

Vert-X 31E - 5V / SSI

Sensor principle		MH-X2
Electrical data		
Measuring range	°	0 ... 360
Indep. linearity (without misalignment)	%	±0.5
Indep. linearity (without allowed misalignment @ 360°)	%	±1
Max. hysteresis	°	0.5
Resolution	bit	12
Max. repeatability	°	0.35
Max. temperaturecoefficient of the output signal	ppm/°K	5
Power supply voltage	VDC	5 (±10%)
Reverse polarity protection of power supply		no
Redundancy feasible		no
Output driver TTL		
MTTFd / MTBF	years	715 / 715
Current consumption without load (typ.)	mA	18
Recomended ohmic load at output	kOhm	1
Max. capacitive load at output	nF	-
Electrical connection		Cable 4pole
Cross section of single wires	mm ²	0.35 (AWG22)
Output driver Differential RS-485		
MTTFd / MTBF	years	654 / 654
Current consumption without load (typ.)	mA	58
Recomended ohmic load at output	kOhm	0.12
Max. capacitive load at output	nF	-
Electrical connection		Cable 6pole
Cross section of single wires	mm ²	0.25 (AWG24)
Mechanical data		
Mechanical angle	°	360 (continuous)
Protection class		IP68
Min. life	movements	no limitation
Operating & storage temperature	°C	-40 ... +85
IEC 68-2-6 Vibration (Amax = 0.75mm, f = 5 ... 2000 Hz)	g	50
IEC 68-2-27 Shock	g	200
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, Immission 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, Immission HF conducted (0.15...80MHz)	Vemk	10
EN 61000-4-8, Immission 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

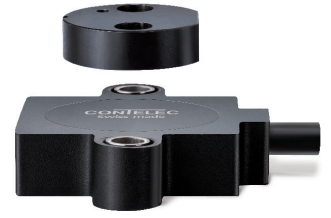
Applications

- Concrete pump
- E-Motor feedback system
- Fork lift

Features

- High protection class IP68
- Compact dimensions
- Very fast, non-contacting measuring method
- Very long life
- Applications under adverse ambient conditions possible (humidity, dampness, dust, vibrations etc.)
- Low temperaturecoefficient of the output signal

Errors and omissions excepted. Subject to change without notice. / State: 22.05.13



