

CDV582M*8192/65536 EPN 36ZB10NT + FS3

Order No.:CDV582M-00050

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Stock photo



Advantages

- Fast start-up, FSU
- Isochronous applications, IRT
- Media-Redundancy Protocol, MRP
- PNO Encoder Profile, CL 3/4
- Preset "on the fly"
- Salt-resistant
- Shared Device
- SIL3, PLe

Technical data for CDV582M-00050

NO.OF STEPS/REV	8.192,000
NO. OF REVOLUTIONS	65.536,000
INTERFACE	PROFINET/PROFISAFE
SUPPLY VOLTAGE	10-30VDC
POWER DISSIPATION	< 3W
CONNECTOR TYPE	1X4P.M12-CONNECTOR (A-COD) 2X4P.M12-FEMALE (D-COD)
CONNECTOR-POSITION	AXIAL
MATING PLUG	NO
FLANGE TYPE	ZB36 3XM3+3XM4
SHAFT TYPE	10KEYWAY/19,5
STANDARD	EN 61508 EN 62061 / EN ISO 13849
SAFETY	CDV582MD+FS03 EPN SIL3/PLe
TEMPERATURE RANGE	-25+85°C
PROTECTION Class	IP65
OPTIONS ENC	CONFORMANCE CLASS C IEC 61158 / IEC 61784-1 Legacy-Profil PN Spec. 2.3

Subject to change.

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30.4.2020 / 010102158201030201

Technical data for CDV582M-00050 continuation

	PNO-PROFILE
	PRESET VIA BUS
	PROFIsafe-Profile V2.4
	PROFIsafe-Profile V2.6.1
	TR-Profil
	VELOCITY
PINOUT NO.	TR-ECE-TI-DGB-0323
DRAWING NO.	04-CDV582M-M0003
VERSIONNO	000
DOCUMENTATION NO	DOKUMENTE
EL:	AL:N
ECCN:	ECCN:N
UL-APPROVALS	USA+CANADA

General data for K-CDV58_2FS-PN-1

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 °
PROFINET IO - Interface	
- PROFINET IO – Device	IEC 61158, IEC 61784-1
- Physical Layer	Fast Ethernet, ISO/IEC 8802-3

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General data for K-CDV58_2FS-PN-1 continuation

- PROFINET-Specification	V2.3
- Conformance Class	B, C
- Real-Time-Classes	Class 1, 2 (RT), Class 3 (IRT)
- PROFI-safe-Profile	No. 3.192b
- PROFI-safe-Profile	PROFI-safe V2.4 (BP)
- PROFI-safe-Profile	PROFI-safe V2.6.1 (XP)
- Media Redundancy Protocol, MRP	yes, is supported
- PNO Encoder-Profile	Class 3 and 4, V4.2
- Fast Start-Up (FSU)	3-times faster start-up
SSI - Interface	
- Equipment	Optional interface
- SSI-Clock input	RS-422; 2-wire
- SSI-Data output	RS-422, 2-wire
- SSI-Clock frequency	<= 1MHz
- SSI-Mono time, typically	15 µs, 20 µs, 50 µs, 500 µs
- Protocol, TR-specific	Function information + CRC
- Output code	Binary, Gray
- Number of data bits	8...29
- Type of parametrization	programmable
Incremental - Interface	
- Equipment	Optional interface
- Signal form	Square wave
- Signal form, alternative	SIN / COS
- Incremental signals, square	K1± K2±
- Incremental signals, SIN/COS	SIN± COS±, 1 V _{ss}
- Impulses, square wave	1024...5120, in steps of 1024
- Impulses, SIN/COS	1024 □
- Output driver, TTL	RS-422, 5 VDC
- Output driver, HTL	Push-Pull, Supply Voltage
- Type of parametrization	programmable
Transmission rate	
- Specific value	100 MBit/s
Cycle time	>= 1000 µs (IRT/RT)
- Not safety related	0.5 ms
- Safety related	3 ms
Parameter/Function, changeable	Integration time
	Preset parameter
	Scaling parameter

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General data for K-CDV58_2FS-PN-1 continuation

