



## Vert-X 13 - 5V / SPI

### Applications

- Servodrives
- Insetting machines
- Sewer inspection robots
- Medical applications

### Features

- Compact dimensions
- Contactless measuring method
- Long life
- High accuracy of measurement
- Use in cramped installation conditions
- Full resolution and accuracy at programmed electrical angle

Sensor principle		MH-C	MH-C2
<b>Electrical data</b>			
Measuring range	°	0 ... 360	-
Indep. linearity	% of meas. range	±0.3	-
Max. hysteresis	°	0.1	-
Resolution	bit	14	-
Max. repeatability	°	0.1	-
Sample rate fast mode	kHz	2.2	-
Sample rate slow mode	kHz	(0.55)	-
System propagation delay fast mode	µs	400	-
System propagation delay slow mode	µs	(600)	-
Max. temperature coefficient of the output signal	ppm/°K	25	-
MTTFd / MTBF	years	668 / 668	-
Power supply voltage	VDC	5 (±10 %)	-
Current consump. without load (typ.) fast mode	mA	14	-
Current consump. without load (typ.) slow mode	mA	(9)	-
Reverse polarity protection of power supply		yes	-
Electrical connection		Ribbon cable 6pole	-
Cross section of single wires	mm <sup>2</sup>	0.25 (AWG24)	-
Redundancy feasible		no	-
<b>Mechanical data</b>			
Mechanical range	°	360 (continuous)	-
Protection class		IP54 / IP65	-
Max. starting torque at spec. protection class	Ncm	0.5 / 3	-
Max. rotating speed	rpm	6000	-
Min. life	movements	360 Mio.	-
Max. permitted axial shaft load	N	5	-
Max. permitted radial shaft load	N	5	-
Operating & Storage temperature	°C	-40 ... +105	-
IEC 68-2-6 Vibration (Amax = 0.75mm, f = 5 ... 2000 Hz)	g	20	-
IEC 68-2-27 Shock	g	50	-
<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, Immision HF radiated (80... 1000 MHz)	V/m	100	-
EN 61000-4-4, Burst (on all lines)	kV	±1	-
EN 61000-4-5, Surge (lines to ground)	kV	±1	-
EN 61000-4-6, Immision HF conducted (0.15...80MHz)	Vemk	10	-
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: 25.02.14

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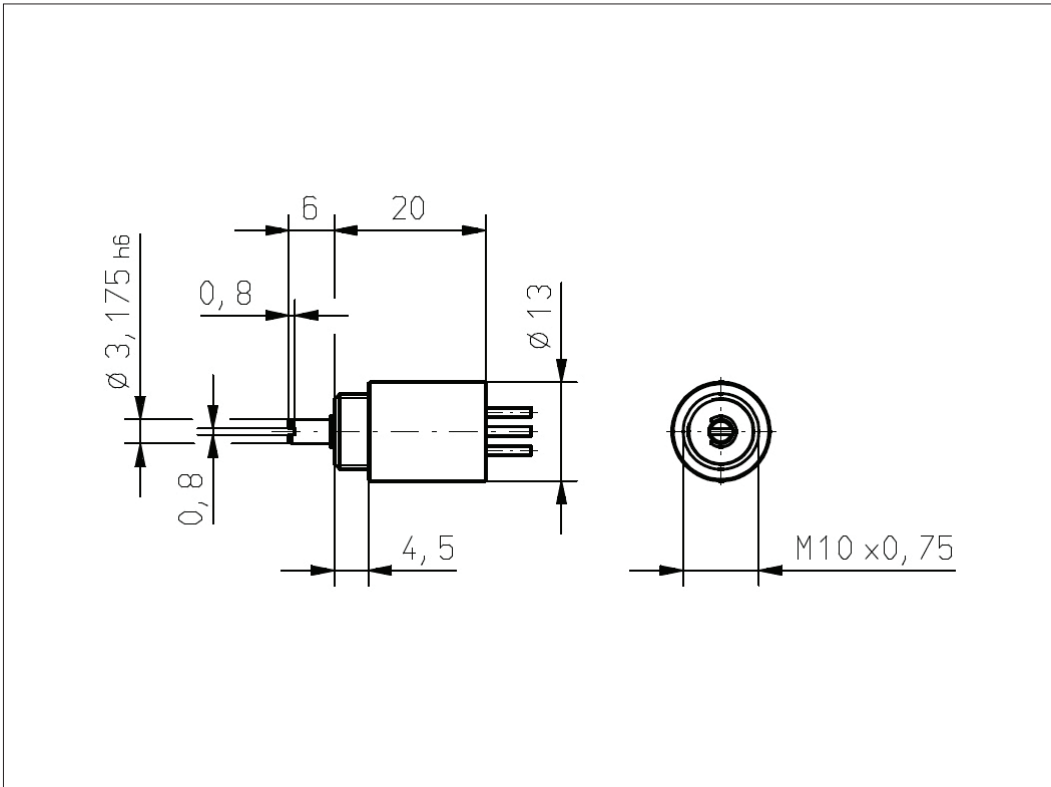




