



WRD-750 Double Ridge Waveguide SPDT/DPDT Latching Relay Switch, 7.5 GHz to 18 GHz Frequency Band, 8,500 Watts, UG Cover, 28V, TTL

Waveguide Electromechanical Relay Switches Technical

PEWGS6049

Features

- 7.5 to 18 GHz SPDT Double Ridge Waveguide Switch
- Optional DPDT Configuration
- WRD-750 Double Ridge Waveguide
- Insertion Loss: 0.30 dB Max
- Isolation: 60 dB min
- +28 Vdc Nominal Voltage
- Input Power Rating up to 8.5 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 PEWGS6049 electromechanical relay switch supports double ridge WRD-750 waveguide ports and operates across an ultra-wide frequency range from 7.5 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 0.30 dB max insertion loss, 60 dB min Isolation, 1.15:1 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 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	7.5		18	GHz
Operating Voltage	21	28	32	Volts
Actuating Current @ 28 Volts			1	A
VSWR			1.15:1	
Insertion Loss			0.3	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-750 Double Ridge Waveguide SPDT/DPDT Latching Relay Switch, 7.5 GHz to 18 GHz Frequency Band, 8,500 Watts, UG Cover, 28V, TTL PEWGS6049](#)



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Latching Relay Switch, 7.5 GHz to 18 GHz Frequency
Band, 8,500 Watts, UG Cover, 28V, TTL

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Mechanical Specifications
Size

Operating Life 250,000 Cycles
Operating Pressure 30 psig

Configuration

Waveguide Size WRD-750
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

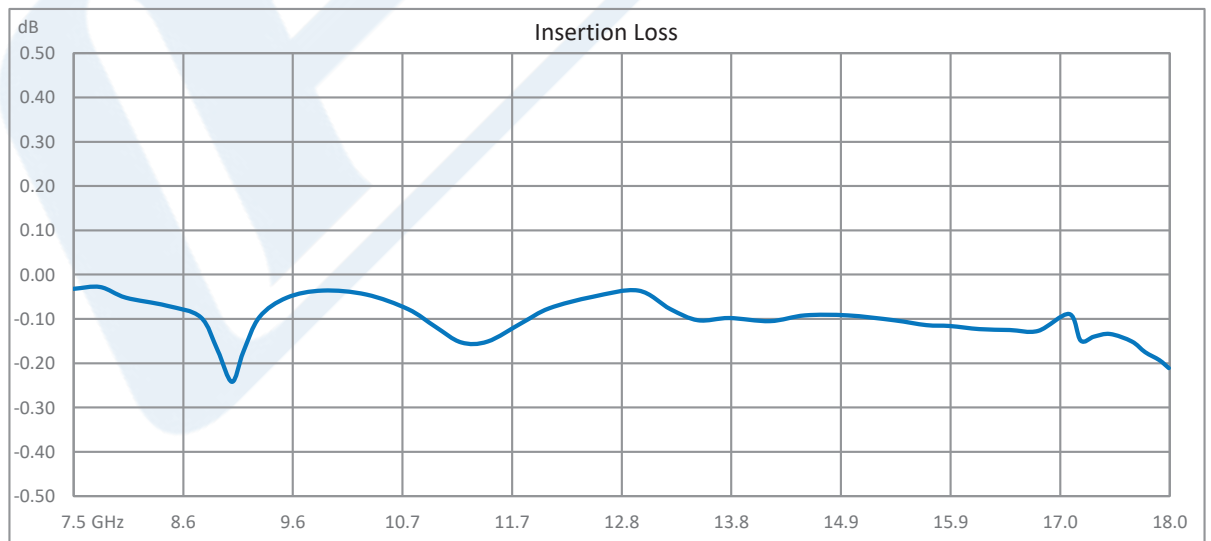
Humidity 0 to 100%, Fully Weatherized

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

Plotted and Other Data

Notes:

Typical Performance Data



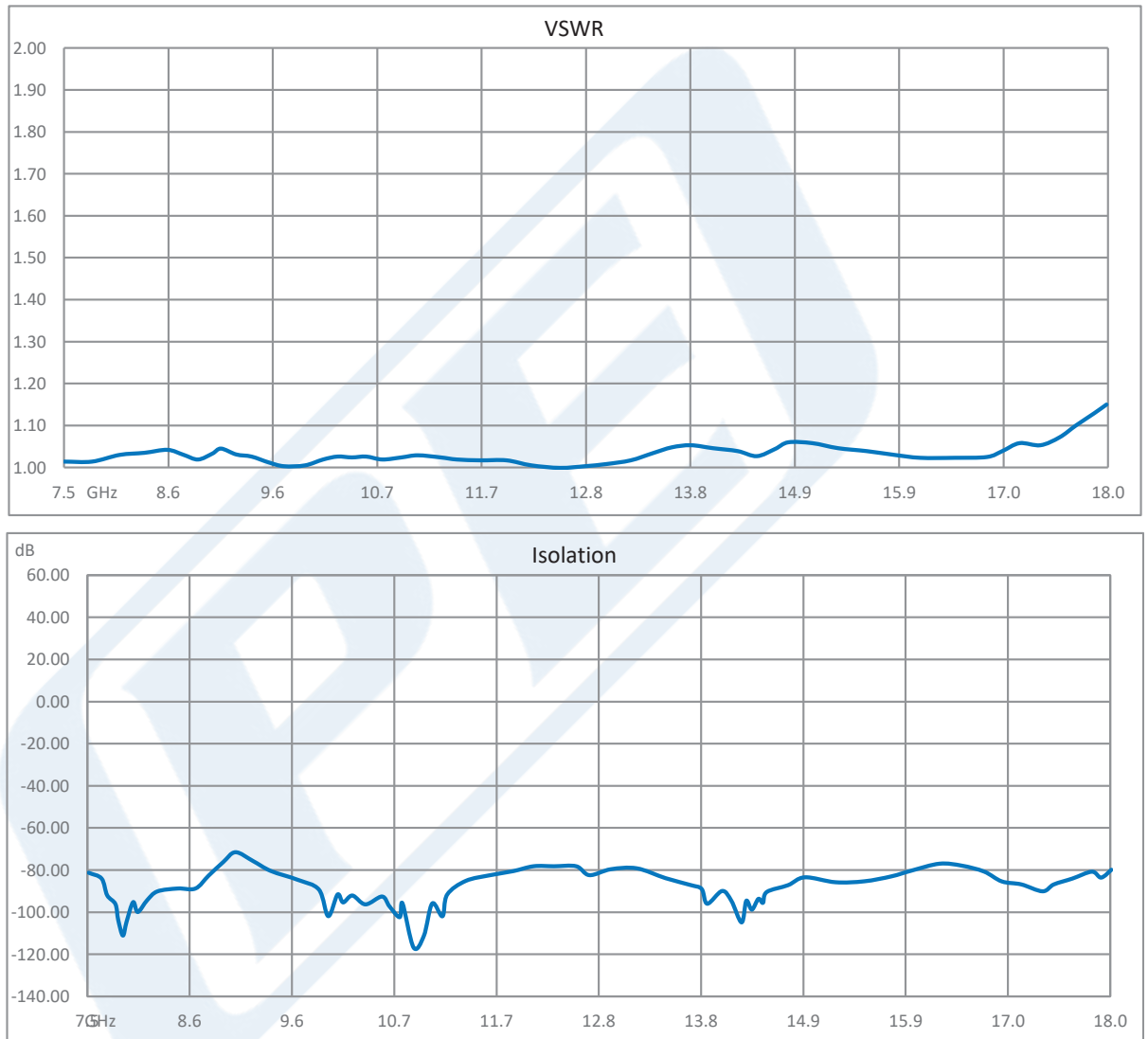
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Latching Relay Switch, 7.5 GHz to 18 GHz Frequency
Band, 8,500 Watts, UG Cover, 28V, TTL

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PEWGS6049

WRD-750 Double Ridge Waveguide SPDT/DPDT Latching Relay Switch, 7.5 GHz to 18 GHz Frequency Band, 8,500 Watts, UG Cover, 28V, 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-750-waveguide-electromechanical-relay-spdt-dpdt-latching-switch-18-ghz-pewgs6049-p.aspx>