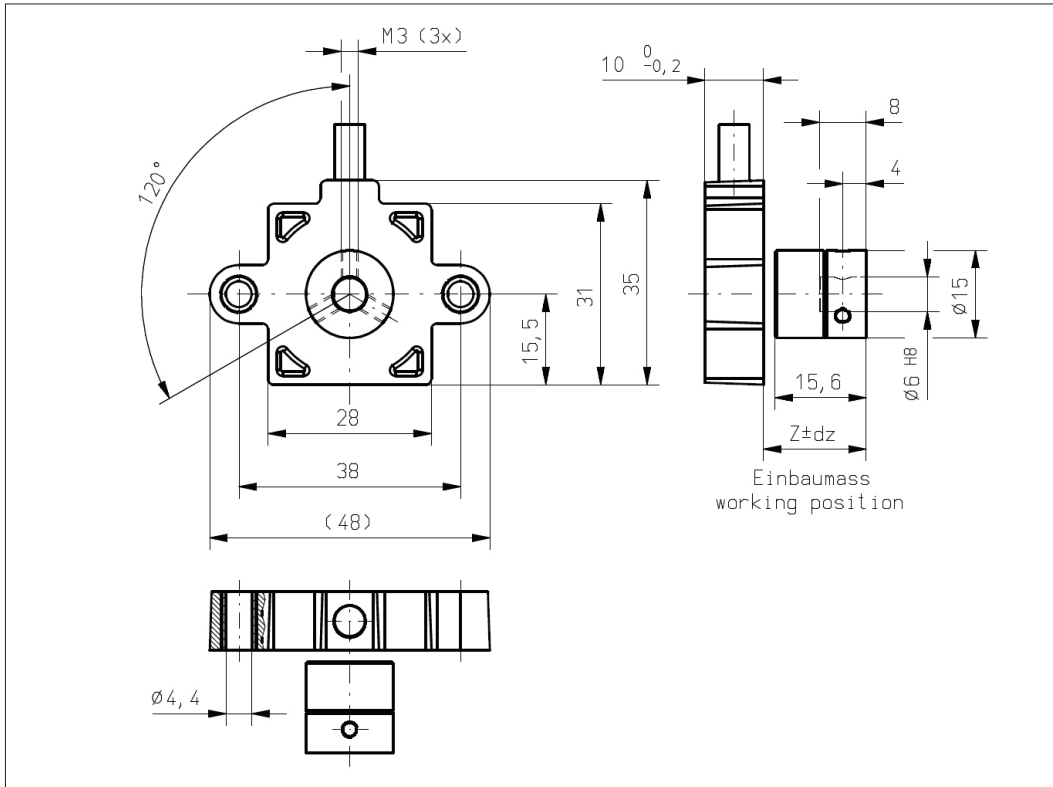
Vert-X 31E - 5V / SSI
Ordering code

												Output characteristics / Output driver TTL Standard 1 Differential RS-485 Optional 3			Electrical connection 6 Optional Cable 6pole 8 Standard Cable 4pole 9 Optional Special cable		
												Output signal SSI Standard 6			Length of cable 02 Standard 1.0m 06 Optional 3.0m 10 Optional 5.0m 99 Optional Special length		
												Power supply voltage 5VDC Standard 2					
Vert-X	3	1	E	5	a	6	3	6	2	6	1	8	0	2			
												Electrical angle 36 Standard Electrical angle 360°					
												Sensor principle 6 MH-X2					
												Mounting hole a Standard Through-hole ø 4.4mm b Optional Through-hole ø 4.4mm with counterbore ø 7.4mm					
												Mechanical version 31E5 Standard Magnetic actuator type 5 31E6 Standard Magnetic actuator type 6 31E7 Optional Magnetic actuator type 7 31E9 Optional Special magnetic actuator					

	MH-X2
Custom magnetic actuator	X
Custom cable	X

Options (on request)

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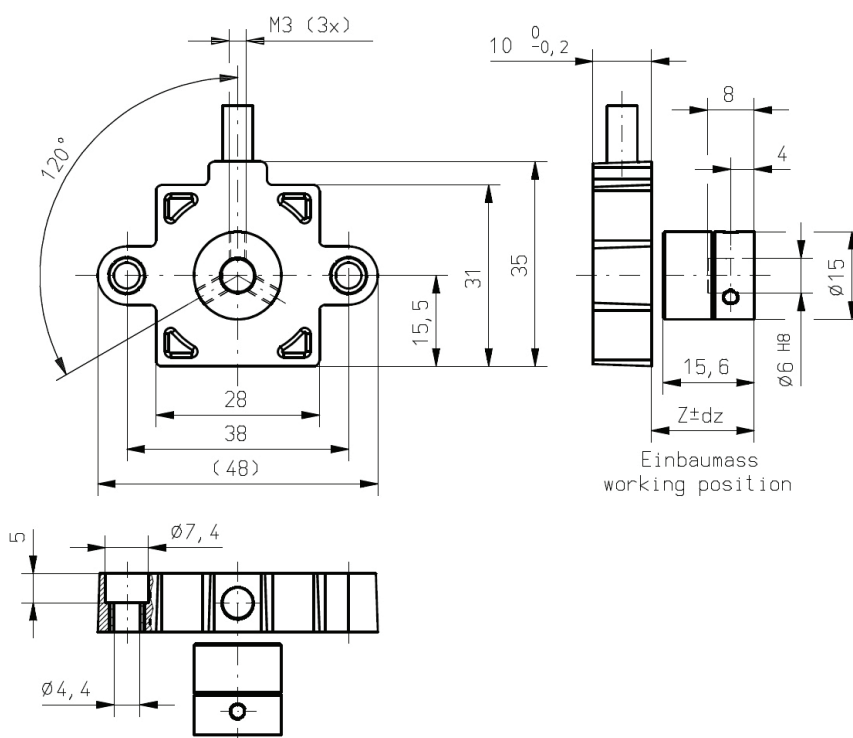
Vert-X 31E5axxx xxx xxx

Accessoires (incl.)

