




Vert-X 90E - 24V / CANopen, redundant

Applications

- Agricultural machines
- Special purpose vehicles
- Construction machines
- Stone crusher

Features

- CiA approved  CIA201003-301V402/20-0116
- High protection class IP68 / IP69K
- Flat design
- Non-contacting measuring method
- Very long life
- High accuracy of measurement
- Applications under harsh ambient conditions possible (humidity, dampness, dust, dirt, vibrations etc.)
- Detection of magnetic loss (with safety flag)

Sensor principle		MH-C2
Electrical data		
Measuring range	°	0 ... 360
Indep. linearity (typ.)	% of meas. range	±0.3
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	year	135 / 135
Power supply voltage	VDC	8 ... 35
Current consumption without bus load (typ.)	mA	30
Reverse polarity protection of power supply		yes
Electrical connection (s = shielded)		Round cable, s
Cross section of single wires	mm ²	0.34 (AWG22)
Bus interface		ISO/DIS 11898-2
CANopen communication according to CiA		Standard DS-301 Rev. 4.02
Device profile		DS-406, Rev. 3.1, Encoder class C2
Default Node-ID's		16 & 17 (programmable 1 ... 127)
Default bitrate	kBit/s	125
Mechanical data		
Mechanical range	°	360 (continuous)
Protection class		IP68 / IP69K
Min. life	movements	no limitation
Operating & storage temperature	°C	-40 ... +85
EN 60068-2-6 Vibration (Amax = 0.75mm, f = 5...2000Hz)	g	50
EN 60068-2-27 Shock	g	200
Standards		
EN 55022 class B, Emission radiated (30...230MHz)	dB(µV/m)	max. 30
EN 55022 class B, Emission radiated (230...1000MHz)	dB(µV/m)	max. 37
EN 55022 class B, Emission conducted (0.15...0.5MHz)	dB(µV)	max. 56 ... 46
EN 55022 class B, Emission conducted (0.5...5MHz)	dB(µV)	max. 46
EN 55022 class B, Emission conducted (5...30MHz)	dB(µV)	max. 50
EN 61000-4-2, ESD (contact discharge / air discharge)	kV	±4 / ±8
EN 61000-4-3, Immision 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, Immision HF conducted (0.15...80MHz)	Vemk	10
EN 61000-4-8, Immision 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
CANopen conformance certified by CiA	Certificate-#:	CiA201003-301V402/20-0116

Errors and omissions excepted. Subject to change without notice. / State: 29.04.16

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CONTELEC
 A company of the Siedle-Group



