

Slip Rings
Originated by Mike Webb (NOAA) on 14 July 2011

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We've always used IEC slip rings because that's what we had 30 years ago. We upgraded to Meridian MXO-4 for the new ships, but don't have a good track record with them. I know that Focal makes both electrical and fiber optic slip rings, but have no experience with them either. We are not being asked to consider Alpha 117 slip rings in place of the Meridians by the yard building the REUBEN LASKER, our newest ship being built simultaneously with the Sikuliaq in Wisconsin.

What is the predominant slip ring being used in the UNOLS fleet?

Electrical model?

Fiber Optic Model?

How's the reliability and noise levels of the model you use?

do you use connectors or just splice the wires and seal?

repair and service of the companies supplying the ones you use?

This is opening a can of worms, but it's an important aspect of all our data collection.

i look forward to response from Tom Wilson

mike

Reply From: Dale Hubbard (OSU) on Thu, 14 Jul 2011

Hi Mike,

We've used IEC electrical slip rings on our profiling winch (supporting OSU's Supersoar and Supersucker vehicle ops) for nearly a decade now, and over all we've been pleased with their performance. I don't have easy access to model numbers offhand, but we've employed a couple of different types: a couple of custom-made 16 ring units (my understanding is that these were fabricated in-house in TX), and more recently an off-the-shelf 20-ring model (I believe this was manufactured offshore). All are washdown-rated, have stainless housings, and are capable of handling 480V. We've had no slip ring related noise issues while collecting a broad suite of data from a variety of sensors. We splice connections on the cable side using ol' reliable solder/scotchkote/scotchwrap/super 33+. The leads on the winch side are long enough to screw into a terminal strip in the control box (one may specify lead length and gauge when ordering). IEC has been good about servicing the units we've screwed up, and we've screwed some of them up pretty good. I shopped around and looked at other vendors a couple of years ago, but we stuck with IEC because at that time their product cost a fraction of their competitors', availability was quicker, and they didn't give us grief about not buying in bulk lots.

My \$0.02...

Cheers,

Dale Hubbard
OSU
College of Oceanic & Atmospheric Sciences

**Reply from Andrew Nunn and Bruce Felix (Raytheon Polar Services Company) on
Fri, 15 Jul 2011**

We still use Meridian MXO-4 slip rings for Rochester .322 3 conductor cable (A301592), but for coaxial cable we've moved to MacArtney/Focal/Moog slip rings. We use the Focal 180 model for straight Rochester .680 coax (A301241), and a hybrid Focal 180/206 model for hybrid Rochester coax/fiber cable (A304097). The model 180 has been in use for two years on the NBP with no problems deploying multiple instruments up to 1000V, and we have used the coax side of the hybrid slip ring but not the fiber (single mode, 9/125um, 1300/1550nm) yet.

Both are too new to have been serviced yet, but tech support online and via phone has been very good. We get models with pigtails and splice connectors or go to junction boxes as needed. About \$2K for the coax, \$6K for the fiber hybrid.

Cheers,

Andy Nunn

Andrew Nunn
Bruce Felix
Electronic Technician Supervisors
Raytheon Polar Services Company