

Vert-X 31E - 5V / SPI / Single**31E5a799281602****Technical datas**

Mechanical version	Magnetic actuator type 5
Mounting hole	Through-hole ø4.4 mm
Sensor principle	MH-C
Electrical angle	Special angle
Power supply voltage	5 VDC
Output signal	SPI
Output characteristics	Single, positive gradient CW
Electrical connection	Round cable, 6-pole
Length of cable	1.0 m (cable)

Electrical Datas

Measuring range	°	0...360
Indep. linearity (typ.)	% of measuring range	±0.3
Max. hysteresis	°	0.1
Resolution	bit	14
Max. repeatability	°	0.1
Sample rate fast mode	kHz	2.2
Sample rate slow mode	kHz	(0.55)
System propagation delay fast mode	µs	400
System propagation delay slow mode	µs	(600)
Max. temperature coefficient of output signal	ppm/K	25
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	-
Max. capacitive load at output	nF	-
Reverse polarity protection of power supply		yes
Electrical connection		Round cable, 6-pole
Cross section of single wires	mm ²	0.25 (AWG24)

Mechanical Datas

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

Standards

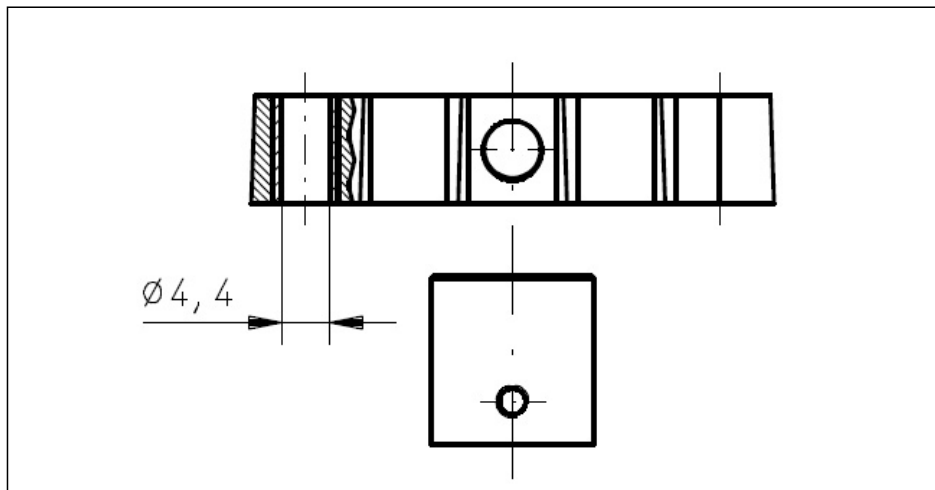
EN 55011, Emission (Cl. B)		
EN 61000-4-2, ESD (contact discharge / air discharge)	kV	±4 / ±8
EN 61000-4-3, Immision HF radiated (80–1000 MHz/1.4–2.7 GHz)	V/m	30
EN 61000-4-4, Burst (on all lines)	kV	±1
EN 61000-4-5, Surge (lines to ground)	kV	±1
EN 61000-4-6, Immision HF conducted (0.15–80 MHz)	Vemf	10

Features

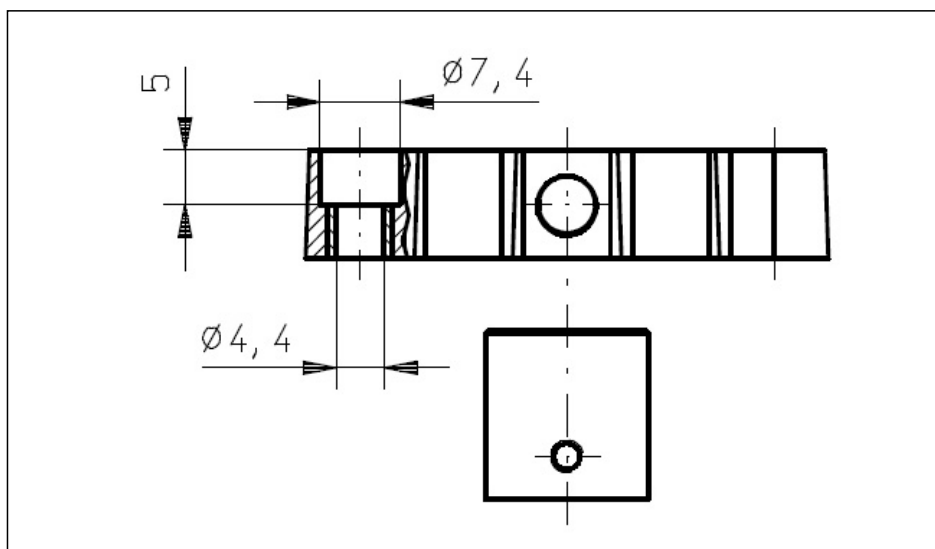
- High protection rating IP68
- Compact dimensions
- Non-contacting measuring method
- Very long life
- High measurement accuracy
- Can be used in harsh environments (humidity, dampness, dust, vibrations, etc.)
- Full resolution and accuracy at programmed electrical angle
- Magnetic loss detection (with safety flag)

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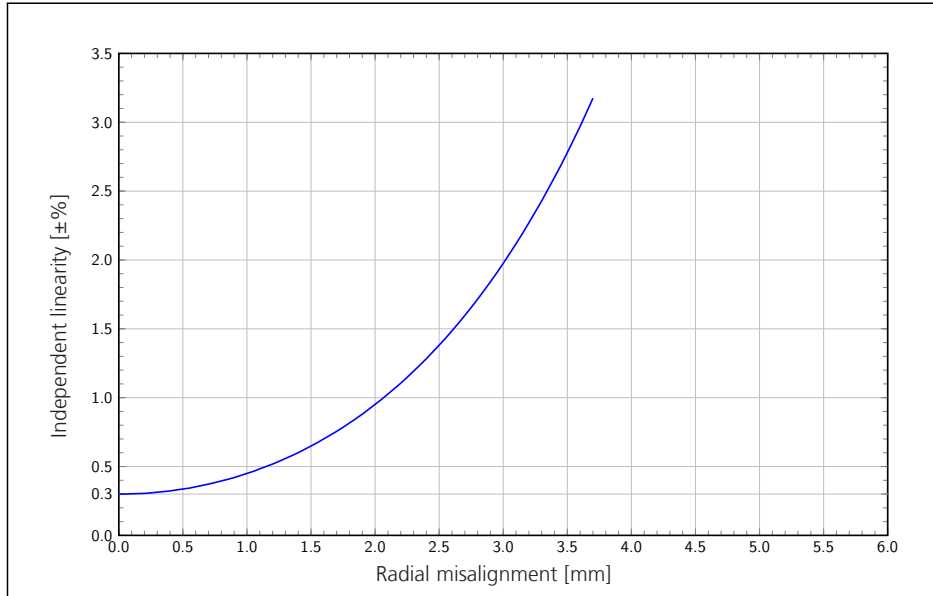
Vert-X 31E5a



Vert-X 31E5b

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Indep. linearity with radial misalignment (@360°)