

Vert-X 05E 5V / Incremental

Application

- E-Motor Feedback-System

Features

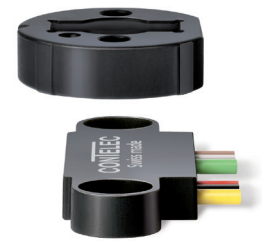
- High protection class IP68
- Flat design (5mm)
- Measuring system only 6mm from the edge. This enables the use with rotation centers close to a wall
- Select CW or CCW by Flip-assembly
- Non-contacting measuring method
- Very long life
- High accuracy of measurement
- Applications under adverse ambient conditions possible (humidity, dampness, dust, vibrations etc.)
- Several possible resolutions

Sensor principle		MH-X2
Electrical Data		
Measuring range	°	0 ... 360
Indep. linearity (without misalignment)	%	±0.5
Indep. linearity (with allowed misalignment @ 360°)	%	±1
Max. hysteresis	°	0.5
Resolution	ppr/channel	256 (1-128 ; 512 ; 1024)
Max. repeatability	°	0.2
Max. temperature coefficient 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	711 / 711
Current consumption without load (typ.)	mA	18
Recommended ohmic load at output	kOhm	1
Max. capacitive load at output	nF	1
Electrical connection (A;B)		Wires (4x)
Cross section of single wires (A;B)	mm ²	0.5 (AWG20)
Electrical connection (A;B;Z)		Wires (5x)
Cross section of single wires (A;B;Z)	mm ²	0.5 (AWG20)
Output driver Open collector		
MTTFd / MTBF	years	479 / 479
Current consumption without load (typ.)	mA	18
Max. output current	mA	30
Max. output voltage	VDC	35
Electrical connection (A;B)		Wires (4x)
Cross section of single wires (A;B)	mm ²	0.5 (AWG20)
Electrical connection (A;B;Z)		Wires (5x)
Cross section of single wires (A;B;Z)	mm ²	0.5 (AWG20)
Mechanical Data		
Mechanical range	°	360 (continuous)
Protection class		IP68
Min. life	movements	no limitation
Operating & storage temperature	°C	-40 ... +125
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

Errors and omissions excepted. Subject to change without notice. State: 17.10.13

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Vert-X 05E 5V / Incremental
Ordering code

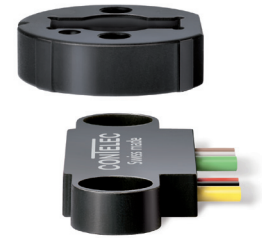
		Output characteristics / Output driver			Electrical connection								
		TTL (A,B,Z)	Standard	1	3	Optional	Wires 4pole						
		TTL (A,B)	Optional	2	7	Standard	Wires 5pole						
		Open collector (A,B,Z)	Optional	7	9	Optional	Special wires						
		Open collector (A,B)	Optional	8	P	Standard	Pins						
		Special output driver	Optional	9									
		Output signal			Length of wires								
		Incremental	Standard	7	02	Standard	20cm						
					05	Optional	50cm						
					99	Optional	Special length						
		Power supply voltage			Number of pins								
		5VDC	Standard	2	06	Standard	6 Pins						
Vert-X	0	5	E	6	6	3	6	2	7	1	7	0	2
					Electrical angle								
					36	Standard	Electrical angle 360°						
					Sensor principle								
					6	MH-X2							
					Mechanical version								
		05E6	Standard	Magnetic actuator type 6									
		05E9	Optional	Special magnetic actuator									

	MH-X2
Custom magnetic actuator	X
Custom wires	X
Custom output driver	X
Custom resolution (1-128 ; 512 ; 1024ppr)	X

Options (on request)

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Vert-X 05E6 xxx xx1 7xx
Vert-X 05E6 xxx xx2 3xx

Accessoires (incl.)

- None

Working position (Z1)

