

Vert-X 31E - 8 ... 35V / Inkremental Open collector**31E8aD36177602****Technical datas**

Mechanical version	Magnetic actuator type 8
Mounting hole	Through-hole ø4.4 mm
Sensor principle	MH-S
Electrical angle	Electrical angle 360°
Power supply voltage	24 VDC
Output signal	Incremental
Output characteristics / output d	Open collector (A,B,Z)
Electrical connection	Round cable, 6-pole
Length of cable	1.0 m (cable)

Electrical Datas

Measuring range	°	0...360
Indep. linearity (without misalignment)	%	±0.5
Indep. linearity (with permitted misalignment @ 360°)	%	±1
Max. hysteresis	°	0.5
Resolution	bit	256 (1-1024)
Max. repeatability	°	0.1
Max. temperature coefficient of output signal	ppm/K	50
MTTFd / MTBF		upon request
Power supply voltage	VDC	8 ... 35
Current consumption without load (typ.)	mA	20
Max. latency	µs	10
Max. current at output	mA	30
Max. voltage at output	VDC	35
Reverse polarity protection of power supply		yes
Electrical connection (A;B)		Round cable, 4-pole
Electrical connection (A;B;Z)		Round cable, 6-pole
Cross section of single wires (A;B)	mm²	0.35 (AWG22)
Cross section of single wires (A;B;Z)	mm²	0.25 (AWG24)
Redundancy possible		no

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
EN 61000-4-8, Immision magnetic field (50 Hz)	A/m	300
Insulation resistance (500 VDC, 1 bar, 2s)	GOhm	20

Features

- High protection rating IP68
- Compact dimensions
- Very quick, non-contacting measuring method
- Very long life
- Can be used in harsh environments (humidity, dampness, dust, vibrations, etc.)
- Several possible resolutions
- Low temperature coefficient of output signal

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Dielectric strength (VAC, 50 Hz, 1 min, 1 bar)

kV

1

Options

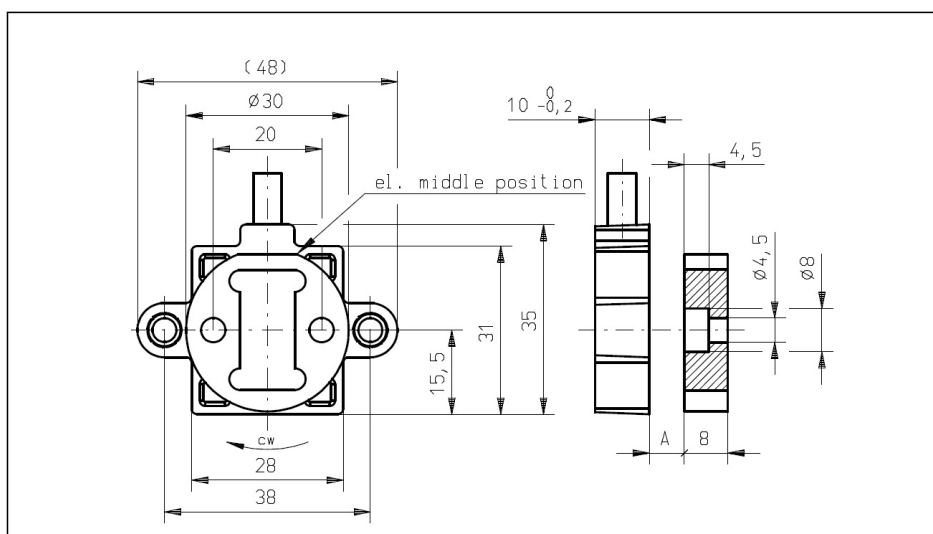
Custom cable

Custom magnetic actuator

Custom output driver

Custom resolution (1-1024 ppr)

Higher speed on request

**Operating range/Air gap (A)
Standard with Safety Flag**

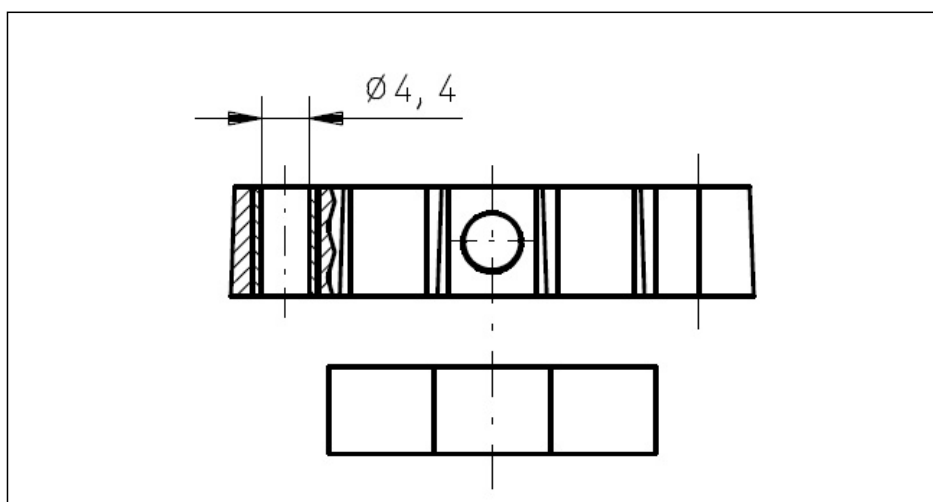
- 3.7 ... 12.8mm => Single
- 3.2 ... 12.3mm => Redundant

