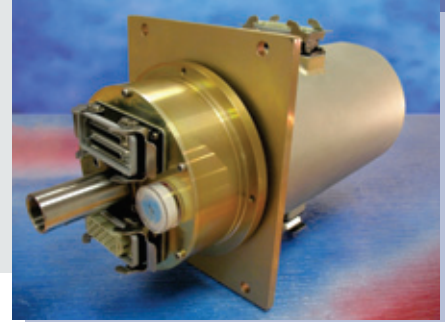


# Hybrid Slip Ring ESR220

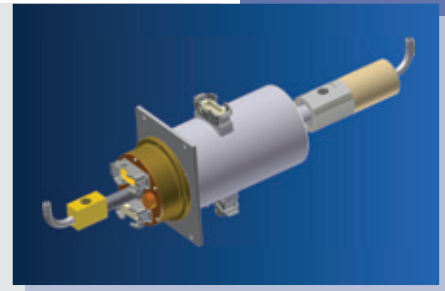
## Product Features

- Electrical power-, signal- and data transmission
- Optical data rates up to 30 Gbit/s
- Air channel for 250 bar
- Gold/Gold technology insures highest contact quality
- Robust offshore connectors
- Seawater resistant aluminium or stainless steel design
- Reliable under high vibrations and extreme temperatures



## Design and Function

The 96 channel slip ring of the series of ESR is based on the field proven gold/gold technology. The combination of gold wire springs on gold plated contact rings provides superior transmission quality for digital data, signal- and power. The advantage of our technology is reliable operation with unchanged performance characteristics over a very long life time. The optical rotary union, which can be fitted with 1 up to 20 channels, uses micro optic technology. It has very low insertion losses of 2.0 dB and the wide wavelength range allows multiplexing as well. The 1" air rotary union can be operated at 250 bar under rotation. The housing is entirely built in plated seawater resistant aluminium. Stainless steel is available as well. It is equipped with heavy stainless steel Harting connectors. The complete hybrid slip ring unit is maintenance-free only the drying cartridges should be exchanged from time to time.



## Applications

This slip ring was developed specifically to meet the requirements of the seismic industry. The unique design of our Rotoflux slip ring insures the reliable transmission of gun control signals and sensor signals from the hydrophones with very low noise. For the rapidly increasing frequency bandwidth we have integrated a multi channel optical rotary union with single mode fibres. The very compact design allows an easy integration into different style winches. The robust housing guarantees a reliable operation in rough conditions and most extreme environments on a vessel deck. All our design ideas are focused to enable our customers to run their seismic vessels most effective.

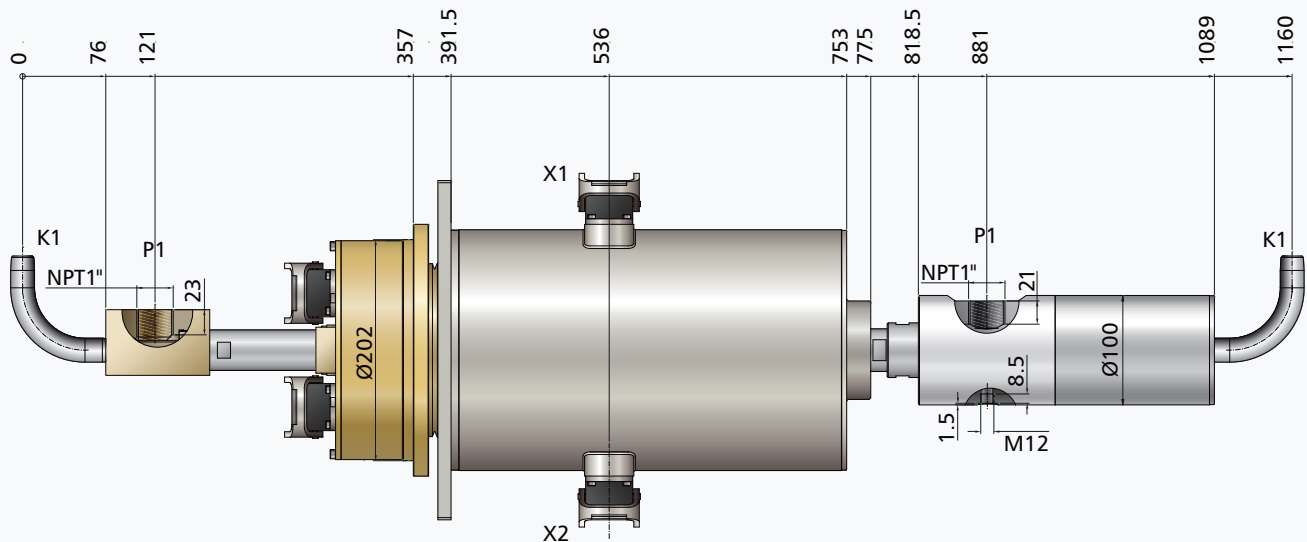


## Versions

Customer specific variations of this product are possible. The number of channels of the electrical or optical section can be customized. Alternative connectors are available upon request. We offer streamer slip rings without integrated air channel as well.

# Hybrid Slip Ring ESR220

## Hybrid Slip Ring ESR220/96+SM1+L1



### Technical Data

Number of electrical channels	96
Rating power channels	36x power with 8A, 180VDC
Rating signal channels	60x signal with 2A, 60VDC
Power connector	EPIC H-D40
Signal connector	EPIC ADP/2DSUB 37
Number of optical channels	1 - 20
Fiber type	single mode (9 $\mu$ m/125 $\mu$ m)
Connectors	FC/PC
Wave length range	1300 - 1550 nm
Insertion loss	< 2.0 dB
Attenuation variation during rotation	< 1.5 dB
Cross talk	> 50 dB
Number of air channels	1
Pressure max.	250 bar
Connections	NPT 1" radial
Operating speed max.	10 rpm