

Zimbra

klimov@mbari.org

Re: cable density

From : Shawn Amirehsani <s.amirehsani@winconn.com>

Thu, Apr 11, 2024 12:28 PM

Subject : Re: cable density 2 attachments**To :** Alana Sherman <alana@mbari.org>**Cc :** Aaron Schnittger <aschnittger@mbari.org>, Aaron Micallef <amicallef@mbari.org>, Denis Klimov <klimov@mbari.org>, Anderson Amaral <a.amaral@winconn.com>, Martin Charles <m.charles@winconn.com>

Hi Alana and the MBARI team,

First of all, please accept our apologies for the late reply. I have finally received the tech info from engineering based on our virtual conversation and instructions you provided. Please see below your custom armored cable design: Also as requested by your team, I am including the spec for the Corning fiber (SMF-28e) used in the design of your cable. Please see attached. Finally, for your reference, I am also including the cross section of the original cable design so you can compare the changes we implemented. I believe we have met all your design requirements. Once I receive your favorable feedback, we will submit our formal offer. Thank you again for working with us on this project.

P/N FM041124CP-1 Rev -**4 each Singlemode fiber-optics in a gel-filled SS tube (F12003).****A 0.082" nom wall Neon-GRN PUR jacket over SS tube.****2 layers 0.040' Galvanized Improved Plow Steel (GIPS).****0.063" nom wall Neon-GRN 95A PUR jacket over GIPS armor.****Nom OD = 0.500" (12.7mm).****Wt in Air/Sea = 253/166 LB/kFT.****Nom Specific-Gravity = 3.0 gm/cc.****Min Bend Radius >= 8"****Nom Breaking Strength = 11,000 LBf (50kN)****Max Peak Dynamic Load <= 2800 LBf (12.5kN)****Max Depth Rating <= 10kFT (3km)****Operating Temp -20 to +70 C****Storage Temp -40 to +90 C**

Best regards,

**Shawn Amirehsani**Eastern USA & International
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On Tue, Apr 2, 2024 at 6:13 PM Alana Sherman <alana@mbari.org> wrote:

Hi Shawn

After some discussion, we decided that if we were just designing for an ideal mechanical coupling with marine sediment, the desired cable density would be between 2.2 - 3 gm/cc . However the existing design you showed us at 3.3 gm/cc is fine. At this point in the project, other design parameters such as bend radius and breaking strength are more critical. So please revise the design as we

discussed in terms of increasing the breaking strength and depth rating and exterior jacket. We can assess the density at that point, I think it will probably not be a problem.

Thanks

Alana

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 **SMF-28e+_PI1463_07-14_English.pdf**
966 KB

 **FM110619CP-3.pdf**
49 KB
