

# Absolute-Encoder CDV75M - PB + FS

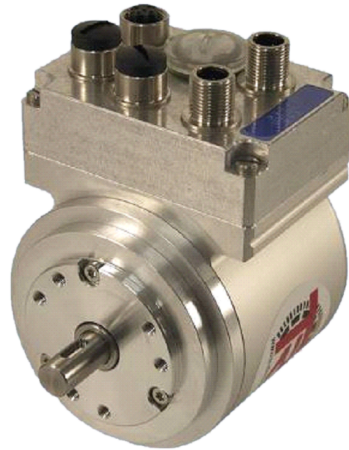
Ref.: K-CDV75-PB-1

18.11.2013

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## Advantages

- Functional safety
- Position feedback signals
- Redundant scanning system
- SIL3, PLe



## General Data

Nominal voltage	
- Specific value	24 VDC
- Limit values, min/max	11/27 VDC
Supply	
- SELV/PELV	IEC 60364-4-41
Current consumption no load	<= 150 mA
Device design	
- Type	Multi-Turn
- Redundant scanning system	yes, double
Total resolution	<= 28 Bit
Number of steps per revolution	<= 8192
Number of revolutions	<= 32768
PROFIBUS - Interface	
- PROFIBUS-DP V0	IEC 61158, IEC 61784
- PROFI-safe-Profile	No. 3.192b
Incremental - Interface	
- Equipment	Standard interface
- Signal form	Square wave
- Signal form, alternative	SIN / COS
- Incremental signals, square	K1± K2±
- Incremental signals, SIN/COS	SIN± COS±, 1 Vss
- Impulses, square wave	4096...20480, in steps of 4096

Subject to change.

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### General Data continuation

- Impulses, SIN/COS	4096 □
- Output driver, TTL	RS-422, 5 VDC
- Output driver, HTL	Push-Pull, 11...27 VDC
- Type of parametrization	Factory setting
Transmission rate	
- Specific value	9.6...12000 kbit/s
Cycle time	
- Not safety related	0.5 ms
- Safety related	5 ms
Parameter/Function, changeable	Integration time
	Preset parameter
	Monitoring window
	Counting direction
	Velocity parameter
Type of parametrization	programmable
Prgramming - Tool	Fieldbus-Device
Functional safety	
- Safety principle	Redundance with cross compare
- SIL-Standardization	DIN EN 61508 / DIN EN 62061
- SIL-Level	SIL3 / SIL CL 3
- PL-Standardization	DIN EN ISO 13849
- Performance-Level (PL)	PLe / Kat. 4
- Service life	20 Years
- PFH, High demand	7.88E-10 1/h
- PFDav, T = 20 a	6.71E-5
- MTTFd, high	98 a
- DCavg, hig	98 %
Maximum Speed, mechanically	<= 6000 1/min
Shaft load, axial/radial	<= 50 N, <= 90 N
Bearing life time	>= 3.9E+10 revolutions
Bearing life time - Parameter	
- Speed	3000 1/min
- Operating temperature	60 °C
- Shaft load, axial/radial	<= 50 N, <= 90 N
Point of origin, shaft load	at the shaft end
Angular acceleration	<= 10E+4 rad/s <sup>2</sup>
Moment of inertia, typically	2.6E-5 kg m <sup>2</sup>
Start-up torque, 20 °C	0.6 Ncm

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## General Data continuation

Mass, typically 1 kg

## Environmental conditions

Vibration	
- Specific value	$\leq 100 \text{ m/s}^2$
- Sine	50...2000 Hz
Shock	
- Specific value	$\leq 600 \text{ m/s}^2$
- Half sine	5 ms
Immunity to disturbance	DIN EN 61000-6-2
Transient emissions	DIN EN 61000-6-3
Working temperature	
- Standard	0...+60 °C
- Optional	-20...+70 °C;
- Note, optional temperature	with restricted functionality
Storage temperature, dry	-30...+80 °C
Relative humidity	98 %, non condensing
Protection class	
- Standard	IP54

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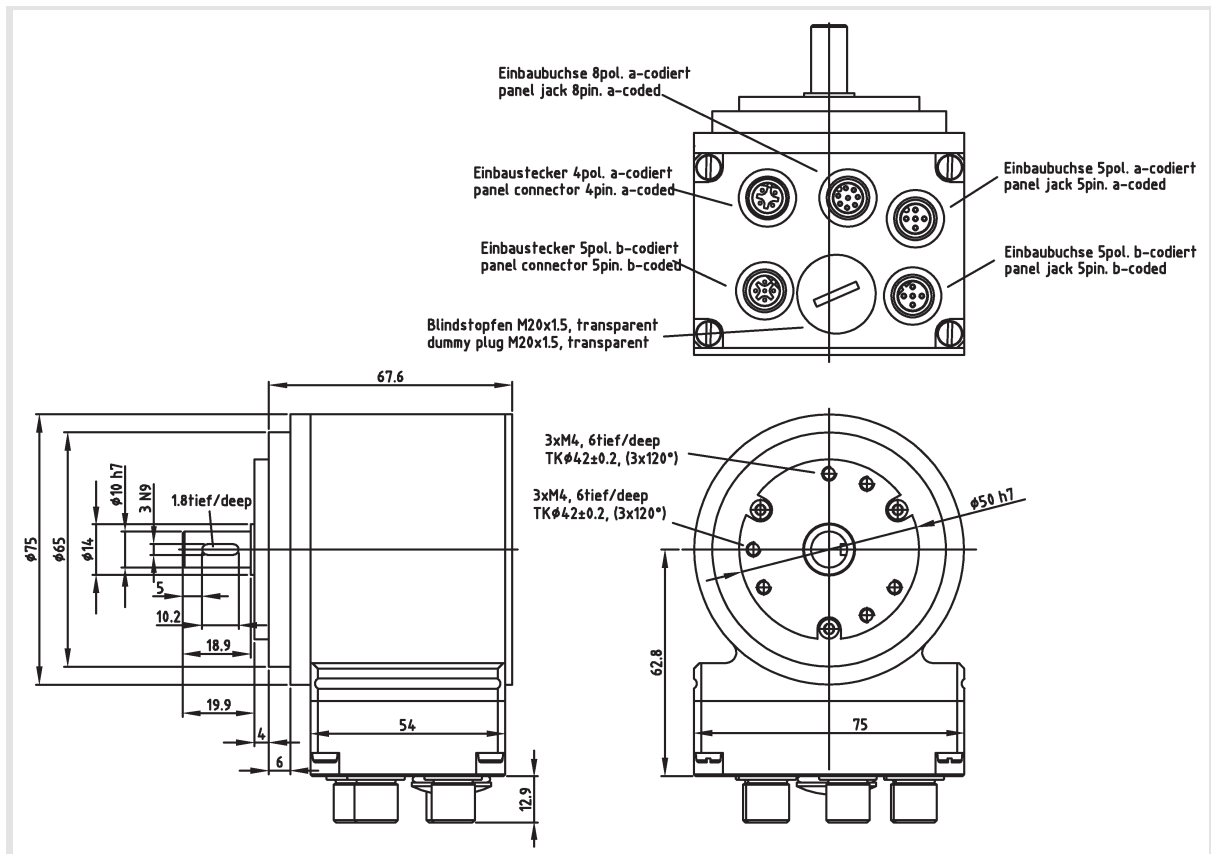
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## Dimensional drawing



## Suggested products

CDV75M\*8192/32768 PB 50ZB10NT +FS  
SIN/COS -20°...70° 5x M12

CDV75M-00008

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