	Monitoring window
	Counting direction
	Velocity parameter
Type of parametrization	programmable
Programming - Tool	Fieldbus-Device
	TCI Device Tool
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	1.00E-9 1/h
- PFDav, T = 20 a	8.50E-5
- MTTFd	170 a, high
- DCavg	98 %, high/middle
- 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	
- Profisafe instances: , Times:	2, DAT <= 14 ms, WCDD <= 7 ms
- Profisafe instances: , Times:	4, DAT <= 18 ms, WCDD <= 8 ms
Maximum Speed, mechanically	<= 6000 1/min
Shaft load, axial/radial	<= 50 N, <= 100 N
Bearing life time	>= 3.9E+10 revolutions

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General data for K-CDV58_2FS-PN-1 continuation

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
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 data

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

Subject to change.

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Environmental data continuation

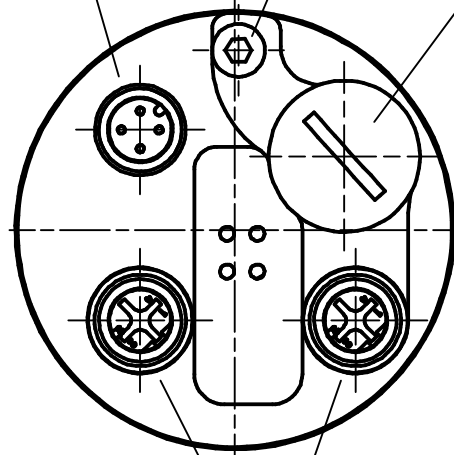
Protection class	
- Standard	IP65
- Optional	extended to IP67
Resistance	
- against salt (seawater)	DIN EN IEC 60068-2-52
- Test method	Test method 1
- excluded are	Attachment parts

Subject to change.

