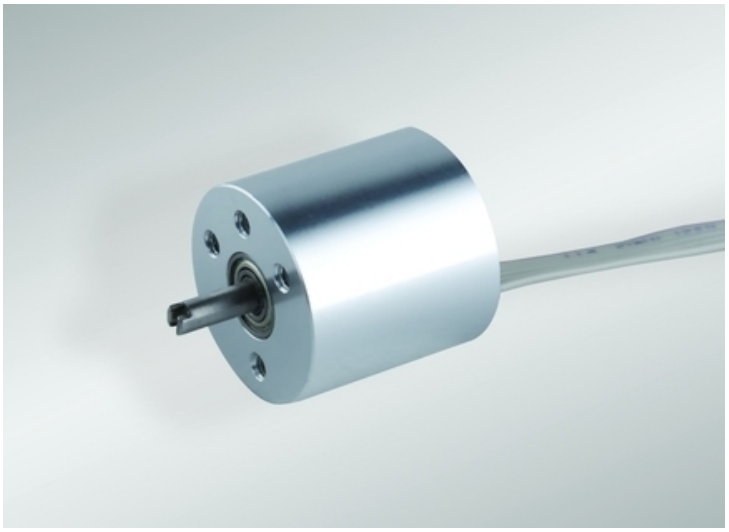
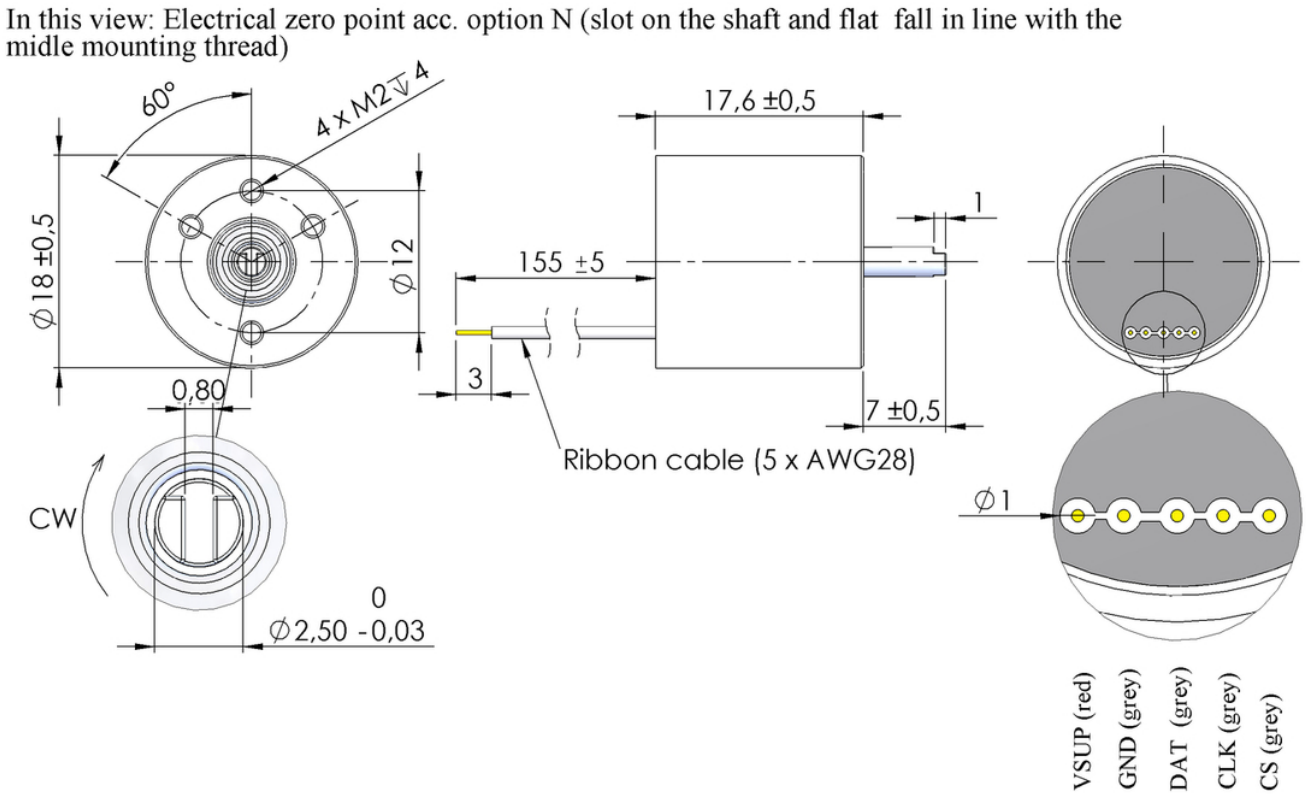
Series MAB18 SER / Hall Effect Absolute Encoder with serial interface

