

# SLIP RINGS



**United Equipment Accessories, Inc.**  
Solving Challenges from the Inside Out.™



# SLIP RINGS

## Custom Designs from Standard Components.

### QUALITY MANUFACTURE

The quality of UEA products is the number one priority of each of our employees. We take great pride in our reputation for consistently producing the highest quality slip rings available in today's marketplace. UEA offers a personal guarantee that our products will keep on performing in some of the most rugged applications.

### DESIGN VERSATILITY

We give you what you want- not what we stock. From component kits to self-contained fully-enclosed models, each UEA Slip Ring has the exact number of conductors you require and the rating you want. This design versatility comes in standard bore sizes of .500" up to 14" and can be customized for you in any size between those parameters.

### HIGH PERFORMANCE

UEA Slip Rings, with their excellent low-level electronic circuit compatibility, are reliable and efficient links that carry power or control signals from stationary to rotating elements. Superior cleaning action is the result of our patented double pivot brush design and high contact pressure. The nylon brush arms and insulators used in UEA Slip Rings are highly resistant to dimensional or performance changes from moisture, temperature, oil or grease. Optional high abrasive brushes can handle highly corrosive environments. Because of our rigid inspection and use of the best quality materials for our products, you can be assured that UEA Slip Rings will provide durability and reliability in hostile environments.

### INSTALLATION & MAINTENANCE

The "drop-in, bolt-down, plug-in" capability of UEA Slip Rings makes installation quick and simple for our customers. Mounting on-site is also easy, as is self-service in the field. If maintenance is needed, UEA stocks replacement parts and can ship them to you overnight in most cases. Our customers require quick response when they need service or information about UEA Slip Rings, and we fulfill those needs.

### HOW A SLIP RING WORKS

A slip ring is a continuity device which transfers electrical current through a continuous rotation from a stationary member to a rotating member. There are two distinct parts of a slip ring. One part is the conductor ring "core" stack and mounting tube or shaft. The other part is the brushes, mounting base and housing. Functionally, it makes no difference which member is stationary and which rotates.

## Slip Ring Applications

UEA builds slip rings for a wide variety of applications. Don't see your application listed below? Our engineers will be happy to work with you on a slip ring for your specific application.

- Advertising displays
- Aerial work platforms
- Amusement rides
- Antennas
- Arcade machines
- Automated welding equipment
- Bridge cranes
- Cable reels
- Car wash equipment
- CCTV cameras and monitors
- Conveyor systems
- Cranes, platform
- Cranes, jib
- Cranes, knuckle boom
- Cranes, pedestal
- Cranes, rough terrain
- Cranes, tower
- Cranes, truck mounted
- Custom machinery
- Drilling rigs (off-shore)
- Down hole drill and geotechnical testing
- Exhibits and displays
- Fabrication equipment
- Fire aerial ladders
- Flight simulators
- Food processing machinery
- Forestry equipment
- Forklifts
- Hoists
- Horizontal earth boring and drilling
- Hydraulic swivels
- Injection presses
- Intelligent machinery
- Irrigation equipment
- Laminating equipment
- Lift platforms and tables
- Lighting displays
- Machine tools
- Manipulators, electric
- Material handling systems
- Measurement equipment
- Medical and health care products
- Military defense equipment
- Packaging machinery
- Pallet Wrappers
- Paper processing machinery
- Plating machinery
- Position welding equipment
- Railroad equipment
- Robotic welding equipment
- Rotary casting machines
- Rotary index tables
- Rotary milking parlor
- Rotating platforms
- Rotating signs
- Rotational molding equipment
- Storage silos
- Theater and stage sets
- Truck body/service cranes
- Utility trucks
- Welding machinery
- Winding machinery
- Work platforms
- Wind turbines

# .50" - 1.00" BORE

## Dependable Power in a Small Unit

The smallest UEA Slip Ring is everything you like about our 1.50" bore, only in a smaller package. Its compact diameter facilitates higher current requirements in a limited space.

## General Features

- Patented double pivot brush design
- Superior cleaning action
- High contact pressure
- Two copper graphite brushes/circuit minimum
- Copper alloy rings
- Temperature extremes, -40° F to 200° F (-40° C to 93.3° C)
- Corrosion inhibiting parts used throughout
- Brass set screw connectors for easy center harness attachment
- 150 R.P.M. maximum rotation speed
- Fits inside housing diameter 4.500" (114.3 mm)
- Built to UL and CSA standards
- Brushes designed for installation on two 5/16-18 stainless steel studs equally spaced on 3.125" (79.38 mm) diameter bolt circle

## Optional Features

- I.D. 0.500" to 1.00" (12.7 - 25.4 mm)
- Pre-wired harness(es)
- 7.5, 10-15, 20, 30 and 45 Amperes/circuit rated 28 V-DC to 600 V-AC
- 1 to 20+ (Dependent upon conductor rating) circuits
- Many combinations of amperage and voltage
- PVC or aluminum enclosure materials
- Solid coin silver ring or silver plated ring with silver graphite brush for low-level signal application
- Mounting tubes
- Treated aluminum with stainless steel hardware for corrosive atmospheres

## Series S10X

1/2" to 1.0" bore with independent core and brush assemblies. No cover.

