



Vert-X 24 - 5V / 10...90% Ub

Applications

- Servodrives
- Forklifter
- Dancer arm
- Operating table

Features

- Compact dimensions
- Contactless measuring method
- Long life
- High accuracy of measurement
- Use in cramped installation conditions
- Simple adjustment with elongated holes
- Full resolution and accuracy at programmed electrical angle
- Full redundancy possible
- Better linearity, up to $\pm 0.3\%$ possible

Sensor principle		MH-C
Electrical data		
Measuring range	°	0 ... 360
Indep. linearity	% of meas. range	± 1
Max. hysteresis	°	0.25
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 ($\pm 10\%$)
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	0.50 (AWG20)
Redundancy feasible		yes
Electrical connection redundant		Wires (6x)
Cross section of single wires redundant	mm ²	0.50 (AWG20)
Mechanical data		
Mechanical range	°	360 (continuous)
Protection class		IP54 / IP67
Max. starting torque at specified protection class	Ncm	0.5 / 3
Max. rotating speed	rpm	120
Min. life	movements	20 Mio.
Max. permitted axial shaft load	N	10
Max. permitted radial shaft load	N	10
Operating & storage temperature	°C	-40 ... +125
IEC 68-2-6 Vibration (Amax = 0.75mm, f = 5 ... 2000 Hz)	g	20
IEC 68-2-27 Shock	g	50
Standards		
EN 55022 class B, Emission radiated (30 ... 230 MHz)	dB($\mu\text{V}/\text{m}$)	max. 30
EN 55022 class B, Emission radiated (230 ... 1000MHz)	dB($\mu\text{V}/\text{m}$)	max. 37
EN 61000-4-2, ESD (contact discharge / air discharge)	kV	$\pm 8 / \pm 15$
EN 61000-4-3, Immision HF radiated (80 ... 2700 MHz)	V/m	100
EN 61000-4-4, Burst (on all lines)	kV	± 1
EN 61000-4-6, Immision HF conducted (0.15 ... 80MHz)	Vemk	12
EN 61000-4-8, Immision 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: 29.08.14

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 24 - 5V / 10...90% Ub
Ordering code

Output characteristics		Electrical connection	
Positive gradient CW	Standard 1	2 Standard	Wires 3pole
Positive gradient CCW	Optional 2	3 Optional	Wires 4pole
Redundant, positive gradient CW	Optional 3	7 Optional	Wires 5pole / 6pole
Redundant, positive gradient CCW	Optional 4	9 Optional	Special wires
Redundant, crossed signal curves	Optional 5		
Output signal		Length of wires	
10% ... 90% Ub	Standard 2	01 Optional	10cm
x% ... y% Ub (within 5 ... 95%)	Optional 3	02 Standard	20cm
		03 Optional	30cm
		04 Optional	40cm
		05 Optional	50cm
		99 Optional	Special length
Power supply voltage			
5VDC	Standard 2		

Vert-X **2 4 1 1 a 7 3 6 2 2 1 2 0 2**

Electrical angle	
36 Standard	Electrical angle 360°
xx Optional	10 to 35; Declaration in 10° steps
99 Optional	Special angle

Sensor principle	
7	MH-C

Protection class	
a Standard	IP54
c Standard	IP67

Shaft	
1 Standard	6.35mm shaft D-shape
2 Optional	6mm shaft D-shape
3 Optional	3.165mm shaft with screw slot
7 Optional	6mm shaft with shaped leaf
9 Optional	Special shaft

Mechanical version	
241 Standard	Fastening lug housing ; pilot diameter
24a Optional	Fastening lug housing ; pilot diameter ; return spring CW (max. mech. angle 120°)
24b Optional	Fastening lug housing ; pilot diameter ; return spring CCW (max. mech. angle 120°)
249 Optional	Special housing

	MH-C
Custom shaft design	X
Custom wires	X
Return spring (CW or CCW, max. mech. angle 120°)	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
Full redundancy possible	X
Indep. linearity of ± 0.3% meas. range	X

Options (on request)

Errors and omissions excepted. Subject to change without notice. / State: 29.08.14

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



Vert-X 24

Accessories (incl.)

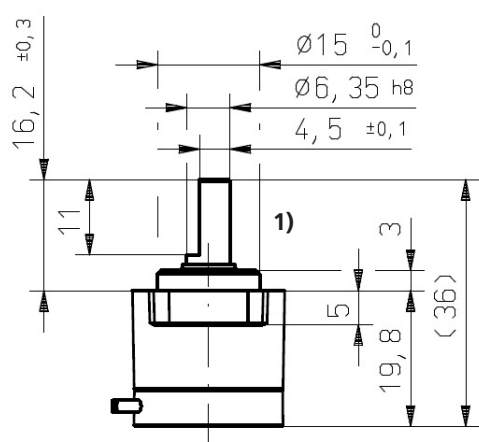
- None

Vert-X 24x1 ¹⁾

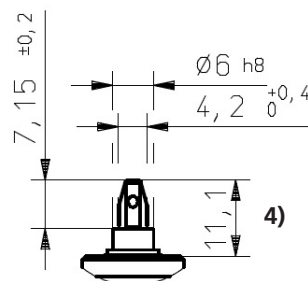
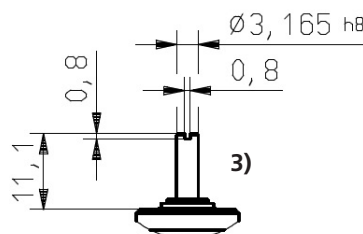
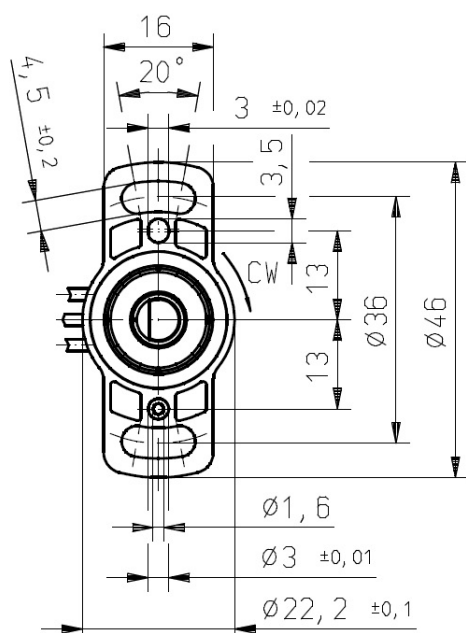
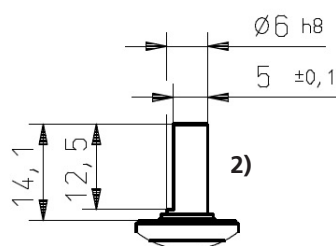
Vert-X 24x2 ²⁾

Vert-X 24x3 ³⁾

Vert-X 24x7 ⁴⁾



Options:



Errors and omissions excepted. Subject to change without notice. / State: 29.08.14

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