- Synchronous serial interface (SER)
- Angle range 360°
- Resolution 10, 12 Bit
- Voltage supply 3,3V or 5V
- 18 mm body diameter
- Precision ball bearing

The R18D is space-saving and used for applications with a high demand of lifetime. The operating- and signal voltage-range enables a flexible adjustment to various applications.



Drawing



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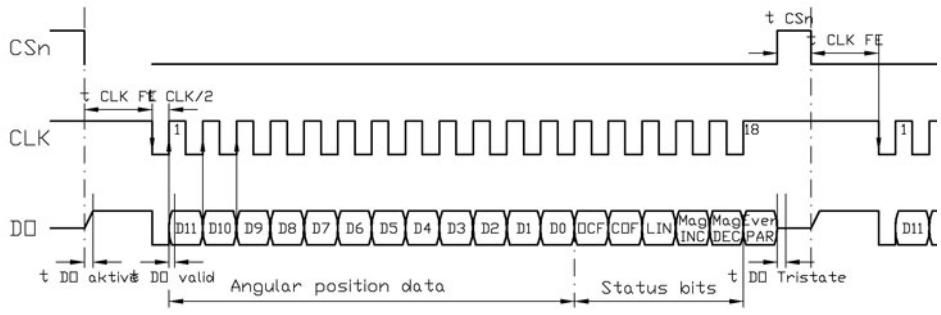
Electrical Data	SER- Interface	
Electrical angle	360°	
Independent linearity tolerance	± 0,2 %	
Resolution	4096 Steps (12Bit) / 1024 Steps (10Bit)	
Update rate	0,38 ms / 0,1 ms (High Speed)	
Initial response	< 50 ms	
Voltage supply	3,3 ±10% VDC	5 ±10% VDC
Current supply (no load)	<20 mA	

Mechanical Data	
Maximum rotational speed	6.000 rpm

Other Data	
Protection class (shaft and housing)	IP65
Operating temperature	-40 ... +85 °C (other temperatures on request)
Storage temperature	-40 ... +105 °C
Bearing	2 precision ball bearings
Housing material	chromed aluminium
Shaft material	stainless steel
Weigth	approx. 30 g

Timing Diagramm SER-Bus



Synchronous serial interface with absolute position data

Falling edge of CS triggers a measurement value
Signal timing:
tCSn >500ns
tCLKFE >500ns
CLK <1MHz
Remark: Above signal timing apply to 10 Bit and 12 Bit version. Please find the exact specifications of the output signals in the datasheets of application notes (AS5040, AS5045) of Austria Microsystems: www.austriamicrosystems.com

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Series MAB18 SER / Hall Effect Absolute Encoder with serial interface

Orderdescription and Options

Description	Series	Options				
Infiniturn with 18mm housing and 10 bit resolution	MAB18 10					
Infiniturn with 18mm housing and 10 bit high speed	MAB18 10HS					
Infiniturn with 18mm housing and 12 bit high speed	MAB18 12HS					
Supply voltage/Output signal 3,3 V / SER 5 V / SER		3,3 SER 5 SER				
Electrical direction and angle: Standard - CW and 360° no description necessary (every angle between 20°-360° possible)			CWxxx CCWxxx			
Zero point alignment: Electrical Zero point is positioned on mechanical zero point (look at drawing)				N		
Shaft length [mm] related on mounting surface (7mm standard, no description necessary)					Axx	
Cable length [m] (0,155 m standard, no description necessary)						CVxx
Example standard version:	MAB18 12	3,3 SER				
Infiniturn with 18 mm housing, 12 bit resolution, 3,3 V supply voltage, SER-interface, direction CW, electrical angle 360°						
Example with options:	MAB18 12	3,3 SER	CCW175	N	A05	CV01
Infiniturn with 18 mm housing, 12 bit resolution, 3,3 V supply voltage, SER- interface, direction CCW, electrical angle 175°, zero point alignment, shaft length 5 mm, cable length 1m						

Our speciality are custom solutions

On serial demand we offer:
Special shaft dimensions, mounting of gear wheels and other mechanical parts, assembling of cables and connectors and more. Please contact us.

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