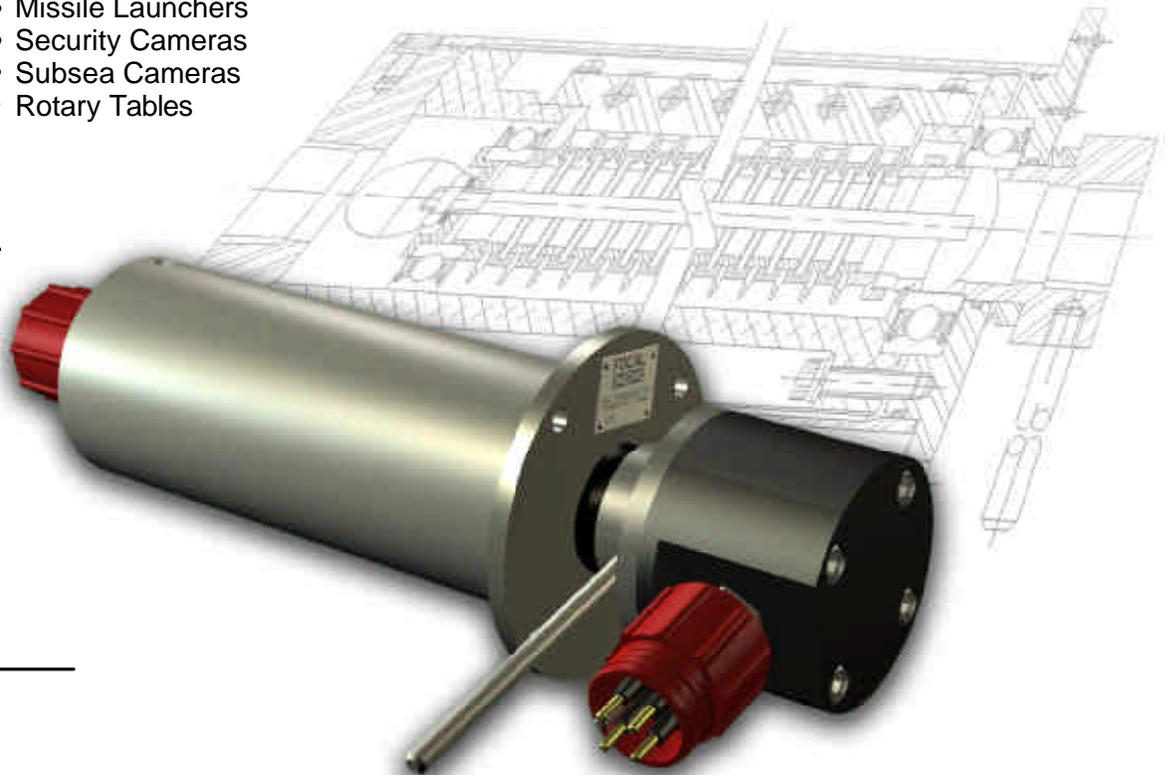


## Model 180

Ideal for small systems such as mini-ROVs, oceanographic instruments, side scan sonars and land based seismic systems, the Model 180 is a compact, rugged unit designed for severe environments and backed by ISO 9000 quality. It has a stainless steel exterior with O-ring seals for weather protection. Heavy duty ball-races are lubricated and sealed for life.

