



WRD-650 Double Ridge Waveguide SPDT/DPDT
 Latching Relay Switch, 6.5 GHz to 18 GHz Frequency
 Band, 8,500 Watts, UG Cover, 12V, TTL

Waveguide Electromechanical Relay Switches Technical

PEWGS6047

Features

- 6.5 to 18 GHz SPDT Double Ridge Waveguide Switch
- Optional DPDT Configuration
- WRD-650 Double Ridge Waveguide
- Insertion Loss: 0.35 dB Max
- Isolation: 60 dB min
- +12 Vdc Nominal Voltage
- Input Power Rating up to 8.5 KW CW max
- Latching Self TTL Logic 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 PEWGS6047 electromechanical relay switch supports double ridge WRD-650 waveguide ports and operates across an ultra-wide frequency range from 6.5 GHz to 18 GHz. The switch 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 0.35 dB max insertion loss, 60 dB min Isolation, 1.18:1 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 8.5 KW CW maximum. The double ridge waveguide ports have standard UG Cover 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	6.5		18	GHz
Operating Voltage	10	12	20	Volts
Actuating Current @ 12 Volts			1	A
VSWR			1.18:1	
Insertion Loss			0.35	dB
Isolation	60			dB
Switching Time		100		ms
Input Power (CW)			8.5	kWatts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WRD-650 Double Ridge Waveguide SPDT/DPDT Latching Relay Switch, 6.5 GHz to 18 GHz Frequency Band, 8,500 Watts, UG Cover, 12V, TTL PEWGS6047](#)



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Mechanical Specifications
Size

Operating Life 250,000 Cycles
Operating Pressure 30 psig

Configuration

Waveguide Size WRD-650
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

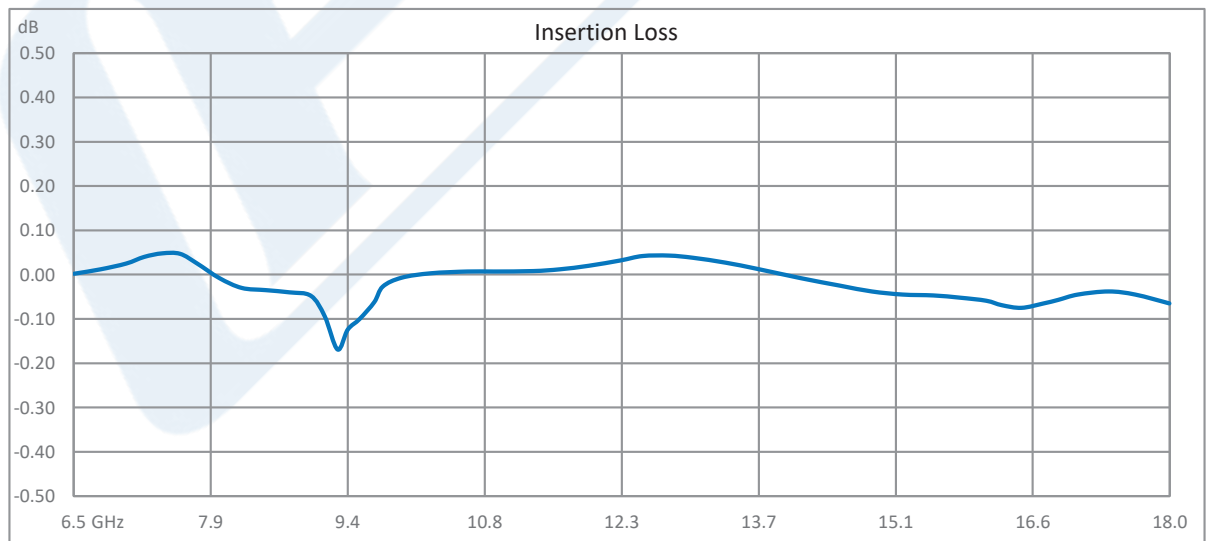
Humidity 0 to 100%, Fully Weatherized

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

Plotted and Other Data

Notes:

