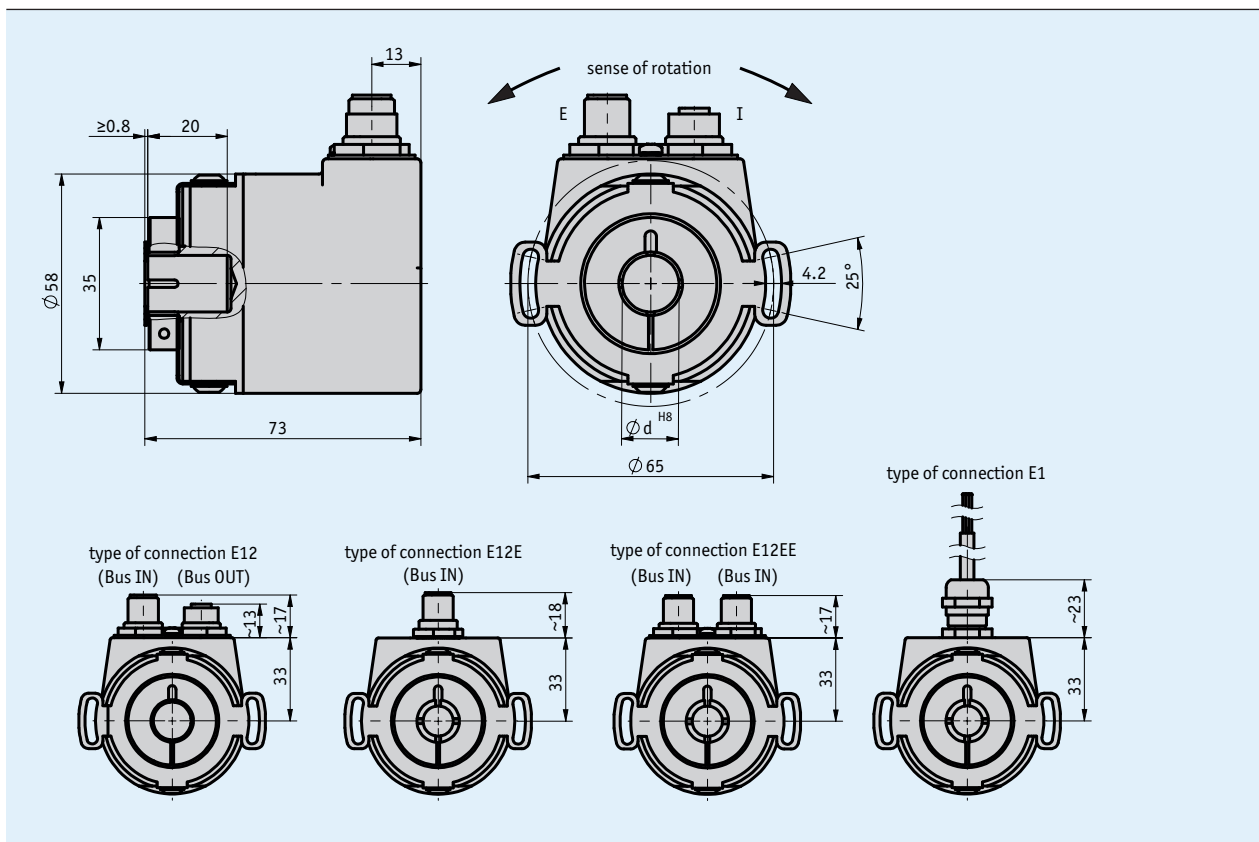


Profile

- Absolute redundant safety rotary encoder
- Interface CANopen Safety or CANopen redundant
- Suitable for applications up to Performance Level PLD
- Hollow shaft to $\varnothing 15$ mm
- Salt-spray resistant housing available
- High electro-magnetic compatibility
- IP67 protection category
- With PURE.MOBILE technology



Mechanical data

Feature	Technical data	Additional information
Shaft	stainless steel	
Flange	aluminum	
Housing	die-cast aluminum	CDP-coated
Speed	≤ 3000 rpm	
Moment of inertia	≤ 110 gcm ²	
Starting torque	≤ 3 Ncm	at 20° C
Shaft load rating	≤ 80 N	radial
	≤ 40 N	axial
Cable sheath	PVC	E1 connection type

