




## Vert-X 51 - 24V / CANopen

### Applications

- Sensor for 360° marine propulsions
- Direction indicator device

### Features

- CiA approved 
- Contactless measuring method (magnetic hall)
- Long life
- High accuracy of measurement
- Applications under adverse ambient conditions possible (humidity, dampness, oil dust, vibrations etc.)

Sensor principle		MH-C2
<b>Electrical data</b>		
Measuring rang	°	0 ... 360
Indep. linearity	% of meas. range	±0.1
Max. hysteresis	°	0.1
Resolution	bit	16
Max. repeatability	°	0.1
Sample rate	kHz	0.5
Max. temperature coefficient of the output signal	ppm/°K	25
MTTFd / MTBF	years	135 / 135
Power supply voltage	VDC	8 ... 35
Current consumption without bus load (typ.)	mA	30
Reverse polarity protection		yes
Electrical connection (s = shielded)		Cable 10pole, s
Cross section of single wires	mm <sup>2</sup>	0.09 (AWG28)
Bus interface		ISO/DIS 11898-2
CANopen communication according to CiA		Standard DS-301 Rev. 4.02
Device profile		DSP-406, Rev. 3.1, Encoder class C2
Node-ID range		1 ... 127
Node-ID (adjustable over 4 external lines)		1 ... 16
Node-ID (without use of external lines)		programmable (1 ... 127)
Default bitrate	kBit/s	125
CAN terminating resistor (settable by external line)	Ohm	120

### Mechanical data

Mechanical range	°	360 (continuous)
Protection class		IP54 / IP67
Max. starting torque at specified protection class	Ncm	0.5 / 6
Max. rotating speed	rpm	6000
Min. life	movements	200 Mio.
Max. permitted axial shaft load	N	45
Max. permitted radial shaft load	N	45
Operating & storage temperature	°C	-40 ... +85
IEC 68-2-6 Vibration (Amax = 0.75mm, f = 5 ... 2000 Hz)	g	20
IEC 68-2-27 Shock	g	50

### Standards

EMC according to German Lloyd (GL)	EMC1 <sup>(1)</sup>
CANopen conformance certified by CiA	Certificate-#: CiA2200804-301V402/20-0087 <sup>(2)</sup>

<sup>(1)</sup> Type approved by German Lloyd: Guidelines for the Performance of Type Approvals, Part 2, Test Requirements for Electrical/Electronic Equipment and Systems, Edition 2003

<sup>(2)</sup> CANopen according DS-301 V4.02, DS-406 V3.1 Encoderclass C2

Errors and omissions excepted. Subject to change without notice. / State: 10.05.10

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 51 - 24V / CANopen**  
**Ordering code**

<p><b>Vert-X</b></p> <p>5 1 1 1</p> <p>8 3 6</p> <p>1 3 1</p> <p>1 0 2</p>	<p><b>Power supply voltage</b></p> <p>1 Standard: 24VDC</p> <p><b>Output signal</b></p> <p>3 Standard: CANopen Encoder Profile 406 (C2)</p> <p><b>Output characteristics</b></p> <p>1 Standard: Positive gradient CW</p> <p>2 Optional: Positive gradient CCW</p> <p><b>Electrical connection</b></p> <p>1 Standard: Round cable 10pole</p> <p>9 Optional: Special cable</p> <p><b>Length of cable</b></p> <p>02 Standard: 1.0m</p> <p>06 Optional: 3.0m</p> <p>10 Optional: 5.0m</p> <p>99 Optional: Special length</p>	<p><b>Electrical angle</b></p> <p>36 Standard: Electrical angle 360°</p> <p><b>Sensor principle</b></p> <p>8 MH-C2</p> <p><b>Mechanical version</b></p> <p>5111 Standard: Servo mount size 20 ; 6 mm shaft ; IP54</p> <p>5151 Standard: Servo mount size 20 ; 6 mm shaft ; IP67</p> <p>5199 Optional: Special housing ; Special shaft</p>
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	MH-C	MH-C2
Custom shaft design	-	X
Custom modification of the housing	-	X
Custom cable	-	X
Switchfunctions TTL (max. 2)	-	X
LED sensor status	-	X