- None

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

see mounting information



Vert-X 31E5bxxx xxx xxx

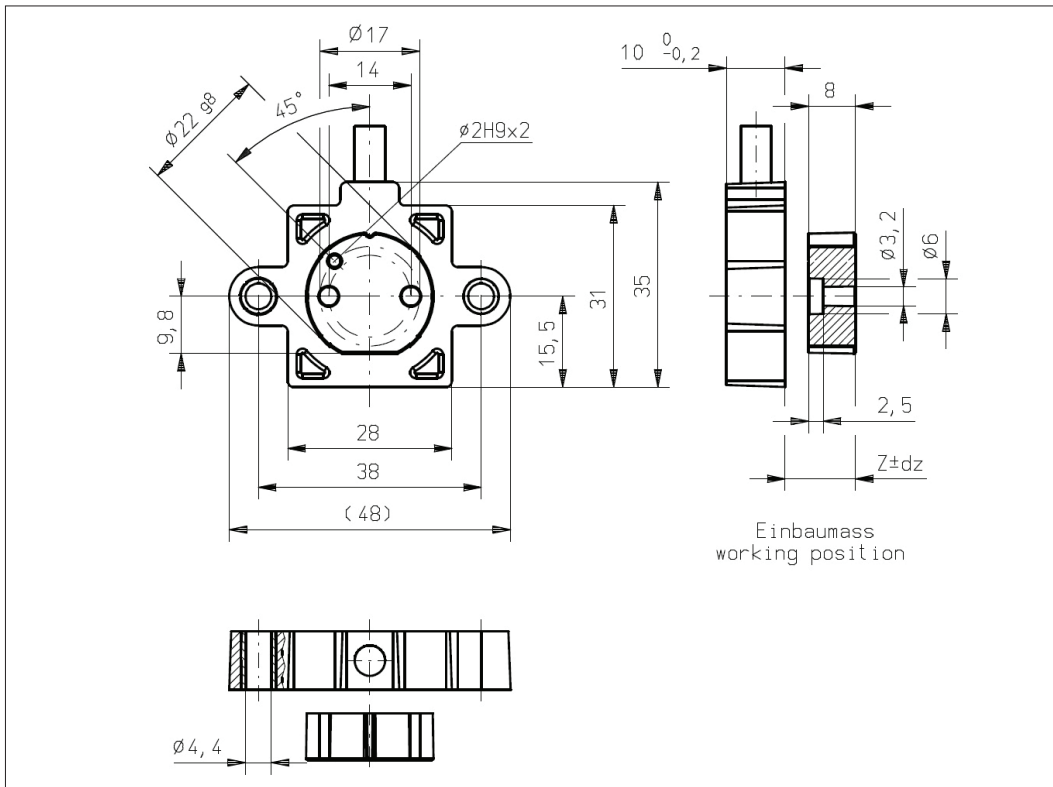
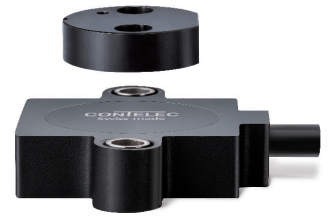
Accessoires (incl.)

- None

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

see mounting information

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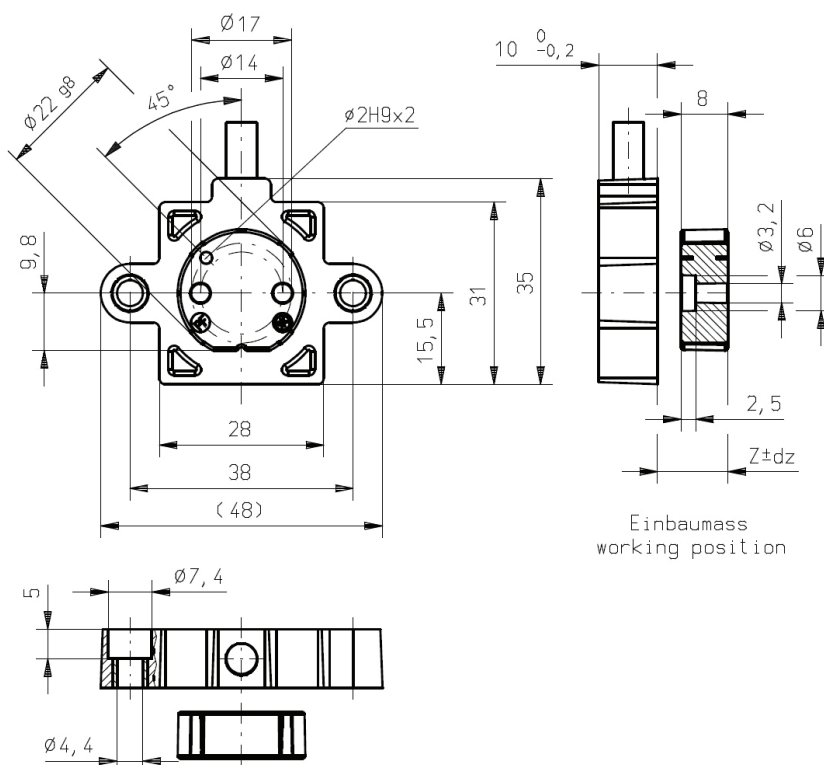
Vert-X 31E6axxx xxx xxx

