

## Technical Definition of the Mercotac Advantage



## Actual Oscilloscope Test

The top line is the input signal as it comes from the power source.

The middle line is the same signal after passing through a typical silver-graphite brush slip ring, showing substantial electrical noise being introduced by the slip ring

The bottom line is the same signal after passing through a Mercotac Model 430 connector, showing near zero electrical noise.

Advantage One: Extremely low electrical noise Advantage Two: Less than 1 milliohm of resistance Advantage Three: No wear, zero maintenance Advantage Four: One connector for signal and power Advantage Five: Much longer life Advantage Six: Lower cost

## More Technical Details

There are many ways you will profit by using Mercotac connectors:

- Slip rings introduce electrical noise into the signal being transmitted. Mercotac connectors transmit with nearly zero electrical noise, thus the same connector can be used for power and signal transmission.
- Typical resistance through a slip ring is 10 20 milliohms. The resistance through a Mercotac connector is less than one milliohm due to the unique liquid metal wetted contacts.
- Slip rings require maintenance and lose signal quality over time due to wear and debris. Mercotac connectors are maintenance free, do not degrade the signal over time and last much longer than slip rings.
- 4. Slip rings typically last several million revolutions.

Mercotac connectors typically last hundreds of millions of revolutions. Under test conditions with all specs. within published range, Mercotacs can last over a billion revolutions.

Though superior in performance and durability, Mercotac connectors cost less than slip rings of comparable capacity.

The above superior performance is possible because of the unique design feature of Mercotac connectors: the electrical conduction path is a liquid metal that is molecularly bonded to the contacts. This creates a connection that is constant and unchanged for the life of the connector.

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