

Mechanical data

Feature	Technical data	Additional information
shaft	rustproof stainless steel	
Flange	aluminum	
Housing	aluminum die-cast	CDP-coated
Speed	≤6000 min ⁻¹	IP65
	≤3000 min ⁻¹	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 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	
Cycle time	1.5 ms, typical	
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-plug connector (A-coded)	5-pole, 1x pin (E12E connection type), encoder internally connected
	2x M12 plug connectors (A-coded)	5-pole, 1x pin; 1x socket (E12 connection type), encoder internally connected
	2x M12 plug connectors (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 rotation(s)	singleturn
	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
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

■ 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	
Type of connection	B E1 E12 E12E E12EE	open cable end 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
number of revolutions	C 1 4096	singleturn 12 bit	multiturn
shaft diameter x length	D 6x10 10x20 S4/10x20 S4/10x26 N3/10x20	ø6 mm, length 10 mm ø10 mm, length 20 mm Notch pin, ø10 mm, length 20 mm Notch pin, ø10 mm, length 26 mm feather key, ø10 mm, length 20 mm	
ambient conditions	E S SN	standard salt spray tested housing	
Protection category	F IP65 IP67	IP65 IP67	

Feature	Ordering data	Spezifikation	Additional information
Mounting type	G M2 M3	Servo flange, ø58 mm Servo flange, ø88 mm	
Cable length	H ... OK	01.0, 02.0, 03.0, 05.0, 10.0 in m without cable	
option	I 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:

WV58MR, 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