

Slip Rings

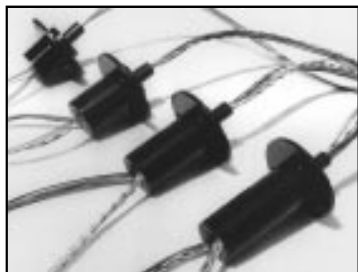
The next two pages show you some of the commercial slip rings available right now.

Our slip rings are:

- **aggressively priced.**
- **available for immediate delivery.**
- **designed for tough commercial and industrial environments.**
- **6, 12, 18, 24 circuit models.**

Poly-Scientific is the largest slip ring manufacturer in the world. We have developed over 5,000 slip ring designs, many of which are available for use in their existing configuration, or can be modified to meet specific requirements. New designs can be created to meet the most demanding specifications.

We also manufacture "specialty" slip rings or can create new designs to meet specific requirements for demanding environments. Our slip rings are currently utilized in a variety of applications including aircraft and spacecraft, ground-based vehicles, ships, instrumentation, radar platforms, and industrial and medical equipment.



Commercial Slip Ring Capsule

AC4898 - gold contacts

This standard, off-the-shelf slip ring was designed for use in industrial and commercial applications. Available in four basic configurations, the capsules range from 1.46" to 2.90" in length and come with a choice of 6, 12, 18 or 24 two amp, 210 VDC circuits. The housing is made from tough, durable engineering thermoplastic. Precious metal contacts are used at the rotary interface.

FEATURES

- Continuous 360° rotation for transmission of power or data signals
- 2 amp/210VDC circuits
- 6, 12, 18, 24 circuit models

TYPICAL APPLICATIONS

- CCTV pan/tilt camera mounts
- manufacturing equipment
 - indexing tables
 - robotics (end-effectors, arms, vision systems, sensors)
- electrical test equipment.



Commercial Slip Ring Assemblies

AC4598 - 10amp per circuit
AC4831 - 5amp per circuit

This device is compact and maintenance-free (no lubrication required) and is a standard design available for immediate delivery. Each slip ring assembly features our patented* fiber brush technology which allows greater rotational speeds (up to 250**rpm) while minimizing contact wear to extend operational life. Precious metal plated rings are used for enhanced conductivity and low electrical noise. 6, 12, 18 or 24 circuit assemblies are available with lengths from 2.2 to 5.0 inches.

The **1.5", unobstructed bore** through the center provides space for hydraulics, pneumatics or for a concentric shaft mount. The frame and cover are molded of high-impact, engineering thermoplastic.

Steel bearings, splash seals and flange mount are optional.

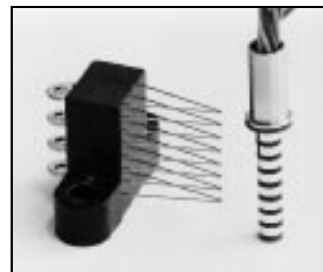
* U.S. Patent #4398113, and other foreign patents.
**Operational life may decline at higher rotational speeds.

FEATURES

- Continuous 360° rotation for transmission of power or data signals
- 5 or 10 amp circuit models
- 6, 12, 18 and 24 circuit assemblies available as standard parts
- Up to 250 rpm continuous**
- Rugged design

TYPICAL APPLICATIONS

- machining centers
- rotary index tables
- heavy equipment turrets
- cable reels
- test equipment
- packaging machines
- palletizing machines
- magnetic clutches
- robotics
- process equipment
- rotary sensors
- emergency lighting



Commercial Miniature Slip Ring Separate Assemblies

Sometimes a self-contained "capsule" slip ring is not practical due to system size constraints or cost limitations. We can provide the slip ring (rotor) and brush block (stator) as separate components to be mated by the customer in his system. The rotor is supplied in a drum configuration which features consecutive individual rings along the axis of rotation. Miniature separates may have slip ring rotor diameters less than 0.100 inch.

FEATURES

- Continuous 360° rotation for transmission of power or data signals
- 1-36 circuit models

TYPICAL APPLICATIONS

- Aircraft cockpit instruments
- Test equipment
- Surveying equipment

Litton

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Call or FAX us to get your copy of our Slip Ring catalog!

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▼ FAX (540)953-1841 ▼ International (540)953-4751

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Certified facility

1213 North Main Street
Blacksburg, VA 24060

Slip Rings



High Speed Slip Ring Capsule

EC3848

The EC3848 features precious metal contacts at the rotary interface. Flying lead wires on the rotating side and solder terminals on the stator side complete the electrical connections. Precision ball bearings and the patented* fiber brush design allow operation up to 10,000 rpm without the need for cooling equipment.

* U.S. Patent #4398113, and other foreign patents.

FEATURES

- 1 amp/100VDC circuits
- 2, 6, 8 and 10 circuit models
- Up to 10,000 rpm

TYPICAL APPLICATIONS

- centrifuges
- various high speed instrumentation applications such as tire testing.



Large Diameter Slip Rings

This economical, mass producible slip ring manufacturing approach features fiber brushes which minimize contact wear and resultant debris to extend operational life. The patented* high frequency design provides excellent digital data transfer, even at a 50 megabit/second NRZ data rate with a 40 inch ring diameter.

We offer these slip rings with an inside diameter up to 50", length up to 18" and rotation speeds up to 120 rpm.

FEATURES

- Combined signal and power circuits
- Up to 120 rpm

- CT scanners
- cranes
- packaging equipment
- any industrial application requiring a large diameter slip ring.



Fiber Optic Rotary Joints (FORJ)

A FORJ is a device used to pass optical signals from a stationary structure to a rotating mechanism in a fiber optic system. We offer a variety of FORJs:

- Off-Axis
- Single-Mode
- Multi-Mode
- Low Cost

TYPICAL APPLICATIONS

- medical systems
- cable reels
- tethered robotic vehicles
- aircraft antenna

Note: Standard commercial slip rings are available to work in combination with our FORJs.



Poly-Twist® or Twist Capsules

The Poly-Twist is a reliable slip ring substitute for limited rotation applications, up to 1 1/2 turns of rotational freedom.

Sometimes called a twist-cap, this device resembles miniature slip ring assemblies in size and appearance and provides a self-contained, no-sliding contact rotary interface using flexible circuit tapes for those applications where continuous rotation is not required. We have designed and produced Poly-Twists with 14 to 1,920 circuits. Poly-Twists feature low torque, no noise and a very long performance life. Although the majority of applications for the thousands of units supplied to date have required miniature twist-cap assemblies, some very large designs have also been provided.

One for every application

We also offer slip ring assemblies for demanding environments:

- ▼ **Space / Vacuum.** Our patented fiber brush slip rings are used in many satellite systems.
- ▼ **Vehicular.** For tanks, retrievers, mobile missile launchers and armored personnel cars.
- ▼ **Pedestal.** Radar, missile and gun fire control systems.
- ▼ **Helicopter.** For main rotors, or deicing and blade folding systems.
- ▼ **Cable Reel.** For marine / seismic explorations, underwater towed vehicles and other rugged environments.
- ▼ **High Speed Slip Ring Capsules.** Centrifuges, aircraft turbine testing, gasoline or diesel engine testing and other high speed instrumentation application.
- ▼ **Miniature Low Speed Slip Rings.** Address both critical space and height limitation, such as the pitch, roll and yaw axes of inertial navigation systems.

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