






Vert-X 51 - 24V / CANopen / GL - certified

Applications

- Sensor for 360° marine propulsions
- Direction indicator device

Features

- GL approved  
- CiA approved  CiA200804-301V402/20-0087
- 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
Electrical data		
Measuring range	°	0 ... 360
Indep. linearity	% of meas. range	±0.25
Max. hysteresis	°	0.36
Resolution	bit	16
Max. repeatability	°	±0.1
Sample rate	kHz	0.5
Max. temperature coefficient of the output signal	ppm/°K	50
MTTFd / MTBF	years	135 / 135
Power supply voltage	VDC	18 ... 31.2
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 ²	0.22 (AWG24)
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)
Software version		1.2.Z
Standard bitrate	kBit/s	125
CAN terminating resistor (settable by external line)	Ohm	120
Mechanical data		
Mechanical range	°	360 (continuous)
Protection class		IP65
Max. starting torque at specified protection class	Ncm	4
Max. rotating speed	rpm	6000
Min. life	movements	200 Mio.
Max. permitted axial shaft load	N	45
Max. permitted radial shaft load	N	45
Standards		
EMC according to German Lloyd (GL)		EMC1 ⁽¹⁾
CANopen conformance certified by CiA		Certificate-#: CiA2200804-301V402/20-0087 ⁽²⁾
Environmental category according to German Lloyd (GL)		D

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

⁽²⁾ 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

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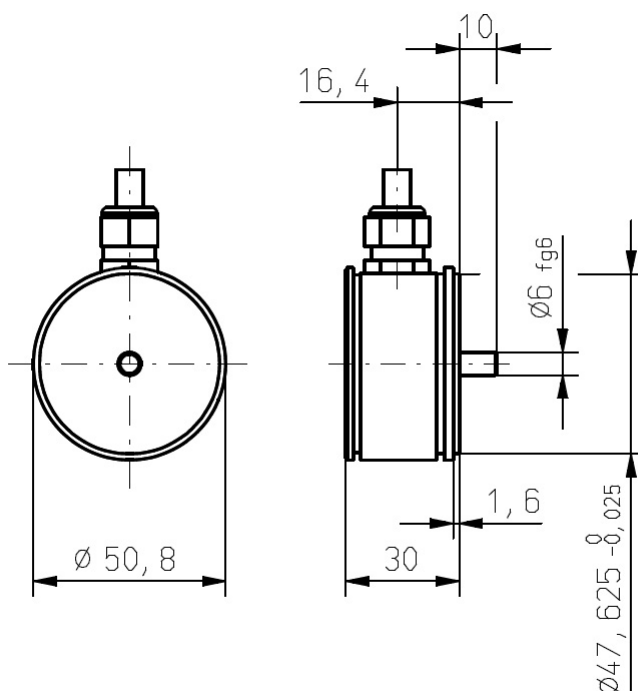
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Ordering code**

Vert-X	5	1	3	1	8	3	6	1	3	1	1	0	2
	Power supply voltage				Output signal				Output characteristic				
	1 Standard: 24VDC				3 Standard: CANopen Encoder Profile 406 (C2)				1 Standard: Positive gradient CW				
	Electrical angle				Electrical connection				Length of cable				
	36 Standard: Electrical angle 360°				1 Standard: Round cable 10pole				02 Standard: 1.0m 06 Optional: 3.0m 10 Optional: 5.0m 99 Optional: Special length				
	Sensor principle				Mechanical version								
8 MH-C2				5131 Standard: Servo mount size 20 ; 6 mm shaft ; IP65									

Drawing

Accessoires (incl.)

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



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**Vert-X 51 - 24V / CANopen /
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Certificate**

Type Approval Certificate



This is to certify that the undemoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No.	58 715 - 08 HH
Company	Contelec AG Portstr. 38 2503 Biel/Bienne, SWITZERLAND
Product Description	Absolute Rotary Position Transducer with CANopen Interface
Type	Vert-X 51 CAN
Environmental Category	D, EMC1
Technical Data / Range of Application	Power supply: 18...31.2 VDC Power consumption: 30 mA (without bus activity) Angular Range: 0...360° Internal Resolution: 16 Bit Absolute Linearity: $\pm 0.25\%$ Reproducibility: $\pm 0.1^\circ$ Hysteresis: 0.36° Temperature Coefficient: max 50 ppm/K Degree of protection: IP65 CANopen Protocol: DS-301 V4.02, DS-406 V3.1, Encoderclass C2 Node ID's: 1...16 (set by 4 external lines) or 1...127 (set by software) Default Btrate: 125 kBit/s Software Version: 1.2.Z
Test Standard	Guidelines for the Performance of Type Approvals Part 2, Edition 2003
Documents	Test report : U080851E1/2nd, E080851E, Messungen Vert-X 51 V1. Specification: Vert-X 51 V6. Drawing: MB 18344 Rev. A. CANopen Certificate: CiA200804-301V402/20-0087
Remarks	None
Valid until	2013-08-24
Page	1 of 1
File No.	I.D.15
	Hamburg, 2008-08-25

Type Approval Symbol



Germanischer Lloyd

Jürgen Wittburg

Heinz Scheffler

This certificate is issued on the basis of "Guidelines for the Performance of Type Approvals Part 1, Procedure".

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Vert-X 51 - 24V / CANopen /
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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

Nuremberg, 26.03.2010

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