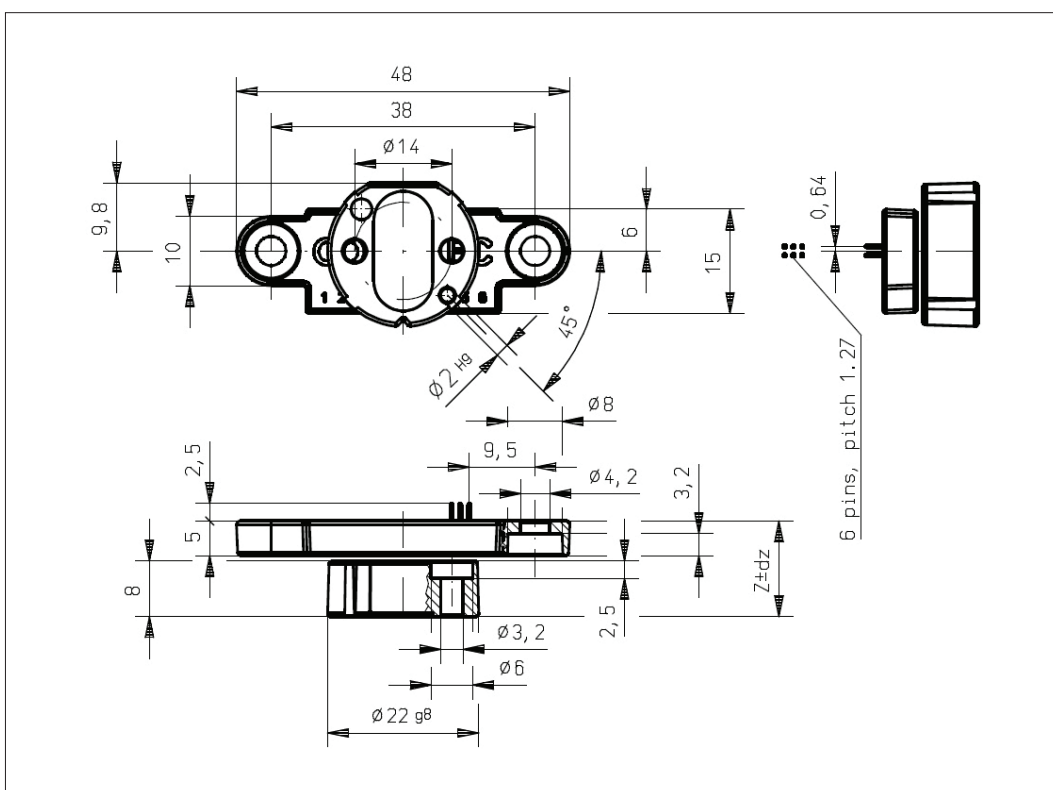
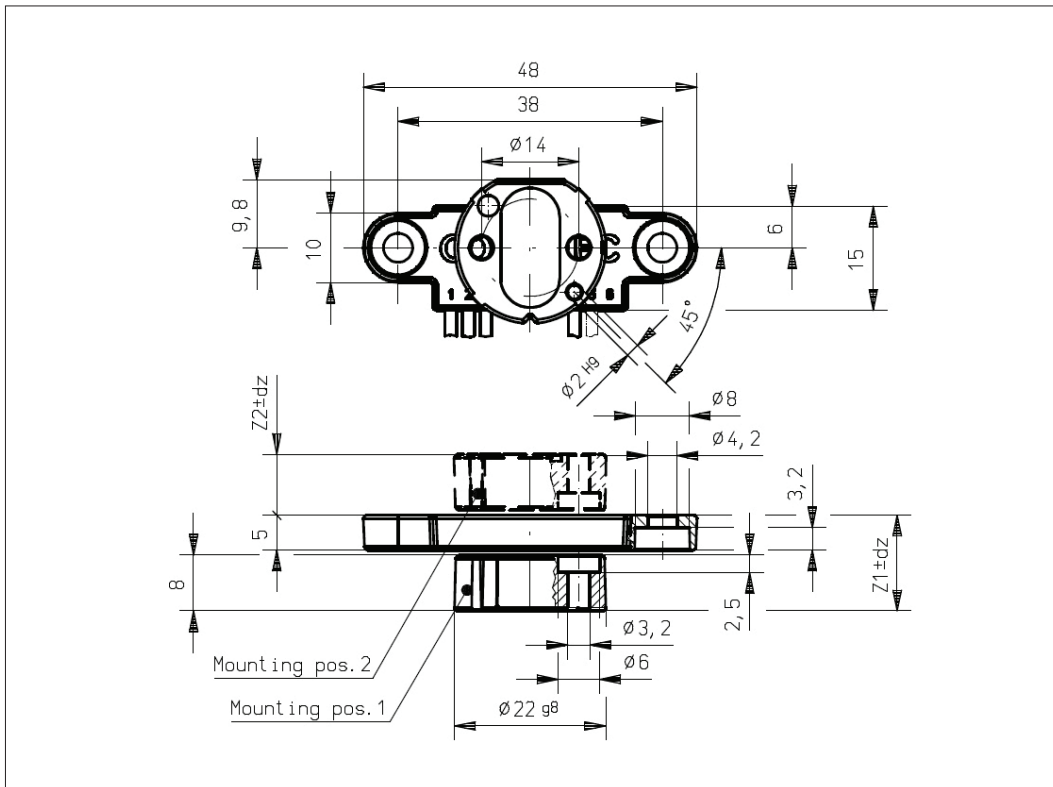
MH-X2 13.60mm

Working position (Z2)

MH-X2 8.60mm

Max. permitted misalignment of the magnetic actuator

see mounting information



Vert-X 05E6 xxx xx1 P06
Vert-X 05E6 xxx xx2 P06

Accessoires (incl.)