**Options (on request)**

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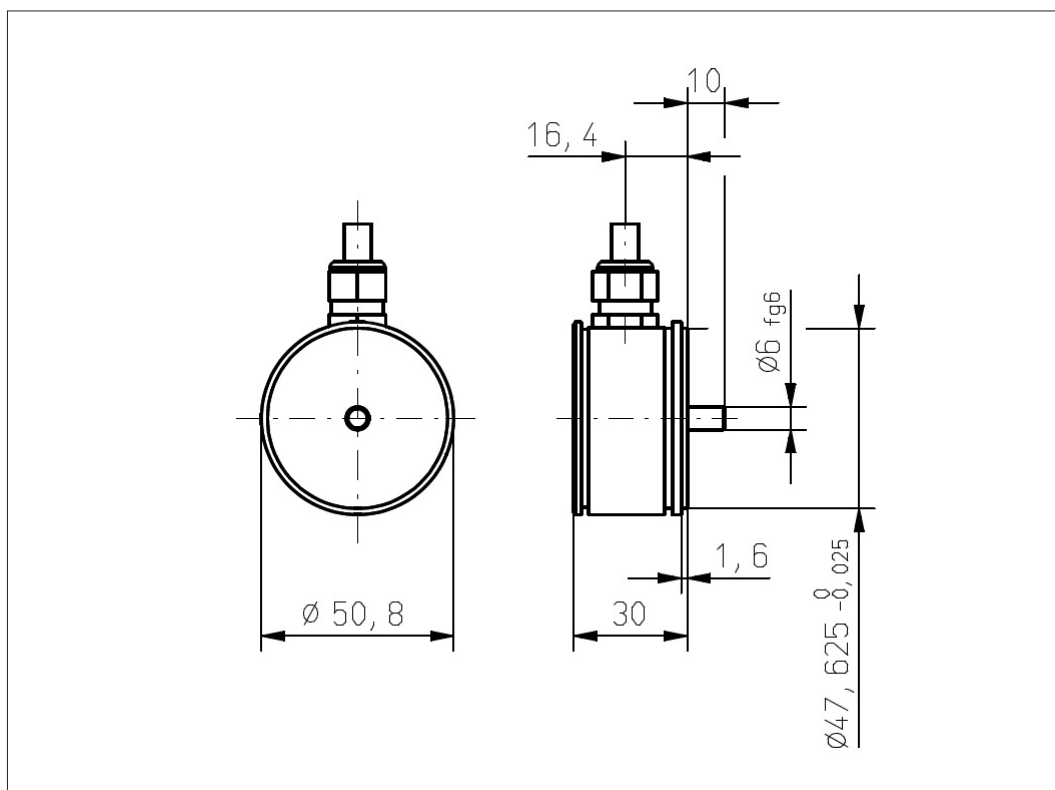
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### Vert-X 51

#### Accessoires (incl.)

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



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Vert-X 51 - 24V / CANopen  
Certificate



Certificate # **CiA201003-301V402/20-0116**

Vendor ID **00 00 00 80**

Manufacturer **Contelec AG**

Device **Vert-X MH-C2 CAN**

Product code: 0001 8774h  
Object 1018h/02h

Revision number: 0000 00A1h  
Object 1018h/03h

Hardware version: HV30781B  
Object 1009h

Software version: SV\_1.2.3  
Object 100Ah

EDS **MH-C2\_CAN.eds**

File version: 1

File revision: 0

EDS version: 4.02

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**CAN in Automation GmbH**

Kontumazgarten 3

90429 Nuremberg

Germany

Fax: +49-911-928819-79

*Technical Manager*

CAN in Automation GmbH  
Kontumazgarten 3  
90429 Nuremberg  
Germany  
phone: +49-911-928819-0  
fax: +49-911-928819-79



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