Electrical data

Feature	Technical data	Additional information
Operating voltage	8 ... 36 V DC	reverse polarity protected
Current consumption	20 mA	at 36 V, per encoder
	28 mA	at 24 V DC, per encoder
	76 mA	at 8 V, per encoder
Power input	≤800 mW	without load
Parameter storage	10 ⁵ cycles	also applies to calibration operations
Status display	2x tricolor LEDs (red/green/yellow)	device status/CAN status
Power rating	±60 V	CAN interface
Interface	according to ISO 11898, not galvanically isolated	CANopen, CiA 301, CiA 303, CiA 305, CiA 406
	according to ISO 11898-1/2, not galvanically isolated	CANopen Safety, CIA 301, CIA 303, CIA 305, CIA 406, EN 50325-5
Address	1 ... 127	Node ID, via SDO or Layer Setting Service (LSS)
Baud rate	20 kBit/s	
	50 kBit/s	
	125 kBit/s	
	250 kBit/s	
	500 kBit/s	
	800 kBit/s	
	1 MBit/s	
Cycle time	typical 1.5 ms	
Starting time	<150 ms	
Type of connection	1x M12 connector (A-coded)	5-pole, 1x pin (E12E connection type), fieldbus and supply internally connected
	2x M12 connector (A-coded)	5-pole, 1x pin; 1x socket (E12 connection type), fieldbus and supply internally connected
	2x M12 connector (A-coded) open cable end	5-pole, 2x pin (E12EE connection type), fieldbus and supply internally separated E1 type of connection, fieldbus and supply internally connected

System data

Feature	Technical data	Additional information
Scanning	magnetic	
Resolution	14 Bit	singleturn, 16384 steps/revolution
Measuring range	1 revolution(s)	singleturn
	4096 revolution(s)	
Failure rate	206.1 year(s)	at 40° C (MTTF) acc. to SN29500
	580 year(s)	at 60° C (MTTFd) each channel
	196 AT	at 60° C (PFH) 1 FIT = 1.0 E - 09 1/h
Error detection	77 %	at 60° C (DCavg) according to ISO13849-1, Appendix E.2

Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-40 ... 85 °C	
Storage temperature	-40 ... 85 °C	
Relative humidity	100 %	condensation admissible
EMC	EN 61000-6-2	interference resistance / immission
	EN 61000-6-4	emitted interference / emission
	ISO 7637-1, -2	transient pulses
	ISO / TR 10605	electrostatic discharge (ESD)
Protection category	IP67	EN 60529
Shock resistance	500 m/s ² , 11 ms	EN 60068-2-27, half-sine, 3 axes (+/-), each 3 shocks
Vibration resistance	100 m/s ² , 10 ... 2000 Hz	EN 60068-2-6, 3 axes, each 10 cycles

Option, PURE.MOBILE sensor module

■ inclination sensor

Feature	Technical data	Additional information
Resolution	0.01°	
Measurement range	360°	1 axis
	±180°	1 axis
Accuracy	±0.1°	at 20° C
	±0.8°	over the entire temperature and max. measurement range
Zero point accuracy drift max.	±0.02°/K	
Zero point accuracy drift typical	±0.008°/K	
Cut-off frequency	10 Hz	

Pin assignment

■ E12, E12E, E12EE

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

■ E1

Signal	E1
CAN_GND	white
+UB	brown
GND	green
CAN_H	yellow
CAN_L	gray

Order

■ Ordering table

Feature	Ordering data	Specification	Additional information	
Interface/protocol	CAN	A	CANopen	
	CANs	A	CANopen Safety	
Number of revolutions	1	B	singleturn	
	4096	B	12 bit	
Hollow shaft/diameter	...	C	10, 12, 15 in mm	
Ambient conditions	S	D	standard	
	SN	D	salt spray tested housing	
Type of connection	E1	E	open cable ends	
	E12	E	Bus IN/Bus OUT	2x M2x M12, 5-pin A-coded, fieldbus and supply internally connected
	E12E	E	Bus IN	1x M12, 5-pin A-coded, fieldbus and supply internally connected
	E12EE	E	Bus IN/Bus IN	2x M12, 5-pin A-coded, fieldbus and supply internally connected
Cable length	...	F	01.0, 02.0, 03.0, 05.0, 10.0 in m	
	OK	F	without cable	

■ Order key

WH58MR - A - 16384 - B - C - D - IP67 - R - E - F - SW

Scope of delivery: WH58MR, Quick Start Guide

Accessories:

Cable extension KV0550
 Mating Connector Overview
 Mating connector, 5-pole, socket

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 Order key 84109