The HI Grip, which is available as a left- or right-hand option, offers a wide range of proportional, non-contacting roller and high-life, push-button switch combinations. Whereas most competitive products can support just three roller functions, the HI Grip can accommodate up to four.

A contoured front panel means the rollers are within an easy sweep of an operator’s thumb, while the switch arrays are angled to allow for similarly convenient actuation.

The controls on the rear panel are situated to provide comfortable operation with a first finger. To further enhance operator comfort, both handed options are oriented to lean forward and inwards.

For maximum, application-specific flexibility, each roller and switch is offered in nine color options. Further customization is possible by a choice of 16 logos which can be printed in each of the switches.

In addition to being supplied fitted to a JC6000 or JC8000 joystick, the HI Grip can be supplied as a stand-alone product with an industry-standard, threaded mount and flying leads.

Careful material selection ensures maximum robustness to impact, liquids and dust, with the enclosure being sealed to IP67. An EMC performance level of 150V/m is provided and the overall design achieves an MTTF<sub>D</sub> in excess of 900 years.
SPECIFICATIONS

ROLLER & SWITCH COMBINATIONS

<table>
<thead>
<tr>
<th>FRONT PANEL</th>
<th>REAR PANEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roller(s)</td>
<td>Switches</td>
</tr>
<tr>
<td>0</td>
<td>2-8</td>
</tr>
<tr>
<td>1, 2 or 3</td>
<td>2-5</td>
</tr>
</tbody>
</table>

ELECTRICAL

- **SUPPLY VOLTAGE**: 5Vdc ± 0.5Vdc for the rollers
- **ROLLER OUTPUT VOLTAGE (FACTORY SET)**: 10% to 90% of Supply Voltage
- **ROLLER CENTERING ACCURACY**: 50% ±5.5% of Supply Voltage
- **ROLLER CURRENT CONSUMPTION**: 10mA max. per roller
- **SWITCH**: 24V, 50mA maximum per switch
- **GRIP CONNECTION**: Flying lead

MECHANICAL

- **MAXIMUM OVERLOAD - STATIC**: 600N – applied at the center of the grip
- **MAXIMUM OVERLOAD - IMPACT**: 10 Joules
- **MAXIMUM ROTATIONAL LOAD - STATIC**: 40Nm
- **WEIGHT**: 290g nominal
- **ROLLER OPERATING ANGLE**: ±35° for front rollers; ±25° for rear roller
- **ROLLER MECHANICAL LIFE**: 5 million cycles
- **SWITCH TYPE**: Normally-open - momentary
- **SWITCH TRAVEL**: 1mm
- **SWITCH OPERATING FORCE**: 3.5N nominal
- **SWITCH MECHANICAL LIFE**: > 5 million cycles
- **MTTF₀**: > 900 years

ENVIRONMENTAL

- **OPERATING TEMPERATURE**: -40°C to 85°C
- **STORAGE TEMPERATURE**: -40°C to 85°C
- **ENVIRONMENTAL PROTECTION**: IP66 and IP67
- **SALT MIST**: EN 60068-2-11: 1999
- **EMC IMMUNITY LEVEL**: ISO 11452-2: 2004
- **EMC EMISSIONS LEVEL**: CISPR25
- **ESD IMMUNITY LEVEL**: ISO 10605:2008
- **POWER FIELD IMMUNITY**: ISO 11452-8: 2007
- **VIBRATION (SINUSOIDAL)**: EN 60068-2-6: 2008
- **VIBRATION (RANDOM)**: EN 60068-2-64: 2008
- **SHOCK**: EN 60068-2-27: 2008
- **BUMP**: EN 60068-2-27: 2008