Vert-X 90E - 24V / CANopen, redundant

Ordering code

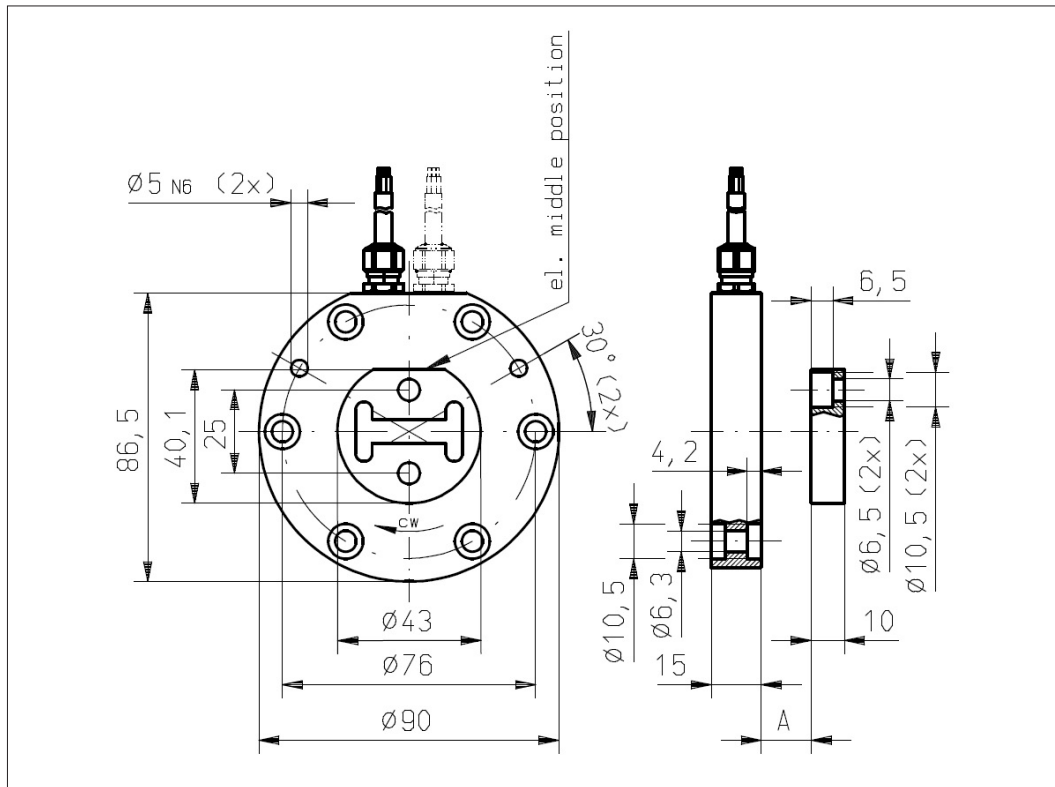
		CAN characteristics			
Redundant 2-Bus / CAN-High ; CAN-Low ; R _{CAN}	Optional	7			
Redundant 2-Bus / CAN-High ; CAN-Low	Standard	8			
Redundant 1-Bus / CAN-High-In ; CAN-High-Out ; CAN-Low-In ; CAN-Low-Out	Optional	A			
Redundant 1-Bus / CAN-High ; CAN-Low ; R _{CAN}	Optional	B			
Redundant 1-Bus / CAN-High ; CAN-Low	Standard	C			
Special version	Optional	9			
		Output signal			
CANopen Encoder Profile 406 (C2)	Standard	3			
		Power supply voltage			
24VDC	Standard	1			
		Electrical connection			
6	Optional	Round cable 6pole			
8	Standard	Round cable 4pole			
C	Standard	2x Round cable 4pole			
9	Optional	Special cable			
		Length of cable			
02	Standard	1.0m			
06	Optional	3.0m			
10	Optional	5.0m			
99	Optional	Special length			
Vert-X	9	0	E	7	8
					3
					6
					1
					3
					8
					C
					0
					2
		Electrical angle			
36	Standard	Electrical angle 360°			
		Sensor principle			
8	MH-C2				
		Mechanical version			
90E7	Standard	Magnetic actuator type 7			
90E8	Optional	Magnetic actuator type 8			
90E9	Optional	Special housing ; special magnetic actuator			

	MH-C2
Custom magnetic actuator	X
Custom modification of the housing	X
Custom cable	X
CAN integrated bus termination resistor (120Ω) / R _{CAN}	X
Custom bitrate (10 ; 20 ; 50 ; 100 ; 250 ; 500 ; 800 ; 1000 kBit/s)	X
Extended operating range, axial (without safety flag)	X

Options (on request)

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Vert-X 90E7

Accessories (incl.)

