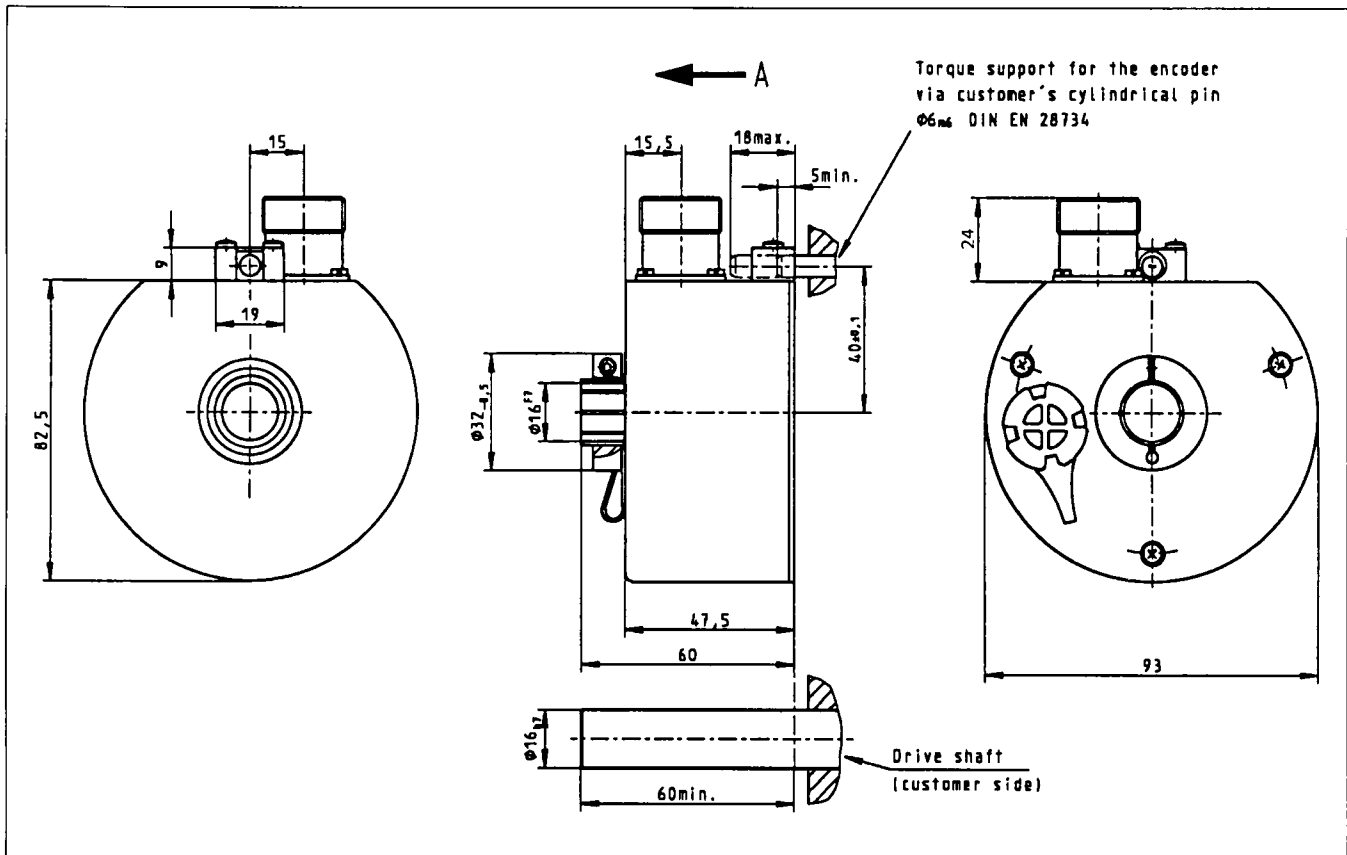


AHG 926 SSI

Absolute hollow-shaft angle encoder



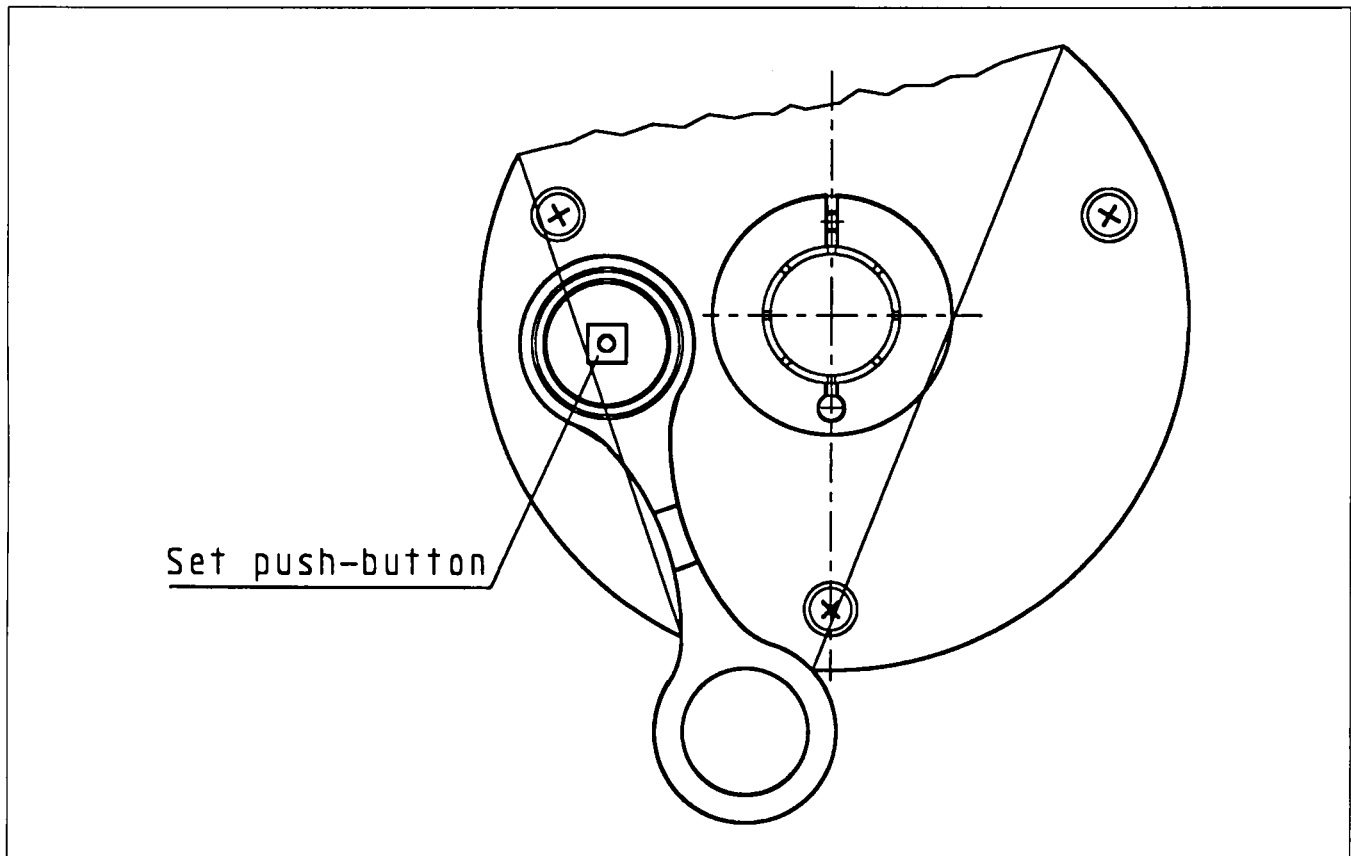
AHG 926 SSI Dimensional drawing and features



Features:

- 24 bit, hollow-shaft multi-turn absolute encoder
- 8192 (13 bit) max. resolution for single turn. Multi-turn a total of 24 bits possible
- Configurable resolution
- Zero-set push-button or spur line
- SSI and RS 422 configurable interface
- Compact dimensions
- Highly shock and vibration proof
- High degree of protection: IP 65
- Hollow-shaft diameter 16 mm

AHG 926 SSI Configuration functions



Order designation

Torque support	Plug outlet radial	Cable outlet radial	ssi-interface
Pin = 1	SR	KR	S
Angle = 2	SR	KR	S

Example of an order for an **AHG 926** with a \varnothing 16 mm diameter shaft, pin torques support, radial plug outlet and ssi-interface = **AHG 926 16 1SRS**

