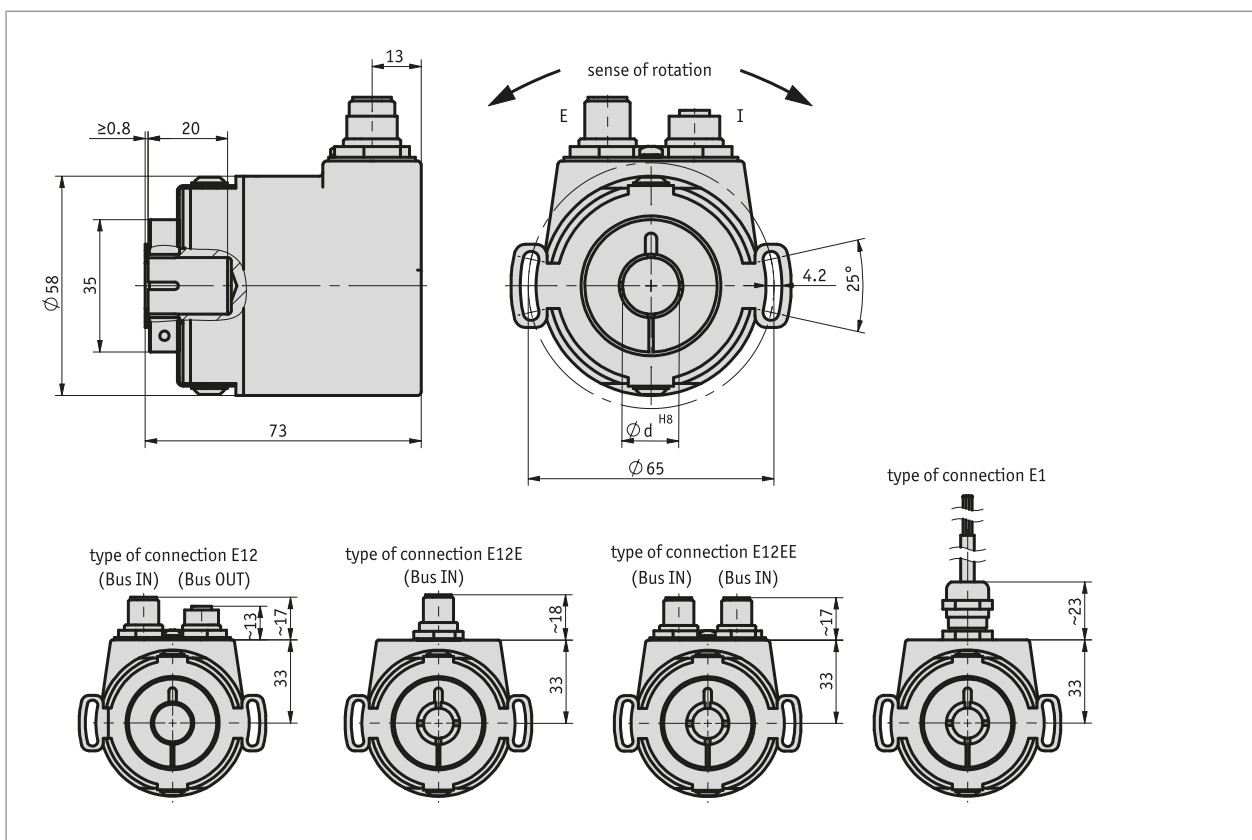


Profile

- 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 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 11898-1, 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
Salt spray test	severity level 3	EN 60068-2-52 (ambient condition SN)
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

■ 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

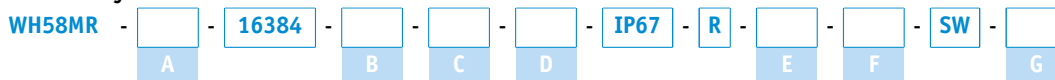
Signal	Cable color E1
CAN_GND	white
+UB	brown
GND	green
CAN_H	yellow
CAN_L	gray

Order

■ Ordering table

Feature	Ordering data	Spezifikation	Additional information
interface/protocol	A CAN CANs	CANopen CANopen Safety	
number of revolutions	B 1 4096	singelturn 12 bit	
hollow shaft/diameter	C ...	10, 12, 15 in mm	
ambient conditions	D S SN	standard salt spray tested housing	
Type of connection	E 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-pin A-coded, fieldbus and supply internally connected
Cable length	F ... OK	01.0, 02.0, 03.0, 05.0, 10.0 in m without cable	
option	G 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



**Scope of delivery:**

WH58MR, Quick Start Guide

**Accessories you can find:**

Cable extension KV05S0	www.siko-global.com
Extension board DIP	www.siko-global.com
Extension board IK1	www.siko-global.com
Extension board IK1R	www.siko-global.com
Overview, Mating connector	www.siko-global.com
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