



Vert-X 37 - 24V / 0.1 - 10V

Applications

- Agricultural machines
- Construction machines
- Forest machines
- Special purpose vehicles

Features general

- Very robust design, sealed stainless steel housing
- Contactless measuring method
- 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

Features MH-C

- Linearity of $\pm 0.3\%$
- Resolution of 12bit
- Full redundancy possible
- Lower price than MH-C2

Features MH-C2

- Linearity of $\pm 0.1\%$
- Resolution of 14bit
- Index point(s), sense of rotation and angle settable resp. programmable by customer (optional)

Errors and omissions excepted. Subject to change without notice. / State: 28.09.10

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

Sensor principle		MH-C	MH-C2
Electrical data			
Measuring range	°	0 ... 360	0 ... 360
Indep. linearity	% of meas. range	± 0.3	± 0.1
Max. hysteresis	°	0.1	0.1
Resolution	bit	12	14
Max. repeatability	°	0.1	0.1
Sample rate fast mode	kHz	(5)	(2)
Sample rate slow mode	kHz	1.66	0.5
System propagation delay fast mode	μ s	(800)	(800)
System propagation delay slow mode	μ s	4600	2500
Max. temperature coefficient of the output signal	ppm/°K	100	100
MTTFd / MTBF	years	185 / 185	147 / 147
Power supply voltage	VDC	10.8 ... 35	11 ... 35
Current consumption without load (typ.) fast mode	mA	(19)	(20)
Current consumption without load (typ.) slow mode	mA	14	15
Min. ohmic load at output	kOhm	10	10
Max. capacitive load at output	nF	100	100
Reverse polarity protection of power supply		yes	yes
Electrical connection (s = shielded)		Cable 3pole, s	Cable 3pole, s
Cross section of single wires	mm ²	0.56 (AWG20)	0.56 (AWG20)
Redundancy feasible		yes	no
Electrical connection redundant (s = shielded)		Cable 6pole, s	-
Cross section of single wires redundant	mm ²	0.56 (AWG20)	-
Mechanical data			
Mechanical range	°	360 (continuous)	360 (continuous)
Protection class		IP54 / IP68	IP54 / IP68
Max. starting torque at specified protection class	Ncm	0.5 / 6	0.5 / 6
Max. rotating speed	rpm	3000	3000
Min. life	movements	360 Mio.	360 Mio.
Max. permitted axial shaft load	N	250	250
Max. permitted radial shaft load	N	100	100
Operating & storage temperature	°C	-40 ... +85	-40 ... +85
IEC 68-2-6 Vibration (Amax = 0.75mm, f = 5 ... 2000 Hz)	g	20	20
IEC 68-2-27 Shock	g	50	50
Standards			
EN 55022 class B, Emission radiated (30... 230 MHz)	dB(μ V/m)	max. 30	max. 30
EN 55022 class B, Emission radiated (230...1000MHz)	dB(μ V/m)	max. 37	max. 37
EN 61000-4-2, ESD (contact discharge / air discharge)	kV	± 4 / ± 8	± 4 / ± 8
EN 61000-4-3, Immision HF radiated (80... 1000 MHz)	V/m	30	30
EN 61000-4-4, Burst (on all lines)	kV	± 1	± 1
EN 61000-4-5, Surge (lines to ground)	kV	± 1	± 1
EN 61000-4-6, Immision HF conducted (0.15...80MHz)	Vemk	10	10
EN 61000-4-8, Immision magnetic field (50Hz)	A/m	30	30
IEC 60393-1 Insulation resistance (500VDC, 1bar, 2s)	GOhm	20	20
IEC 60393-1 Dielectric strength (VAC, 50Hz, 1min, 1bar)	kV	1	1



