

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

### Application

- Access control systems
- Forklift

### Features

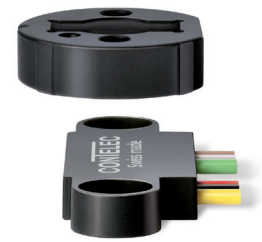
- High protection class IP68
- Flat design (5mm)
- Measuring system only 6mm from the edge. This enables the use with rotation centers close to a wall
- Select CW or CCW by Flip-assembly
- Non-contacting measuring method
- Very long life
- High accuracy of measurement
- Applications under adverse ambient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

Sensor principle		MH-C
<b>Electrical Data</b>		
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 <sup>2</sup>	0.5 (AWG20)
Redundancy feasible		yes
Electrical connection redundant		Wires (6x)
Cross section of single wires redundant	mm <sup>2</sup>	0.5 (AWG20)
<b>Mechanical Data</b>		
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
<b>Standards</b>		
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: 21.10.13

Contelec AG  
 Portstrasse 38  
 CH-2503 Biel/Bienne  
 Phone +41 (0)32 3665600  
 Telefax +41 (0)32 3665604  
 sales@contelec.ch

**CONTELEC**  
 A company of the Siedle-Group



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

		<b>Output characteristics</b>						<b>Electrical connection</b>					
		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			
					<b>Output signal</b>			<b>Length of wires</b>					
		10% ... 90% Ub	Standard	2				02	Standard	20cm			
		x% ... y% Ub (within 5 ... 95%)	Optional	3				05	Optional	50cm			
								99	Optional	Special length			
		<b>Power supply voltage</b>						<b>Number of pins</b>					
		5VDC	Standard	2				06	Standard	6 Pins			
<b>Vert-X</b>	<b>0</b>	<b>5</b>	<b>E</b>	<b>6</b>	<b>7</b>	<b>3</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>2</b>
					<b>Electrical angle</b>								
					36	Standard	Electrical angle 360°						
					xx	Optional	03 to 35; Declaration in 10° steps						
					99	Optional	Special angle						
					<b>Sensor principle</b>								
					7	MH-C							
		<b>Mechanical version</b>											
		05E6	Standard	Magnetic actuator type 6									
		05E9	Optional	Special magnetic actuator									

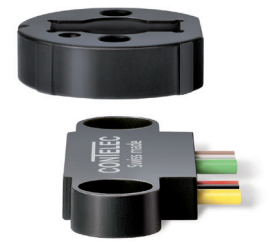
	MH-C
Custom magnetic actuator	X
Custom wires	X
Interface x% ... y% Ub (within 5% ... 95% Ub)	X
Sample rate in fast mode	X
Special electrical angle within 30° to 360° (ex factory)	X

**Options (on request)**

Errors and omissions excepted. Subject to change without notice. State: 21.10.13

Contelec AG  
 Portstrasse 38  
 CH-2503 Biel/Bienne  
 Phone +41 (0)32 3665600  
 Telefax +41 (0)32 3665604  
 sales@contelec.ch

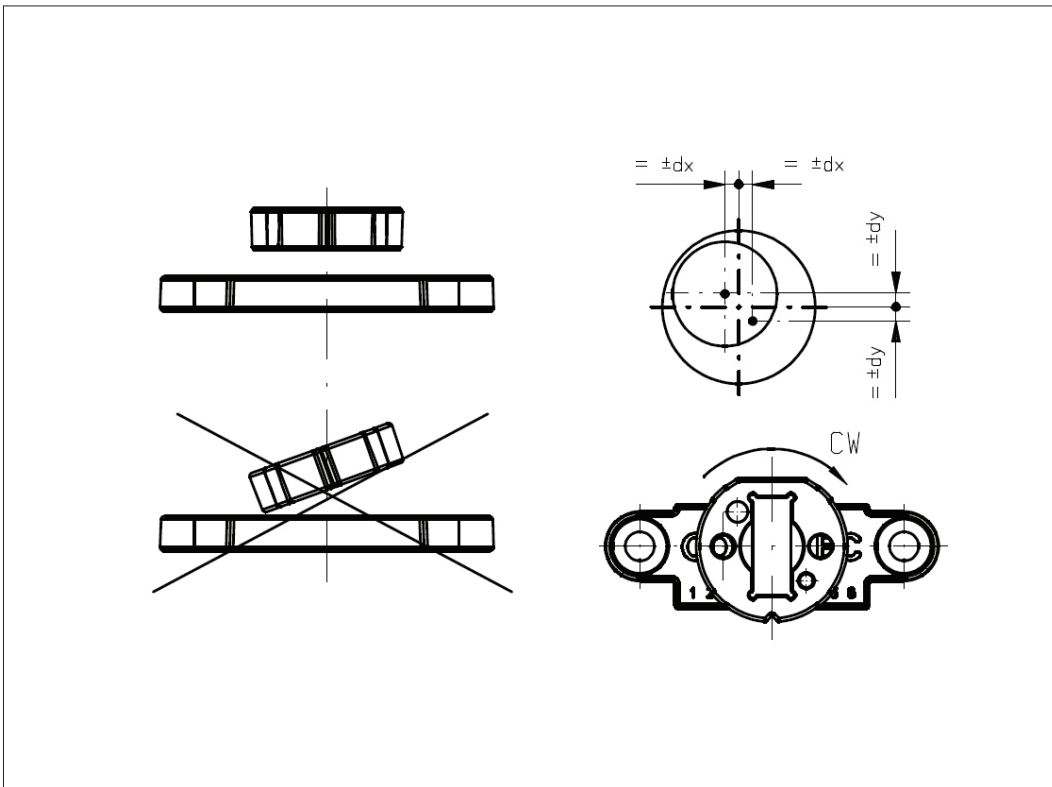




**Vert-X 05E6**  
**Mounting information**

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

dx	±1.00mm
dy	±1.00mm
dz	±0.50mm



Errors and omissions excepted. Subject to change without notice. State: 21.10.13

Contelec AG  
 Portstrasse 38  
 CH-2503 Biel/Bienne  
 Phone +41 (0)32 3665600  
 Telefax +41 (0)32 3665604  
 sales@contelec.ch