**Extended without Safety
Flag (Optional)**

- 3.7 ... 18.7mm => Single
- 3.2 ... 18.2mm => Redundant

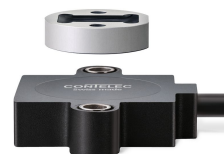
Features Safety Flag

- Detection of magnetic loss
- System shut-down in case of magnetic actuator out of valid operating range
- Recommended for safety relevant applications

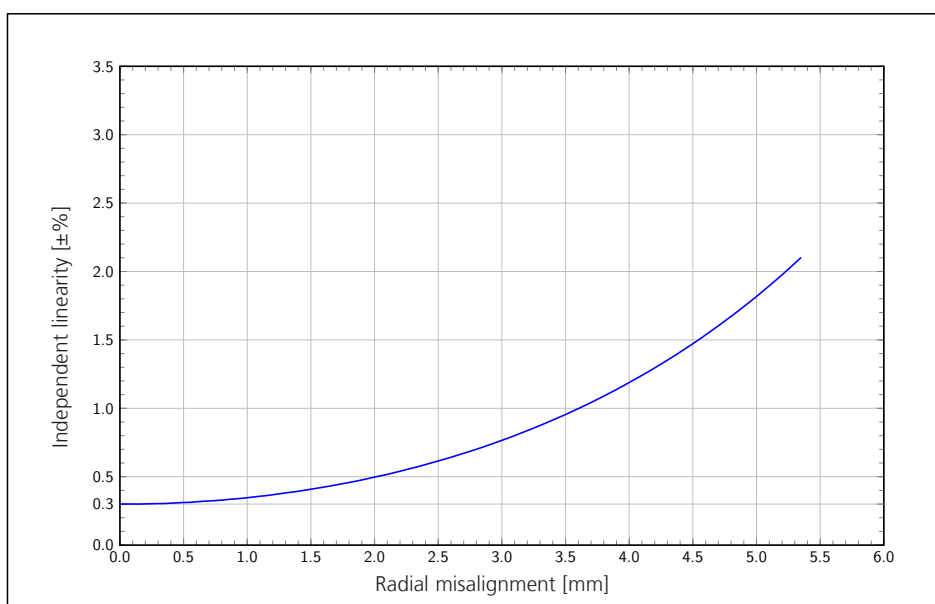
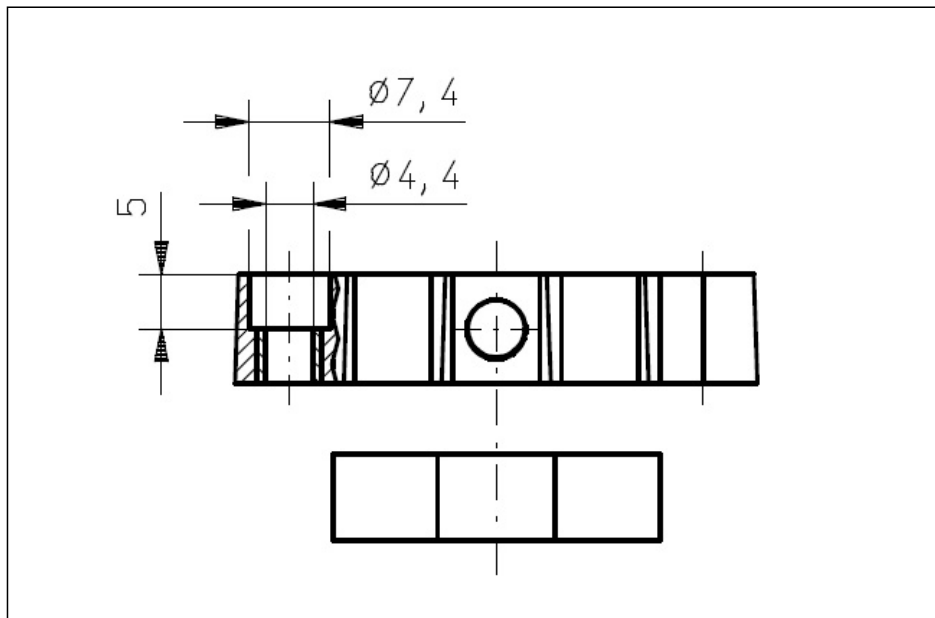
**Vert-X 31E8a**

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Vert-X 31E8b



Indep. linearity with radial misalignment (@360°)