## Series S100

1/2" to 1.0" bore self-contained assembly with no cover.

## Series S10A

1/2" to 1.0" bore assembly with choice of 4.50" O.D. PVC cover(side brush exit) or a 5.50" O.D. spun aluminum cover(bottom brush exit).

## Series S10C

1/2" to 1.0" thru bore assembly with 4.50" O.D. wrap around aluminum cover.

## Series S10D

1/2" to 1.0" bore assembly with dished aluminum base (side exit) and spun aluminum cover. (5.75" O.D.)

## Series S10E

1/2" to 1.0" bore assembly with 4.50" O.D. PVC cover for top brush exit.

CONDUCTOR HEIGHT CHART		
AMPERAGE	VOLTAGE*	CONDUCTOR HEIGHT/CKT** (inches/mm)
7.5 Silver	28	0.134 (3.40)
7.5	28	0.134 (3.40)
7.5	120	0.249 (6.32)
7.5	220 - 600	0.353 (8.97)
10 - 20	28	0.281 (7.14)
10 - 20	120 - 300	0.396 (10.06)
10 - 20	600	0.500 (12.70)
30 - 45	28, 120	0.462 (11.73)
30 - 45	220 - 600	0.584 (14.83)

\*28V-DC, 120V-AC, 220-600V-AC  
\*\*Tolerance 3%. Heights are approximate.

Series S10X



Series S100



Series S10A



Series S10C



Series S10D



Series S10E



# 1.50" BORE

## The Standard Bearer for All UEA Slip Rings

The UEA 1.50" bore slip ring is the original slip ring we are known for. This slip ring is the standard by which other designs are judged in the industrial, heavy equipment and machinery industries.

The 1.50" bore UEA Slip Ring has proven its worth. It will work in harsh conditions and environments where other, lesser quality slip rings fail. However, in addition to the ability to handle rugged uses, the UEA 1.50" bore slip ring has proven its superior performance in today's high-tech world of audio, video, data and electronic signals through continuous rotation.

When your design parameters work around a 1.50" bore UEA Slip Ring, you have entered a world of unlimited variables and options to meet your requirements.

## Design Flexibility

The design flexibility of the UEA 1.50" bore slip ring makes it our most popular and versatile unit. In building each slip ring, we use a modular concept that assures the amperage and voltage combination you need for power and/or control. Slip ring models shown in this brochure are examples of UEA's custom rings built from standard components.

## General Features

- Patented double pivot brush design
- Superior cleaning action
- High contact pressure
- Two copper graphite brushes/circuit minimum
- Copper alloy rings
- Temperature extremes, -40° F to 200° F (-40° C to 93.3° C)
- Corrosion inhibiting parts used throughout
- Brass set screw connectors for easy center harness attachment
- 100 R.P.M. maximum rotation speed
- Built to UL and CSA standards
- Brushes designed for installation on two 5/16-18 stainless steel studs equally spaced on 5.875" (149.23 mm) diameter bolt circle
- Accepts 1.492" (37.9 mm) to 1.496" (38.0 mm) diameter mounting tube (Full 1.504" I.D. available for 1.5" tube)

## Optional Features

- Pre-wired harness(es)
- 6, 7.5, 10-15, 20, 30, 45, 75, 100 and 120-150 Amperes/circuit rated 28 V-DC to 600 V-AC
- 1 to 100+ (Dependent upon conductor rating) circuits
- Many combinations of amperage and voltage
- Covers
- Solid coin silver ring or silver plated ring with silver graphite brush for low-level signal application
- Mounting tubes
- Treated aluminum with stainless steel hardware for corrosive atmospheres
- Oil impregnated bronze bearing for high ambient temperatures accepts 1.50" (38.1 mm) O.D. tube
- Ball bearings
- Fluid passage through ring 1.0" NPT maximum)

### Series S15X

1.5" bore with independent core and brush assemblies. No cover.

### Series S150

1.5" bore self-contained assembly with no cover.

### Series S15A

1.5" bore assembly with 7.63" O.D. spun aluminum cover (bottom brush exit).

### Series S15B

1.5" bore assembly with 10.50" O.D. dome aluminum cover (bottom brush exit).

### Series S15C

1.5" thru bore assembly with 7.63" O.D. wrap around aluminum cover.

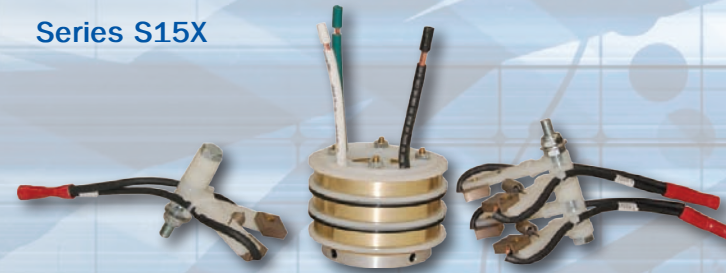
### Series S15D

1.5" bore assembly with dished aluminum base (brush lead side exit) and spun aluminum cover. (7.75" O.D.)