Typical Performance Data



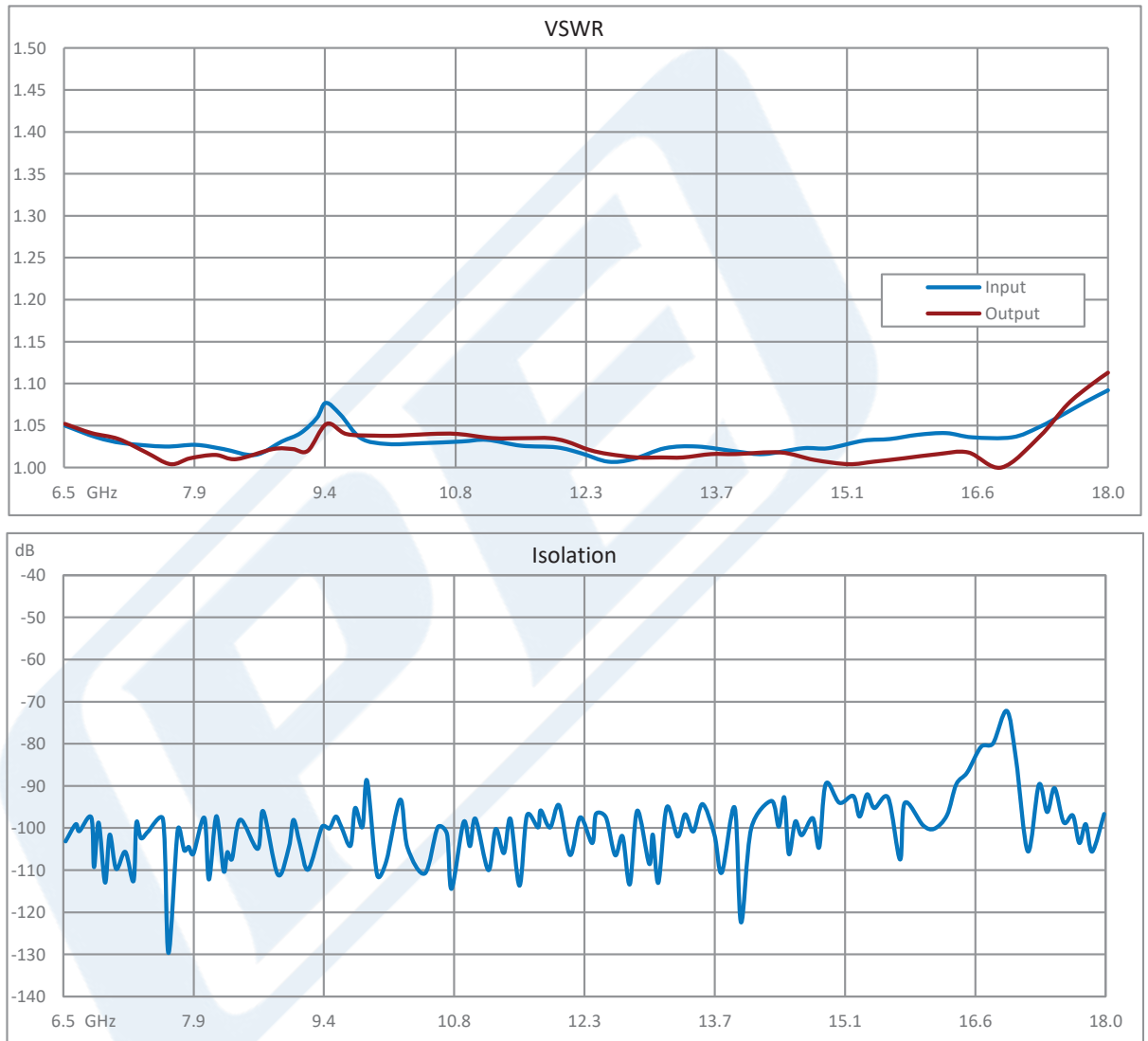
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WRD-650 Double Ridge Waveguide SPDT/DPDT Latching Relay Switch, 6.5 GHz to 18 GHz Frequency Band, 8,500 Watts, UG Cover, 12V, TTL from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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URL: <https://www.pasternack.com/wrd-650-waveguide-electromechanical-relay-spdt-dpdt-latching-switch-18-ghz-pewgs6047-p.aspx>