AHG 926 SSI Technical data and characteristics to DIN 32 878

	Values	Units
Dimensions	see drawing	
Mass	About 0,8	kg
Moment of inertia of the rotor	152,77	gcm ²
Code type	gray/binär	
Programmable code direction ^{*1)}	cw / ccw	
Measuring step	2,6	Minutes of arc
Max. number of steps per revolution	8192	
Max. number of revolutions	8192	
Error limits	40	Minutes of arc
Repeatability	0,1	Degrees
Operating speed	3000	min ⁻¹
Position formation time	0,5	ms
Max. angular acceleration	0,6 x 10 ⁵	rad/s ²
Operating torque	0,4	Ncm
Starting torque	0,5	Ncm
Bearing life	1 x 10 ⁹	Revolutions
Working temperature range	-20...+70	°Celsius
Operating temperature range	-40...+85	°Celsius
Storage temperature range	-40...+100	°Celsius
Permissible relative humidity	98	%
EMY according to EN 500 82 - 2 EN 500 81 - 2		
Resistance to shocks in the mounted state to DIN IEC 68 part 2-27	100/6	g/ms
Resistance to vibration in the mounted state to DIN IEC 68 part 2-6	20/10...2000	g/Hz
Degree of protection to DIN VDE 0470 part 1	IP 65	
Operating voltage range	10...32	V
Recommended supply voltage	15	V
Max. operating current without load	220	mA
Initialization time From the moment the supply voltage is applied, this is the time which elapses before the data word can be correctly read in.	1050	ms

AHG 926 SSI Technical data and characteristics to DIN 32 878

Signal line	via 12 pole connector, potential free w.r.t. housing	
signaux de liaison	Clock+, Clock-, Data+, Data-, Tx D+, Tx D-, Rx D+, Rx D- * ²⁾	SSI RS 422 asynchronous for configuration
	SET (electronic adjustment) * ³⁾	H activ (L = 0-4,7 V; H = 10-24 V)
	V/R (step sequence in direction of rotation) * ¹⁾	L activ (L = 0-0,9 V; H = 1,9-24 V)

Explanations

*1) Code direction indicates the direction of rotation in which, looking at the shaft direction "A", the output code corresponds to increasing values.

↻ cw = Clockwise direction

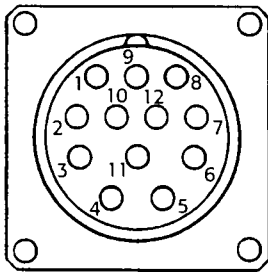
↻ ccw = Counter clockwise direction

You have the possibility of reversing the code direction or the step sequence via the so-called V/R-input.

*2) The encoder can be programmed with various parameters via the asynchronous RS 422 interface.
For this, you will need a programming tool.

*3) By means of a short high signal, >1 ms (10-24 V) on the appropriate pin of the connecting plug or the stranded wire at the cable outlet, the encoder is set to 0 or to a previously programmed value.

AHG 926 SSI Connection allocation



View on plug side

Pin 12 pole flanged plug	Colour	Signal	Explanation
1	blue	GND	Earth connection of the encoder. Electrically isolated from housing.
2	white	Data +	Positive, serial data output from the differential line driver. A high level at the output corre- sponds to logic 1 in positive logic.
3	yellow	Clock +	Clock + forms a current loop together with clock -. A current of 7 mA in the direction of the clock + input has the effect of a logic 1 in positive logic.
4	pink	R x D +	Positive RS 422 - input
5	black	R x D -	Negative RS 422 - input
6	grey	T x D +	Positive RS 422 - output
7	green	T x D -	Negative RS 422 - output
8	red	Vs	Supply voltage to the encoder
9	orange	Teleadjust/SET	If this input is at logic 1, then the en- coder is allocated the preset value. Default 0.
10	brown	Data -	Negative, serial data output from the differential line driver. A high level at the output corre- sponds to logic 0 in positive logic.
11	lilac	Clock -	Clock - forms a current loop together with clock +. A current of 7 mA in the direction of the clock + input has the effect of a logic 0 in positive logic.
12	orange / black	V/ \bar{R}	Forward/reverse: this input programs the counting direction of the encoder. If not connected, this input is high. If the encoder, viewed on the shaft direction "A", is rotated in the clockwise direction, the count increases. If the encoder is intended to count upwards when the shaft is rotated in the counter- clockwise direction, this connection must be connected perma- nently to a low level (GND).

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