### Series S15Q

1.5" bore assembly with rectangular enclosure. Custom sizes available.

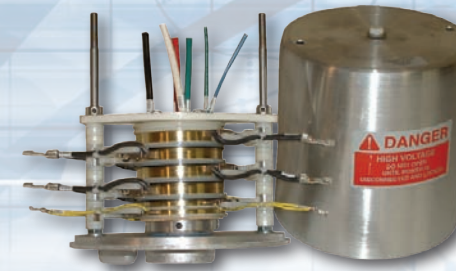
Series S15X



Series S150



Series S15A



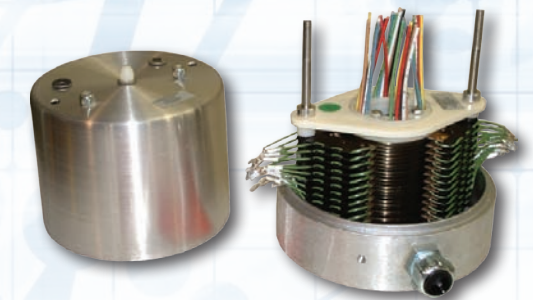
Series S15B



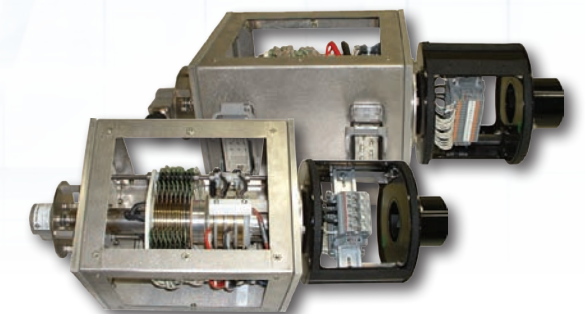
Series S15C



Series S15D



Series S15Q



## CONDUCTOR HEIGHT CHART

AMPERAGE	VOLTAGE*	CONDUCTOR HEIGHT/CKT** (inches/mm)
6.0	28	0.090 (2.29)
7.5 Silver	28	0.134 (3.40)
7.5	28	0.134 (3.40)
7.5	120	0.249 (6.32)
7.5	220 - 600	0.353 (8.96)
10 - 20	28, 120	0.281 (7.15)
10 - 20 Compact	220 - 600	0.396 (10.07)
10 - 20	220 - 600	0.500 (12.70)
30 - 45	28, 120	0.469 (11.91)
30 - 45 Compact	220 - 600	0.584 (14.83)
45	220 - 600	0.688 (17.46)
75	28 - 600	0.688 (17.46)
120	28 - 600	1.458 (37.03)

\*28V-DC, 120V-AC, 220-600V-AC or V-DC, 120A, 600V  
\*\*Tolerance 3%. Heights are approximate.

## 2.00" - 4.00" BORE

### Performance & Economy in a Versatile Assembly

The unique design of UEA's 2.00" - 4.00" bore slip rings provides outstanding quality, performance and economy for the customer. These powerful slip rings, which can be easily installed and serviced in the field, are available in four standard bore sizes:

- Model S25 with 2.50" (63.5 mm) bore
- Model S30 with 3.00" (76.2 mm) bore
- Model S35 with 3.50" (88.9 mm) bore
- Model S40 with 4.00" (101.6 mm) bore
- (Custom bore sizes available)

### General Features

- Patented double pivot brush design
- Superior cleaning action
- High contact pressure
- Two copper graphite brushes/circuit minimum
- Double stacked brushes on 200-600 Amp circuits
- Copper alloy rings
- Temperature extremes, -40°F to 200°F (-40°C to 93.3°C)
- Corrosion inhibiting parts used throughout
- Brass set screw connectors and/or copper lugs for easy center harness attachment
- 50 R.P.M. maximum rotation speed
- Built to UL and CSA standards
- Nylon GSM Nylatron on stainless steel bearings

### Optional Features

- Pre-wired harness(es)
- 7.5 Amperes/circuit rated 28 V-DC
- 10-20, 30-45, 60-75, 125-150, 200-300 & 400-600 Amperes/circuit rated 28 V-D-C to 600 V-AC
- 1 to 100+ (Dependent upon conductor rating) circuits
- Many combinations of amperage and voltage
- Covers
- Silver plated ring with silver graphite brush for low-level signal application
- Mounting tubes
- Treated aluminum with stainless steel hardware for corrosive atmospheres
- Ball bearing(s)
- Can be modified down to 1.50" bore or up to 4.50" bore size for certain applications

