STANDARD
ROTARY JOINTS

ROJO Series

COAXIAL HIGH FREQUENCY ROTARY JOINTS

EXXELIA GROUP designs and manufactures coaxial High Frequency rotary joints (for frequencies > 1 GHz).

These rotary joints use contact technology.

EXXELIA GROUP can propose coaxial rotary joints adapted in impedance 50Ω or 75Ω which allows to have a bandwidth > 3 GHz (DC / > 3 GHz).

The coaxial rotary joints 75Ω allows the transmission of video signals under the format 3G SDI (Norm SMPTE 424M).

Applications: Aeronautics, Defense (Electro Optical Systems), Telecommunications, Space, Medical, ...

L-BAND ROTARY JOINTS

EXXELIA GROUP designs and manufactures L-BAND High Frequency rotary joints for a bandwidth closed to 1 GHz.

These L-BAND High Frequency rotary joints use a contactless technology. They are multi-channels.

They can be integrated in a wide range of products and can be integrated inside the **EXXELIA** GROUP Slip rings.

One of their biggest interests is to be very compact and light compared to their bandwidth and their performances.

Applications: Aeronautics, Defense (Electro Optical Systems), Telecommunications, Space, Medical, Transportation...

Hybrid Systems

SPECIFIC

SERVO MOTORS

EXXELIA GROUP can design and manufacture very specific electrical motors equipped with its own position sensors (Optical encoder, Magnetic position sensors, precision potentiometers).

Most of these products are used on missiles for different applications: missile fin actuator or missile seeker.

Applications: Defense (seeker, actuator...), Industry...

SLIP RING + FORJ (Fiber Optical Rotary Joint)

When the flow of signals is high, or when the quantity of signals is very important (> 3 Gigabit/s), it can necessary to use optical signals.

EXXELIA GROUP Slip rings can be equipped with FORJ which allows transferring these optical signals (number of optical channels: from 1 up to more than 10 channels).

Applications: Defense (EOS, RCWS, Radar...), Industry...

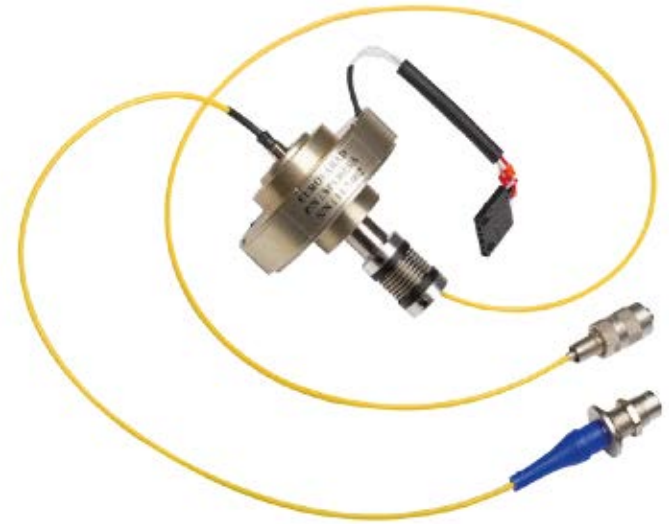
SPECIFIC

Hybrid Systems

ENCODER + FORJ

EXXELIA GROUP's position sensors can be equipped with FORJ (Fiber Optical Rotary Joint). This association allows simultaneously in a low volume the use of a transfer function (transfer of data) with a function of displacement measurement.

Applications: Defense (EOS, RCWS, Radar…), Industry...



HYDRAULIC SLIP RING (ROTARY UNION)

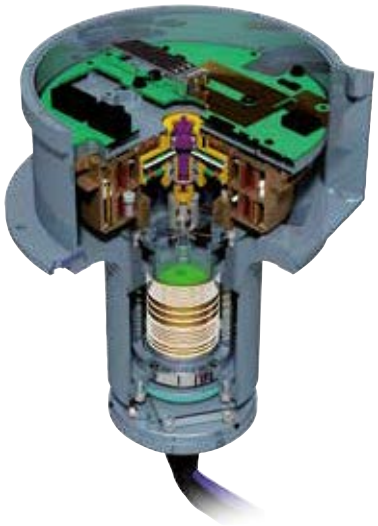
On specific request, **EXXELIA GROUP** can design and manufacture pneumatic or hydraulic transfer functions. This Specific equipment is called a Rotary Union (RU). **EXXELIA GROUP** Rotary Unions have from 1 up to more than 4 channels (for a pressure up to 250 bars). Most of the time, a Rotary Union is a part of a Slip ring.

Applications: Defense (Radar, Turret...), Industry...

PLUG & PLAY SOLUTIONS

In order to offer the highest integration of the biggest number of functions in the smallest volume, **EXXELIA GROUP** can propose PLUG & PLAY Solutions. These solutions are in fact the possibility to integrate and to combine all together the maximum functions offered by the company.

The interest of such a system is to make it more compact by decreasing the weight and the costs of the global system.

List of functions:

- Slip ring,
- Position sensor: Optical encoder, Magnetic position sensor...
- Fiber Optical Rotary Joint (FORJ) / Rotary Union (RU) / Rotary joint (L-Band),
- Mux/Demux electro optical electronics,
- Flexible coupling.