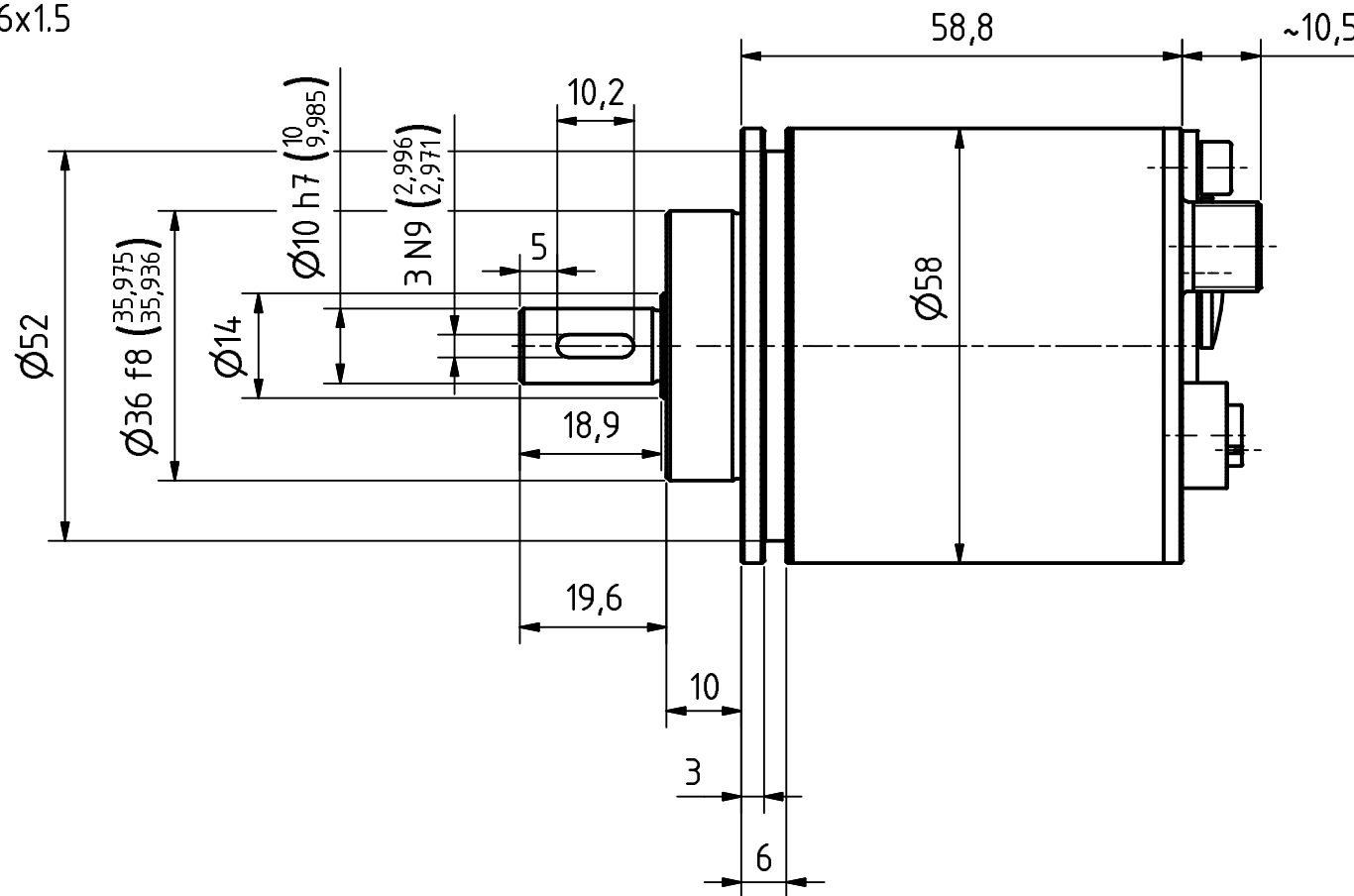
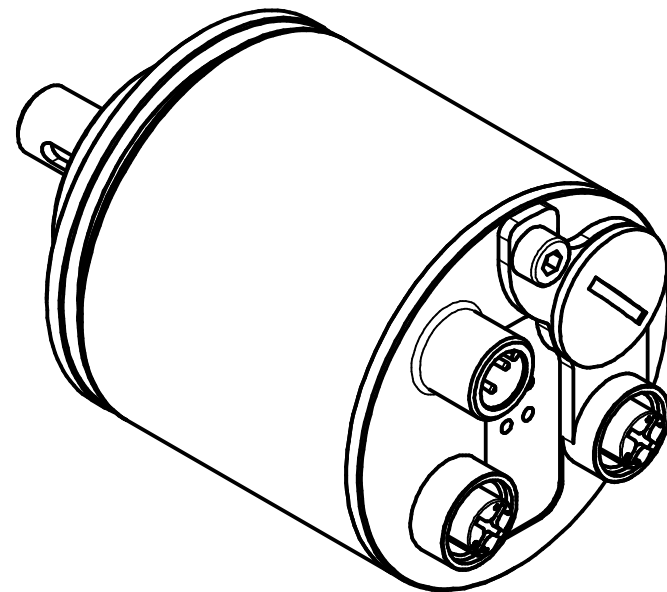
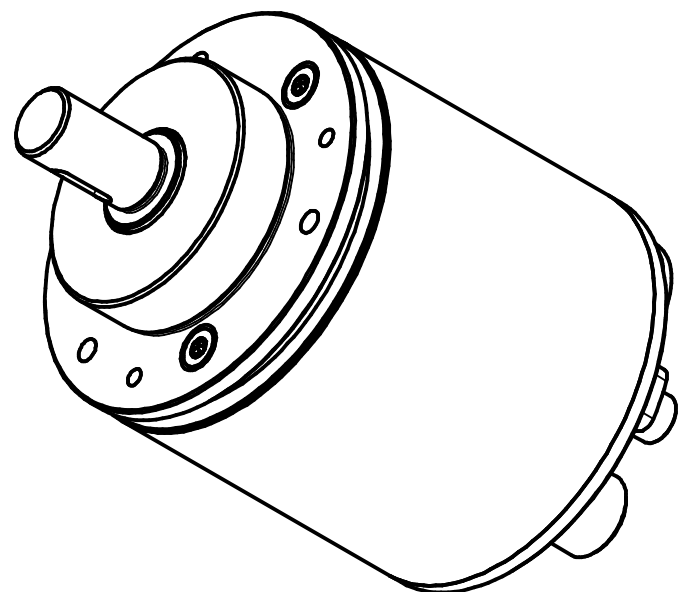
4pol. M12-Stecker (Spannungsversorgung)
4pin. M12-male-connector (Supply voltage)