### CONDUCTOR HEIGHT CHART

AMPERAGE	VOLTAGE*	CONDUCTOR HEIGHT/CKT** (inches/mm)
7.5	28, 120	0.188 (4.78)
10 - 20	28, 120	0.281 (7.14)
10 - 20	220 - 600	0.375 (9.53)
30 - 45	28, 120	0.532 (13.51)
30 - 45	220 - 600	0.625 (15.88)
75	28, 600	0.625 (15.88)
125 - 150	28, 120	0.844 (21.44)
125 - 150	220 - 600	0.938 (23.83)
200 - 300	28, 120	1.844 (46.84)
200 - 300	220 - 600	1.938 (49.23)
500 - 600	28, 120	1.844 (46.84)
500 - 600	220 - 600	1.938 (49.23)
Center Bearing, when required		0.813 (20.65)

\*28V-DC, 120V-AC, 220-600V-AC or V-DC  
\*\*Tolerance 3%. Heights are approximate.

### Dimensions for 2.00" - 4.00" Bores

- Mounting holes - two 0.531" (13.5 mm) dia. holes at 180° on 8.25" (209.6 mm) dia. B.C.
- Diameter - 12.00" (304.8 mm) max. (without enclosure)
- Core lead extension 3" Standard.

### O-Style

2.0"-4.0" bore self-contained assembly with no cover. (9.50"min -12.0"max outer diameter)

### A-Style

2.0"-4.0" bore assembly with PVC cover with bottom brush exit. (13.50"min -15.50"max outer diameter)

### C-Style

2.0"-4.0" thru bore assembly with wrap around aluminum cover with top or bottom brush exit. (10.50"min -13.50"max outer diameter)

### Q-Style

2.0"-4.0" bore assembly with rectangular enclosure. Custom sizes available.

### Series S250



### Series S30C



### Series S35A

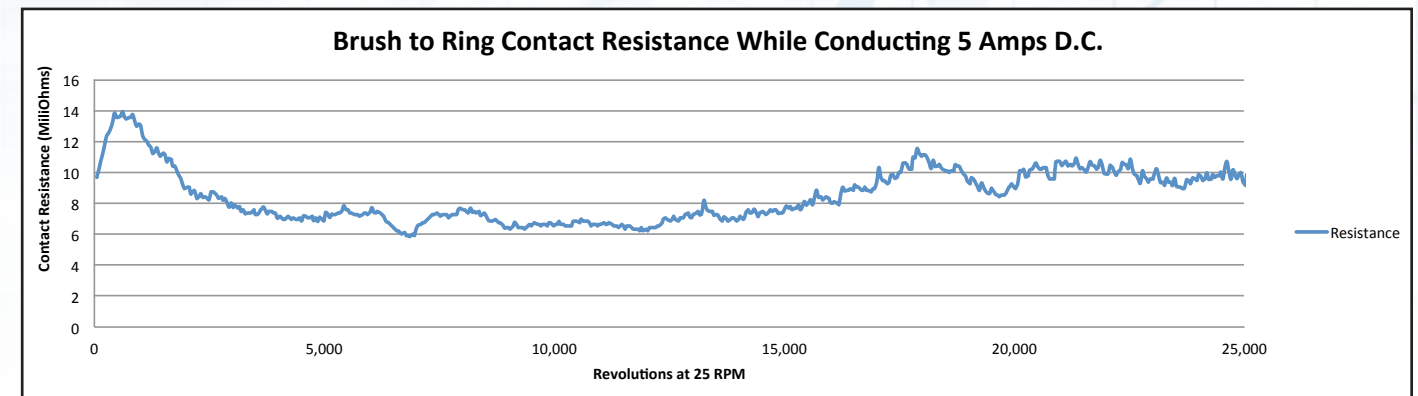


### Series S40C



## ELECTRONIC CONDITION CIRCUITRY

UEA has completed extensive testing to compare various brush materials, ring materials, contact pressures and number of contacts to determine the operating characteristics of each. Through this testing, we have identified materials and characteristics that are advantageous for specific applications.



The test was conducted using 20 Amp rated standard grade copper graphite brushes and ring assembly of 335 brass rings. The test was run for 16 hours at 25 RPM completing over 25,000 revolutions. The voltage drop across two slip rings was measured 5 times every second during this testing period while a current of 5 Amps D.C. was run through the slip rings in series. The results show the electrical resistance measured per assembly (total resistance divided by 2).

**Full Performance in a Larger Unit**

UEA Large Bore Slip Rings were specifically designed for applications requiring large center passageways. They have all the features and performance capabilities of the S2-4 model.