Vert-X 37 - 24V / 0.1 - 10V Ordering code

*** Switch outputs**
Please define number
(max. 127), position and width
of the pulses.

Output characteristics											
	Positive gradient CW	Standard	1								
	Positive gradient CCW	Optional	2								
	Redundant, positive gradient CW	Optional	3								
	Redundant, positive gradient CCW	Optional	4								
	Redundant, crossed signal curves	Optional	5								
	Positive gradient CW with 1 switch output*	Optional	A								
	Positive gradient CCW with 1 switch output*	Optional	B								
	Positive gradient CW with 2 switch outputs*	Optional	C								
	Positive gradient CCW with 2 switch outputs*	Optional	D								
	Sense of rotation settable	Optional	E								
	Zero point & sense of rotation settable	Optional	F								
	Middle point & sense of rotation settable	Optional	G								
	Start + end point & sense of rotation settable	Optional	H								
	Programmable with Vert-X EasyAdapt	Optional	P								
Electrical connection											
4	Standard	Round cable 3pole									
6	Optional	Round cable 6pole									
9	Optional	Special cable									
Length of cable											
02	Standard	1.0m									
06	Optional	3.0m									
10	Optional	5.0m									
99	Optional	Special length									
Output signal											
0,1VDC ... 10VDC	Standard	1									
Power supply voltage											
24VDC	Standard	1									
Vert-X	3	7	2	2	7	3	6	1	1	1	4 0 2
Electrical angle											
36	Standard	Electrical angle 360°									
xx	Optional	03 to 35; Declaration in 10° steps									
99	Optional	Special angle									
Sensor principle											
7	MH-C										
8	MH-C2										
Mechanical version											
3722	Standard	Servo mount size 13 ; 10 mm shaft slotted with D-shape ; IP54									
3762	Standard	Servo mount size 13 ; 10 mm shaft slotted with D-shape ; IP68									
3799	Optional	Special housing; special shaft									

	MH-C	MH-C2
Custom shaft design	X	X
Custom modification of the housing	X	X
Custom cable	X	X
Sample rate in fast mode	X	X
Switch functions TTL (max. 2)	X	X
Special characteristic curve	-	X
Special electrical angle within 30° to 360° (ex factory)	X	X
Electrical angle programmable (Software)	-	X
Start & end point settable (Additional wires)	-	X
Sense of rotation CW/CCW settable / programmable (Additional wires or Software)	-	X
Index point settable / programmable (Additional wires or Software)	-	X

Options (on request)

Errors and omissions excepted. Subject to
change without notice. / State: 28.09.10

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

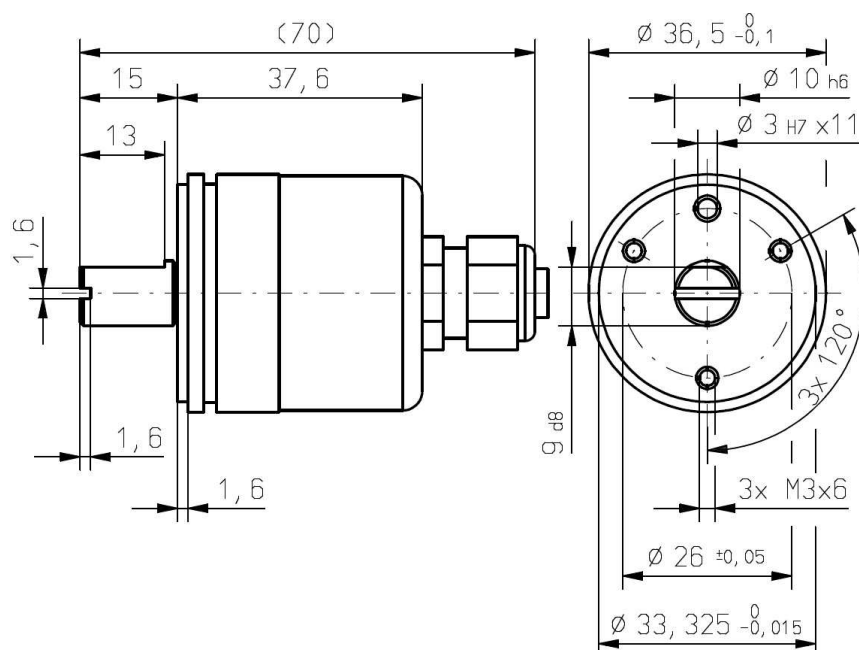
CONTELEC
A company of the Siedle-Group



Vert-X 37

Accessoires (incl.)

- 3x Fixation clamp
- 3x Slotted cylinder head screw M3x8



Errors and omissions excepted. Subject to change without notice. / State: 28.09.10

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