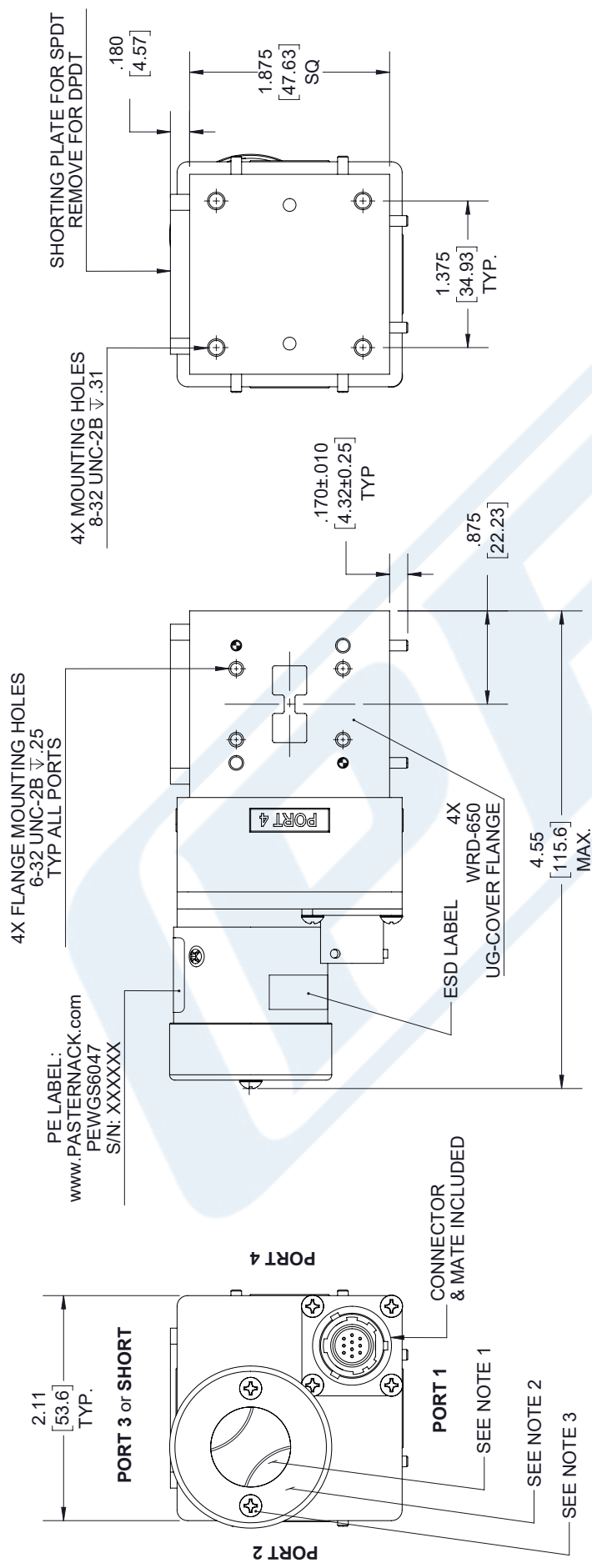
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PEWGS6047 CAD Drawing

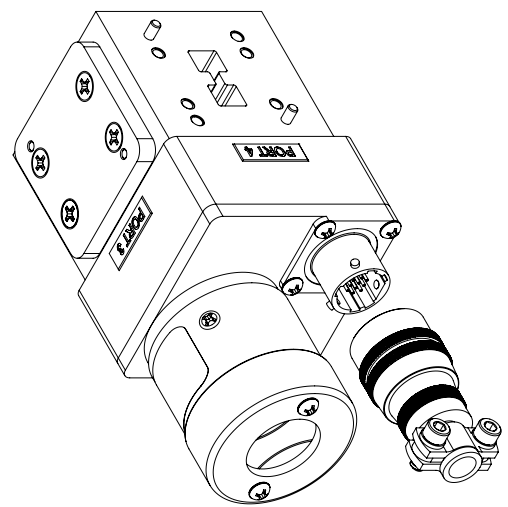
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REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL RELEASE	07/16/19
		APPROVED T. GALLA