Two standard large bore models are available:

- Model S60 with 6.00" (152.4mm) bore
- Model S80 with 8.00" (203.2mm) bore

**General Features**

- Patented double pivot brush design
- Superior cleaning action
- High contact pressure
- Two copper graphite brushes/circuit minimum
- Double stacked brushes on 200-600 Amp circuits
- Copper alloy rings
- Temperature extremes, -40°F to 200°F (-40°C to 93.3°C)
- Corrosion inhibiting parts used throughout
- Brass set screw connectors or copper lugs for easy center harness attachment
- 30 R.P.M. maximum rotation speed
- Built to UL and CSA standards
- Nylon GSM Nylatron on brass bearings

**Optional Features**

- Optional pre-wired harness(es)
- 10-20, 30-45, 60-75, 125-150, 200-300 & 400-600 Amperes/circuit rated 28 V-DC to 600 V-AC
- 1 to 100+ (Dependent upon conductor rating) circuits
- Many combinations of amperage and voltage
- Covers
- Silver plated ring with silver graphite brush for low-level signal application
- Mounting tubes
- Treated aluminum with stainless steel hardware for corrosive atmospheres
- Ball bearing(s)
- Can be modified down to 4.75" bore size for certain applications

**Dimensions for 6.00" - 8.00" Bores**

- Mounting holes - two 0.500" (12.7 mm) dia. holes at 180° on 12.38" (314.5 mm) dia. B.C.
- Diameter - 13.5" (342.9 mm) exclusive of copper lugs on higher power circuits
- Core lead extension 3" Standard.

**O-Style**

6.0"-8.0" bore self-contained assembly with no cover. (13.50"min -18.5"max outer diameter)

**A-Style**

6.0"-8.0" bore assembly with terminal block connections, no cover. (13.50"min -18.50"max outer diameter)

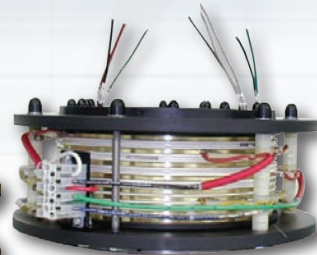
**C-Style**

6.0"-8.0" thru bore assembly with wrap around aluminum cover with top or bottom brush exit. (13.50"min -18.50"max outer diameter)

CONDUCTOR HEIGHT CHART		
AMPERAGE	VOLTAGE*	CONDUCTOR HEIGHT/CKT** (inches/mm)
10 - 20	28, 120	0.281 (7.14)
10 - 20	220 - 600	0.531 (13.49)
30 - 45	28, 120	0.469 (11.91)
30 - 45	220 - 600	0.719 (18.26)
75	28, 120	0.469 (11.91)
75	220 - 600	0.719 (18.26)
125	28 - 600	0.719 (18.26)
125 - 150	28, 120	0.844 (21.44)
125 - 150	220 - 600	1.094 (27.79)
200 - 300	28, 120	1.804 (45.82)
200 - 300	220 - 600	2.054 (52.17)
400 - 600	28, 120	1.804 (45.82)
400 - 600	220 - 600	2.054 (52.17)

\*28V-DC, 120V-AC, 220-600V-AC or V-DC  
\*\*Tolerance 3%. Heights are approximate.

**Series S60C**



**Series S80A**



**Series S800**

**Large Center Passageways**

UEA designed the 10" - 14" large bore for customers who need an extra large bore slip ring. These slip rings meet customers' demands for specific applications that require large center passageways, including storage silos, waste treatment facilities, custom machinery, machine tools and pedestal cranes.

**Models:** S100, S110, S120, S130, S140 (Custom Bore Sizes Also Available)

**General Features**

- Patented double pivot brush design
- Superior cleaning action
- High contact pressure
- Two copper graphite brushes/circuit minimum
- Double stacked brushes on 200-600 Amp circuits
- Copper alloy rings
- Temperature extremes, -40°F to 200°F (-40°C to 93.3°C)
- Corrosion inhibiting parts used throughout
- Brass set screw connectors or copper lugs for easy center harness attachment
- 20 R.P.M. maximum rotation speed
- Built to UL and CSA standards
- Nylon GSM Nylatron on brass bearings
- High quality Nylatron insulating components
- Large bore ID for liquid, gas and semi-solids passage

**Optional Features**

- Optional pre-wired harness(es)
- 10-20, 30-45, 60-75, 100-150, 200-250 & 300-600 Amperes/circuit rated 28 V-DC to 600 V-AC
- 1 to 100+ (Dependent upon conductor rating) circuits
- Many combinations of amperage and voltage
- Covers
- Silver plated ring with silver graphite brush for low-level signal application
- Mounting tubes
- Treated aluminum with stainless steel hardware for corrosive atmospheres
- Can be modified down to 8.50" bore size for certain applications

**Dimensions for 10.00" - 14.00" Bores**

- Diameter (20.00" - 24.00")
- Core lead extension 3" Standard.

