

Vert-X 22E - 5V / 10 ... 90% Ub / Redundant**22E1736223902****Technical datas**

Mechanical version	Magnetic actuator type 1
Sensor principle	MH-C
Electrical angle	Electrical angle 360°
Power supply voltage	5 VDC
Output signal	10% to 90% operating voltage
Output characteristics	Redundant, positive gradient CW
Electrical connection	Special cable; special wires
Length of wires / cable / ribbon < 1.0 m (cable)	

Electrical Datas

Measuring range	°	0...360
Indep. linearity (typ.)	% of measuring 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 output signal	ppm/K	50
MTTFd / MTBF		upon request
Power supply voltage	VDC	5 (±10 %)
Current consumption without load (typ.) fast mode, per channel	mA	(14)
Current consumption without load (typ.) slow mode, per channel	mA	9
Min. ohmic load at output	kOhm	10
Max. capacitive load at output	nF	100
Reverse polarity protection of power supply		yes
Electrical connection redundant axial		Ribbon cable, 6-pole
Electrical connection redundant radial		Round cable, 6-pole
Cross section of single wires redundant axial	mm ²	0.09 (AWG28)
Cross section of single wires redundant radial	mm ²	0.25 (AWG24)

Mechanical Datas

Mechanical range	°	360 (continuous)
Protection rating		IP68
Min. life	movements	no limitation
Operating & storage temperature (with ribbon cable)	°C	-40 ... +105
Operating & storage temperature (with cable)	°C	-40 ... +85
Operating & storage temperature (with wires)	°C	-40 ... +125
EN 60068-2-6, vibration (Amax = 0.75 mm, f = 5–2,000 Hz)	g	50
EN 60068-2-27, shock	g	200

MH-C features

- Resolution 12 bit
- Full redundancy possible
- Lower price than MH-C2

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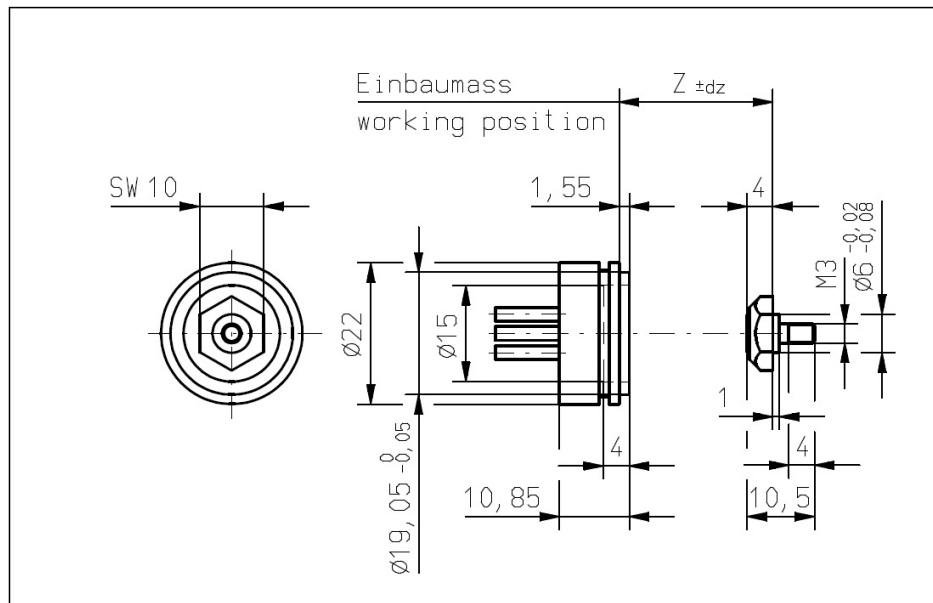
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**Standards**

EN 55011, Emission (Cl. B)		
EN 61000-4-2, ESD (contact discharge / air discharge)	kV	$\pm 4 / \pm 8$
EN 61000-4-3, Immision HF radiated (80–1000 MHz/1.4–2.7 GHz)	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 (0.15–80 MHz)	Vemf	10
EN 61000-4-8, Immision magnetic field (50 Hz)	A/m	300
Insulation resistance (500 VDC, 1 bar, 2s)	GOhm	20
Dielectric strength (VAC, 50 Hz, 1 min, 1 bar)	kV	1

Options

Custom modification of housing
Custom cable/wires
Custom magnetic actuator
Sample rate in fast mode
Switch functions TTL (max. 2)
Special electrical angle between 30 and 360° (ex factory)

