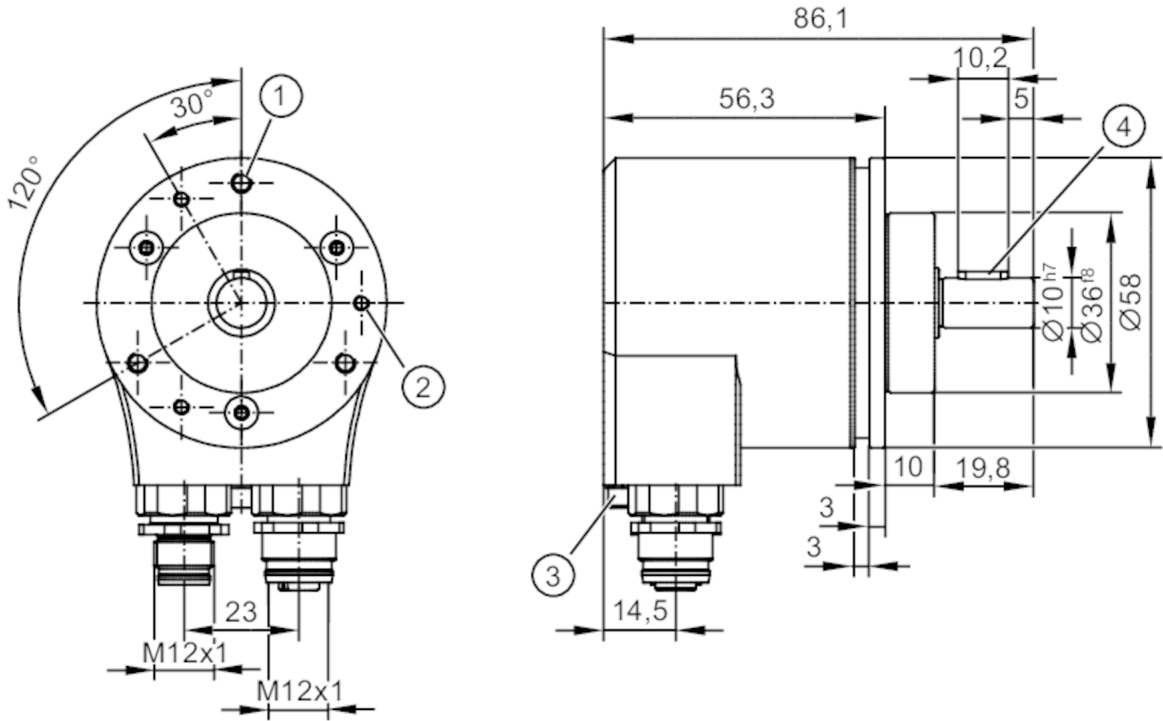


RM902S



Absolute multiturn encoder with solid shaft

RMV10SRU51213bCANS



- | | |
|---|-------------------------------|
| 1 | M4 |
| 2 | M3 |
| 3 | M4 for potential equalization |
| 4 | parallel key (DIN6885-4x4x10) |



Product characteristics

Resolution	8192 steps; 65536 revolutions; 29 bit
Shaft design	solid shaft
Shaft diameter [mm]	10

Application

Function principle	absolute
Revolution type	multiturn
Detection system	magnetic
Application	Mobile applications; cranes and hoist machines
Operating temperature (active) [°C]	-40...85

Electrical data

Operating voltage	[V]	8...36 DC
Current consumption	[mA]	< 60; ((24 V DC))
Power consumption	[W]	1.5
Protection class		III
Reverse polarity protection		yes
Overvoltage protection		yes; (< 60 V DC)
Power-on delay time	[s]	< 2

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Outputs			
Contact rating		max. 1,5 A (24 V DC)	
Code		binary	
Measuring/setting range			
Resolution		8192 steps; 65536 revolutions; 29 bit	
Accuracy / deviations			
Accuracy	[°]	safety	0.5
Accuracy	[°]	non-safety	0.2
Repeatability		± 0,1 °; (magnetic)	
Reaction times			
Response time to safety request	[ms]	7	
Software / programming			
Parameter setting options		scaling; preset; Baud rate; node ID; limit switch; gear function; monitoring window; Counting direction; speed parameters; integration time; ifm mode	
Interfaces			
Number of CAN interfaces		2	
Transmission rate		20 kBit/s... 1 MBit/s	
Terminating resistor		yes; (Extern M12 (z.B. E11590))	
CAN			
Protocol		CANopen; CANopen Safety; CAN Spezifikation 2.0 A	
Factory settings		Baud rate: 250 kBit/s	
		node ID: 32	
Version		CiA 406 V4.1.0; CiA 301 V4.2.0; CiA DSP-305 V3.0.0 LSS; EN 50325-4; EN 50325-5; ISO 11898	
Operating conditions			
Ambient temperature	[°C]	-40...85	
Storage temperature	[°C]	-40...90	
Note on storage temperature		dry	
Max. relative air humidity	[%]	98	
Max. height above sea level	[m]	5000	
Protection		IP 67; IP 69K; (with ifm socket duly screwed on)	