Accessoires (incl.)

- None

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

see mounting information



Vert-X 31E6bxxx xxx xxx

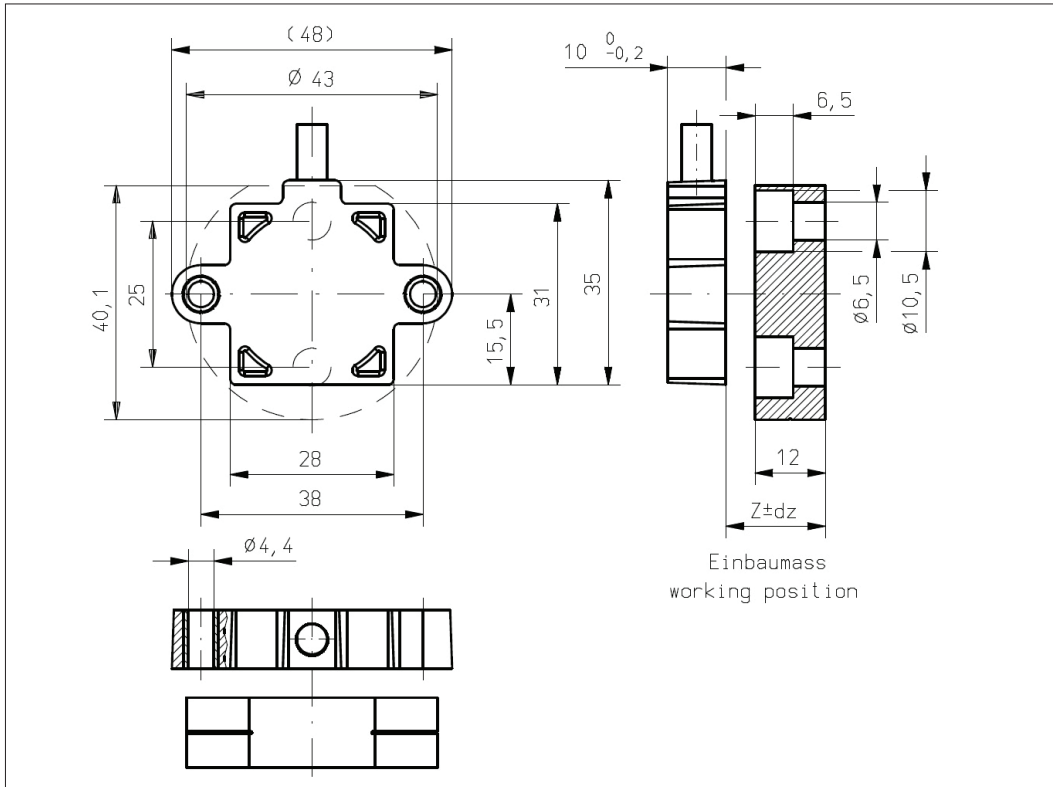
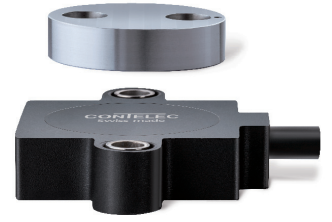
Accessoires (incl.)

