



WR-102 Waveguide Electromechanical Relay SPDT/
DPDT Latching Switch, X Band 11 GHz Max. Freq.,
6,000 Watts, UG Cover, 28V, TTL, Self Cut Off

Waveguide Electromechanical Relay Switches Technical

PEWGS6037

Features

- 7 to 11 GHz SPDT Waveguide Switch
- Optional DPDT Configuration
- WR-102 Waveguide
- Insertion Loss: 0.06 dB Max
- Isolation: 80 dB min
- +28 Vdc Nominal Voltage
- Input Power Rating up to 6 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 PEWGS6037 electromechanical WR-102 waveguide switch operates across a wide frequency range from 7 GHz to 11 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 0.06 dB max insertion loss, 80 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 +28Vdc nominal bias voltage, and has an input power rating of up to 6 KW CW maximum. The waveguide ports have standard UG Cover with Custom O-Ring Groove 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	7		11	GHz
Operating Voltage	21	28	32	Volts
Actuating Current @ 28 Volts			1	A
VSWR			1.1:1	
Insertion Loss			0.06	dB
Isolation	80			dB
Switching Time		100		ms
Input Power (CW)			6	kWatts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-102 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, X Band 11 GHz Max. Freq., 6,000 Watts, UG Cover, 28V, TTL, Self Cut Off PEWGS6037](#)



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Mechanical Specifications

Size

Operating Life	250,000 Cycles
Operating Pressure	30 psig

Configuration

Waveguide Size	WR-102
Flange Type	UG Cover
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

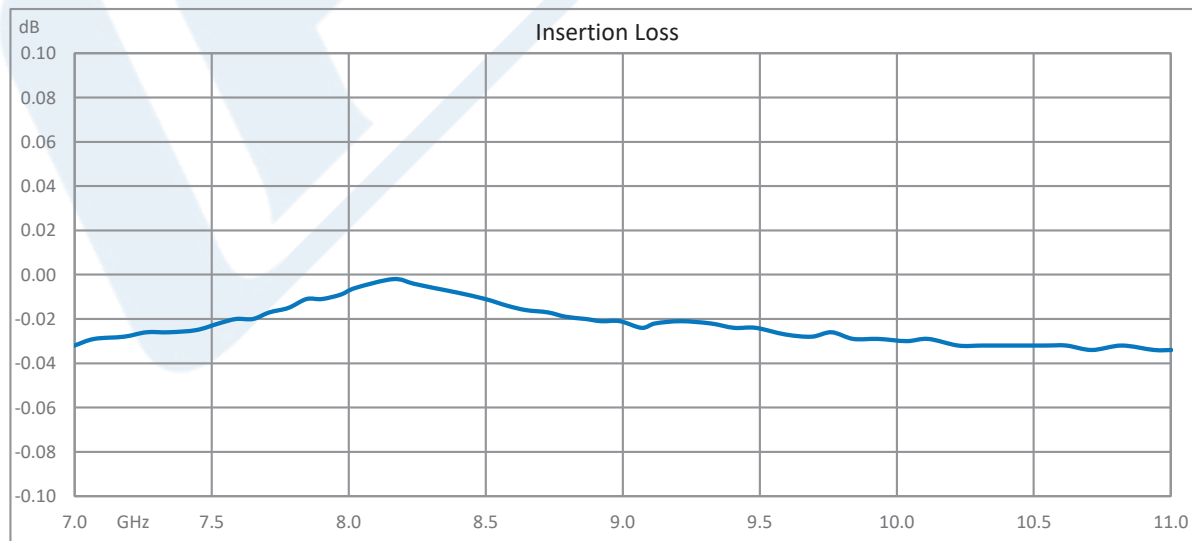
Humidity	0 to 100%, Fully Weatherized
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Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data