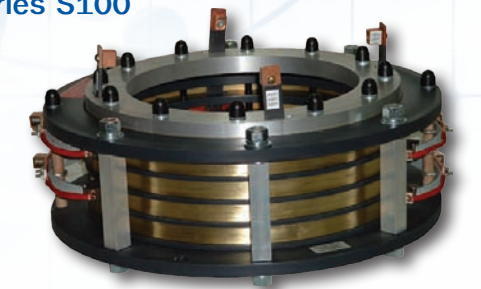
CONDUCTOR HEIGHT CHART		
AMPERAGE	VOLTAGE*	CONDUCTOR HEIGHT/CKT** (inches/mm)
10 - 20	28, 120	0.281 (7.14)
10 - 20	600	0.375 (9.53)
30 - 45	28, 120	0.438 (11.13)
30 - 45	600	0.500 (12.70)
60 - 75	28 - 600	0.563 (14.30)
100 - 150	28 - 600	0.938 (23.83)
200 - 250	28 - 600	1.438 (36.53)
300 - 600	28 - 60	2.188 (55.58)

\*28V-DC, 120V-AC, 220-600V-AC or V-DC  
\*\*Tolerance 3%. Heights are approximate.

**Series S140C**



**Series S100**



**Knowing Your Rotary Position**

UEA Slip Rings are always in the center of a 360° rotation. Various rotary applications are improved by the ability to sense a single position, multiple positions, or to define one or more areas. This sensing of position allows customer defined functions to operate within the requirements of each individualized application.

UEA offers three position sensing systems which provide a high degree of accuracy. The Cam & Switch Design offers accurate performance for up to 3 defined areas. Potentiometers and encoders are designed for use in applications requiring variable position indication.

These position sensing systems were conceptualized for the UEA 1.5" bore ring model, but can be adapted to our larger bore models. The Cam & Switch Design and the Continuous Through-bore Potentiometer are installed near the slip ring base casting and bearing, eliminating inaccuracies caused by brush and core stud flexing. This also leaves the center bore open through the slip ring assembly for air lines, linkage, etc. The 2.00" O.D. potentiometer and encoder are mounted above the center lead connections at the top of the assembly. This allows easier replacement if necessary.

**Cam & Switch Design Features**

- Factory set accuracies of  $\pm 0.5^\circ$
- 1, 2, or 3 switches and areas defined using one cam
- Cam and switch(es) add 0.28125" to overall height of slip ring assembly
- Spring loaded cam arms with switch(es) located at bottom of one or both brush stacks
- Cam built into or onto the bottom of the core stack
- Stacks in standard 1.5" bore UEA Slip Ring assembly
- Easily installed under any UEA standard cover

**Continuous Potentiometer Design Features**

- 360° continuous rotation
- Infinite position indication
- 2.5 K $\pm$  10% per quadrant
- 2.5 K $\pm$  10% between taps @ 180°
- Two taps spaces at 180°  $\pm$  0.1%
- Linearity of 0.10% max
- Easily installed under any UEA standard cover

**2.0" O.D. Potentiometer**

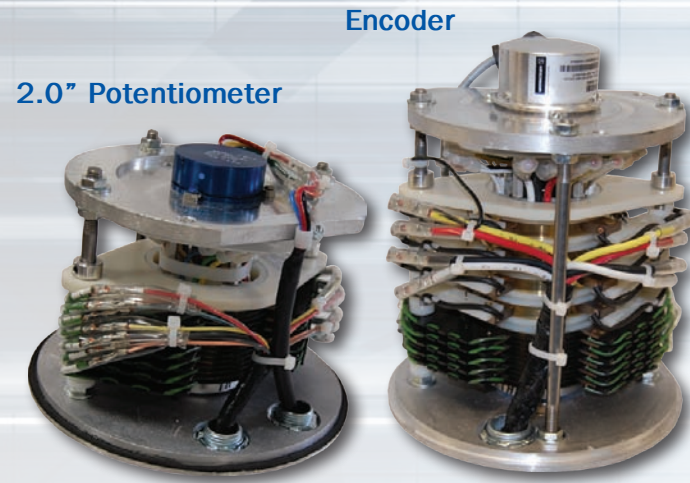
- Can be used on top of longer non-through bore assembly
- Two wipers spaced at 900 $\pm$  0.5%
- Tap width 2° max

**Through-Bore Potentiometer**

- Adds 0.625" to overall slip ring height
- Stacks in standard 1.5" bore UEA Slip Ring assembly
- No special brackets or drive mechanism required
- Two wipers spaced at 90°  $\pm$  0.1%
- Tap width 0.4° max

**Encoders**

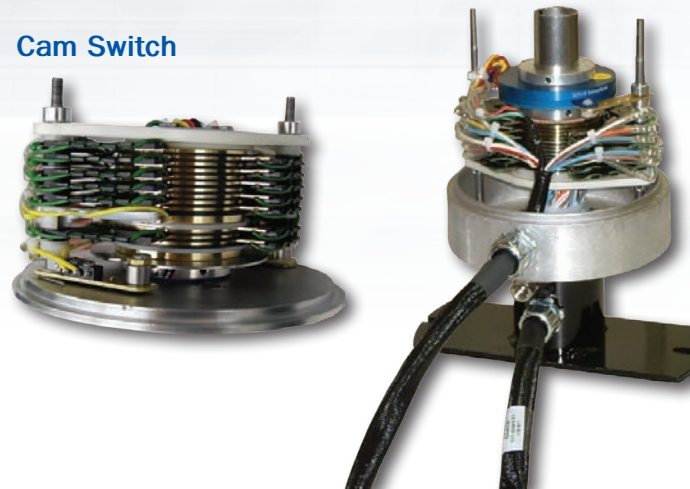
- Absolute or incremental can be adapted for use with UEA slip rings



Encoder

2.0" Potentiometer

Through Bore Potentiometer



Cam Switch

**Pneumatic Swivels**

All-brass air swivels with 2 or 4 passages are optional for use with any slip ring, except .500" - 1.00" bore. These are precision engineered and manufactured for air passages, supplementing electrical passages, in the rotating unit. When ordering, please outline your needs or consult with our engineering department to determine air swivel options for your slip ring application.

