

Datasheet

Encoder RSA 58E absolute CANopen magnetic



RS Stock No. 7951214
RS Stock No. 7951217
RS Stock No. 7951211

Mechanical Data

Housing

Flange	hollow shaft (blind-bored)
Flange material	aluminium
Housing cap	steel case chrome-plated, magnetic shielding
Torque supports	incl. 1 torque support WDGDS10001
- 1. Spring plate compensation	axial: ± 0.8 mm, radial: ± 0.2 mm
- Max. operating speed	6000 rpm up to max. protection rating +60 °C
Housing	Ø 58 mm

Shaft(s)

Shaft material	stainless steel
Starting torque	approx. 1.6 Ncm at ambient temperature
Fixing	permanently attached clamping ring
Shaft	Ø 10 mm
Advice	with adapter sleeve
Insertion depth min.	11 mm
Insertion depth max.	16 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N

Shaft	Ø 12 mm
Insertion depth min.	11 mm
Insertion depth max.	16 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N

Shaft	Ø 14 mm
Insertion depth min.	11 mm
Insertion depth max.	16 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N

- Maintenance-free and environmentally friendly
- CANopen, Multiturn
- Communication Profile according to CiA 301
- Device Profile for encoder CiA 406 V3.2 class C2
- Single-/Multiturn (12 bit / 18 bit)
- Forward-looking technology with 32 Bit processor

Bearings

Bearings type	2 precision ball bearings
Nominal service life	1 x 10 ⁹ revs. at 100 % rated shaft load 1 x 10 ¹⁰ revs. at 40 % rated shaft load 1 x 10 ¹¹ revs. at 20 % rated shaft load
Max. operating speed	6000 rpm

Machinery Directive: basic data safety integrity level

MTTF _d	1000 a
Mission time (TM)	20 a
Nominal service life (L10h)	1 x 10 ¹¹ revs. at 20 % rated shaft load and 6000 rpm
Diagnostic coverage (DC)	0 %

Electrical Data

Power supply/Current consumption	10 VDC up to 32 VDC: max. 50 mA
Power consumption	max. 0.5 W

Sensor data

Singleturn technology	innovative hall sensor technology
Singleturn resolution	4,096 steps/360° (12 bit)
Singleturn accuracy	< $\pm 0.35^\circ$
Singleturn repeat accuracy	< $\pm 0.20^\circ$
Turn cycle time	$\leq 600 \mu s$
Multiturn technology	no battery and no gear.
Multiturn resolution	up to 262,144 revolutions (18 bit)

Environmental data

ESD (DIN EN 61000-4-2):	8 kV
Burst (DIN EN 61000-4-4):	2 kV
includes EMC:	DIN EN 61000-6-2 DIN EN 61000-6-3
Vibration: (DIN EN 60068-2-6)	50 m/s ² (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	1000 m/s ² (6 ms)
Design:	appropriate DIN VDE 0160
Turn on time:	<1,5 s

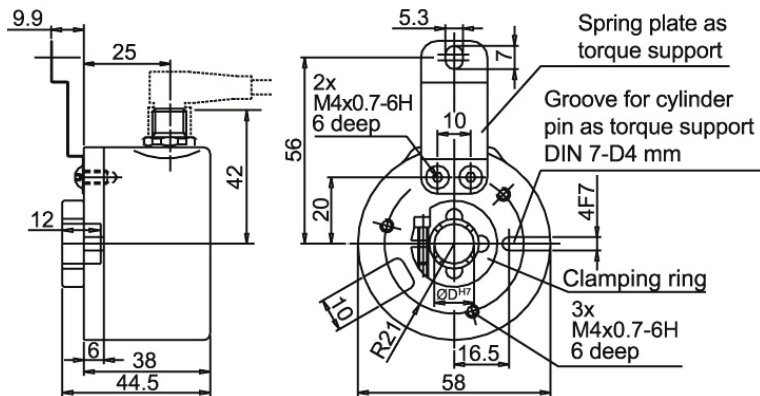
Interface

Interface:	CAN
Protocol:	CANopen <ul style="list-style-type: none"> • Communication profil CiA 301 • Device Profile for encoder CiA 406 V3.2 class C2
Node number:	0 up to 127 (default 127)
Baud rate:	10 kBaud up to 1 MBaud with automatic bit rate detection.
Advice:	The standard settings as well as any customization in the software can be changed via LSS (CiA 305) and the SDO protocol, e. g. PDOs, Scaling, Heartbeat, Node-ID, Baud rate, etc.
Programmable CAN transmission modes:	Synchronous mode: when a synchronisation telegram (SYNC) is received from another bus node, PDOs are transmitted independently. Asynchronous mode: a PDO message is triggered by an internal event. (e.g. change of measured valued, internal timer, etc.)

General Data

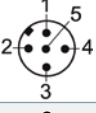
Weight	approx. 220 g
Connections	connector outlet
Protection rating (EN 60529)	IP67, shaft sealed to IP65
Operating temperature	-40 °C up to +80 °C
Storage temperature	-40 °C up to +100 °C

Connector, M12x1 CC5, 5-pin



Description

CC5 radial, 5-pin, shield connected to encoder housing

Assignments	
	<p>CC5</p> 
+UB	2
GND	3
CANHigh	4
CANLow	5
CANGND shield	1



ENGLISH

RS Stock No.	Ø Shaft	Single-/Multiturn	Code	Power supply	Connector
7951214	10 mm	12 bit / 18 bit	binary	10 VDC up to 32 VDC	CC5 (radial)
7951217	12 mm	12 bit / 18 bit	binary	10 VDC up to 32 VDC	CC5 (radial)
7951211	14 mm	12 bit / 18 bit	binary	10 VDC up to 32 VDC	CC5 (radial)