- None

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

see mounting information

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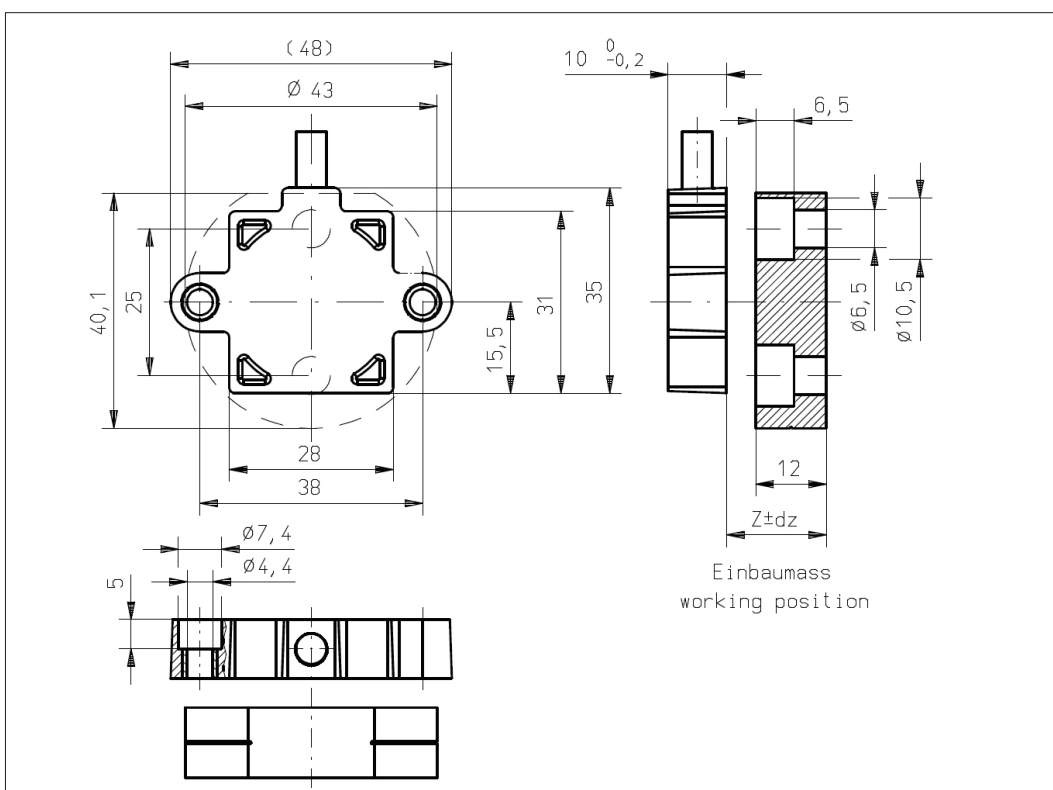
Vert-X 31E7axxx xxx xxx

Accessoires (incl.)