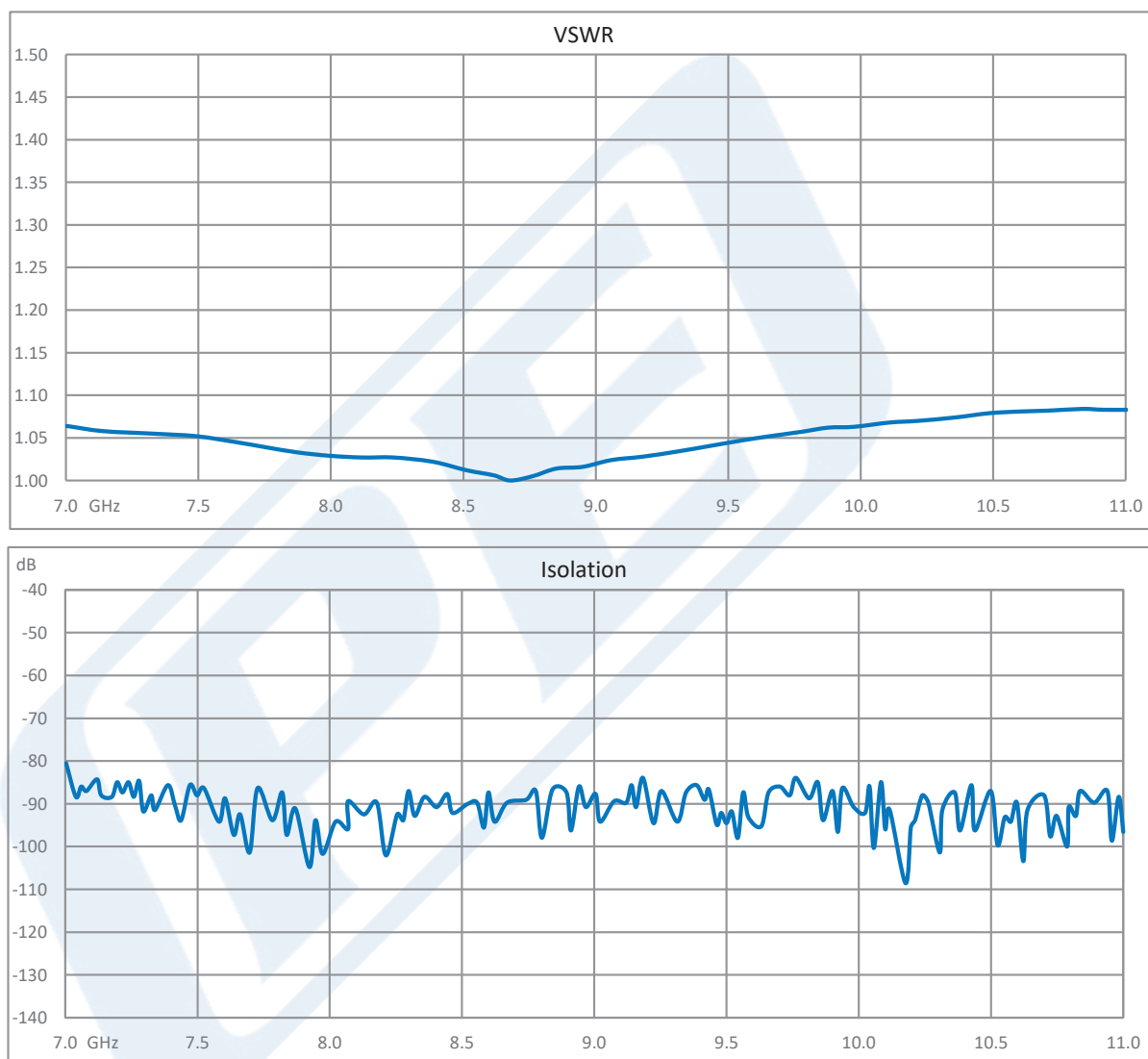
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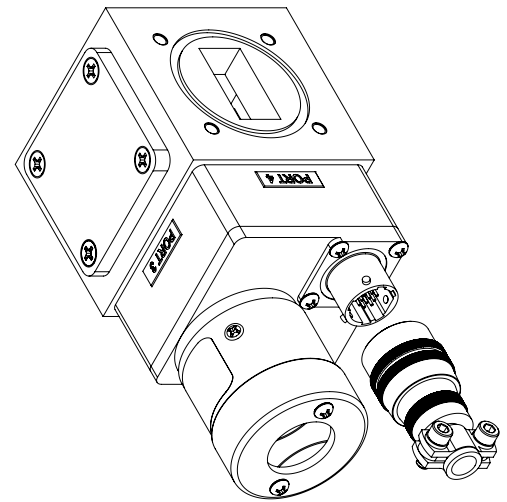
