



Vert-X 16 - 5V / PWM

Applications

- Servodrives
- Dancer arm
- Operating table

Features

- Compact dimensions
- Mounting tabs with metal inlets
- Contactless measuring method
- Long life
- High accuracy of measurement
- Use in cramped installation conditions
- Full resolution and accuracy at programmed electrical angle
- Full redundancy possible

Errors and omissions excepted. Subject to change without notice. State: 27.02.19

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Version		MH-C	MH-C2
Electrical data			
Measuring range	°	0 ... 360	-
Indep. linearity	% meas. range	±0.3	-
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	1	-
PWM frequency	Hz	855 (±20%)	-
Reverse polarity protection of power supply		yes	-
Electrical connection		Wires (3x)	-
Cross section of single wires	mm ²	0.25 (AWG24)	-
Redundancy feasible		yes	-
Electrical connection redundant		Ribbon cable 6pol	-
Cross section of single wires redundant	mm ²	0.09 (AWG28)	-
Mechanical data			
Mechanical range	°	360 (continuous)	-
Protection class		IP54 / IP65	-
Max. starting torque at specified protection class	Ncm	0.5 / 3	-
Max. rotating speed	rpm	120	-
Min. life	movements	50 Mio.	-
Max. permitted axial shaft load	N	10	-
Max. permitted radial shaft load	N	10	-
Operating & storage temperature (with wires)	°C	-40 ... +125	-
Operating & storage temperature (with ribbon cable)	°C	-40 ... +105	-
EN 60068-2-6 Vibration (Amax = 0.75mm, f = 5...2000 Hz)	g	20	-
EN 60068-2-27 Shock	g	50	-
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...1000MHz/1.4...2.7GHz)	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	-
EN 60393-1 Insulation resistance (500VDC, 1bar, 2s)	GOhm	20	-
EN 60393-1 Dielectric strength (VAC, 50Hz, 1min, 1bar)	kV	1	-



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Ordering code

		Power supply voltage		
		2	Standard 5VDC	
		Output signal		
		5	Standard PWM	
		Output characteristics		
		1	Standard Positive gradient CW	
		2	Optional Positive gradient CCW	
		3	Optional Redundant, positive gradient CW	
		4	Optional Redundant, positive gradient CCW	
		5	Optional Redundant, crossed signal curves	
		Electrical connection		
		1	Optional Ribbon cable 6pol	
		2	Standard Wires 3pol	
		9	Optional Special cable; special wires	
		Length of wires / ribbon cable		
		01	Optional 10cm	
		02	Standard 20cm	
		03	Optional 30cm	
		04	Optional 40cm	
		05	Optional 50cm	
		99	Optional Special length	
Vert-X	1 6 0 1	7 3 6	2 5 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	
		Mechanical version		
		1601	Standard 6mm shaft D-shape ; IP54	
		1631	Standard 6mm shaft D-shape ; IP65	
		1699	Optional Special shaft	

	MH-C	MH-C2
Custom shaft design	X	-
Custom cable / 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	-
Special characteristic curve	-	-
Electrical angle programmable by customer (Software)	-	-
Switchfunctions TTL (max. 2)	-	-
Index-point setting by customer (Additional wire or Software)	-	-
Positive gradient setting (CW/CCW) by customer (Additional wire or Software)	-	-

Options (on request)

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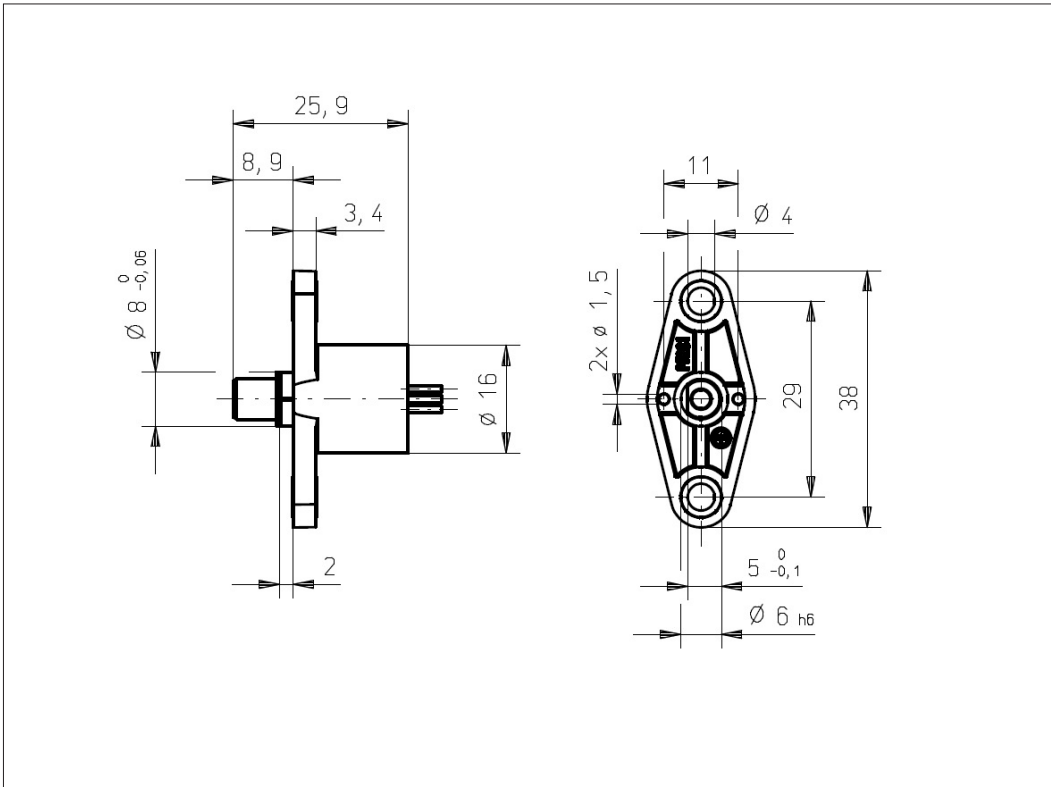
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Accessories (incl.)

- None



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