



Vert-X 28 - 5V / PWM

Applications

- Harvester
- Fork-lift
- Operating table
- Hydraulic pump

Features

- Compact dimensions
- Contactless measuring method
- Long life
- High accuracy of measurement
- Simple adjustment with elongated holes
- 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 | 25 | - |
| MTTFd / MTBF | years | 668 / 668 | - |
| Power supply voltage | VDC | 5 (±10 %) | - |
| Current consumption without load (typ.) fast mode | mA | (14) | - |
| Current consumption without load (typ.) slow mode | mA | 9 | - |
| 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 | | Cable 3pole | - |
| Cross section of single wires | mm ² | 0.56 (AWG20) | - |
| Redundancy feasible | | yes | - |
| Electrical connection redundant | | Wires (6x) | - |
| Cross section of single wires redundant | mm ² | 0.56 (AWG20) | - |
| Mechanical data | | | |
| Mechanical range | ° | 360 (continuous) | - |
| Protection class | | IP54 / IP65 | - |
| Max. starting torque at specified protection class | Ncm | 0.5 / 3 | - |
| Max. rotating speed | rpm | 120 | - |
| Min. life | movements | 50 Mio. | - |
| Max. permitted axial shaft load | N | 20 | - |
| Max. permitted radial shaft load | N | 20 | - |
| Operating & storage temperature (with cable) | °C | -40 ... +85 | - |
| Operating & storage temperature (with wires) | °C | -40 ... +125 | - |
| 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 | 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, Immision HF conducted (0.15...80MHz) | Vemk | 10 | - |
| EN 61000-4-8, Immision 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 | - |

Errors and omissions excepted. Subject to change without notice. State: 31.10.11

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Vert-X 28 - 5V / PWM
Ordering code

| | | | | | | | | | | | | | |
|---------------|----------|----------------------------------|----------|------------------------------------|------------------------------|----------|-----------------------|----------|----------|----------|----------|----------|----------|
| | | Output characteristics | | | Electrical connection | | | | | | | | |
| | | Positive gradient CW | Standard | 1 | 1 | Standard | Round cable 3pole | | | | | | |
| | | Positive gradient CCW | Optional | 2 | 4 | Optional | Wires 6pole | | | | | | |
| | | Redundant, positive gradient CW | Optional | 3 | 9 | Optional | Special cable / wires | | | | | | |
| | | Redundant, positive gradient CCW | Optional | 4 | | | | | | | | | |
| | | Redundant, crossed signal curves | Optional | 5 | | | | | | | | | |
| | | Output signal | | | Length of wires | | | | | | | | |
| | | PWM | Standard | 5 | 01 | Optional | 10cm | | | | | | |
| | | | | | 03 | Optional | 30cm | | | | | | |
| | | | | | 05 | Standard | 50cm | | | | | | |
| | | | | | 99 | Optional | Special length | | | | | | |
| | | Power supply voltage | | | Length of cable | | | | | | | | |
| | | 5VDC | Standard | 2 | 02 | Standard | 1.0m | | | | | | |
| | | | | | 06 | Optional | 3.0m | | | | | | |
| | | | | | 10 | Optional | 5.0m | | | | | | |
| | | | | | 99 | Optional | Special length | | | | | | |
| Vert-X | 2 | 8 | 0 | 1 | 7 | 3 | 6 | 2 | 5 | 1 | 1 | 0 | 2 |
| | | Electrical angle | | | Sensor principle | | | | | | | | |
| | | 36 | Standard | Electrical angle 360° | 7 | | | MH-C | | | | | |
| | | xx | Optional | 03 to 35; Declaration in 10° steps | | | | | | | | | |
| | | 99 | Optional | Special angle | | | | | | | | | |
| | | Mechanical version | | | | | | | | | | | |
| 2801 | Standard | 6mm shaft D-shape; IP54 | | | | | | | | | | | |
| 2821 | Optional | Push on coupling; IP54 | | | | | | | | | | | |
| 2831 | Standard | 6mm shaft D-shape; IP65 | | | | | | | | | | | |
| 2841 | Optional | Push on coupling; IP65 | | | | | | | | | | | |
| 2899 | Optional | Special shaft | | | | | | | | | | | |

| | MH-C | MH-C2 |
|---|------|-------|
| Custom shaft design | X | - |
| Custom cable / wires | X | - |
| Sample rate in fast mode | X | - |
| Switch functions TTL (max. 2) | X | - |
| Special characteristic curve | - | - |
| Special electrical angle within 30° to 360° (ex factory) | X | - |
| Electrical angle programmable (Software) | - | - |
| Start & end point settable (Additional wires) | - | - |
| Sense of rotation CW/CCW settable / programmable (Additional wires or Software) | - | - |
| Index point settable / programmable (Additional wires or Software) | - | - |

Options (on request)

