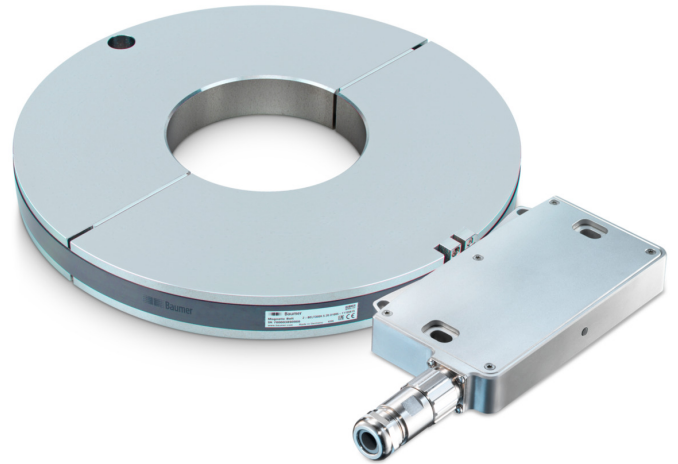


MIR 350A

Sensor head with split wheel and magnetic tape for shaft $\varnothing 90 \dots 300$ mm
 512...131072 pulses or 512...16384 sinewave cycles per turn

Overview

- Encoder without bearings - incremental with magnetic sensing
- Split wheel design for easiest mounting on installed shafts
- Very large axial tolerances ± 8 mm
- Max. 131072 pulses per revolution
- Status indication via system OK output and LED
- Robust and wearless
- Fully encapsulated electronics IP 67
- Magnetic rotor included in delivery



Technical data

Technical data - electrical ratings

Voltage supply	4.75...30 VDC
Consumption w/o load	≤ 300 mA (24 VDC)
Initializing time	≤ 1000 ms after power on
Output signals	A+, B+, R+, A-, B-, R-
Sensing method	Magnetic
Status indicator	Color-LED, system OK output
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE UL approval / E217823

Technical data - electrical ratings (square-wave)

Pulses per revolution	512 ... 131072
Phase shift	$90^\circ \pm 2^\circ$
Duty cycle	45...55 %
Reference signal	Zero pulse, width 90°
Output frequency	≤ 500 kHz (HTL) ≤ 2 MHz (TTL)
Output stages	HTL TTL/RS422

Technical data - electrical ratings (SinCos)

Sinewave cycles per revolution	512 ... 16384
Phase shift	$90^\circ \pm 2^\circ$
Reference signal	Zero pulse, width 360°
Output frequency	≤ 500 kHz

Technical data - electrical ratings (SinCos)

Output stages	SinCos 1 Vpp
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Technical data - mechanical design

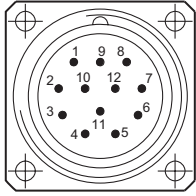
Dimensions (sensor head)	165 x 25 x 93 mm
Outer diameter adapter wheel	350 mm
Over all depth adapter wheel	40 mm
Shaft type	$\varnothing 90 \dots 300$ mm (through hollow shaft)
Axial tolerance	± 8 mm (belt to head)
Radial tolerance	1...3 mm (belt to head)
Shaft diameter tolerance	-0.4...0 mm
Protection EN 60529	IP 67
Operating speed	≤ 2000 rpm
Material	Housing sensing head: aluminium alloy Adapter wheel: stainless steel (1.4104) Magnetic belt: stainless steel (1.4104)
Operating temperature	$-40 \dots +85^\circ \text{C}$
Resistance	IEC 60068-2-6 Vibration 30 g, 10-2000 Hz IEC 60068-2-27 Shock 300 g, 6 ms
Weight approx.	880 g (head) 13 kg (wheel with belt, bore size $\varnothing 90$ mm) 12.5 kg (wheel with belt, bore size $\varnothing 150$ mm) 7 kg (wheel with belt, bore size $\varnothing 299$ mm)
Connection	Flange connector M23, 12-pin

