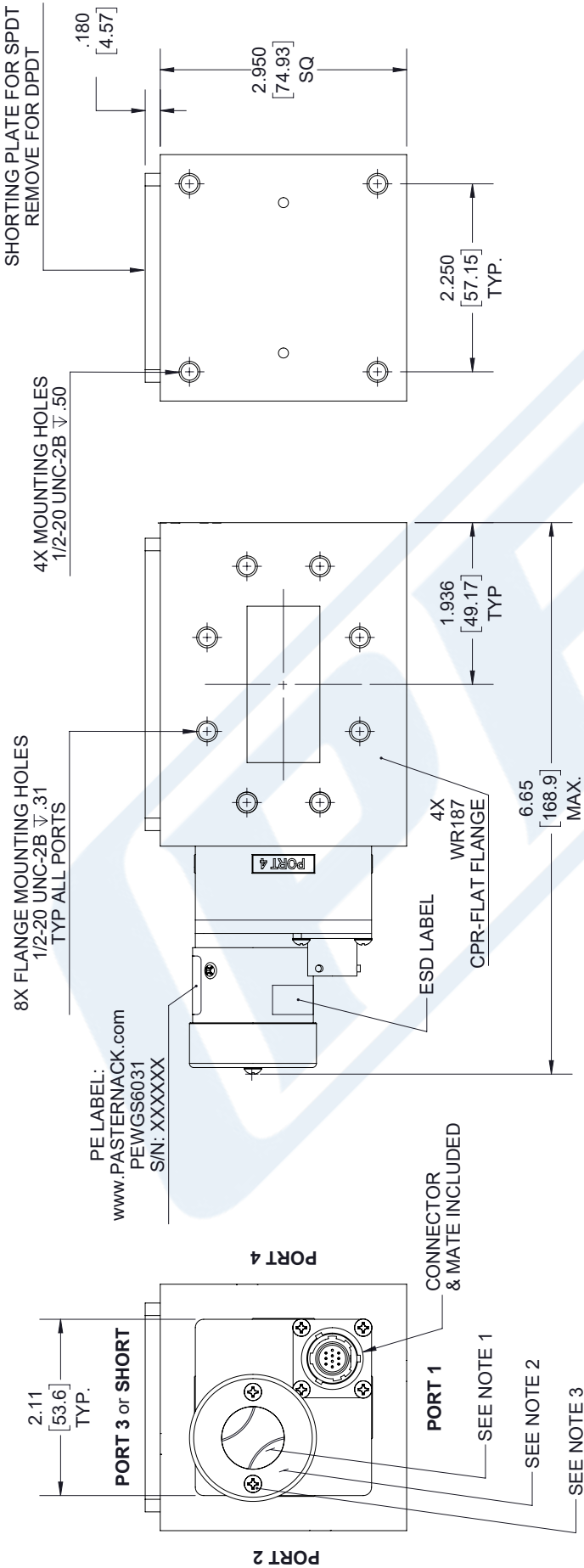
PEWGS6031 CAD Drawing

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:

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



UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS			
TOLERANCES:			
X±.2	[5.08]	FRACTIONS	
XX±.01	[.25]		±.132
XXX±.005	[.13]	ANGLES ± 1°	
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.			
THIRD-ANGLE PROJECTION			

