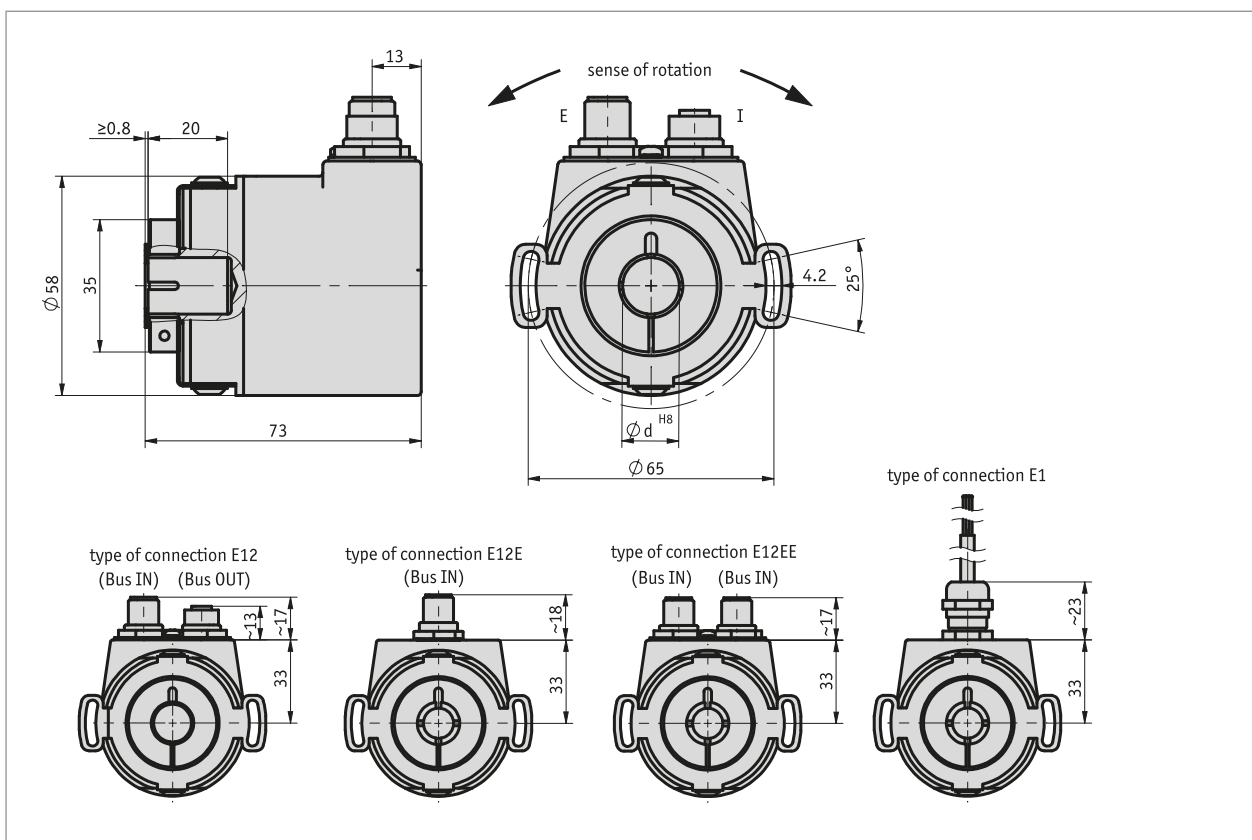


### Profile

- absolute redundant safety encoders
- CANopen Safety or CANopen redundant interface
- Can be used in applications up to performance level PLd
- Hollow shaft to  $\varnothing$  15 mm
- Salt spray tested housing available
- High EMC compatibility
- IP67 protection class
- with PURE.MOBILE technology



### Mechanical data

Feature	Technical data	Additional information
shaft	rustproof stainless steel	
Flange	aluminum	
Housing	aluminum die-cast	CDP-coated
Speed	$\leq 3000 \text{ min}^{-1}$	
Moment of inertia	$\leq 110 \text{ gcm}^2$	
Starting torque	$\leq 3 \text{ Ncm}$ at 20 °C	
Shaft load rating	$\leq 80 \text{ N}$ $\leq 40 \text{ N}$	radial axial
Cable sheath	PVC	E1 connection type

