

QRJ1-18000-86

Singal Channel, DC~18GHz, 86Smm

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|-------------------------------|------------------------------------------|
| Features: | Applications: |
| * Low VSWR | * High Speed Digital Signal Transmission |
| * Low VSWR Flatness | * Analog Signal Transmission |
| * Low Insertion Loss Flatness | |

Electrical (Rotary Joint)

| | |
|--------------------------|---------------------------------------------------------------------------|
| Frequency: | DC~18GHz |
| VSWR: | 1.4 max. |
| VSWR Flatness: | 0.05 max. |
| Insertion Loss: | 0.3dB max. |
| Insertion Loss Flatness: | 0.05 dBmax. |
| Phase Flatness: | 1° max. |
| Average Power: | 500W max. @1GHz 200W max. @6GHz 100W max. @12GHz 30W max. @18GHz |
| Peak Power: | 3000W max. |
| IP Grade: | IP40 acc. EN 60529 |

Mechanical (Rotary Joint)

| | |
|------------------------|---------------|
| Connectors: | SMA female |
| Rotating Speed: | 250RPM max. |
| Starting Torque: | 0.5N.cm max. |
| Connector Axial Load: | ±0.1N max. |
| Rotating Torque: | 0.5 N.cm max. |
| Connector Radial Load: | ±0.1N max. |
| Operation Life: | 10M Cycles |
| Dielectric: | PTFE |

Environmental

| | |
|-----------------------------|-----------|
| Temperature (Rotary Joint): | -55~+85°C |
| Temperature (Slip Ring): | -30~+80°C |

Electrical (Slip Ring)

| | |
|-----------------------------------------|-----------------------------|
| Voltage (Power/Signal): | 0~440V/0~240V |
| Impedance of Dielectric (Power/Signal): | 500/300MΩ min. |
| Lead Wire (Power): | AWG#17 Silver plated Teflon |
| Lead Wire (Signal): | AWG#22 Silver plated Teflon |
| Dielectric Resistance: | 500V AC @50Hz, 60s |
| Electrical Noise: | 0.01Ω max. |
| IP Grade: | IP51 |

Mechanical (Slip Ring)

| | |
|-------------------|-------------------------------|
| Operation Life: | 10M Cycles |
| Rotating Speed: | 250RPM max. |
| Contact Material: | Gold |
| Housing: | Aluminum alloy |
| Torque: | 0.01N.m @6 Channels + 0.05N.m |

How To Order

QRJ1-18000-86-X-Y

X: Power Circuits
For example:
0610 - 6 circuits@10A
Y: Signal Circuits
For example:
06S - 6 circuits signal@2A

Customization is available upon request.

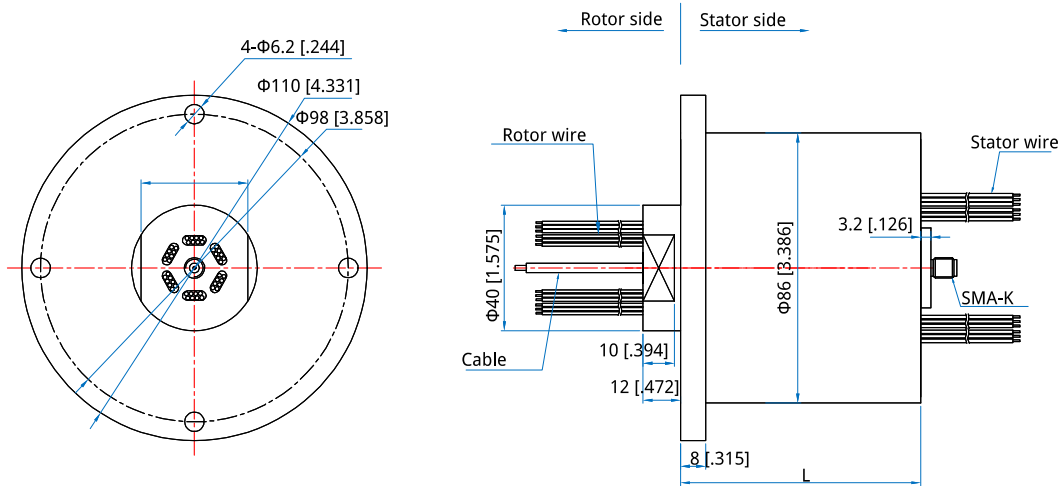
Color Code of Lead Wire

| | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|---------|
| Ring | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Color | BLK | BRN | RED | ORG | YEL | GRN | BLU | PUR | GRY | WHT | PINK | LGT BLU |

| | | | | | | | | | | | | |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------------|
| Ring | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Color | WHT/BLK | WHT/BRN | WHT/RED | WHT/ORG | WHT/YEL | WHT/GRN | WHT/BLU | WHT/PUR | WHT/GRY | BLK/RED | BLK/BRN | Transparet |