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Terminal assignment

View A (see dimension)
Assignment flange connector



Flange connector M23,
male, 12-pin,
counter-clockwise (CCW)

Pin	Assignment
1	B-
2	System OK-
3	R+
4	R-
5	A+
6	A-
7	dnu
8	B+
9	dnu
10	0V (\perp)
11	System OK+
12	+UB

No error if „System OK“ output = HIGH

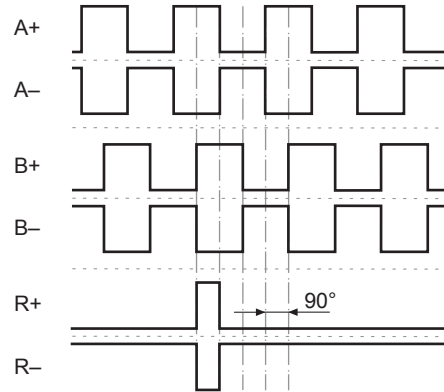
Terminal significance

+UB	Voltage supply
0V (\perp)	Ground
A+	Output signal channel 1
A-	Output signal channel 1 inverted
B+	Output signal channel 2 (offset by 90° to channel 1)
B-	Output signal channel 2 inverted
R+	Zero pulse (reference signal)
R-	Zero pulse inverted
System OK+	Error output
System OK-	Error output inverted
dnu	Do not use

Output signals

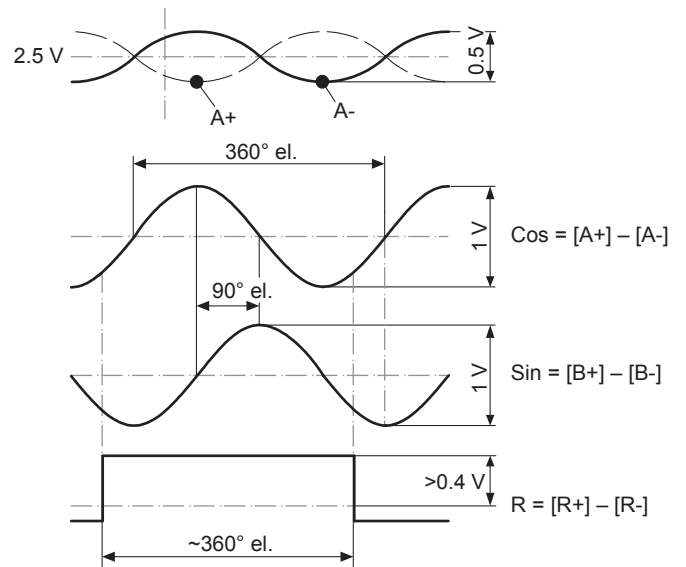
HTL/TTL

At positive rotating direction (see dimension)



