**High temperature cables for satellite electrical propulsion**

AXON’ CABLE has developed power cables for the latest generation of satellite thrusters. These cables have been specially designed to simplify and take weight out of the overall thruster mechanics, while withstanding the aggressive combination of high temperatures, high voltages and cosmic radiation found in space.

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**CURRENT TECHNOLOGY THRUSTER**

The connection to the outside of the thruster is made via a heavy relay box and rigid “mineral insulated” MI cables:

- Heavy solution
- Vibration inducing
- Inflexible
- Special tooling required for forming MI cable.

**NEW TECHNOLOGY THRUSTER**

The new generation of cable makes it possible to connect the satellite to the thruster with no need for the heavy relay box.

- Weight saving
- Less vibration
- Simplified integration: fewer connections
- Greater reliability
- No tooling required to bend the cable.

www.axon-cable.com
High temperature cables
for satellite electrical propulsion

Main characteristics
- Radiation resistant up to 200 MRad.
- Maximum operating current up to 12A.
- Resistant to Corona effect.
- EMI protection.
- Ability of the cable to flex and bend.

Construction
1 - Conductor: special nickel plated copper alloy.
2 - Multi-layered insulation.
3 - Braided shield: special nickel plated copper alloy.

From min -100°C to max. + 280°C for static applications
From min -50°C to max. +120°C for dynamic applications
Operating voltage : up to 5 kV DC

<table>
<thead>
<tr>
<th>PRIMARY WIRE</th>
<th>SHIELDING</th>
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</thead>
<tbody>
<tr>
<td>CONDUCTOR NOMINAL Ø (mm)</td>
<td>CONDUCTOR AREA MM²</td>
</tr>
<tr>
<td>2.56</td>
<td>3.89</td>
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