**Pre-Wired Harness**

UEA Slip Rings with pre-wired harnesses give you the convenience of faster connections, which save both time and money. UEA will supply the appropriate custom wire harness or jacketed cable, with or without multi-pin connectors to facilitate your installation. Our harnesses are available taped or braided for long-term durability.

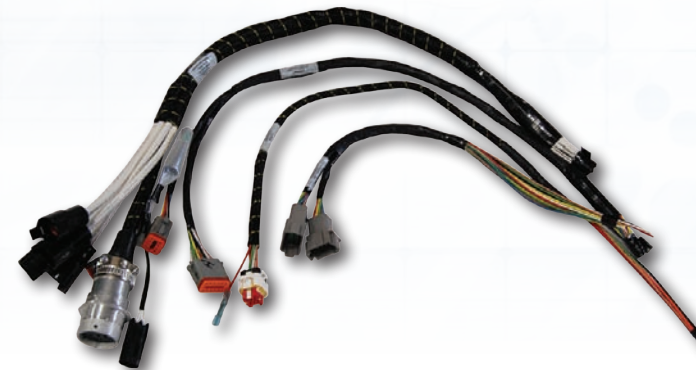
**Hydraulic Swivels**

For all your rotary fluid and air needs, UEA offers multi-media rotary unions. Pair any of our slip rings with a fluid or air swivel in one complete package. Our hydraulic swivels are available in many sizes and number of ports.

**Custom Mounting Tubes**

Because of the modular concept of UEA slip rings, we offer a wide selection of mounting tubes. When ordering, please outline your needs or consult with our engineering department to determine the correct mounting tube for your slip ring application.

**Pre-Wired Harness**



**Custom Mounting Tubes**



**Hydraulic Swivels**



**Pneumatic Swivels**



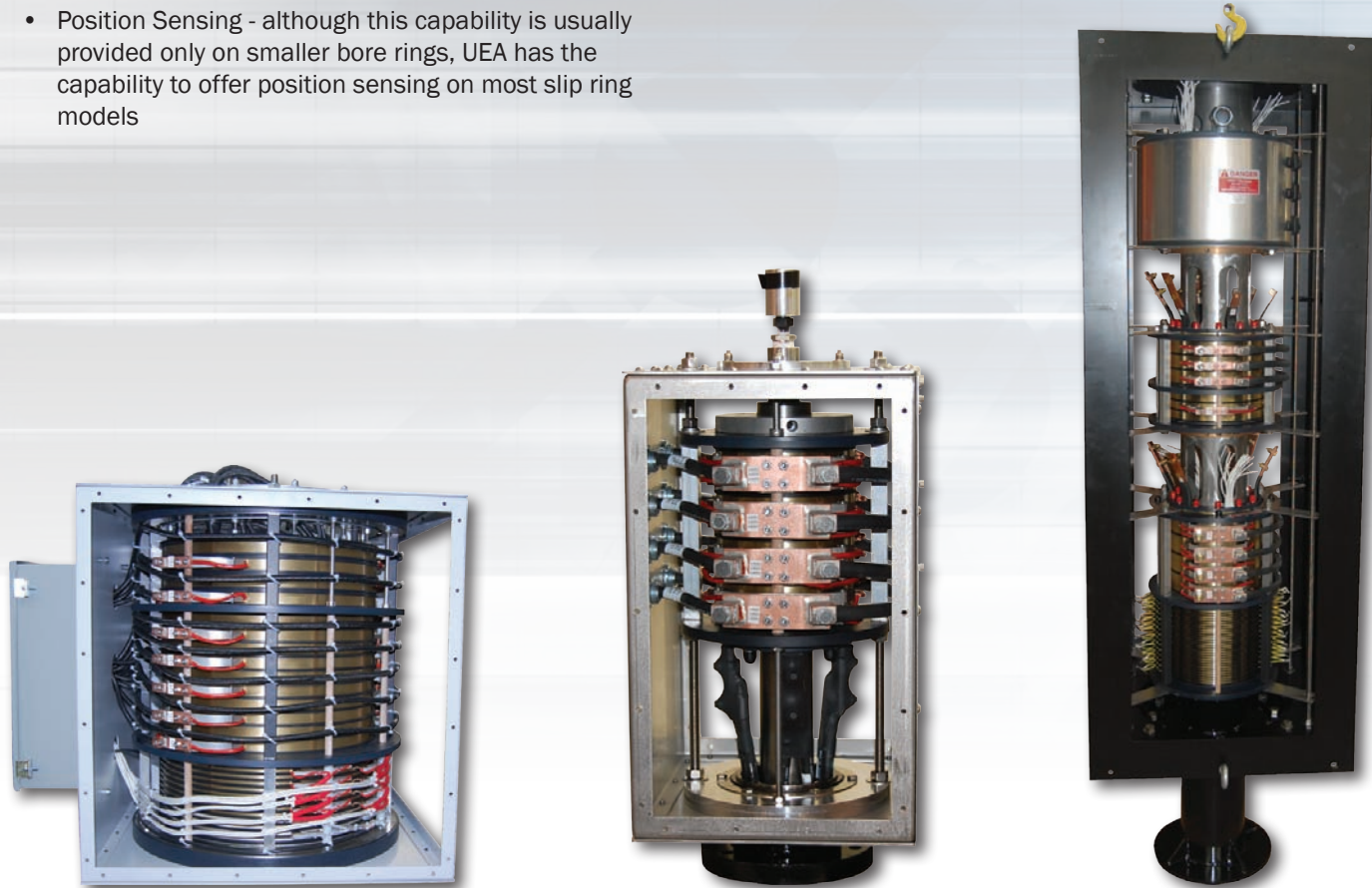
## Meeting the Needs for Unique Applications