Errors and omissions excepted. Subject to change without notice. State: 31.10.11

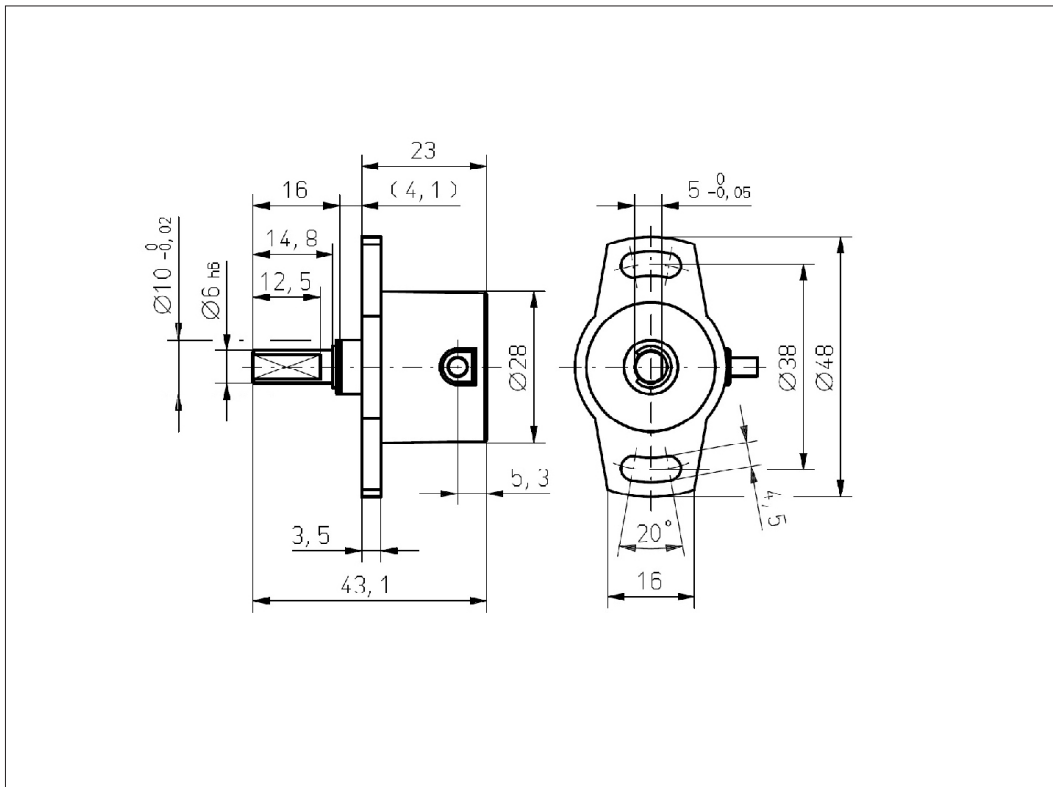
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Vert-X 2801
Vert-X 2831

Accessories (incl.)

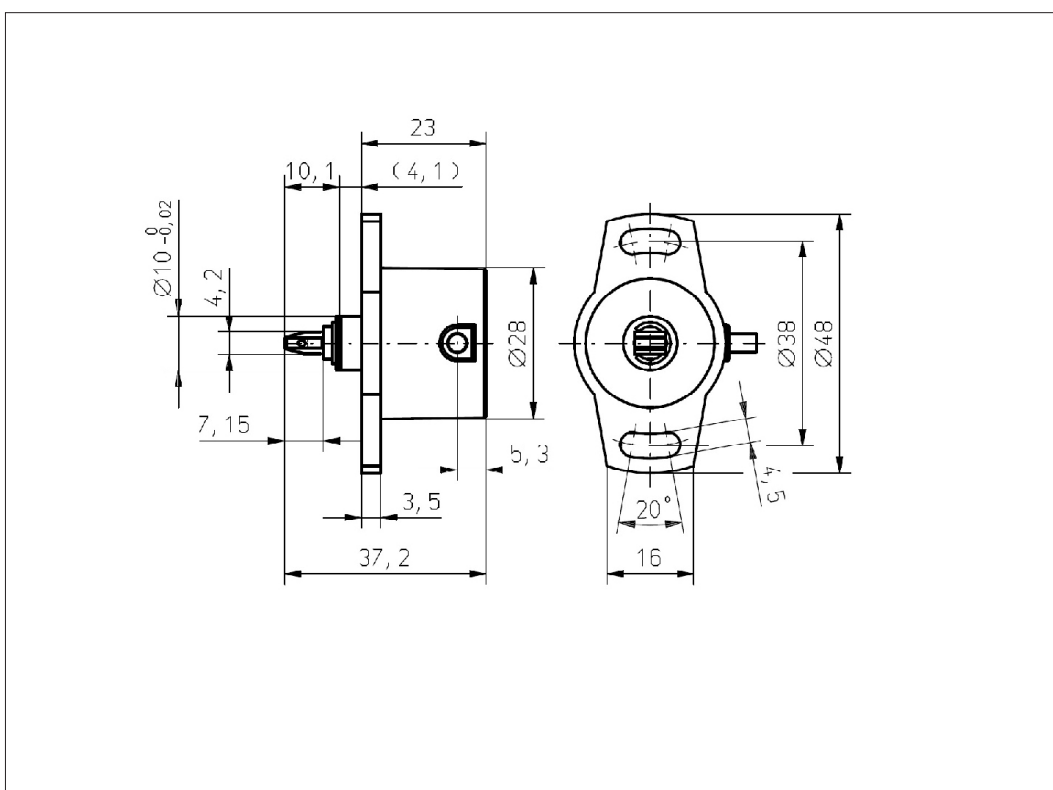
- None



Vert-X 2821
Vert-X 2841

Accessories (incl.)

- None



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