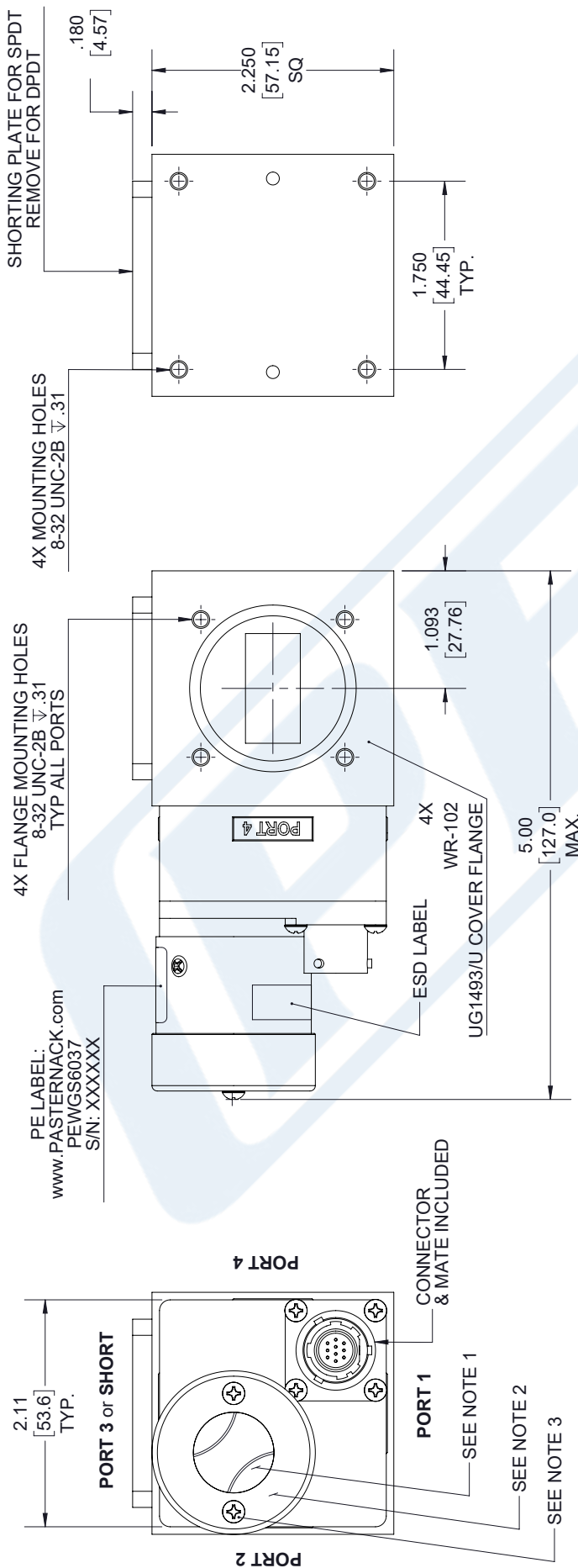
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PEWGS6037 CAD Drawing