- None

Operating range/Air gap (A) Standard with safety flag

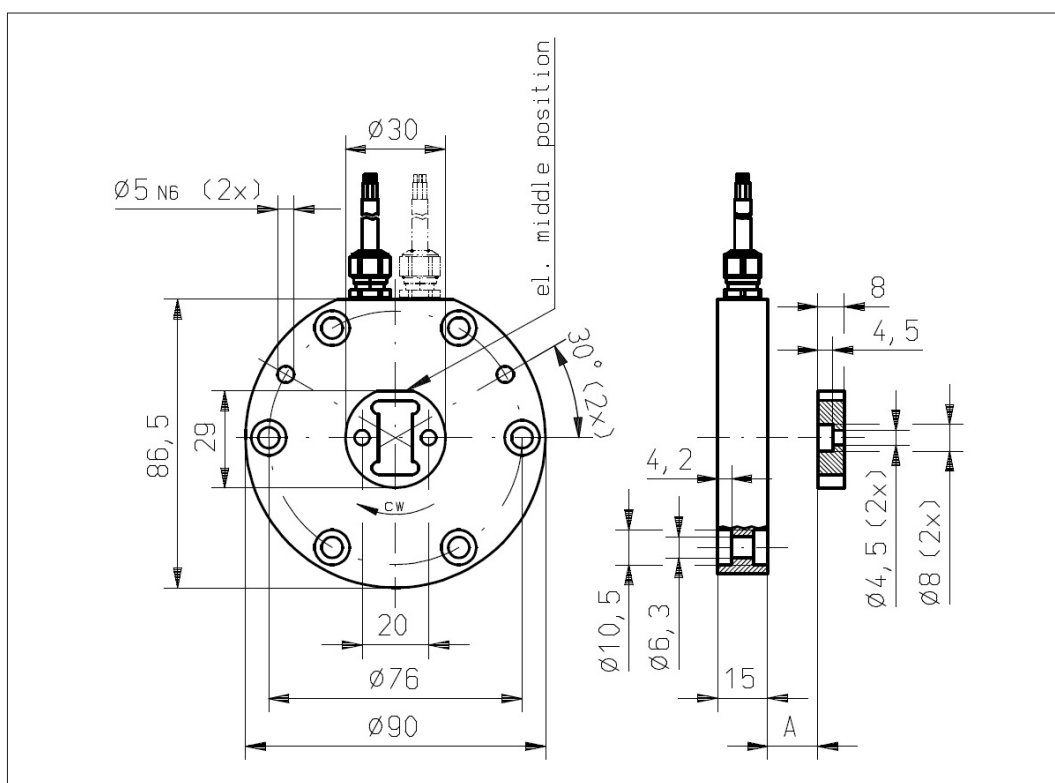
Redundant 0 ... 13.3mm

Extended without safety flag (Optional)

Redundant 0 ... 19.7mm

Features Safety Flag

- Detection of magnetic loss
- System shut-down in case of magnetic actuator out of valid operating range
- Recommended for safety relevant applications



Vert-X 90E8

Accessories (incl.)

- None

Operating range/Air gap (A) Standard with safety flag

Redundant 0 ... 12.8mm

Extended without safety flag (Optional)

Redundant 0 ... 18.7mm

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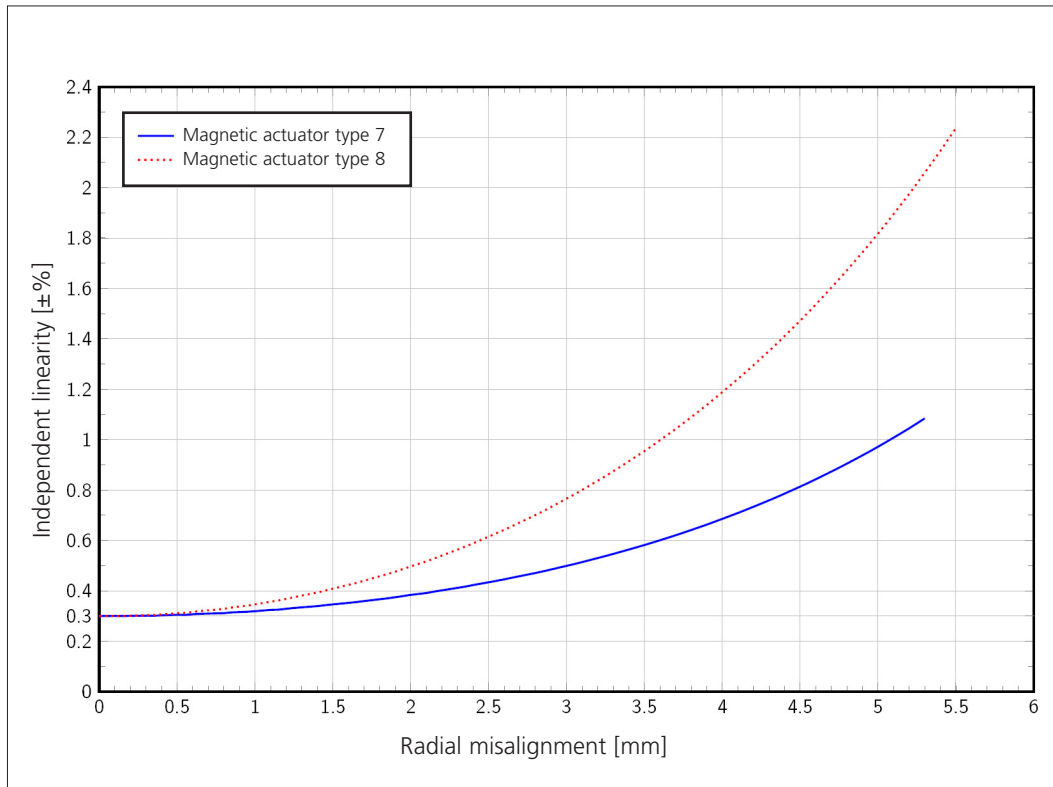
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Vert-X 90E

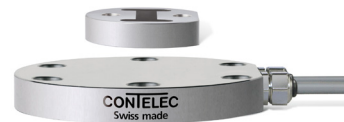
Indep. linearity with radial misalignment (@360°)



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Vert-X 90E - 24V / CANopen,
Certificates



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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