SinCos

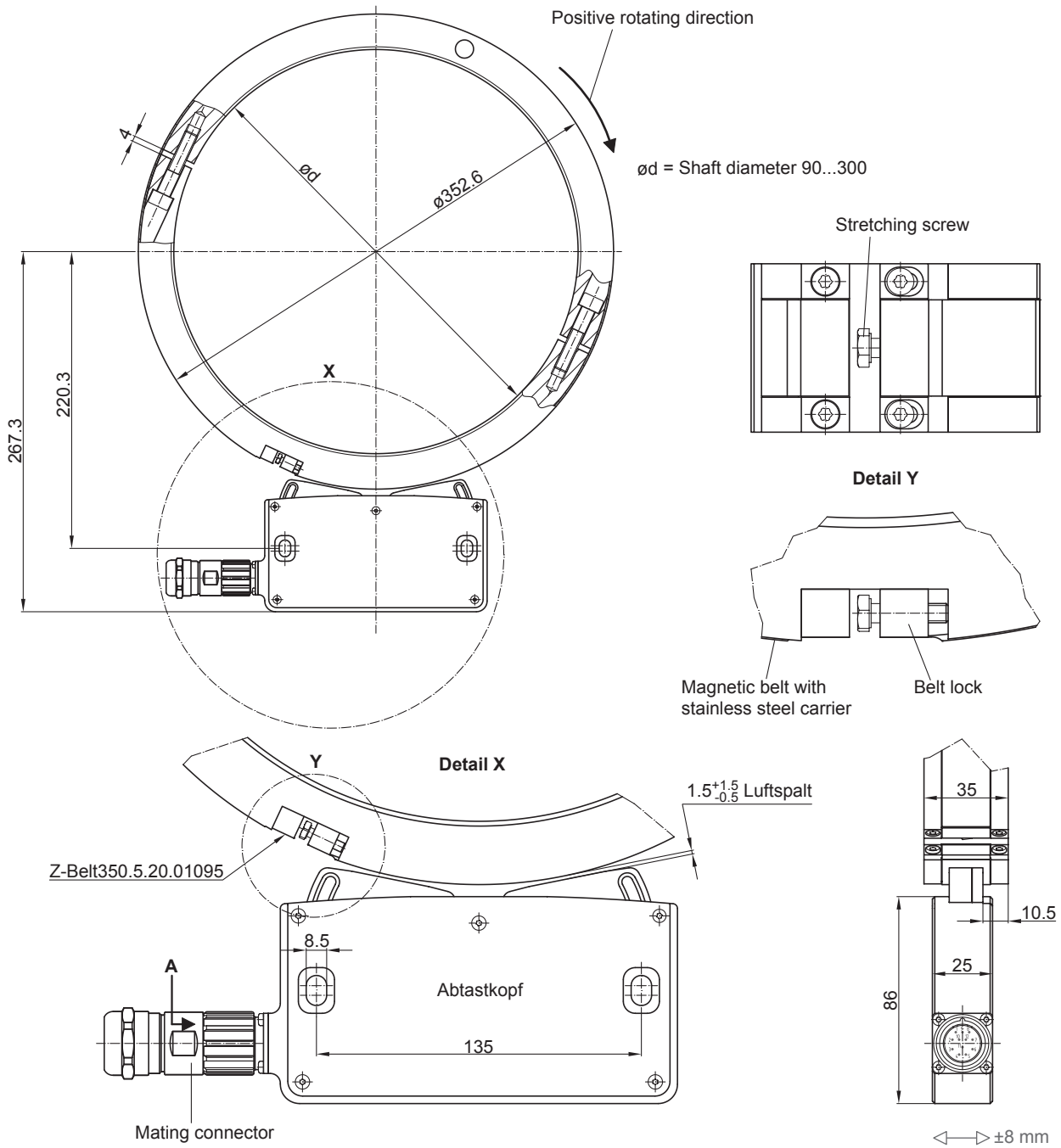
At positive rotating direction (see dimension)



MIR 350A

Sensor head with split wheel and magnetic tape for shaft $\varnothing 90 \dots 300$ mm
512...131072 pulses or 512...16384 sinewave cycles per turn

Dimensions



MIR 350A

Sensor head with split wheel and magnetic tape for shaft ø90...300 mm
 512...131072 pulses or 512...16384 sinewave cycles per turn

Ordering reference

		MIR350A	-	M	#	.	#####	.	A
Product											
Encoder without bearings - incremental		MIR350A									
Shaft diameter (mm)											
0090...0300										
Connection											
Flange connector M23, tangential 12-pin, male, CCW		M									
Voltage supply / output stages											
4.75...30 VDC, HTL (Vin = Vout), 6 channel		Q									
4.75...30 VDC, TTL/RS422, 6 channel		F									
4.75...30 VDC, SinCos (1 Vpp), 6 channel		T									
Pulse number/sinewave cycles⁽¹⁾											
512		000512									
720		000720									
1000		001000									
1024		001024									
2048		002048									
4096		004096									
5000		005000									
8192		008192									
10000		010000									
16384		016384									
32768 ⁽²⁾		032768									
131072 ⁽²⁾		131072									
Operating temperature											
-40...+85 °C											

- (1) Other pulse numbers/sinewave cycles on request.
 (2) No SinCos output possible