

Vert-X 05E 5V / 10...90% Ub

Application

- Access control systems
- Forklift

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.)
- Full resolution and accuracy at programmed electrical angle

Sensor principle

MH-C

Electrical Data

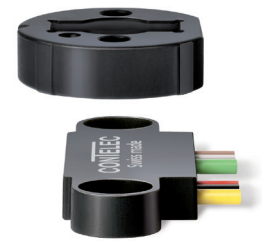
Measuring range	°	0 ... 360
Indep. linearity (without misalignment)	% of meas. range	±0.3
Indep. linearity (with allowed misalignment @ 360°)	% of meas. range	±0.5
Max. hysteresis	°	0.1
Resolution	bit	12
Max. repeatability	°	0.1
Sample rate fast mode	kHz	(5)
Sample rate slow mode	kHz	1.66
System propagation delay fast mode	µs	(800)
System propagation delay slow mode	µs	4600
Max. temperature coefficient of the output signal	ppm/°K	50
MTTFd / MTBF	years	668 / 668
Power supply voltage	VDC	5 (±10%)
Current consumption without load (typ.) fast mode	mA	(14)
Current consumption without load (typ.) slow mode	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		Wires (3x)
Cross section of single wires	mm ²	0.5 (AWG20)
Redundancy feasible		yes
Electrical connection redundant		Wires (6x)
Cross section of single wires redundant	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,		



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Ordering code

Output characteristics		Electrical connection	
Positive gradient CW	Standard 1	1	Optional Wires 6pole
Positive gradient CCW	Optional 2	2	Standard Wires 3pole
Redundant, positive gradient CW	Optional 3	3	Optional Wires 4pole
Redundant, positive gradient CCW	Optional 4	9	Optional Special wires
Redundant, crossed signal curves	Optional 5	P	Standard Pins
Output signal		Length of wires	
10% ... 90% Ub	Standard 2	02	Standard 20cm
x% ... y% Ub (within 5 ... 95%)	Optional 3	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	7	3	6	2	2	1	2	0	2
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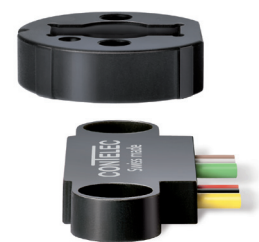
Electrical angle		Sensor principle	
36	Standard	7	MH-C
xx	Optional		
99	Optional		

Electrical angle 360°
 03 to 35; Declaration in 10° steps
 Special angle

Mechanical version		
05E6	Standard	Magnetic actuator type 6
05E9	Optional	Special magnetic actuator

	MH-C
Custom magnetic actuator	X
Custom wires	X
Interface x% ... y% Ub (within 5% ... 95% Ub)	X
Sample rate in fast mode	X
Special electrical angle within 30° to 360° (ex factory)	X

Options (on request)



Vert-X 05E6 xxx xxx 1xx
 Vert-X 05E6 xxx xxx 2xx
 Vert-X 05E6 xxx xxx 3xx

Accessoires (incl.)

- None

Working position (Z1)