Remark: "1" : the first wire from rotor side , QRJ1-18000-86-12S wire color sequence: BLK/BRN/RED/ORG/YEL/GRN/BLU/PUR/GRY/WHT/PINK/LGT BLU, 24 color wires asone group, if more than 24wires, repeat as sequence, use number tube to tell group 1#, 2#....

Outline Drawings



Unit: mm [in] Tolerance: $\pm 0.2\text{mm}$ [$\pm 0.008\text{in}$]

Standard Part Number List

| Part Number | RF Channel | Frequency (GHz) | Circuits no. (10A) | Circuits no. (0~2A) | Length L(mm/in) |
|------------------------|------------|-----------------|--------------------|---------------------|-----------------|
| QRJ1-18000-86-0610 | 1 | DC~18 | 6 | 0 | 48 [1.89] |
| QRJ1-18000-86-06S | 1 | DC~18 | 0 | 6 | 48 [1.89] |
| QRJ1-18000-86-0610-06S | 1 | DC~18 | 6 | 6 | 72 [2.835] |
| QRJ1-18000-86-1210 | 1 | DC~18 | 12 | 0 | 72 [2.835] |
| QRJ1-18000-86-12S | 1 | DC~18 | 0 | 12 | 72 [2.835] |
| QRJ1-18000-86-0610-12S | 1 | DC~18 | 6 | 12 | 96 [3.78] |
| QRJ1-18000-86-1810 | 1 | DC~18 | 18 | 0 | 96 [3.78] |
| QRJ1-18000-86-18S | 1 | DC~18 | 0 | 18 | 96 [3.78] |
| QRJ1-18000-86-0610-18S | 1 | DC~18 | 6 | 18 | 120 [4.724] |
| QRJ1-18000-86-1210-12S | 1 | DC~18 | 12 | 12 | 120 [4.724] |
| QRJ1-18000-86-2410 | 1 | DC~18 | 24 | 0 | 120 [4.724] |
| QRJ1-18000-86-24S | 1 | DC~18 | 0 | 24 | 120 [4.724] |
| QRJ1-18000-86-0610-30S | 1 | DC~18 | 6 | 30 | 168 [6.614] |
| QRJ1-18000-86-1210-24S | 1 | DC~18 | 12 | 24 | 168 [6.614] |
| QRJ1-18000-86-3610 | 1 | DC~18 | 36 | 0 | 168 [6.614] |
| QRJ1-18000-86-36S | 1 | DC~18 | 0 | 36 | 168 [6.614] |
| QRJ1-18000-86-0610-42S | 1 | DC~18 | 6 | 42 | 216 [8.504] |
| QRJ1-18000-86-1210-36S | 1 | DC~18 | 12 | 36 | 216 [8.504] |
| QRJ1-18000-86-2410-24S | 1 | DC~18 | 24 | 24 | 216 [8.504] |
| QRJ1-18000-86-4810 | 1 | DC~18 | 48 | 0 | 216 [8.504] |
| QRJ1-18000-86-48S | 1 | DC~18 | 0 | 48 | 216 [8.504] |
| QRJ1-18000-86-2410-36S | 1 | DC~18 | 24 | 36 | 264 [10.394] |
| QRJ1-18000-86-6010 | 1 | DC~18 | 60 | 0 | 264 [10.394] |
| QRJ1-18000-86-60S | 1 | DC~18 | 0 | 60 | 264 [10.394] |
| QRJ1-18000-86-2410-48S | 1 | DC~18 | 24 | 48 | 312 [12.283] |

| Part Number | RF Channel | Frequency (GHz) | Circuits no. (10A) | Circuits no. (0~2A) | Length L(mm/in) |
|--------------------|------------|-----------------|--------------------|---------------------|-----------------|
| QRJ1-18000-86-7210 | 1 | DC~18 | 72 | 0 | 312 [12.283] |
| QRJ1-18000-86-72S | 1 | DC~18 | 0 | 72 | 312 [12.283] |
| QRJ1-18000-86-96S | 1 | DC~18 | 0 | 96 | 360 [12.173] |
| QRJ1-18000-86-120S | 1 | DC~18 | 0 | 120 | 408 [16.063] |