

Absolute-Encoder CDV582M - EIP + FS3

Ref.: K-CDV58_2FS-EIP-1

24.06.2021

010102158201030201

Advantages

- CIP Node on EtherNet/IP, CT17
- CIP Safety
- Intelligent diagnoses
- Parameterizable gear unit
- Preset "on the fly"
- Salt water resistant
- SIL3, PLe
- Speed signal



EtherNet/IP



General Data

Nominal voltage	
- Specific value	24 VDC
- Limit values, min/max	10/30 VDC
Nominal current, typically	
- Specific value	110 mA
- Specific value	130 mA with second interface
- Condition	unloaded
Supply	
- SELV/PELV	IEC 60364-4-41
- In case of UL / CSA approval	according to NEC Class 2
Device design	
- Type	Multi-Turn
- Redundant scanning system	yes, double
- Design	optical/magnetic
Total resolution	<= 29 Bit
Number of steps per revolution	<= 8192 = 13 bit resolution
Number of revolutions	<= 65536
Accuracy (functional)	12 Bit, Single-Turn; 0.087 °
EtherNet/IP™ - Interface	
- EtherNet/IP™	IEC 61784-1 CP 2/2, IEC 61158
- Physical Layer	Fast Ethernet, ISO/IEC 8802-3
- Device profile	Encoder Device Profile 0x22

Subject to change.

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General Data continuation

- Dynamic Host Config. Protocol	DHCP is supported
- IP-Address	adjustable via rotary switches
- Ethernet/IP Adapter	CT17 Conformant
- CIP Safety Specification	Edition 2.20
SSI - Interface	
- Equipment	Optional interface
- SSI-Clock input	RS-422; 2-wire
- SSI-Data output	RS-422, 2-wire
- SSI-Clock frequency	≤ 1 MHz
- Output code	Binary, Gray
- Number of data bits	8...29
- Type of parametrization	programmable
- MTTFd, SSI	150 a
- SSI-Refresh time	500 μ s
Incremental - Interface	
- Equipment	Optional interface
- Signal form	Square wave
- Signal form, alternative	SIN / COS
- Incremental signals, square	$K1 \pm K2 \pm$
- Incremental signals, SIN/COS	$SIN \pm COS \pm, 1 V_{ss}$
- Impulses, square wave	1024...5120, in steps of 1024
- Impulses, SIN/COS	1024 \square
- Output driver, TTL	RS-422, 5 VDC
- Output driver, HTL	Push-Pull, Supply Voltage
- Type of parametrization	programmable
- MTTFd, square	180 a
- MTTFd, SIN/COS	190 a
Transmission rate	
- Specific value	100 MBit/s
Cycle time	
- Not safety related	1.0 ms
- Safety related	5 ms
Parameter/Function, changeable	Integration time
	Preset parameter
	Scaling parameter
	Monitoring window
	Counting direction
	Velocity parameter

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Type of parametrization	programmable
Programming - Tool	Fieldbus-Device
	SNCT Device Applet
Functional safety	
- Safety principle	Redundance with cross compare
- SIL-Standardization	DIN EN 61508 / DIN EN 62061
- SIL-Standardization	DIN EN 61800-5-2
- SIL-Level	SIL3 / SIL CL 3
- PL-Standardization	DIN EN ISO 13849
- Performance-Level (PL)	PLe / Cat. 4
- Service life	20 Years
- PFH	1.13E-9 1/h
- PFDav, T = 20 a	9.84E-5
- MTTFd	136 a
- DCavg	99 %, high
- Mode	High demand, continuous
- Proof-Test-Interval	T1 = 20 Years
- Accuracy (safety)	8 Bit, Single-Turn; 1.406 °
Safety functions	
- DIN EN 61800-5-2	SLP (safely-limited position)
- DIN EN 61800-5-2	SDI (safe direction)
- DIN EN 61800-5-2	SCA (safe cam)
- DIN EN 61800-5-2	SS1 (safe stop 1)
- DIN EN 61800-5-2	SS2 (safe stop 2)
- DIN EN 61800-5-2	SOS (safe operating stop)
- DIN EN 61800-5-2	SLS (safely-limited speed)
- DIN EN 61800-5-2	SSR (safe speed range)
- DIN EN 61800-5-2	SSM (safe speed monitor)
Internal process safety time	
- CIP Safety	9.5 ms + RPI
Maximum Speed, mechanically	<= 6000 1/min
Shaft load, axial/radial	<= 50 N, <= 100 N
Bearing life time	>= 3.9E+10 revolutions
Bearing life time - Parameter	
- Speed	3000 1/min
- Operating temperature	60 °C
- Shaft load, axial/radial	= 60 %
Point of origin, shaft load	Mounting flange + 10 mm