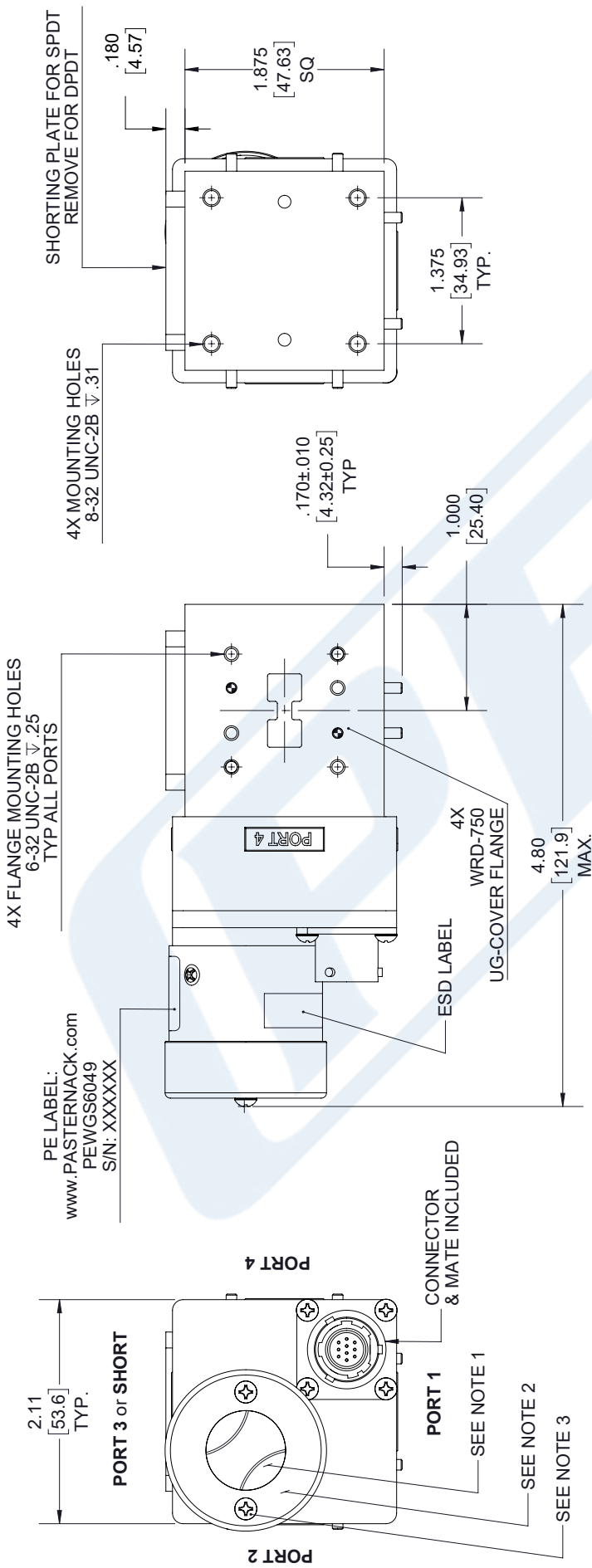
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PEWGS6049 CAD Drawing

WRD-750 Double Ridge Waveguide SPDT/DPDT Latching Relay Switch,
7.5 GHz to 18 GHz Frequency Band, 8,500 Watts, UG Cover, 28V, TTL

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.

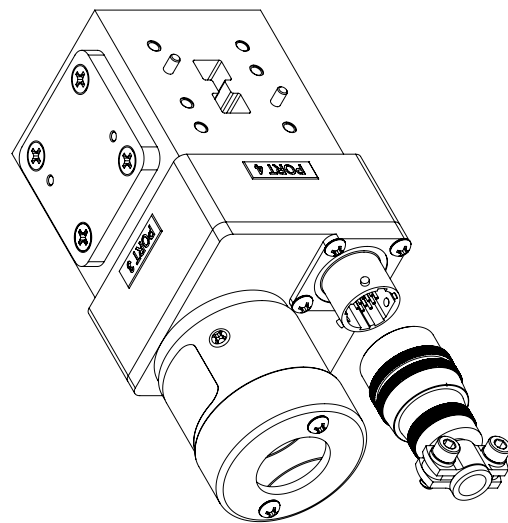


4X FLANGE MOUNTING HOLES
6-32 UNC-2B ∇.25
TYP ALL PORTS

PE LABEL:
www.PASTERNAK.com
PEWGS6049
S/N: XXXXXX

4X MOUNTING HOLES
8-32 UNC-2B ∇.31

SHORTING PLATE FOR SPDT
REMOVE FOR DPDT



UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS	
TOLERANCES:	FRACTIONS
X±.2 [5.08]	±.132
.XX±.01 [25]	±.132
.XXX±.005 [1.13]	ANGLES ± 1°
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.	
THIRD-ANGLE PROJECTION	

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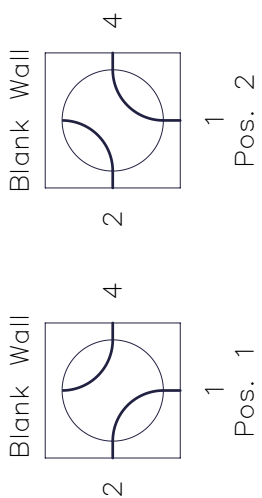
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SCALE N/A

