



Vert-X 28HD - 24V / 0.5 - 4.5V

Applications

- Harvester
- Public transport
- Construction machines

Features

- Very high protection class IP68 & IP69K
- Very robust design
- Compact dimensions
- Contactless measuring method
- Long life
- High accuracy of measurement
- Simple adjustment with elongated holes
- Applications under harsh ambient conditions possible (humidity, dampness, dust, dirt, vibrations, etc.)
- Full resolution and accuracy at programmed electrical angle

| Sensor principle | | MH-C | MH-C2 |
|---|------------------|------------------|-------|
| Electrical data | | | |
| 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 | (5) | - |
| 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 | 100 | - |
| 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 | 100 | - |
| Reverse polarity protection of power supply | | yes | - |
| Electrical connection | | Cable 3pole | - |
| Cross section of single wires | mm ² | 0.56 (AWG20) | - |
| Redundancy feasible | | no | - |
| Electrical connection redundant | | - | - |
| Cross section of single wires redundant | mm ² | - | - |
| Mechanical data | | | |
| Mechanical range | ° | 360 (continuous) | - |
| Protection class | | IP68 & IP69K | - |
| Max. starting torque at specified protection class | Ncm | 6 | - |
| Max. rotating speed | rpm | 3000 | - |
| Min. life | movements | 360 Mio. | - |
| Max. permitted axial shaft load | N | 100 | - |
| Max. permitted radial shaft load | N | 100 | - |
| 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) | dB(µV/m) | max. 30 | - |
| EN 55022 class B, Emission radiated (230...1000MHz) | dB(µV/m) | max. 37 | - |
| EN 61000-4-2, ESD (contact discharge / air discharge) | kV | ±4 / ±8 | - |
| EN 61000-4-3, Immision HF radiated (80...1000 MHz) | V/m | 100 | - |
| EN 61000-4-3, Immision HF radiated (1.4...2GHz) | V/m | 3 | - |
| EN 61000-4-3, Immision HF radiated (2...2.7GHz) | V/m | 1 | - |
| EN 61000-4-4, Burst (on all lines) | kV | ±1 | - |
| EN 61000-4-5, Surge (lines to ground) | kV | ±1 | - |
| EN 61000-4-6, Immision HF conducted (0.15...80MHz) | Vemk | 10 | - |
| EN 61000-4-8, Immision magnetic field (50Hz) | A/m | 300 | - |
| IEC 60393-1 Insulation resistance (500VDC, 1bar, 2s) | GOhm | 20 | - |
| IEC 60393-1 Dielectric strength (VAC, 50Hz, 1min, 1bar) | kV | 1 | - |

Errors and omissions excepted. Subject to change without notice. State: 02.11.12



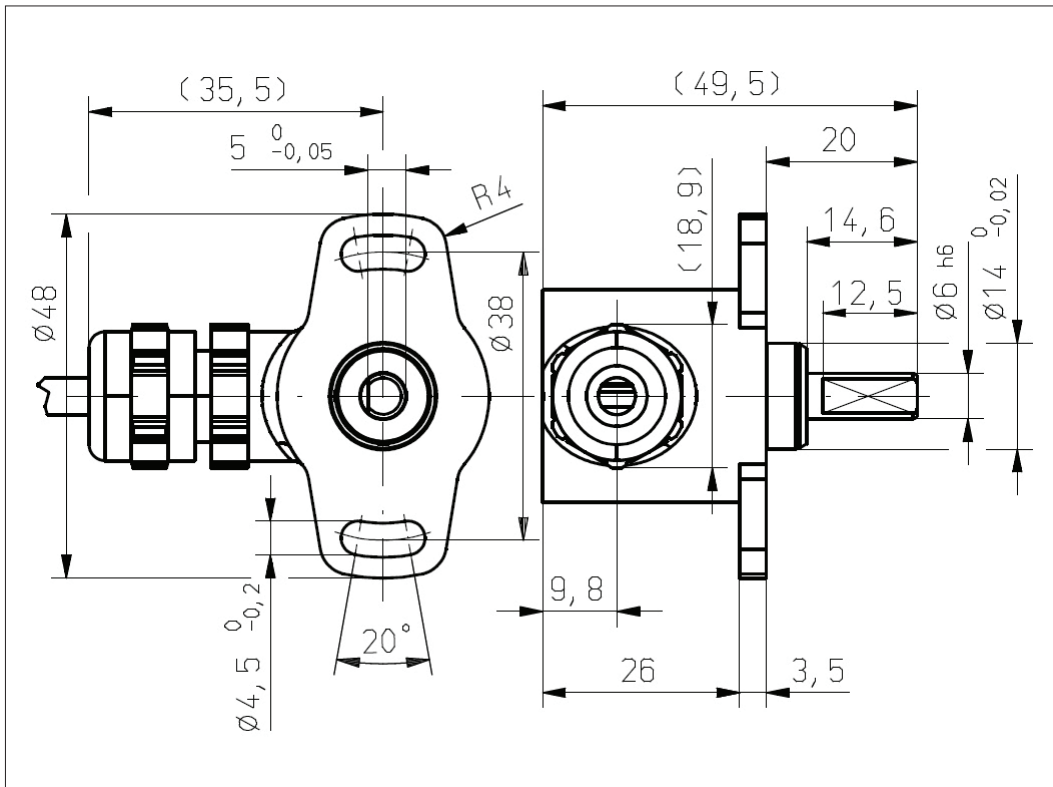
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Ordering code

| | | | | | | | | | | | | | |
|--------|---|-------------------------------|---|----------|--|---|---|------------------------------|----------|------------------------|----------------------------|---|---|
| | | Output characteristics | | | | | | Electrical connection | | | | | |
| | | Positive gradient CW | | Standard | 1 | | 1 | | Standard | Round cable 3pole | | | |
| | | Positive gradient CCW | | Optional | 2 | | 9 | | Optional | Special cable | | | |
| | | | | | Output signal | | | | | | | | |
| | | 0,5VDC...4,5VDC | | Standard | 4 | | | | | Length of cable | | | |
| | | | | | Power supply voltage | | | | | | 02 Standard 1.0m | | |
| | | 24VDC | | Standard | 6 | | | | | 06 Optional 3.0m | | | |
| | | | | | | | | | | | 10 Optional 5.0m | | |
| | | | | | | | | | | | 99 Optional Special length | | |
| Vert-X | 2 | 8 | H | D | 7 | 3 | 6 | 6 | 4 | 1 | 1 | 0 | 2 |
| | | | | | | | | | | | Electrical angle | | |
| | | 36 | | Standard | Electrical angle 360° | | | | | | | | |
| | | xx | | Optional | 03 to 35; Declaration in 10° steps | | | | | | | | |
| | | 99 | | Optional | Special angle | | | | | | | | |
| | | | | | Sensor principle | | | | | | | | |
| | | 7 | | MH-C | | | | | | | | | |
| | | Mechanical version | | | | | | | | | | | |
| | | 28HD | | Standard | 6mm shaft D-shape; IP68 & IP69K - Heavy-duty | | | | | | | | |
| | | 28H9 | | Optional | Special shaft | | | | | | | | |

| | MH-C | MH-C2 |
|--|------|-------|
| Custom shaft design | X | - |
| Custom cable | X | - |
| Sample rate in fast mode | X | - |
| Special characteristic curve | - | - |
| Special electrical angle within 30° to 360° (ex factory) | X | - |
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| | | |

Options (on request)

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Vert-X 28HD

Accessories (incl.)

- None

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