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Shaft type	
- Shaft diameter [mm]	10
- Shaft diameter [mm]	12
- Shaft diameter [mm]	14
- Shaft forming	Parallel key/Groove
Angular acceleration	$\leq 10E+4 \text{ rad/s}^2$
Moment of inertia, worst-case	$\leq 5.3E-6 \text{ kg m}^2$
	at shaft diameter 14 mm
	depending from shaft forming
Start-up torque, worst-case	$\leq 3.4 \text{ Ncm (IP65, -20 °C, +6 } \sigma)$
	$\leq 10 \text{ Ncm (IP67, -20 °C, +6 } \sigma)$
	at shaft diameter 14 mm
	depending from shaft forming
Mass, typically	0.3...0.5 kg
Isolation voltage	500 V

Environmental conditions

Vibration	DIN EN 60068-2-6
- Specific value	$\leq 100 \text{ m/s}^2$
- Sine	50...2000 Hz
Shock	DIN EN 60068-2-27
- Specific value	$\leq 1000 \text{ m/s}^2$
- Half sine	11 ms
Immunity to disturbance	DIN EN 61000-6-2
Transient emissions	DIN EN 61000-6-3
Working temperature	
- Standard	-25...+85 °C
- Derating	$T_w = -0.002 * n + 85 \text{ °C}$
- Derating	$T_w = -0.004 * n + 85 \text{ °C (IP67)}$
Storage temperature, dry	-40...+90 °C
Relative humidity	98 %, non condensing
Protection class	
- Standard	IP65
- Optional	extended to IP67
Resistance	
- against salt (seawater)	DIN EN IEC 60068-2-52

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Environmental conditions continuation

- Test method	Test method 1
- excluded are	Attachment parts

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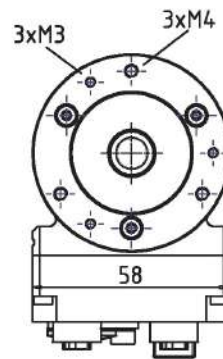
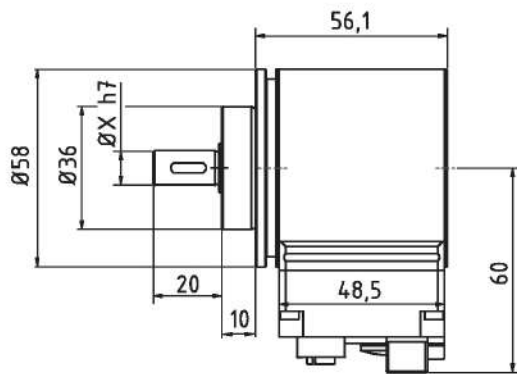
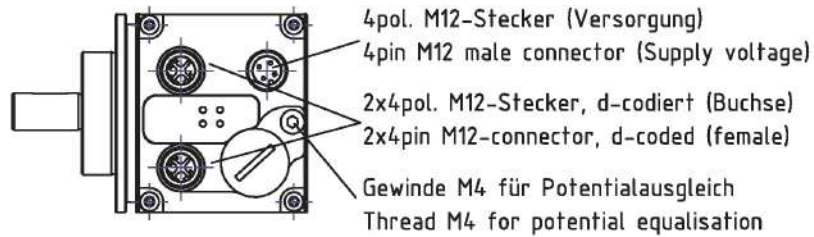
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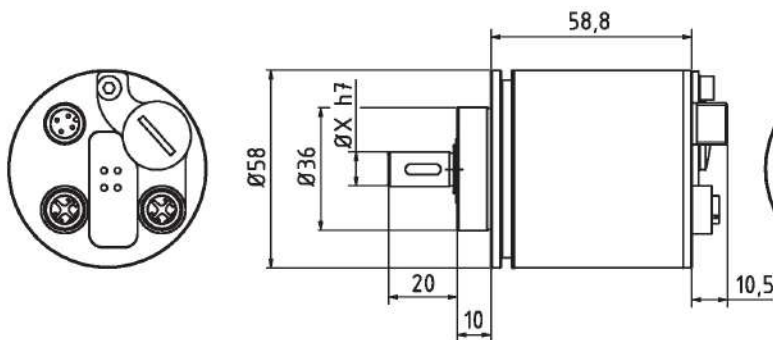
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Dimensional drawing



**Radial
Version**



**Axial
Version**

Fehlende Abmaße bzw. abweichendes Design, siehe Art.-Nr. bezogene Zeichnung /
Missing dimensions or different design, see drawing related to the order number

Subject to change.