- None

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

see mounting information



Vert-X 31E7bxxx xxx xxx

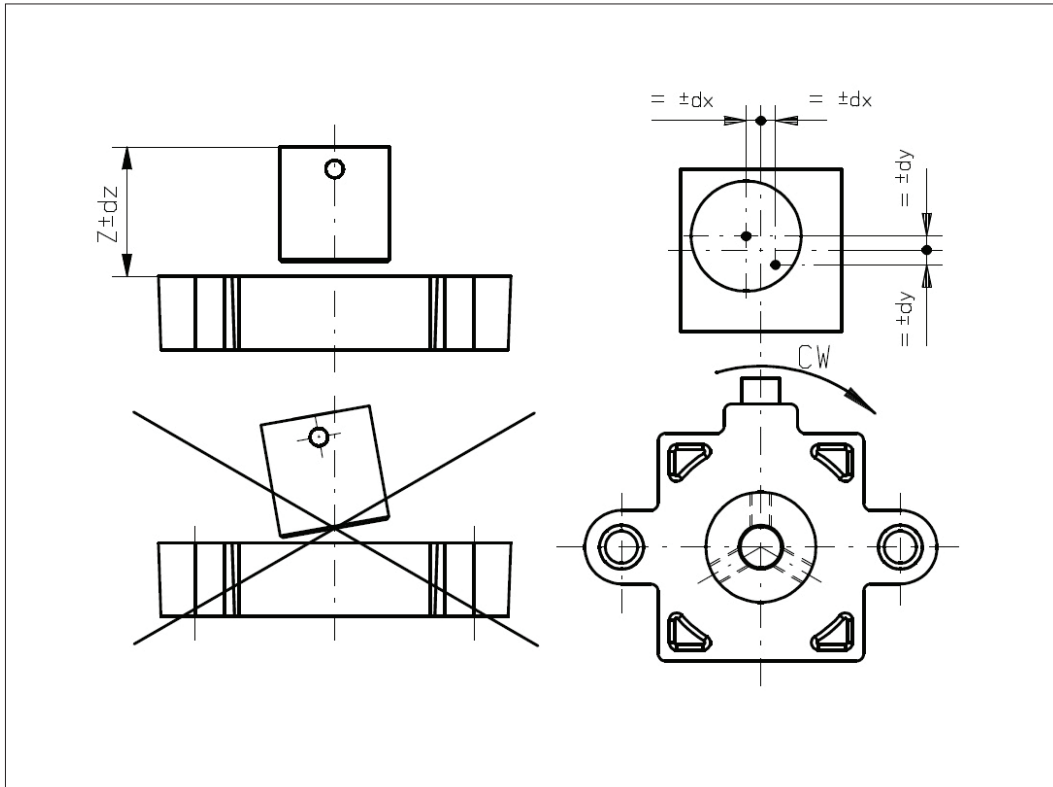
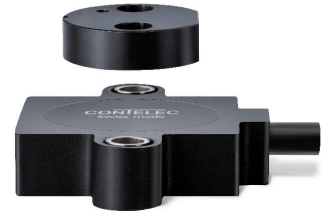
Accessoires (incl.)

- None

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

see mounting information

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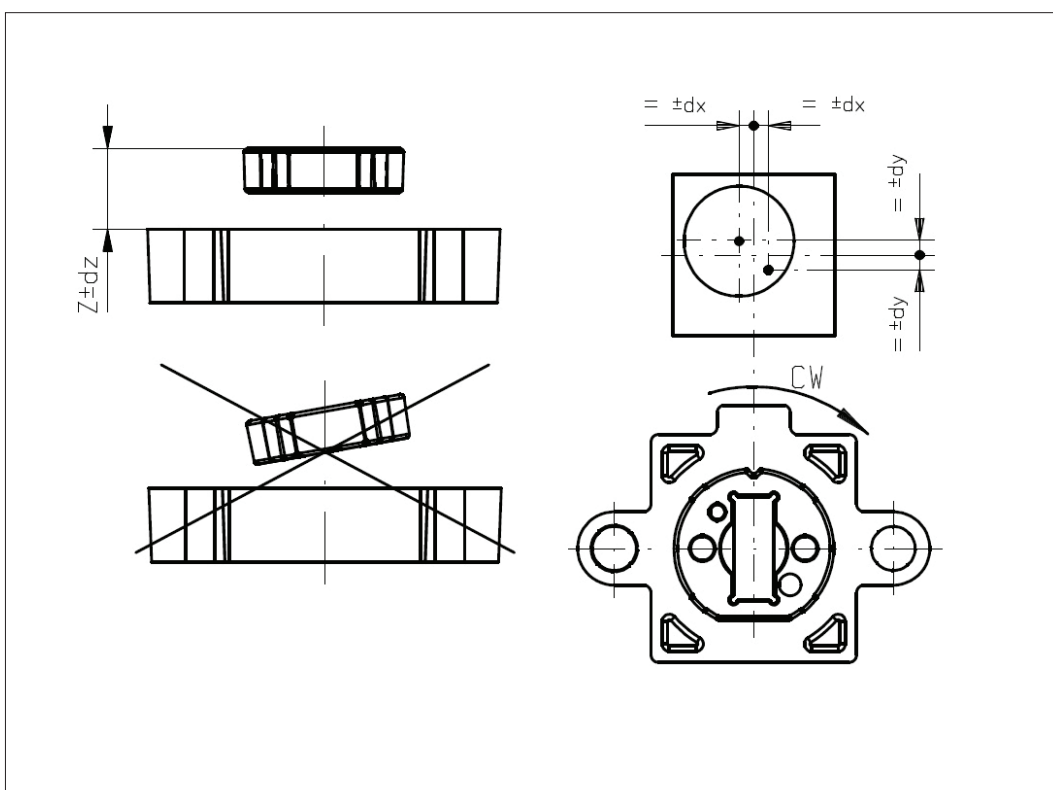
Vert-X 31E5