Gewinde M4 für
Potentialausgleich
thread m4 for
potential equalisation

Verschlussstopfen M16x1.5
dummy plug M16x1.5

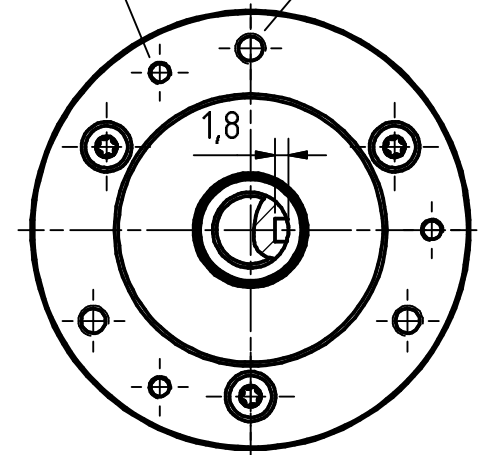


2x4pol. M12-Stecker, d-codiert (Buchse)
2x4pin. M12-connector, d-coded (female)




3xM3, 3tief/deep
TK $\varnothing 48 \pm 0.2$, (3x120°)

3xM4, 3tief/deep
TK $\varnothing 48 \pm 0.2$, (3x120°)



Artikel-Nr. und Steckerbelegung: siehe Datenblatt
Article-No. and pin connections: see data sheet

 TR-Electronic GmbH Eglisshalde 6 D-78647 Trossingen phone +49 7425 228.0 www.tr-electronic.de	Maßstab 1:1 DIN A3		Projekt-Nr.:
	Zeichnungs-Nr. nur für diese Ausführung gültig Drawing-No. only for this type valid		
	Datum	Name	
Erstellt	19.06.2018	FLAIG	
Bearb.	16.08.2018	FLAIG	
Gepr.	20.08.2018	NEMECZ	
	Norm		
www.tr-electronic.de DXF+Info: info@tr-electronic.de			Zeichnungs-NR./Drawing-No.:
1 Überarbeitung 16.08.18 Flaig			Blatt 1 1 BU
Zustf.	Änderungen	Datum Name	
04-CDV582M-M0003			

Steckerbelegung / Pin assignment

CD_-582 PROFINET / PROFIsafe

<p>axialer Steckerabgang / <i>axial connector outlet</i></p>	<p>radialer Steckerabgang / <i>radial connector outlet</i></p>	<p>A Potentialausgleich / <i>Potential equalisation</i></p> <p>B PROFIsafe-Zieladresse / <i>PROFIsafe destination address</i> - Valid addresses = 1 – 255</p> <p>Rücksetzen auf Werkseinstellungen / <i>Reset to factory settings</i> - Set SW1 / SW2 = 0x00 - 3 Sek. warten - Set SW2 / SW1 = 0x52 - Wait 3s -> LED green 2 Hz - Set SW1 / SW2 = 0x00</p>
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X1	Flanschstecker / <i>Male socket</i> (M12x1-4 pol. A-coded)			Steckseite <i>Mating Face</i>	
1	10 – 30 V DC	Encoder-Versorgungsspannung / <i>Encoder-Supply Voltage</i>			
2	-	N.C.			
3	0 V	Encoder-Versorgungsspannung / <i>Encoder-Supply Voltage</i>			
4	-	N.C.			

X2 = PORT 1	Flanschdose / <i>Female socket</i> (M12x1-4 pol. D-coded)			Steckseite <i>Mating Face</i>	
1	TxD+	Sendedaten +	<i>Transmission Data +</i>		
2	RxD+	Empfangsdaten +	<i>Receive Data +</i>		
3	TxD-	Sendedaten -	<i>Transmission Data -</i>		
4	RxD-	Empfangsdaten -	<i>Receive Data -</i>		

X3 = PORT 2	Flanschdose / <i>Female socket</i> (M12x1-4 pol. D-coded)			Steckseite <i>Mating Face</i>	
1	TxD+	Sendedaten +	<i>Transmission Data +</i>		
2	RxD+	Empfangsdaten +	<i>Receive Data +</i>		
3	TxD-	Sendedaten -	<i>Transmission Data -</i>		
4	RxD-	Empfangsdaten -	<i>Receive Data -</i>		



Die Schirmung ist großflächig auf das Gegensteckergehäuse aufzulegen!
Empfehlung: Potentialausgleich [A] großflächig mit dem Erdungsanschluss verbinden. /

The shielding is to be connected with large surface on the mating connector housing!
Recommendation: Connect the potential equalisation [A] to the grounding connection across a sufficiently sized surface.