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53919 K.DANG PEWGS6049 A

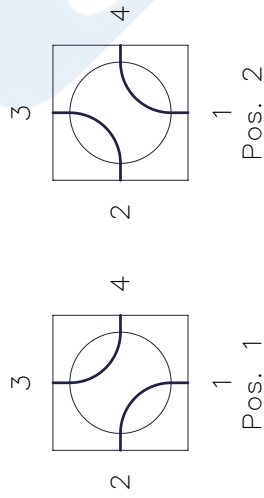
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PEWGS6049 CAD Drawing

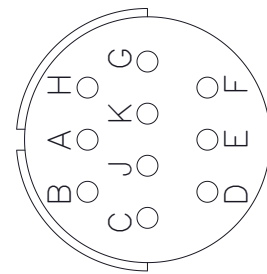
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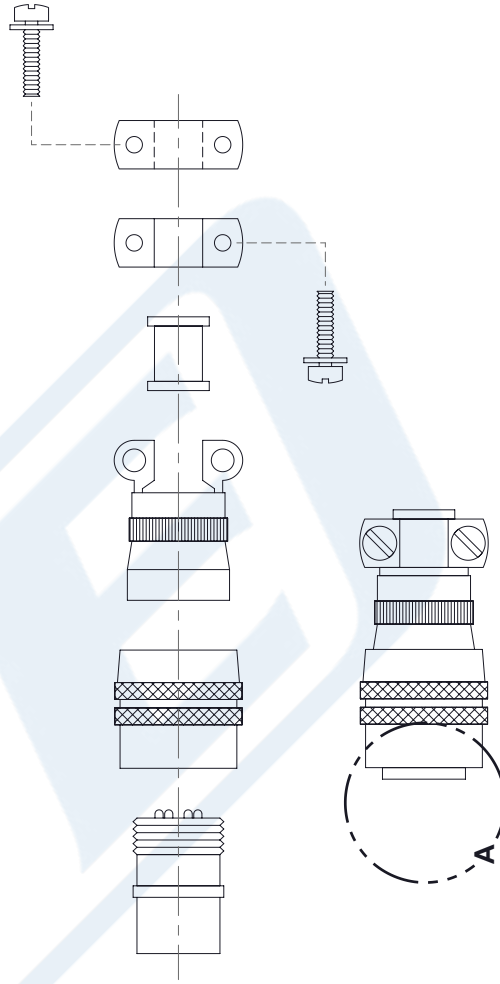
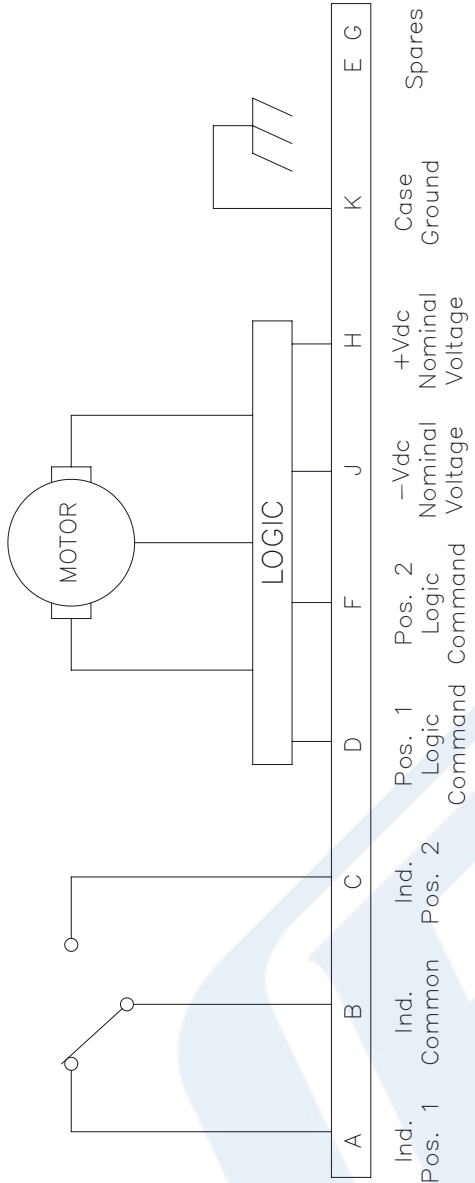
R.F. PATHS—SPDI



R.F. PATHS—DPDI



VIEW A



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

TOLERANCES:
X±.2 [5.08]
.XX±.01 [.25]
.XXX±.005 [0.13]

FRACTIONS
±1/32
ANGLES ± 1°

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ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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SIZE A CAGE 53919 DRAWN BY K.DANG PART NUMBER PEWGS6049 REV A

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SCALE N/A

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