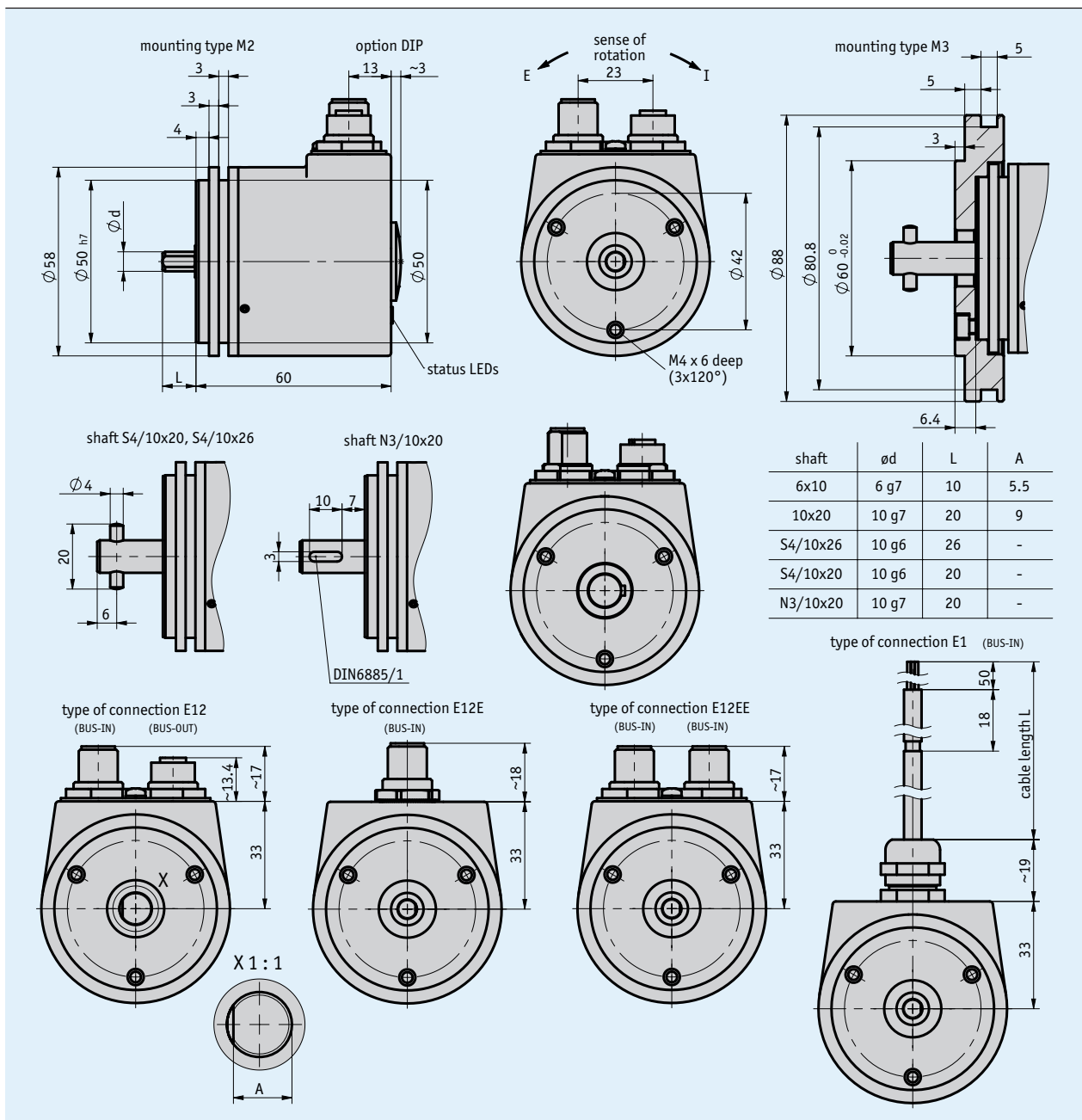


Profile

- Absolute redundant safety rotary encoder
- Interface CANopen Safety or CANopen redundant
- Suitable for applications up to Performance Level PLD
- Salt-spray resistant housing available
- High electro-magnetic compatibility
- Available with special swing ring functionality
- With PURE.MOBILE technology