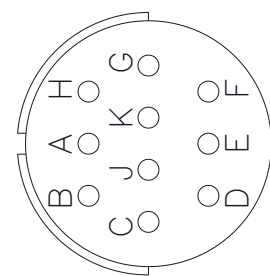
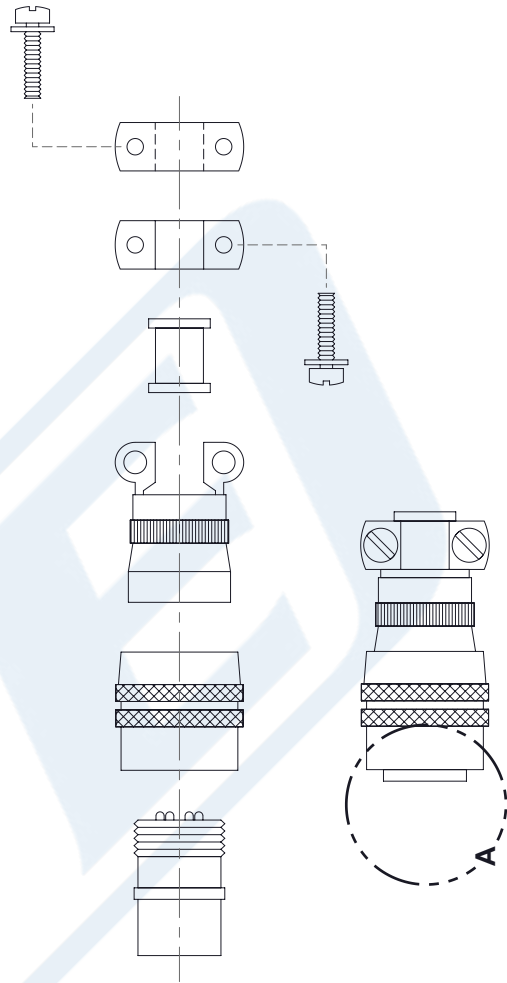
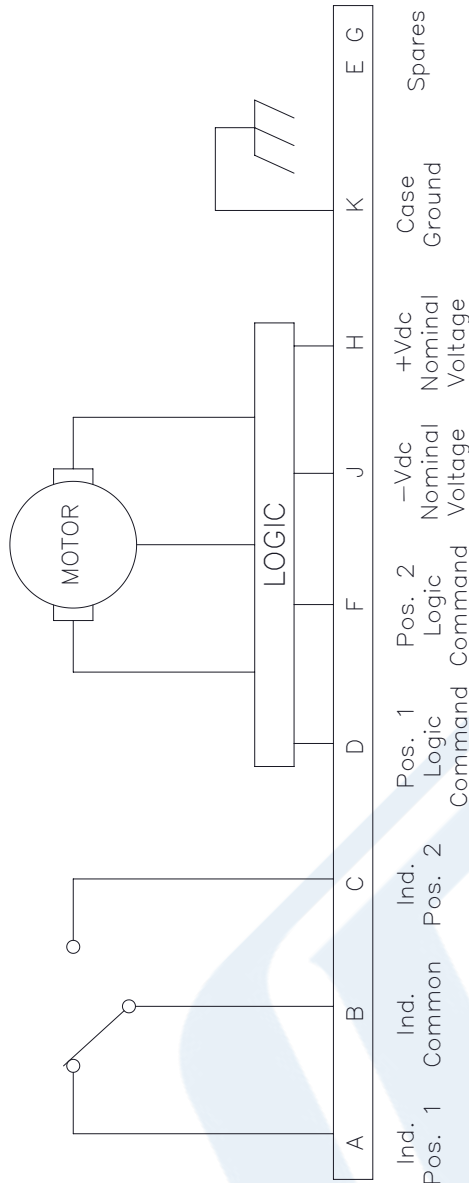
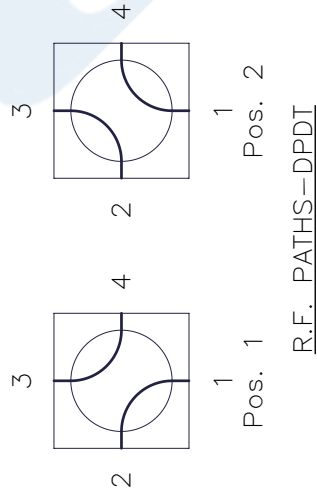
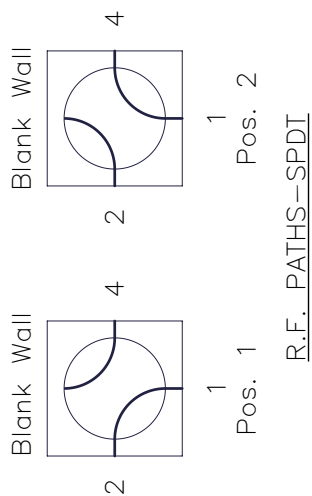
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SIZE	CAGE	DRAWN BY	PART NUMBER
A	53919	K.DANG	PEWGS6031
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PEWGS6031 CAD Drawing

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VIEW A

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TOLERANCES:	FRACTIONS
X±.2 [5.08]	±.132
.XX±.01 [.25]	±.132
.XXX±.005 [.13]	±.132
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.	
THIRD-ANGLE PROJECTION	

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DRAWN BY	K.DANG
PART NUMBER	PEWGS6031
REV	A

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