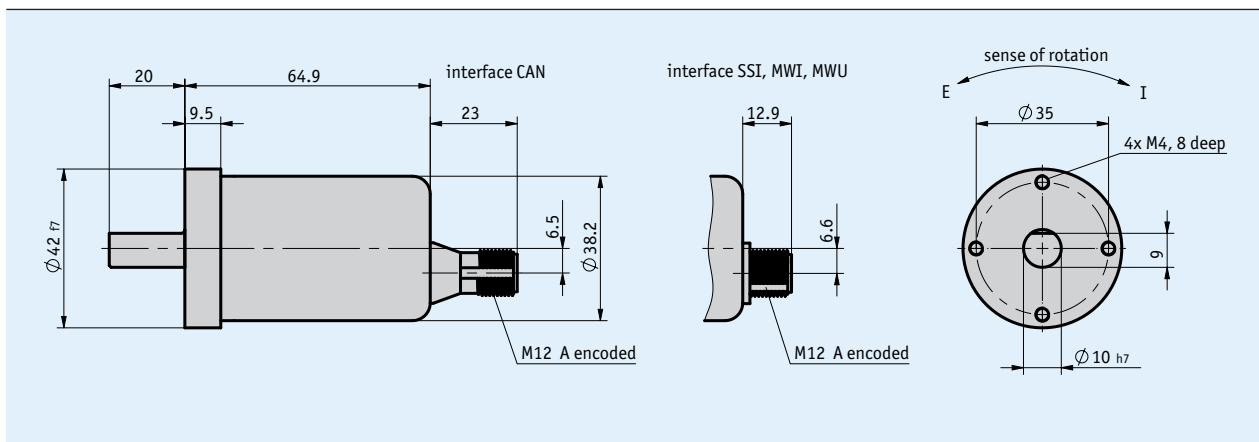


Profile

- Heavy-duty design in stainless steel
- Compact design (42 mm diameter)
- IP6K9K, IP68 protection category
- Resistant to salt spray and acids
- CANopen interface, SSI, analog
- Multi-turn without battery
- High shaft loadability of up to 270 N
- 16 bit multi-turn (65536 revolutions)
- 13 bit single-turn (8192 revolutions)



Mechanical data

Feature	Technical data	Additional information
Shaft	stainless steel	
Flange	stainless steel	
Housing	stainless steel	
Speed	≤ 12000 rpm	
Starting torque	≤ 4 Ncm	at 25 °C
Shaft load rating	axial ≤ 270 N	
	radial ≤ 270 N	
Weight	~ 0.35 kg	

Electrical data

■ Transducer, power output

Feature	Technical data	Additional information
Operating voltage	8 ... 32 V DC	4 ... 20 mA
Current consumption	typical 20 mA@ 24 V (idling)	4 ... 20 mA
Linearity	0.15 %	4 ... 20 mA
Load	RL < 500 Ω	4 ... 20 mA, load against ground GND
Accuracy	$\pm 0.09^\circ$	singleturn, 4 ... 20 mA
Starting time	< 500 ms	4 ... 20 mA
Settling time	32 ms	4 ... 20 mA

■ Transducer, voltage output

Feature	Technical data	Additional information
Operating voltage	8 ... 32 V DC	0 ... 10 V
Current consumption	typical 15 mA	0 ... 10 V
Linearity	0.15 %	0 ... 10 V
Load	RL >5 kΩ	0 ... 10 V, load against ground GND
Accuracy	±0.09°	singleturn, 0 ... 10 V
Starting time	<500 ms	0 ... 10 V
Settling time	32 ms	0 ... 10 V

■ CANopen interface

Feature	Technical data	Additional information
Operating voltage	9 ... 30 V DC	reverse polarity protected
Power input	≤1.2 W	
Interface	according to ISO 11898, galvanically isolated	CANopen (DS406)
Address	adjustable	via SDO or Layer Setting Service (LSS)
Baud rate	≤1 MBit/s	
Cycle time	≥1 ms	

■ SSI interface

Feature	Technical data	Additional information
Operating voltage	4.5 ... 30 V DC	reverse polarity protected
Power input	≤1 W	
SSI clock speed input	100 kHz ... 2 MHz	
Interface	line driver to RS422	
Cycle time	≥25 μs	

System data

Feature	Technical data	Additional information
Resolution	13 bit (analog output)	over the programmed measuring range
	13 bit (singleturn)	current/voltage output
	12 bit (single turn)	CANopen, SSI
Measuring range	≥11.5°	
	≤1 revolution(s)	singleturn
	≤65536 revolution(s)	multiturn
	16 revolution(s)	factory setting (multiturn)

Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-40 ... 85 °C	
Storage temperature	-40 ... 85 °C	
Relative humidity	98 %	condensation inadmissible
EMC	EN 61000-6-2	interference resistance / immission
	EN 61000-6-4	emitted interference / emission
Protection category	IP68	EN 60529
	IP6K9K	ISO 20653
Shock resistance	≤3000 m/s ² , 6 ms	EN 60068-2-27
Vibration resistance	≤300 m/s ² , 10 Hz ... 1 kHz	EN 60068-2-6

Pin assignment

■ MWI/MWU interface

Signal	PIN
I _{out} /U _{out}	1
+UB	2
GND	3
Set 2	4
Set 1	5

■ CAN interface

Signal	PIN
CAN_GND	1
+UB	2
GND	3
CAN_H	4
CAN_L	5

■ SSI interface

Signal	PIN
GND	1
+UB	2
SSI clock +	3
SSI clock -	4
SSI data +	5
SSI data -	6
calibration input	7
sense of rotation	8

Order

■ Ordering table

Feature	Ordering data	Specification	Additional information
Interface	CAN	CANopen (DS406)	
	MWI	4 ... 20 mA	
	MWU	0 ... 10 V	
	SSI/B	SSI binary	
	SSI/G	SSI gray	
Number of revolutions	1	singleturn	
	8192	13 bit	only SSI or CAN
	65536	16 bit	only MWI or MWU

■ Order key

WV42HD - A - B - M12

Scope of delivery: WV42HD

Accessories:
Electronic display MA10/4
Electronic display MA50

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