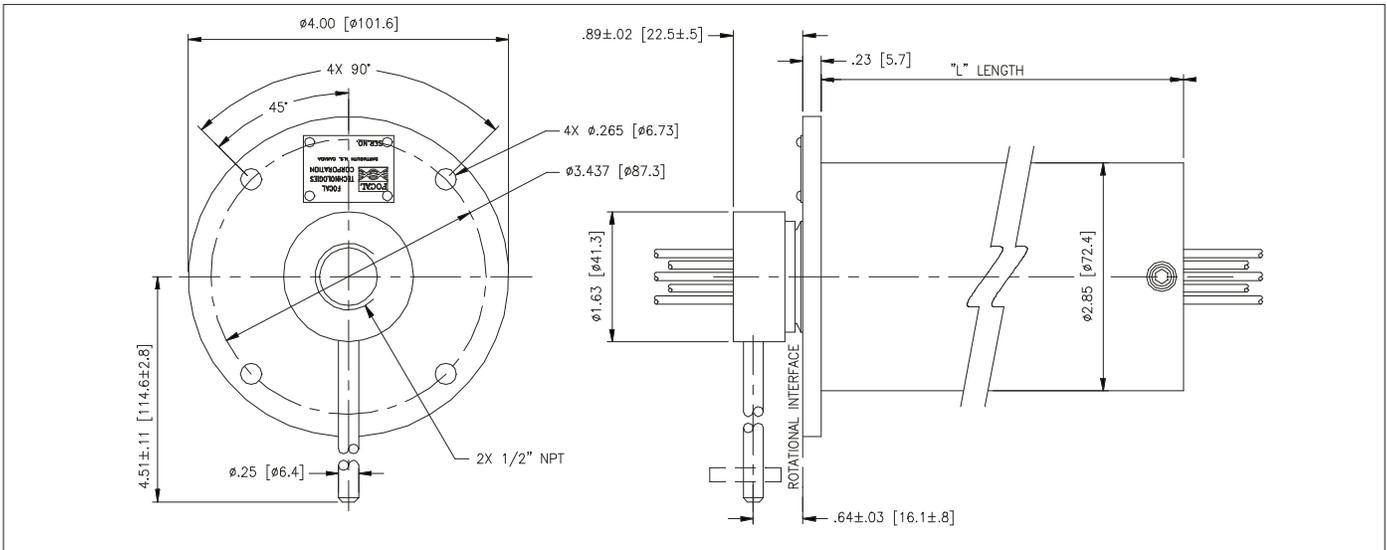
It can be supplied with a single or dual-channel, bi-directional, passive fiber optic rotary joint, enclosed within a longer body, or with a single pass fluid swivel integral to the housing. For use in hazardous locations the unit may be ordered with an explosion-proof or flameproof certified enclosure. Another adaption is for use underwater as an oil-filled, pressure-compensated electro-mechanical swivel with a maximum continuous rating of 3 tonnes.

- Typical uses include:
- Food Processing Equipment
  - Oceanographic Winches
  - Missile Launchers
  - Security Cameras
  - Subsea Cameras
  - Rotary Tables



*Shown with optional  
Subconn connectors*

**FOCAL**  
A KAYDON COMPANY



Notes: All measurements shown are in inches [mm]. Specifications subject to change without notice.

### Options

#### Optical:

Supply and installation of single pass single/multimode or dual pass multimode fiber optic rotary joint - see **FORJ Insertion Length**. Note that the maximum number of electrical circuits is limited to 30 when combined with the FORJ.

#### Connectors and Cable:

Supply and installation of customer specific connectors or cable.

#### Junction Boxes:

Supply and installation of junction boxes and terminals.

#### Shaft Encoder:

Incremental with various resolutions.

#### High Frequency:

Single channel true coax, up to 18GHz.

#### Hazardous Locations:

- Class I, Group C, D and Class 1, Zone 1, Group IIB (CSA)
- EExd IIB T5 (Demko)
- Can be supplied with purge fittings for use with a certified purging system
- Can be used as simple apparatus in intrinsically safe systems (EN 50020)
- Can be certified as associated apparatus (EExd [ib] IIB T5) on special order (EN 50020)

#### External Pressure Applications:

Supply of oil-fill and air-bleed fittings.

#### Fluid Pass:

Supply and installation of a 1/4 inch fluid swivel.

### Specifications

#### Electrical:

Available from 2-60 rings. All circuits are rated to 1000V. Breakdown voltage is 2500V. The ring/brush assembly is rated 7A. The slip ring current rating will depend on the size and number of conductors in the slip ring. The maximum total current is 100A.

Insertion loss typically <1.5dB, crosstalk <30dB @ 50 MHz.

#### Mechanical:

Rotation: 1000 rpm (Max)  
 Brushes: 2 per ring  
 Typical Service Interval (Max Rating): 5 Million rotations  
 Exterior: Stainless Steel  
 Operating Temperature: -25 to + 55°C

#### Terminations:

Standard is 4 feet [1220 mm] of loose wire pigtails exiting the slip ring through 1/2 or 3/4 inch NPT female ports for connection to fittings and conduit.

#### Insertion Length (Electrical only):

Part Number	No. of Rings	"L" Length
180-0002-04	1-4	<b>4.27</b> [108.6]
180-0002-08	5-8	<b>5.27</b> [134.0]
180-0002-16	9-16	<b>7.27</b> [184.8]
180-0002-24	17-24	<b>9.27</b> [235.6]
180-0002-30	25-30	<b>10.77</b> [273.7]
180-0002-36	31-36	<b>13.27</b> [337.2]
180-0002-42	37-42	<b>14.77</b> [375.3]
180-0002-48	43-48	<b>16.27</b> [413.4]
180-0002-54	49-54	<b>17.77</b> [451.5]
180-0002-60	55-60	<b>19.27</b> [489.6]

#### FORJ Insertion Length (Electrical + 1 or 2 Fibers):

Add **6.775** [172.1] to the above dimensions.