- None

Working position (Z)

MH-X2 13.60mm

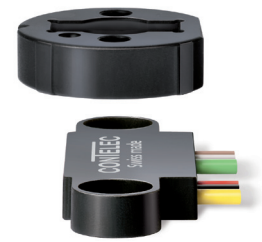
Max. permitted misalignment of the magnetic actuator

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Vert-X 05E6 xxx xx7 7xx
Vert-X 05E6 xxx xx8 3xx

Accessoires (incl.)

- None

Working position (Z1)

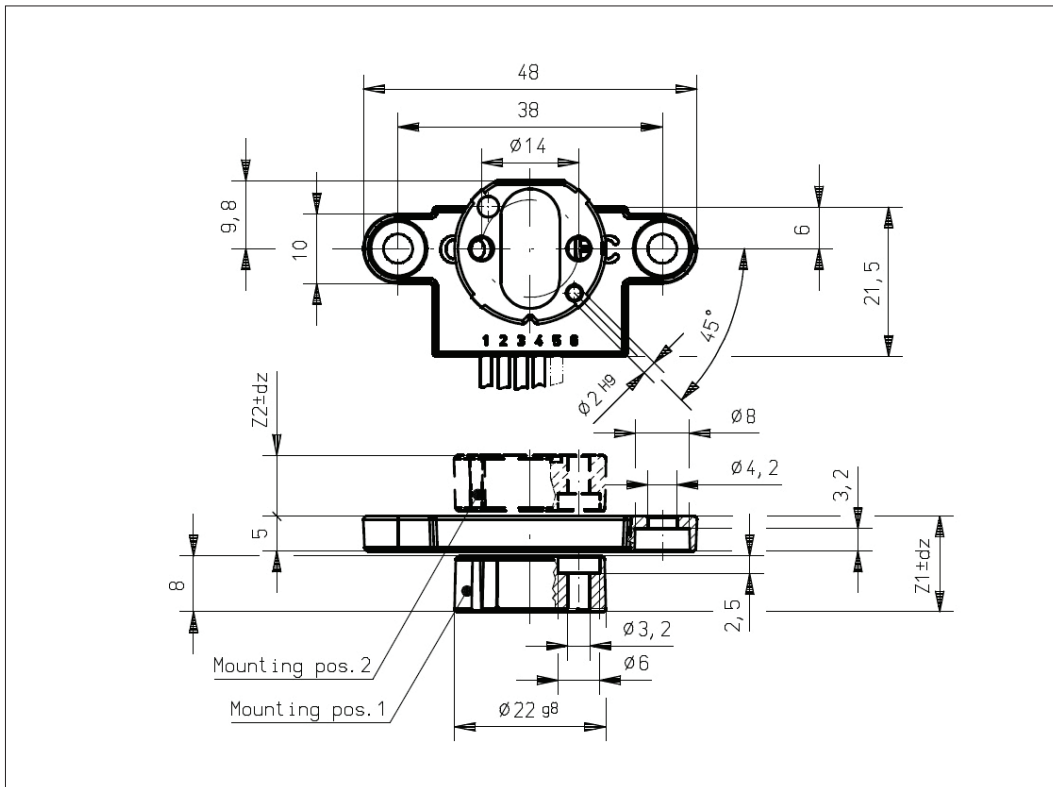
MH-X2 13.60mm

Working position (Z2)

MH-X2 8.60mm

Max. permitted misalignment of the magnetic actuator

see mounting information



Vert-X 05E6 xxx xx7 P06
Vert-X 05E6 xxx xx8 P06

Accessoires (incl.)

