## Sensor principle

**MH-C** | **MH-C2**
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**Measuring range** | ° 0 ... 360 -
**Indep. linearity** | % of meas. range ±0.3 -
**Max. hysteresis** | ° 0.1 -
**Resolution** | bit 12 -
**Max. repeatability** | ° 0.1 -
**Sample rate fast mode** | kHz (S) -
**Sample rate slow mode** | kHz 1.66 -
**System propagation delay fast mode** | µs (800) -
**System propagation delay slow mode** | µs 4600 -
**Max. temperature coefficient of the output signal** | ppm/°K 25 -
**MTTFd / MTBF** | years 240 / 240 -
**Power supply voltage** | VDC 8 ... 35 -
**Current consumption without load (typ.) fast mode** | mA (19) -
**Current consumption without load (typ.) slow mode** | mA 14 -
**Min. ohmic load at output** | kOhm 10 -
**Max. capacitive load at output** | nF 1 -
**PWM frequency** | Hz 855 (±20%) -
**Reverse polarity protection of power supply** | yes -
**Electrical connection (s = shielded)** | Cable 3pole, s -
**Cross section of single wires** | mm² 0.25 (AWG24) -

## Mechanical data

**Mechanical range** | ° 360 (continuous) -
**Protection class** | IP54 / IP67 -
**Max. starting torque at specified protection class** | Ncm 0.5 / 3 -
**Max. rotating speed** | rpm 6000 -
**Min. life movements** | 360 Mio. -
**Max. permitted axial shaft load** | N 100 -
**Max. permitted radial shaft load** | N 50 -
**Operating & storage temperature** | °C -40 ... + 85 -
**IEC 68-2-6 Vibration (Amax = 0.75mm, f = 5 ... 2000 Hz)** | g 20 -
**IEC 68-2-27 Shock** | g 50 -

## Standards

- **EN 55022** class B, Emission radiated (30...230 MHz) dBµV/m max. 30 -
- **EN 55022** class B, Emission radiated (230...1000 MHz) dBµV/m max. 37 -
- **EN 61000-4-2, ESD** (contact discharge / air discharge) kV ±4 / ±8 -
- **EN 61000-4-3, Immission HF** radiated (80...1000 MHz) V/m 30 -
- **EN 61000-4-4, Burst** (on all lines) kV ±1 -
- **EN 61000-4-5, Surge (lines to ground)** kV ±1 -
- **EN 61000-4-6, Immission HF** conducted (0.15...80 MHz) V/mk 10 -
- **EN 61000-4-8, Immission magnetic field (50Hz)** A/m 30 -
- **IEC 60393-1** Insulation resistance (500VDC, 1bar, 2s) GOhm 20 -
- **IEC 60393-1** Dielectric strength (VAC, 50Hz, 1min, 1bar) kV 1 -

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**Applications**

- Wind vanes
- Valve control
- Steering angle sensor for F1-racing cars

**Features**

- Robust design, sealed stainless steel housing
- Contactless measuring method
- Long life
- High accuracy of measurement
- Applications under adverse ambient conditions possible (humidity, dampness, dust, vibrations etc.)
- Full resolution and accuracy at programmed electrical angle

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Contelec AG
Portstrasse 38
CH-2503 Biel/Bienne
Phone +41 (0)32 3665600
Telefax +41 (0)32 3665604
sales@contelec.ch

A company of the Siedle-Group
### Vert-X 22 - 24V / PWM

#### Ordering code

<table>
<thead>
<tr>
<th>Option Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH-C</td>
<td>MH-C2</td>
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</table>

#### Output characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>MH-C</th>
<th>MH-C2</th>
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</thead>
<tbody>
<tr>
<td>Positive gradient CW</td>
<td>Std</td>
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</tr>
<tr>
<td>Positive gradient CCW</td>
<td>Opt</td>
<td>2</td>
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<tr>
<td>Redundant, positive gradient CW</td>
<td>Opt</td>
<td>3</td>
</tr>
<tr>
<td>Redundant, positive gradient CCW</td>
<td>Opt</td>
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<tr>
<td>Redundant, crossed signal curves</td>
<td>Opt</td>
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#### Electrical connection

<table>
<thead>
<tr>
<th>Parameter</th>
<th>MH-C</th>
<th>MH-C2</th>
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<tbody>
<tr>
<td>Power supply voltage</td>
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<td>Output signal</td>
<td>PWM</td>
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<td>Output signal</td>
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<tr>
<td>Electrical angle</td>
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<tr>
<td>Electrical angle</td>
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<tr>
<td>Electrical angle</td>
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<td>360°</td>
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<tr>
<td>Optional</td>
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<td></td>
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<tr>
<td>Declaration in 10° steps</td>
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<tr>
<td>Special characteristic curve</td>
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<td>Special electrical angle within 30° to 360° (ex factory)</td>
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<tr>
<td>Sense of rotation CW/CCW settable</td>
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<td>Sense of rotation CW/CCW programmable (Software)</td>
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<td>Switch functions TTL (max. 2)</td>
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<td>Start &amp; end point settable (Additional wires)</td>
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<td>Index point settable / programmable (Additional wires or Software)</td>
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#### Options (on request)

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Contelec AG
Portstrasse 38
CH-2503 Biel/Bienne
Phone +41 (0)32 3665600
Telefax +41 (0)32 3665604
sales@contelec.ch

A company of the Siedle-Group
Vert-X 2201 / Vert-X 2231

Accessoires (incl.)
- 1x Nut M10x0.75 / SW13
- 1x Serrated lock washer

Vert-X 2202 / Vert-X 2232

Accessoires (incl.)
- 1x Nut M10x0.75 / SW13
- 1x Serrated lock washer

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Vert-X 2211 / Vert-X 2241

Accessoires (incl.)
- 1x Fixation clip
- 2x Slotted cylinder head screw M3x8

Vert-X 2212 / Vert-X 2242

Accessoires (incl.)
- 1x Fixation clip
- 2x Slotted cylinder head screw M3x8

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Vert-X 2211 / Vert-X 2212
Vert-X 2241 / Vert-X 2242
Accessoires
Fixation clip