Special applications often call for special slip rings. By combining standard, off-the-shelf components into custom slip rings, UEA designs meet the parameters and environmental conditions of the application. Here are some examples of special slip rings which were designed to be application specific.

Recent Special Ring requests which were built by UEA include:

- High Conductor Count rings were built to handle multiple functions
- Bore Sizes - built in conjunction with high conductor counts, these rings have bore sizes to accommodate special wiring, water hoses and hydraulic or pneumatic connections
- Unusual Environments - UEA has built special rings to be used in salt mines, frigid Alaskan climates and extreme desert heat
- Position Sensing - although this capability is usually provided only on smaller bore rings, UEA has the capability to offer position sensing on most slip ring models

- Electro-pneumatic swivel assembly with circuit combinations from high power to control. Includes potentiometer position sensor at base of slip ring.
- Pre-wired power and control combination circuits assembly with integral 1/2" pneumatic line. Up to 1.00" air line available.
- Piggyback 4.00" & 1.50" slip ring with power & control circuits located in 4.00" ring. Electronic control in enclosed 1.50" ring.
- S150 for high temperature, used in laminating equipment.



## The More We Know About Your Application, the Better We Can Customize Your Slip Ring

UEA Slip Rings have to work in applications with many different types of electrical loads and data signals, as well as in a variety of environmental and operating conditions. Working closely with the OEM or end user, we get as much insight as possible into each application in order to evaluate the needs and potential problems that might arise in that particular situation. Please describe the conditions of operation as accurately and completely as possible so that we can supply you with a product that will perform well and meet your highest expectations.

We look at the combination of factors in order to recommend a UEA Slip Ring for every application. For example, if a slip ring assembly is carrying low level data signals, is rotating almost constantly (high duty cycle) and is used indoors, standard materials will perform well. On the other hand, with the same signal in an outdoor application or in an environment with wide variations in temperature and humidity, in combination with infrequent rotation, special materials may be needed to maintain signal integrity.

In some manufacturing or processing facilities, corrosive gases may be present in the air around the slip ring. If the application requires a high duty cycle, surface oxidation will be kept scrubbed off by the mechanical action of the brushes. However, if the slip ring is not being rotated through complete rotations or is infrequently rotated, special materials would be needed to prevent surface oxidation that could impair the function of the slip ring.

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### Contact UEA:

PH: 800.394.9986 or 319.352.3946  
FAX: 319.352.2175  
www.uea-inc.com

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### Provide us with the following information:

- Bore size
- Number of circuits
- Amperage and voltage rating of each circuit
- Rotational speed of application (in RPM)
- Environmental conditions the unit will encounter
  - Temperature
  - Humidity
  - Type of atmosphere (corrosive, dirty, etc.)
- Type of unit
  - Non self-contained (brushes and core only)
  - Self-contained (brushes and core mounted on base bracket)
  - Enclosed unit (with integral cover)
- Type of mounting: upright, inverted, or horizontal
- Other information specific to your intended application
- Does UEA supply mounting tube?
- Does UEA supply wire harnesses?



Note: No responsibility will be assumed by United Equipment Accessories, Inc. for improper choice of slip ring models for existing environmental conditions or where current in excess of rated capacity is run through an assembly. Users of UEA Slip Rings will assume full responsibility for compliance with local, state, and federal codes for their particular applications. Because of constant efforts to provide the most efficient products, specifications remain subject to change without notice and without incurring obligation or liability.





**Check Out Our Blog: UEA Tech Talk**  
<http://info.uea-inc.com/>

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