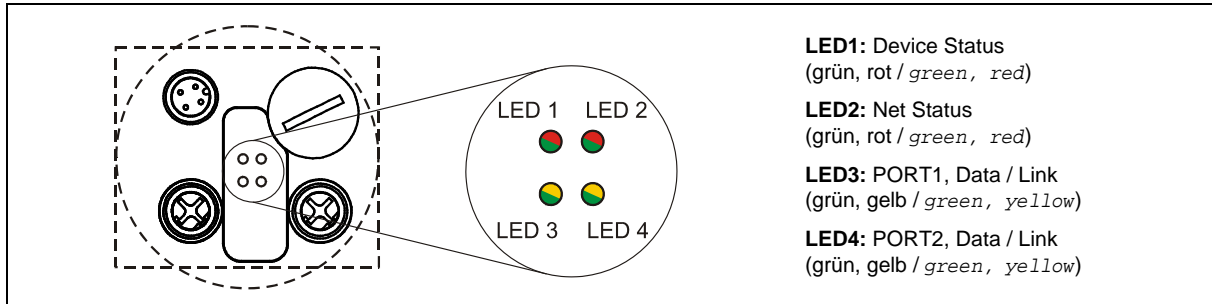
Betriebsanleitung beachten! - Observe User Manual!



Änderungen vorbehalten / Subject to change

Steckerbelegung / Pin assignment

Status-LEDs

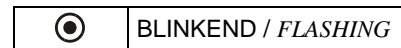
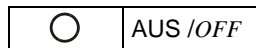
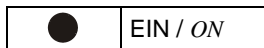


LED1: Device Status
(grün, rot / *green, red*)

LED2: Net Status
(grün, rot / *green, red*)

LED3: PORT1, Data / Link
(grün, gelb / *green, yellow*)

LED4: PORT2, Data / Link
(grün, gelb / *green, yellow*)



LED1, Device Status

grün / <i>green</i>	
	Versorgung fehlt, Hardwarefehler / <i>No supply voltage, hardware error</i>
	Betriebsbereit / <i>Operational</i>
	Re-Integration gefordert / <i>Re-integration required</i>
rot / <i>red</i>	
	System- oder Sicherheitsfehler / <i>System or safety relevant error</i>
	Warnungen, Parameter- oder F-Parameterfehler / <i>Warnings, Parameter- or F-Parameter error</i>

LED2, Net Status

grün / <i>green</i>	
	Versorgung fehlt, Hardwarefehler / <i>No supply voltage, hardware error</i>
	Datenaustausch / <i>Data exchange</i>
rot / <i>red</i>	
	Keine Verbindung zum IO-Controller / <i>No link to the IO-Controller</i>

LED3 / LED4, PORT1 / PORT2 - Link/Data LEDs

grün / <i>green</i>	
	keine Ethernet-Verbindung hergestellt / <i>No ethernet connection established</i>
	Ethernet-Verbindung hergestellt / <i>Ethernet connection established</i>
gelb / <i>yellow</i>	
	Datenaustausch aktiv / <i>data exchange active</i>

Bestellangaben zum Ethernet Steckverbinder, passend zur Flanschdose M12x1-4 pol. D-kodiert /
Order numbers for the Ethernet connector, suitably for the D-coded female socket M12x1-4 pol.

Hersteller / <i>Manufacturer</i>	Bezeichnung / <i>Name</i>	Art-No.:
Binder	Series 825	99 3729 810 04
Phoenix Contact	SACC-M12MSD-4CON-PG 7-SH (PG 7)	15 21 25 8
Phoenix Contact	SACC-M12MSD-4CON-PG 9-SH (PG 9)	15 21 26 1
Harting	HARAX® M12-L	21 03 281 1405