### Electrical data

Feature	Technical data	Additional information
Operating voltage	8 ... 36 V DC	reverse polarity protection
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, per encoder
Parameter storage	10 <sup>5</sup> 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 11898-1, not electrically isolated	CANopen, CiA 301, CiA 303, CiA 305, CiA 406
	according to ISO 11898-1, not electrically 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	1.5 ms, typical	
Starting time	<150 ms	
Type of connection	1x M12-plug connector (A-coded)	5-pole, 1x pin (E12E connection type), fieldbus and supply internally connected
	2x M12 plug connectors (A-coded)	5-pole, 1x pin; 1x socket (E12 connection type), fieldbus and supply internally connected
	2x M12 plug connectors (A-coded)	5-pole, 2x pin (E12EE connection type), fieldbus and supply internally separated
	open cable end	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 rotation(s)	singelturm
	4096 rotation(s)	
Failure rate	206.1 Year(s)	at 40° C (MTTF) acc. to SN 29500
	580 Year(s)	at 60° C (MTTFd) each channel
	196 FIT	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
Approval	E1	UN ECE R10 approval No.: E1*10R05/01*8898*00

### 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 <sup>2</sup> , 11 ms	EN 60068-2-27, half-sine, 3 axes (+/-), each 3 shocks
Vibration resistance	100 m/s <sup>2</sup> , 10 ... 2000 Hz	EN 60068-2-6, 3 axes, each 10 cycles
Salt spray test	severity level 3	EN 60068-2-52 (ambient condition SN)

### Option, PURE.MOBILE sensor module

#### ■ Inclinometer

Feature	Technical data	Additional information
Resolution	0.01°	
Measuring range	360°	1 axis
	±180°	1 axis
Accuracy	±0.1° at 20 °C	
	±0.8°	over the entire temperature and max. measuring 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	Cable color E1
CAN_GND	white
+UB	brown
GND	green
CAN_H	yellow
CAN_L	gray

### Order

#### ■ Ordering table

Feature	Ordering data	Spezifikation	Additional information
interface/protocol	<b>A</b> CAN CANs	CANopen CANopen Safety	
number of revolutions	<b>B</b> 1 4096	singelturn 12 bit	
hollow shaft/diameter	<b>C</b> ...	10, 12, 15 in mm	
ambient conditions	<b>D</b> S SN	standard salt spray tested housing	
Type of connection	<b>E</b> E1 E12 E12E E12EE	open cable ends Bus IN/Bus OUT Bus IN Bus IN/Bus IN	2x M12, 5-pole A-coded, fieldbus and power supply internally connected 1x M12, 5-pin A-coded, fieldbus and supply internally connected 2x M12, 5-pole A-coded, fieldbus and power supply isolated
Cable length	<b>F</b> ... OK	01.0, 02.0, 03.0, 05.0, 10.0 in m without cable	
option	<b>G</b> 0 DIP IK1 IK1R	without rotary switch, address, baud rate inclination sensor, 1 axis redundant inclination sensor, 1 axis	only with CANopen, CANopen Safety

#### ■ Order key

WH58MR -  -  -  -  -  -  -  -  -  -  -



#### Scope of delivery:

WH58MR, Quick Start Guide



#### Accessories you can find:

Cable extension KV05S0	<a href="http://www.siko-global.com">www.siko-global.com</a>
Extension board DIP	<a href="http://www.siko-global.com">www.siko-global.com</a>
Extension board IK1	<a href="http://www.siko-global.com">www.siko-global.com</a>
Extension board IK1R	<a href="http://www.siko-global.com">www.siko-global.com</a>
Overview Mating connector	<a href="http://www.siko-global.com">www.siko-global.com</a>
Mating connector, 5-pole, angle socket	Order key 83006
Mating connector, 5-pole, socket	Order key 84109
Bus terminating connector, 5-pole, pin	Order key 82815