WR-102 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, X
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NOTES:

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



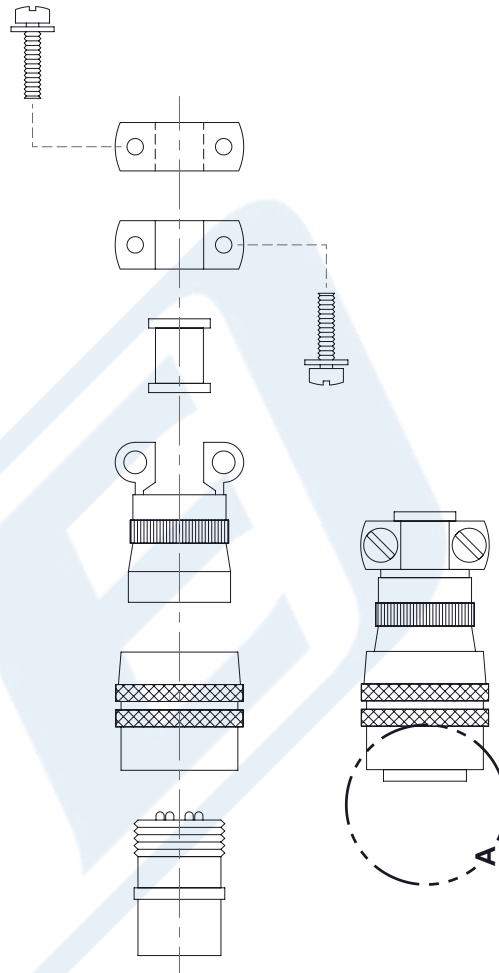
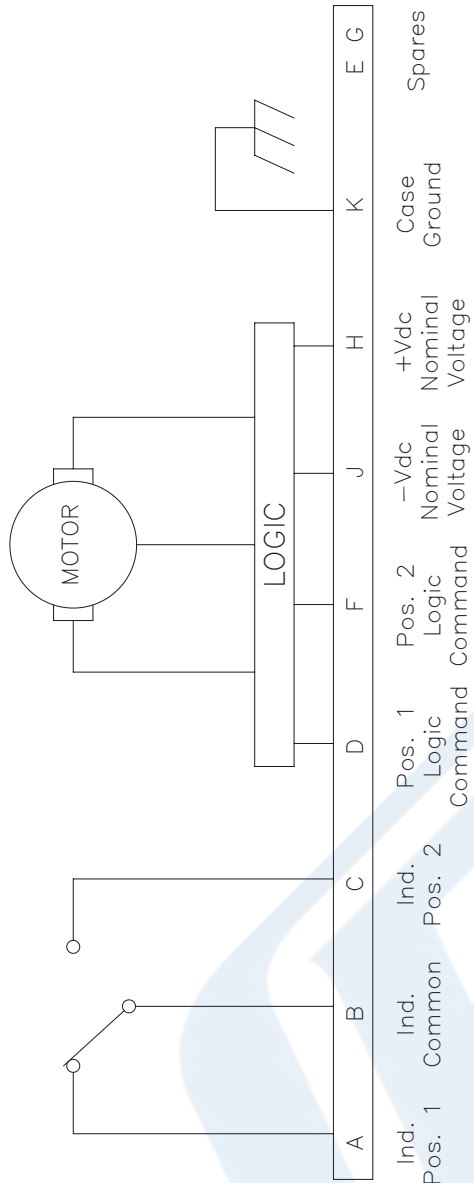
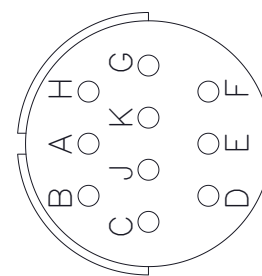
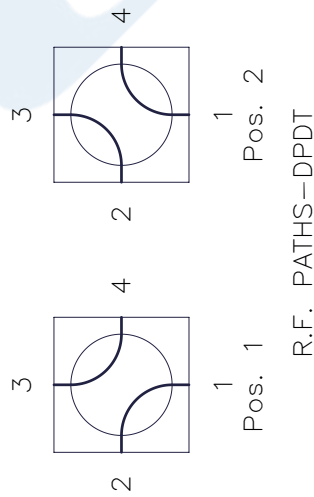
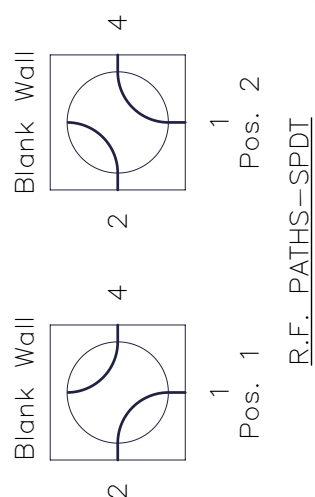
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X $\pm$.2 [5.08]	$\pm$.132
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XXX $\pm$.005 [.13]	ANGLES $\pm$ 1°
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CAGE	53919
DRAWN BY	K.DANG
PART NUMBER	PEWGS6037
REV	A

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