- 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
PEWGS6047
S/N: XXXXXX

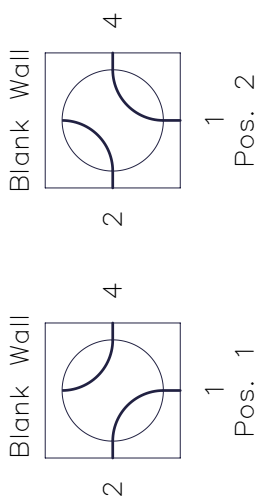


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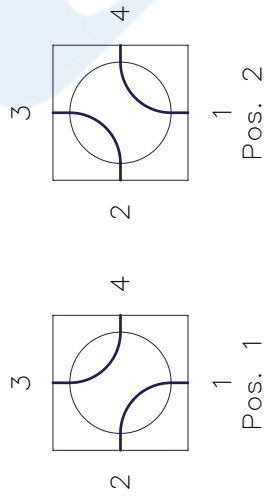
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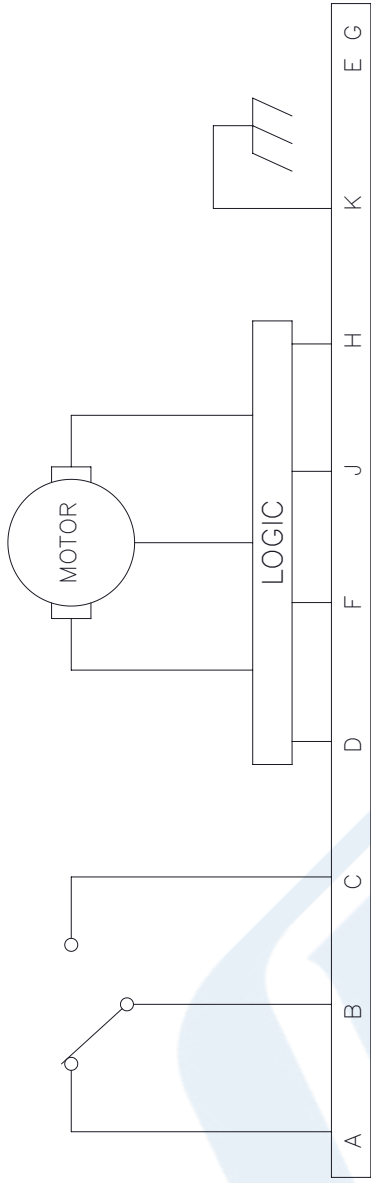
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R.F. PATHS—SPDI

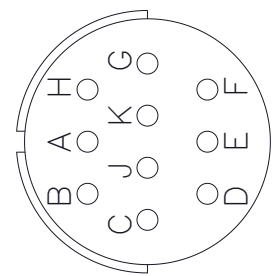
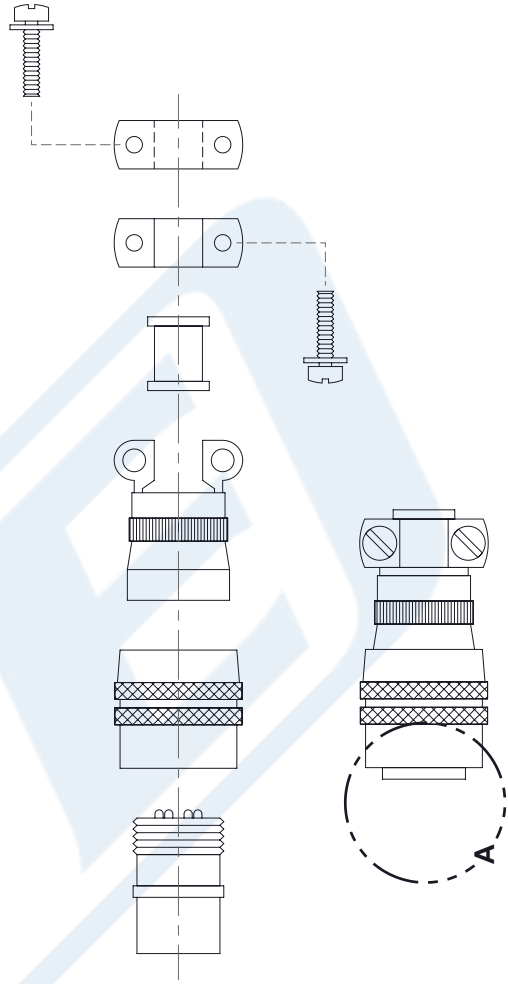


R.F. PATHS—DPDI



Ind. Pos. 1 Ind. Pos. 2
Pos. 1 Ind. Pos. 2
Command Logic Command Logic
Voltage Voltage
+Vdc
Nominal
Voltage

Case Ground
Spares



VIEW A

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

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

FRACTIONS
±1/32
ANGLES ± 1°

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THIRD-ANGLE PROJECTION

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SIZE A CAGE 53919 DRAWN BY K.DANG PART NUMBER PEWGS6047 REV A

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SHEET 2 OF 2
SCALE N/A