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Chemical media	test according to ISO 16750-5	
	the following media were tested at 85 °C for 22 hours	diesel
		biodiesel
		hydraulic fluids
		(Fuchs Hydrotherm 46 M HFC,
		(Fuchs Renoling B15 VG 46 HLP,
		Liqui Moly Hydrauliköl HEES 46)
		brake fluid
		(K2 TURBO DOT 4)
		urea
		(Adblue)
	the following media were tested for 22 hours at 23 °C	preservative
		(Pfänder W550)
		cold cleaner
		(Nigrin cold cleaner)
		ammonia-based cleaner
		(EMSAL Kraft und Grundreiniger)
		alkaline cleaner
		(Kärcher RM 69 FloorPro)
	the following media were tested for 2 hours at 23 °C	windscreen washer fluid
		(SONAX Clear View 1:100 Concentrate)
		vehicle cleaning product
		(Förch R527 car shampoo concentrate)
		wheel rim cleaner
		(SONAX Xtreme)
		de-icer
		(Eastman Clearway)
	the following media were tested for 10 minutes at 23 °C	lead-free petrol
		alcohol

Tests / approvals		
EMC	IEC 61000-4-2 ESD 6	6 kV CD / 15 kV AD
	IEC 61000-4-3 HF radiated	20 V/m (27...1000MHz)
		10 V/m (1000...2000MHz)
		3 V/m (2000...6000MHz)
	IEC 61000-4-4 Burst	4 kV
	IEC 61000-4-5 Surge	2 kV (screen)
	IEC 61000-4-6 HF	20 V
	IEC 55011	class B
	IEC 61000-4-8 magnetic fields	30 A/m (50 Hz) / 1000 A/m (0 Hz) Failure criterion A
Shock resistance	IEC 60068-2-27	100 g 6 ms half-sine; 100 shocks each in every direction of the 3 coordinate axes
Vibration resistance	IEC 60068-2-64	15 g Sinus / 50...2000 Hz
	ISO 19014-3	5.7 g RMS
Salt spray test	IEC 60068-2-52	severity level 5
Standard	compliant with ECE R 10 Rev. 6	

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Safety classification	
Complies with the requirements	ISO 13849-1 Category 3, PL d IEC 61508 SIL 2 IEC 61800-5-2 IEC 61800-5-3
Mission time TM [h]	175800
Mission time TM (additional indication)	20 years
PFH [1/h]	2,00E-8
Mechanical data	
Weight [g]	595.1
Housing	tubular
Dimensions [mm]	Ø 58 / L = 86.1
Material	sealings: NBR/HNBR; Display: UV-stabilized polycarbonate; Connections: diecast zinc nickel-plated (axial)/(radial)
Max. revolution, mechanical [U/min]	6000
Max. starting torque [Nm]	0.05
Reference temperature torque [°C]	20
Shaft design	solid shaft
Shaft diameter [mm]	10
Shaft material	stainless steel (1.4305 / 303)
Max. shaft load axial (at the shaft end) [N]	80
Max. shaft load radial (at the shaft end) [N]	100
Fixing flange	Clamping flange; Ø 58 mm
Remarks	
Remarks	material for secure mounting not supplied; fixing must be done by the user meets the EMC requirements for use in agricultural and forestry machinery, earthworks and construction machines and industrial trucks additional information on max. shaft load: measured 10 mm from the flange can be used in applications up to Ag PL d in accordance with ISO 25119, up to MPL d in accordance with ISO 19014-3
Pack quantity	1 pcs.

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Electrical connection - CAN-in

Connector: 1 x M12; coding: A; (open M12 connections must be covered with appropriate protective caps)



1	CAN screen
2	VBB
3	GND
4	CAN_H
5	CAN_L
	PE via housing screw

Electrical connection - CAN-out

Connector: 1 x M12; coding: A; (open M12 connections must be covered with appropriate protective caps)



1	CAN screen
2	VBB
3	GND
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5	CAN_L
	PE via housing screw