Especially designed for heavy duty: steel and paper mills, lumber, cranes, etc.
- Excellent resistance to shocks/vibrations and to extreme axial/radial loads
- Connection with terminal box with LED option, cable or connectors output
- Digital incremental output, optional analog output (tachoencoders, optotacho)
- Mechanical over-speed switch: optional
- Max control option: detection of shocks, vibrations, temperatures...
- Solid shaft of 12 mm or 11 mm with RE0 115 mm flange (Euroflange B10) for tacho-generator type mounting

Material (connector or cable output version)
- Cover: zinc alloy
- Body: aluminium

Material (terminal box version)
- Cover: aluminium
- Body: aluminium

Shaft
- Stainless steel

Bearings
- 6001 serie

Maximal loads
- Axial: 100 N
- Radial: 200 N

Shaft inertia moment
- $\leq 15 \times 10^{-6}$ kg.m²

Torque
- $\leq 10 \times 10^{-3}$ N.m

Permissible max. speed
- 9,000 min⁻¹

Continuous max. speed
- 6,000 min⁻¹

Shaft seal
- Viton double lips

Shock (EN60068-2-27)
- $\leq 2 \times 10^{-3}$ m.s⁻² (during 6ms)

Vibration (EN60068-2-6)
- $\leq 200 \text{ m.s}^{-2}$ (10 ... 1000 Hz)

EMC
- EN 50081-1, EN 61000-6-2

Isolation
- 1,000 Veff

Weight (connector or cable version)
- 1,1kg zinc alloy cover, alu body
- 2,4kg zinc alloy cover, stainless steel body
- 2,6kg stainless steel cover and body

Weight (terminal box version)
- 1,3kg alu cover, alu body
- 2,6kg alu cover, stainless steel body
- 2,8kg stainless steel cover and body

Operating temperature
- -20 ... +80 °C (Encoder T°)

Storage temperature
- -40 ... +80 °C

Protection (EN 60529)
- IP 65

Theoretical mechanical lifetime $10^6$ turns ($F_{axial}/F_{radial}$)
- 20 N / 30 N : 360
- 50 N / 100 N : 30
- 100 N / 200 N : 2,5
### OUTPUT ELECTRONIC / SUPPLY

**2G2 electronic (100kHz)**
- Supply: 5Vdc ± 10%
- Cons. without load: 100mA max
- Current per channel: 40mA max
- 0 max (l<20mA): \( V_{ih} = 0.5Vdc \)
- 1 min (l=20mA): \( V_{in} = 2.5Vdc \)

**5G2 electronic (100kHz)**
- Supply: 11 to 30Vdc
- Cons. without load: 75mA max
- Current per channel: 40mA max
- 0 max (l<20mA): \( V_{ih} = 0.5Vdc \)
- 1 min (l=20mA): \( V_{in} = 2.5Vdc \)

**5G5 electronic (100kHz)**
- Supply: 11 to 30Vdc
- Cons. without load: 75mA max
- Current per channel: 40mA max
- 0 max (l<20mA): \( V_{ih} = 0.5Vdc \)
- 1 min (l=20mA): \( V_{in} = 2.5Vdc \)

5GT electronic permits to drive very long (contact our factory)

Available in option:
- 3G3 electronic, supply between 15 and 30Vdc, push-pull output regulated 12Vdc
- 5GH electronic permits to drive different inputs (PLC + display for example)

Protection against short circuits for electronics: 5G5, 5GT, 3G3
Protection against polarity inversion for all electronics: 2G2

*Option “Max control”*: the encoder gives on real time its physical environment parameters: shocks and vibrations, too high or too low temperature, too low or too high supply, quality of the output signals: upon request.

### STANDARD CONNECTION

<table>
<thead>
<tr>
<th>-</th>
<th>+</th>
<th>A</th>
<th>B</th>
<th>0</th>
<th>A/</th>
<th>B/</th>
<th>0/</th>
<th>Ground</th>
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</thead>
<tbody>
<tr>
<td>G8</td>
<td>Terminal box</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>G6</td>
<td>12 pins CW</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>G8</td>
<td>12 pins CCW</td>
<td>10 + 11</td>
<td>2 + 12</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>6</td>
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<td>G3</td>
<td>PVC cable 8 wires B230/020</td>
<td>WH</td>
<td>white</td>
<td>BN</td>
<td>brown</td>
<td>GN</td>
<td>green</td>
<td>YE</td>
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<tr>
<td>G3</td>
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<td></td>
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<td>G3</td>
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<tr>
<td>GP</td>
<td>PUR cable 12 wires B230/050</td>
<td>WH</td>
<td>white</td>
<td>+</td>
<td>WH/GN</td>
<td>white</td>
<td>/green</td>
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</tbody>
</table>

### ORDERING CODE

(Special versions upon request, for ex. over-speed switches, special flanges/electronics/connections...)

<table>
<thead>
<tr>
<th>Shaft Ø</th>
<th>Available electronic</th>
<th>Output signal</th>
<th>Resolution</th>
<th>Connection</th>
<th>Connection orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>G8M9</td>
<td>G8M9 Stainless steel body</td>
<td>2G2, 5G2, 5G5, 5GT, 5GH, 3G3</td>
<td>9: A/A+/B/B+/0/0 (A, A gate)</td>
<td>10,000 max</td>
<td>G6: M2312pins CW</td>
</tr>
<tr>
<td>G8M9</td>
<td>G8M9 Stainless steel cover body</td>
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<td></td>
<td>G5: M2312pins CW</td>
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<tr>
<td>Ex: GXM9S</td>
<td>12</td>
<td>//</td>
<td>G5</td>
<td>9</td>
<td>//</td>
</tr>
</tbody>
</table>

Available resolutions: 1 2 3 4 5 6 7 8 9 10 12 13 14 15 16 19 20 21 24 25 26 28 29 30 32 35 36 39 40 43 45 46 48 50 54 56 58 60

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