

WR-10 L Style Rotary Joint, 75 to 110 GHz, Rectangular Waveguide

SAN-10R10I-S1-WPC is a W-band, L-Style rotary joint that covers the frequency range of 75 to 110 GHz. This high-power rotary joint allows for mechanical rotation while providing consistently low insertion loss. The rotary joint incorporates a high precision bearing and propriety mechanical design to ensure smooth mechanical rotation as well as low amplitude and phase variation. Due to the contactless mechanical design, the rotary joint has high power handling capacity. The panel mount design of the joint also allows for easy equipment integration. The rotary joint is equipped with two WR-10 rectangular waveguides with UG-387/U-M anti-cocking flanges.



Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|--|---------|------------|------------|
| Frequency Range | 75 GHz | | 110 GHz |
| Insertion Loss | | 1.7 dB | 2.7 dB |
| Insertion Loss Variation Over Rotation | | 0.2 dB | |
| Return Loss | | 16 dB | |
| Return Loss Variation Over Rotation | | 2 dB | |
| Phase Variation Over Rotation | | 2.5° | |
| Power Handling | | 100 W (CW) | 250 W (CW) |
| Specification Temperature | | +25°C | |
| Operating Temperature | -40°C | | +85°C |

Mechanical Specifications:

| Item | Specification |
|----------------------|---|
| Waveguide Size | WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange |
| Material | Aluminum 6061-T6, Stainless Steel |
| Finish | Gold Plated |
| Rotating Speed | 60 rpm |
| Degree of Protection | IP40 |
| Weight | 18 oz |
| Outline | AN-R10R-R10I-A |

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FEATURES

- Full Band Operation
- Low Insertion Loss
- High Return Loss
- High Power Handling
- Low Amplitude and Phase Variation During Rotation
- L-Style Port Configuration
- No Contact Mechanism

APPLICATIONS

- Radar System
- Test Equipment
- Sub-assemblies
- Antenna Range
- Communication System

SUPPLEMENTAL DETAILS



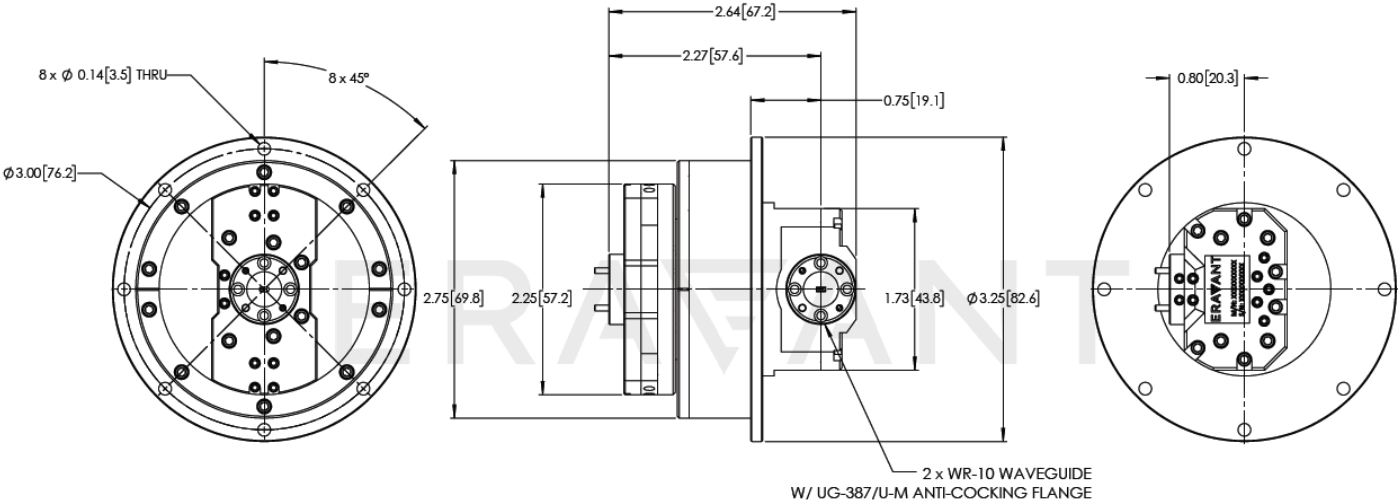
SAN-10R10I-S1-WPC

Components Included in Each Kit:

| Item | Eravant Number | Quantity |
|--------------------------------------|-------------------|-------------|
| Rotary Joint | SAN-10R10I-S1-WPC | 1 Piece |
| Waveguide Screws, 3/32 Hex Head | SWH-332-SS-10 | (10 Pieces) |
| Waveguide Screwdriver, 3/32 Hex Head | SWH-332-DS | 1 Piece |
| Black Test Equipment Case | - | 1 Piece |

Mechanical Outline:

Unless otherwise specified, all dimensions are in inches [millimeters]



NOTE:

- The product presented in this datasheet is at a preliminary design stage. Final electrical and mechanical specifications may differ than what is presented.
- The datasheet product photo used is not representative of the final product.
- Other mechanical configurations with other frequency bands are available under different model numbers.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Any foreign objects in the waveguide will cause performance degradation and possible device damage.