**Accessories (incl.)**

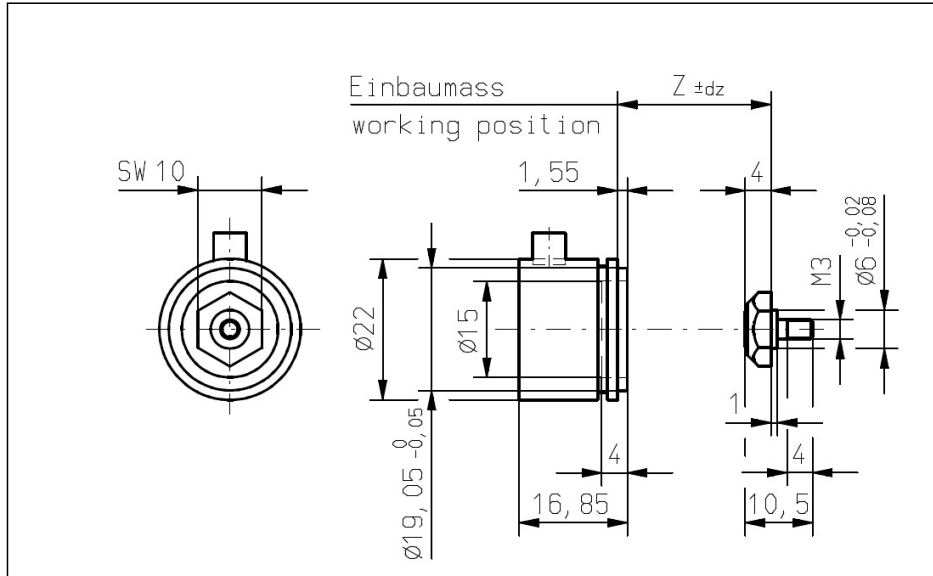
- 1x Fixation clip
- 2x Slotted cylinder head screw M3x8

Working position (Z) and max. permitted misalignment of the magnetic actuator

- see mounting information

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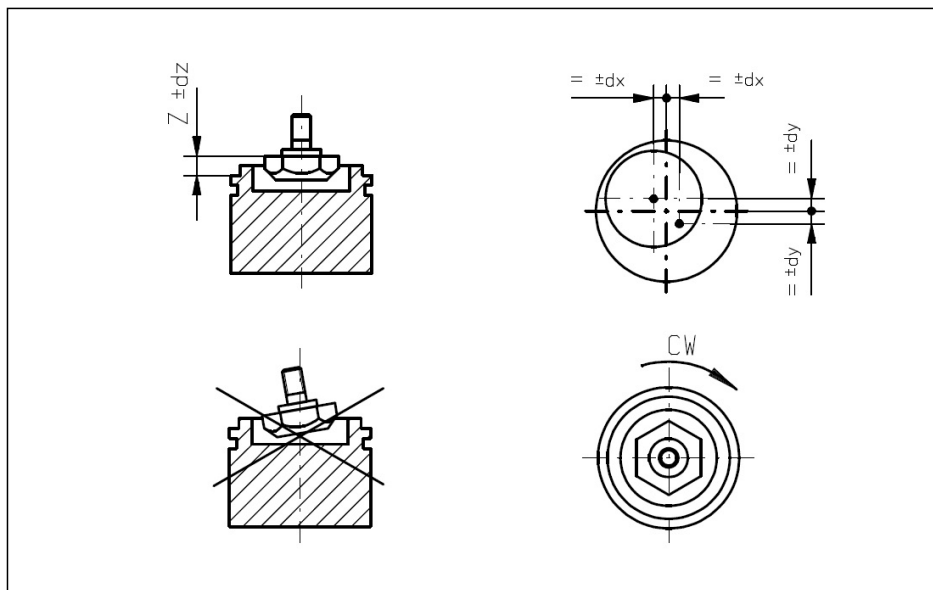


Accessories (incl.)

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Working position (Z) and max. permitted misalignment of the magnetic actuator

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Working position (Z)

- 3.00mm => Single
- 2.50mm => Redundant

Max. permitted misalignment of the magnetic actuator

- $\pm 0.25\text{mm}$ => dx
- $\pm 0.25\text{mm}$ => dy
- $\pm 0.50\text{mm}$ => dz

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Accessories

- Fixation clip