Mechanical data

Feature	Technical data	Additional information
Shaft	stainless steel	
Flange	aluminum	
Housing	die-cast aluminum	CDP-coated
Speed	≤6000 rpm	IP65
	≤3000 rpm	IP67
Moment of inertia	≤8 gcm ²	
Starting torque	≤2 Ncm	at 20 °C
Shaft load rating	≤80 N	radial
	≤40 N	axial
Cable sheath	PVC	E1 connection type
Cable bending radius	>25 mm	E1 connection type, static
Mounting type	servo-flange	
Weight	~0.35 kg	

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, 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 11898-1/2, 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	
Cycle time	typical 1.5 ms	
Starting time	<150 ms	
Parameter	as specified by CiA DS-301, DS-406, DS-303 Part 3, EN 50325-5	CANopen Safety
	as specified by CiA DS-301, DS-406, DS-303 Part 3	CANopen
Type of connection	1x M12 connector (A-coded)	5-pole, 1x pin (E12E connection type), encoder internally connected
	2x M12 connector (A-coded)	5-pole, 1x pin; 1x socket (E12 connection type), encoder internally connected
	2x M12 connector (A-coded)	5-pole, 2x pin (E12EE connection type), encoder not internally connected
	open cable end	type of connection E1, encoder 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) according 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
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
Protection category	IP65	EN 60529 fitted with suitable mating connector
	IP67	EN 60529
Salt spray test	severity level 4	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

■ 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
Max. zero point accuracy drift.	±0.02°/K	
Typical zero point accuracy drift	±0.008°/K	
Cut-off frequency	10 Hz	

Pin assignment

■ E12, E12E

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	Specification	Additional information
Interface/protocol	CAN	CANopen	
	CANs	CANopen Safety	
Type of connection	E1	open cable end	
	E12	bus IN/bus OUT	2x M12, 5-pole A-coded, fieldbus and power supply internally connected
	E12E	bus IN	1x M12, 5-pole A-coded, fieldbus and power supply internally connected
	E12EE	bus IN/bus IN	2x M12, 5-pole A-coded, fieldbus and power supply isolated
Number of revolutions	1	singleturn	
	4096	12 bit	multiturn
Shaft diameter x length	6x10	∅6 mm, length 10 mm	
	10x20	∅10 mm, length 20 mm	
	S4/10x20	notch pin, ∅10 mm, length 20 mm	
	S4/10x26	notch pin, ∅10 mm, length 26 mm	
	N3/10x20	feather key, ∅10 mm, length 20 mm	
Ambient conditions	S	standard	
	SN	salt-spray resistant housing	
Protection category	IP65	IP65	
	IP67	IP67	
Mounting type	M2	servo flange, ∅58 mm	
	M3	servo flange, ∅88 mm	
Cable length	...	01.0, 02.0, 03.0, 05.0, 10.0	
	OK	without cable	
Option	O	without	
	DIP	rotary switch, address, baud rate	only with CANopen, CANopen Safety
	IK1	inclination sensor, 1 axis	
	IK1R	redundant inclination sensor, 1 axis	

Order key



Scope of delivery: WV58MR, Quick Start Guide

Accessories:

Extension Board DIP	www.siko-global.com
Extension Board IK1	www.siko-global.com
Extension Board IK1R	www.siko-global.com
Cable extension KV05S0	www.siko-global.com
Mating Connector Overview	www.siko-global.com
Mating connector, 5-pole, socket	Order key 84109
Mating connector, 5-pole, angle socket	Order key 83006
Bus terminating connector, 5-pole, pin	Order key 82815