**Vert-X 1302**  
**Vert-X 1332**  
**Vert-X 1303**  
**Vert-X 1333**

**Accessoires (incl.)**

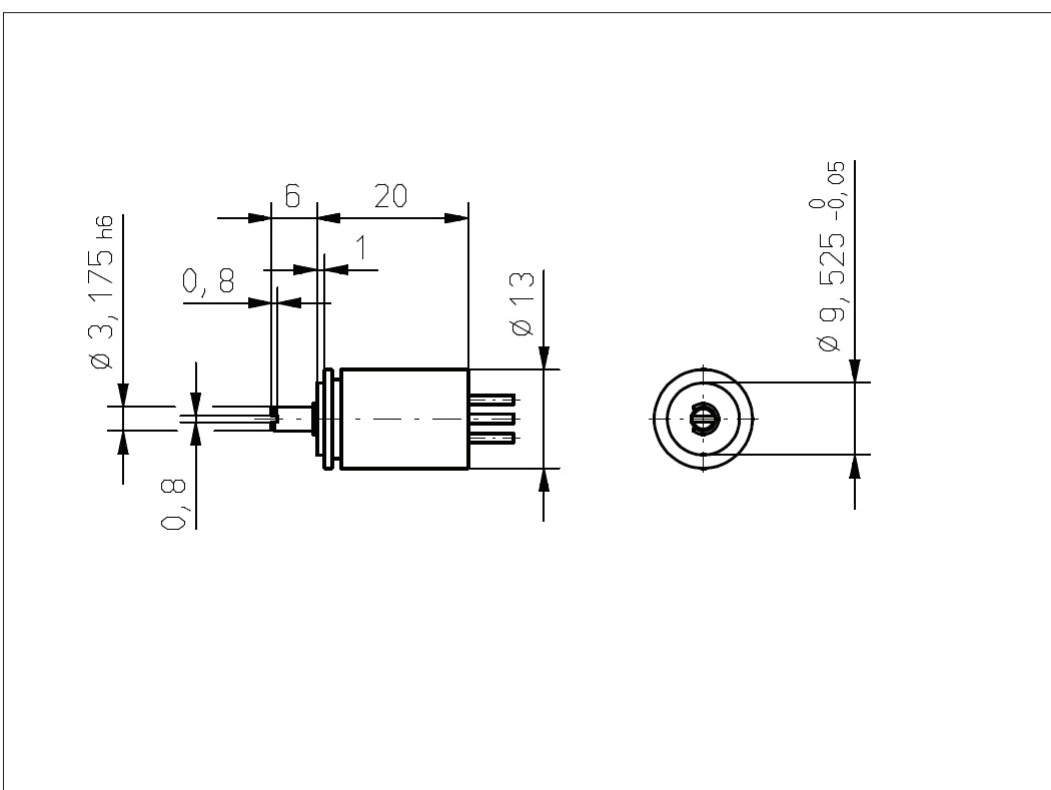
- 1x Nut M10x0.75 / SW13
- 1x Serrated lock washer



**Vert-X 1312**  
**Vert-X 1342**  
**Vert-X 1313**  
**Vert-X 1343**

**Accessoires (incl.)**

- 1x Fixation clip
- 2x Slotted cylinder head screw M3x8



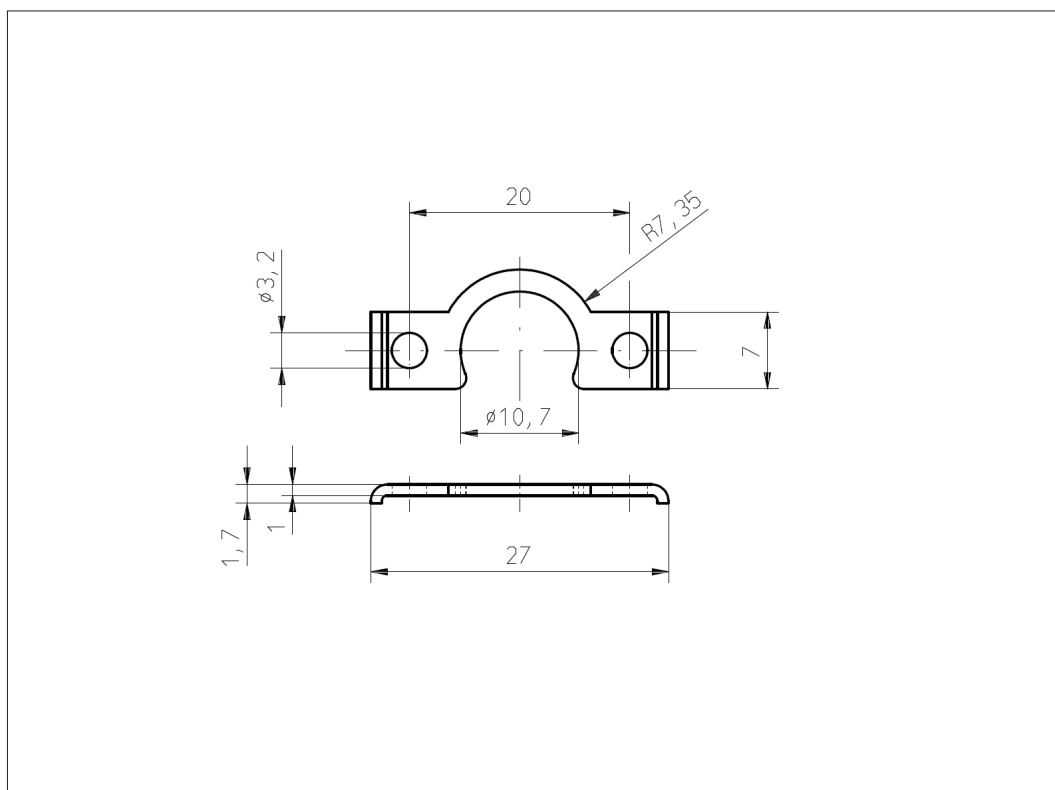
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**Accessoires**  
Fixation clip



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