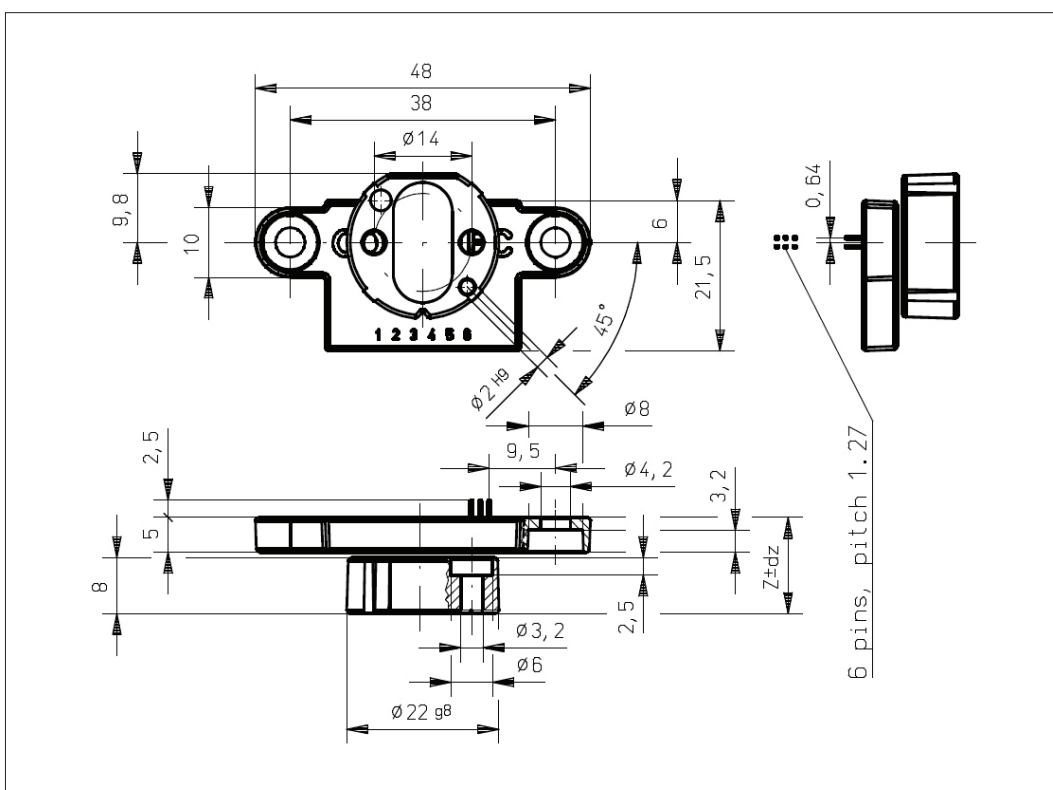
- None

Working position (Z)

MH-X2 13.60mm

Max. permitted misalignment of the magnetic actuator

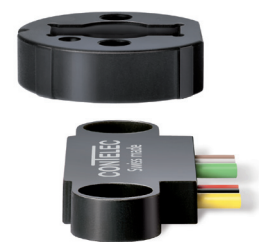
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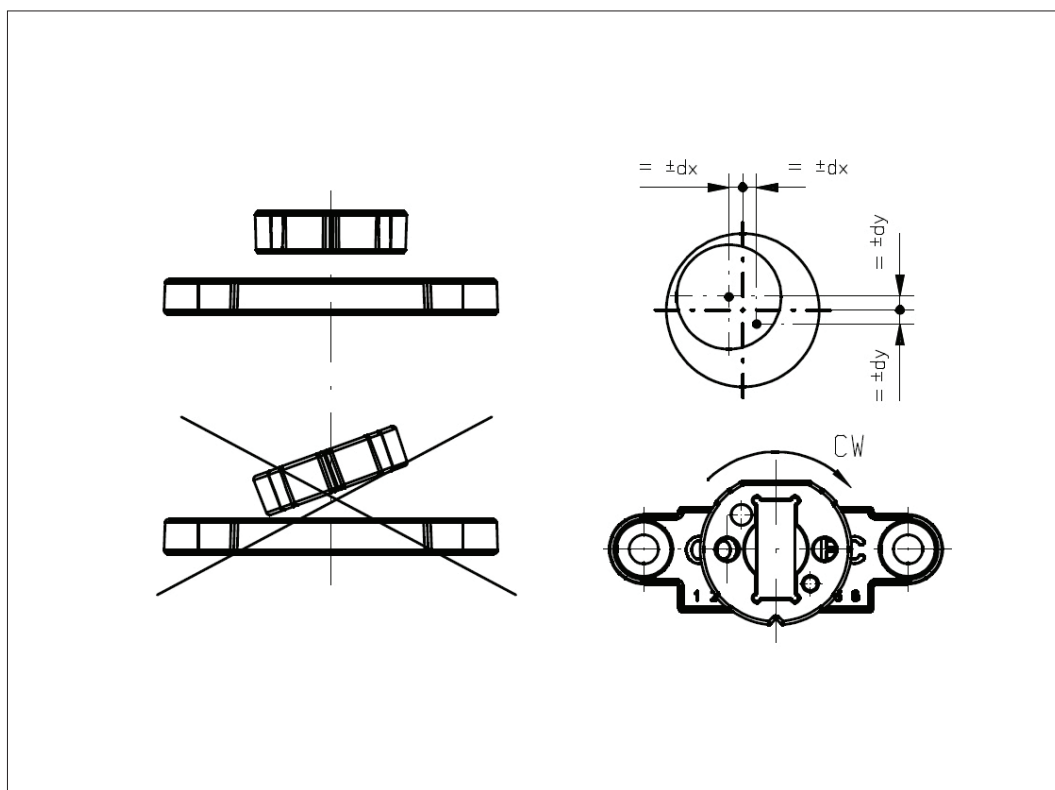
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**Vert-X 05E6
Mounting information**

Max. permitted misalignment of the magnetic actuator

dx	±0.75mm
dy	±0.75mm
dz	±0.50mm



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