Mounting information

Working position (Z)
MH-X2 16.10mm

Max. permitted misalignment of the magnetic actuator

dx	±0.50mm
dy	±0.50mm
dz	±0.30mm



Vert-X 31E6

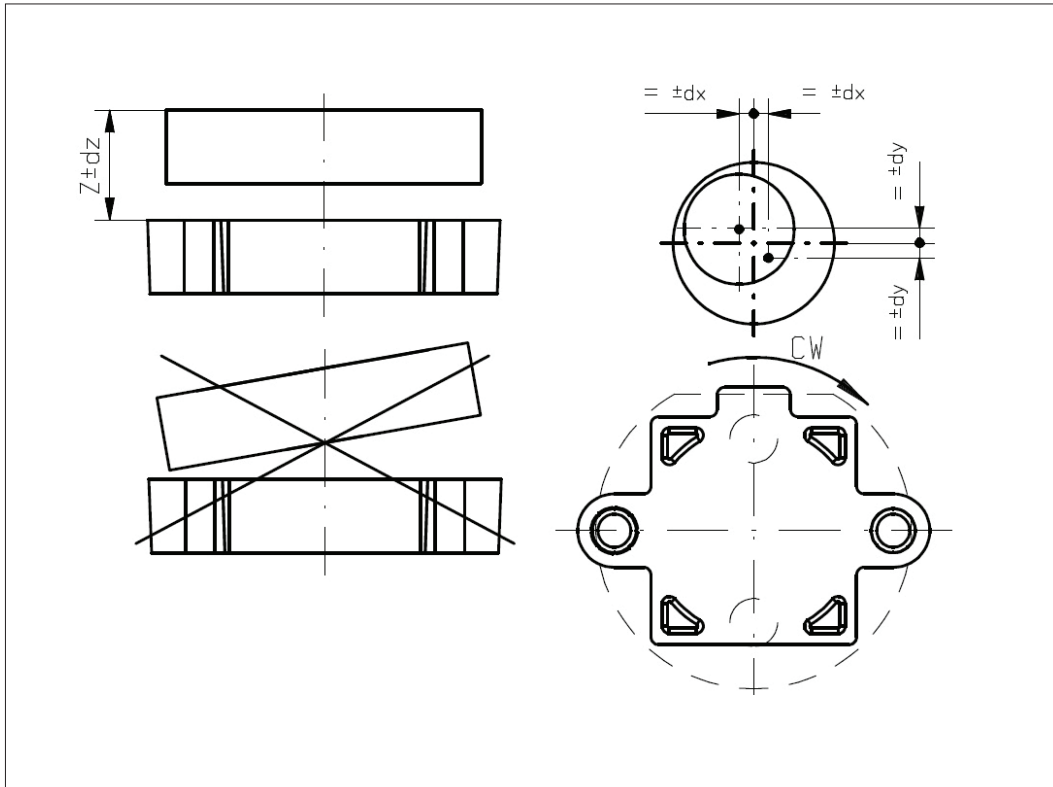
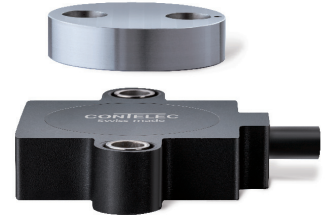
Mounting information

Working position (Z)
MH-X2 8.70mm

Max. permitted misalignment of the magnetic actuator

dx	±0.50mm
dy	±0.50mm
dz	±0.50mm

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Vert-X 31E7

Mounting information

Working position (Z)
MH-X2 13.00mm

Max. permitted misalign- ment of the magnetic actuator

dx	$\pm 1.00\text{mm}$
dy	$\pm 1.00\text{mm}$
dz	$\pm 0.80\text{mm}$

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