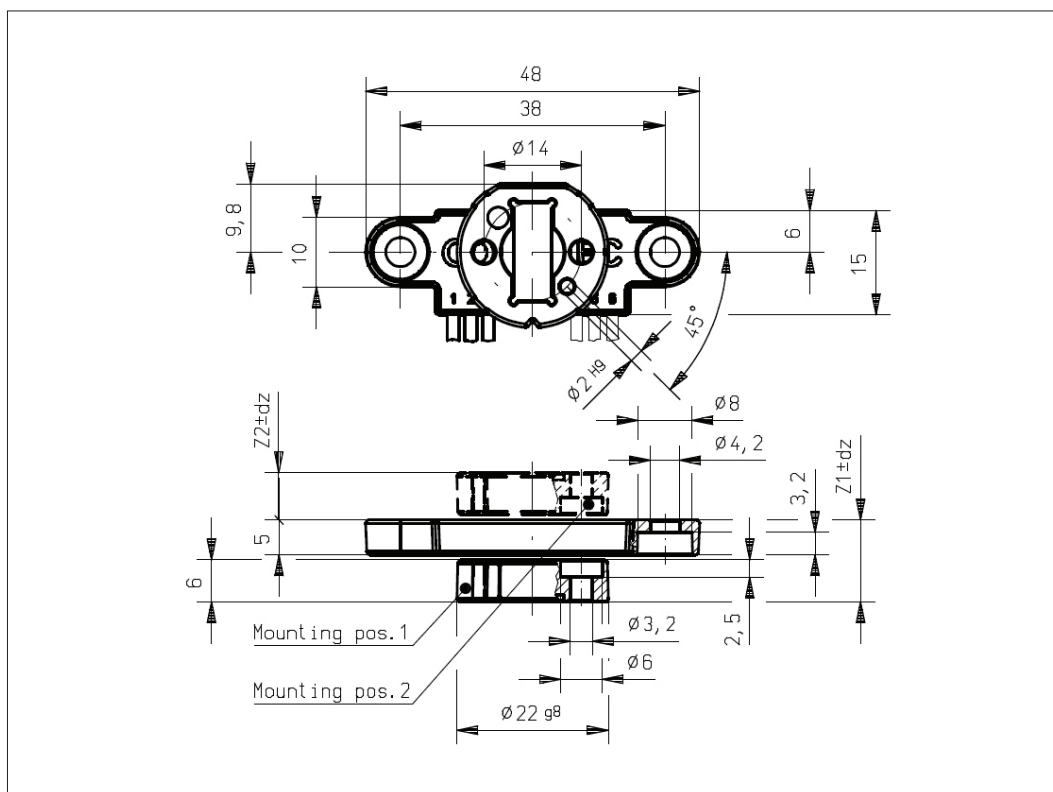
MH-C	13.00mm
MH-C redundant	13.00mm

Working position (Z2)

MH-C	8.00mm
MH-C redundant	8.00mm

Max. permitted misalignment of the magnetic actuator

see mounting information



Vert-X 05E6

Accessoires (incl.)

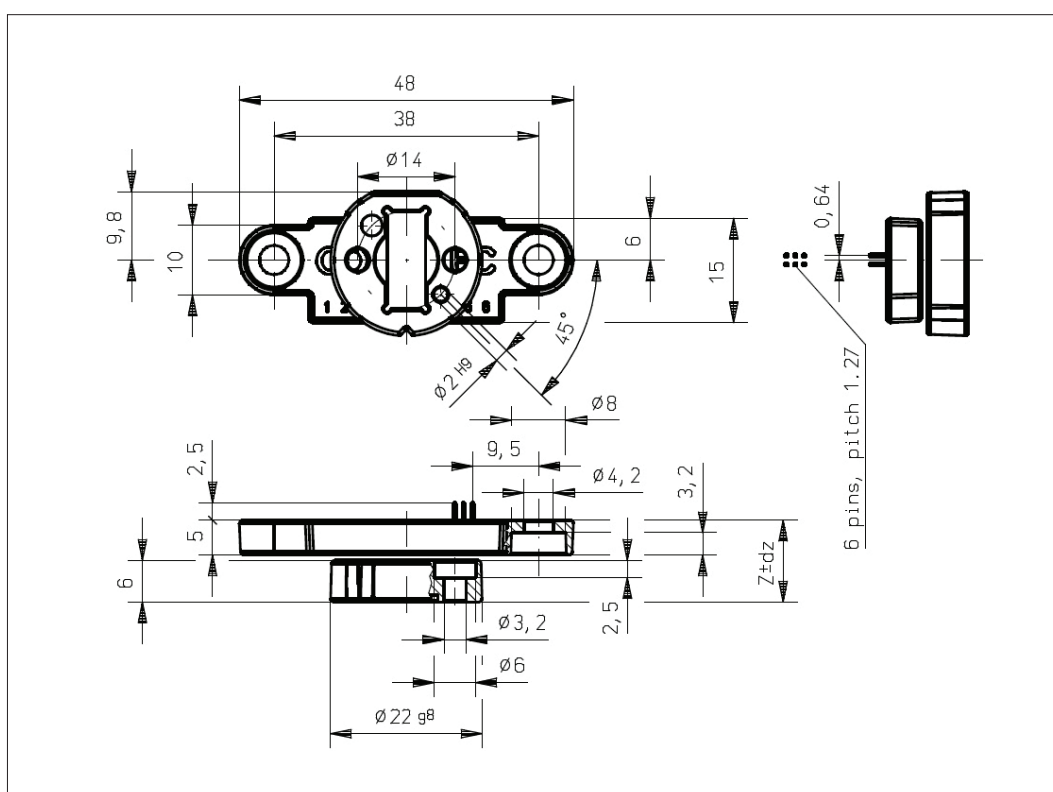
- None

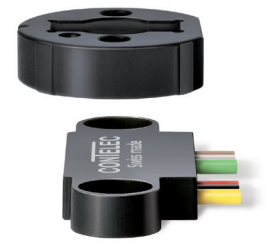
Working position (Z)

MH-C	13.00mm
MH-C redundant	13.00mm

Max. permitted misalignment of the magnetic actuator

see mounting





Vert-X 05E6
Mounting information

**Max. permitted misalign-
 ment of the magnetic
 actuator**

dx	±1.00mm
dy	±1.00mm
dz	±0.50mm

