

## GMP 1,0, GMPZ 1,0

Solid shaft  $\varnothing 11$  to  $\varnothing 14$  mm with flange

With own bearings

### Overview

- Low response time
- Open circuit voltage 40...175 mV per rpm
- Redundant output (GMPZ)
- Solid shaft  $\varnothing 11$ ...14 mm
- High signal quality due to patented LongLife technology
- With own bearings



**HUBNER**  
BERLIN  
A Baumer Brand

### Technical data

#### Technical data - electrical ratings

Reversal tolerance	$\leq 0.1$ %
Linearity tolerance	$\leq 0.5$ %
Temperature coefficient	$\pm 0.05$ %/K (open-circuit)
Isolation class	B
Calibration tolerance	$\pm 3$ %
Climatic test	Humid heat, constant (IEC 60068-2-3, Ca)
Performance	GMP: 30 W (speed $\geq 3000$ rpm) GMPZ: 2x 30 W (speed $\geq 3000$ rpm)
Armature-circuit time-constant	$< 0.55$ $\mu$ s (GMP) $< 0.27$ $\mu$ s (GMPZ)
Open-circuit voltage	40...175 mV per rpm
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE

#### Technical data - mechanical design

Size (flange)	135 x 135 mm $\varnothing 120$ mm $\varnothing 165$ mm $\varnothing 115$ mm
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#### Technical data - mechanical design

Shaft type	$\varnothing 11$ ...14 mm solid shaft
Flange	EURO flange B10 B5, B5k, B5n und B5s flange
Protection EN 60529	IP 55
Operating speed	$\leq 6000$ rpm
Torque	2 Ncm (GMP) 3.3 Ncm (GMPZ)
Rotor moment of inertia	4.5 kgcm <sup>2</sup> (GMP) 8.5 kgcm <sup>2</sup> (GMPZ)
Admitted shaft load	$\leq 80$ N axial $\leq 100$ N radial
Material	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-30...+130 °C
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 100 g, 6 ms
Weight approx.	4.5 kg (GMP) 7 kg (GMPZ)
Connection	Terminal box

### Optional

- Second shaft end (B14)

# GMP 1,0, GMPZ 1,0

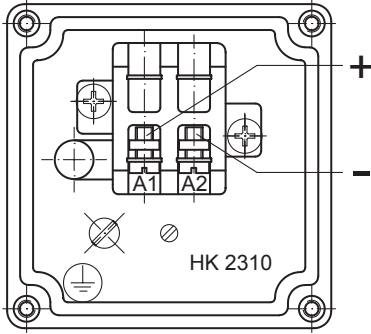
Solid shaft  $\varnothing 11$  to  $\varnothing 14$  mm with flange

With own bearings

## Terminal assignment

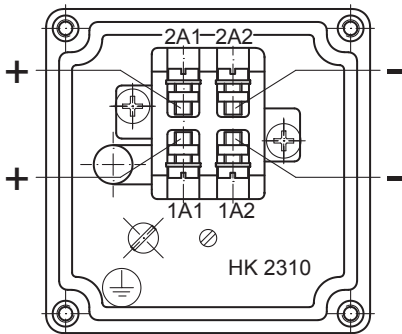
### View A (see dimension)

Connecting terminal tachogenerator GMP  
Polarity for positive rotating direction



### View A (see dimension)

Connecting terminal twin tachogenerator GMPZ  
Polarity for positive rotating direction

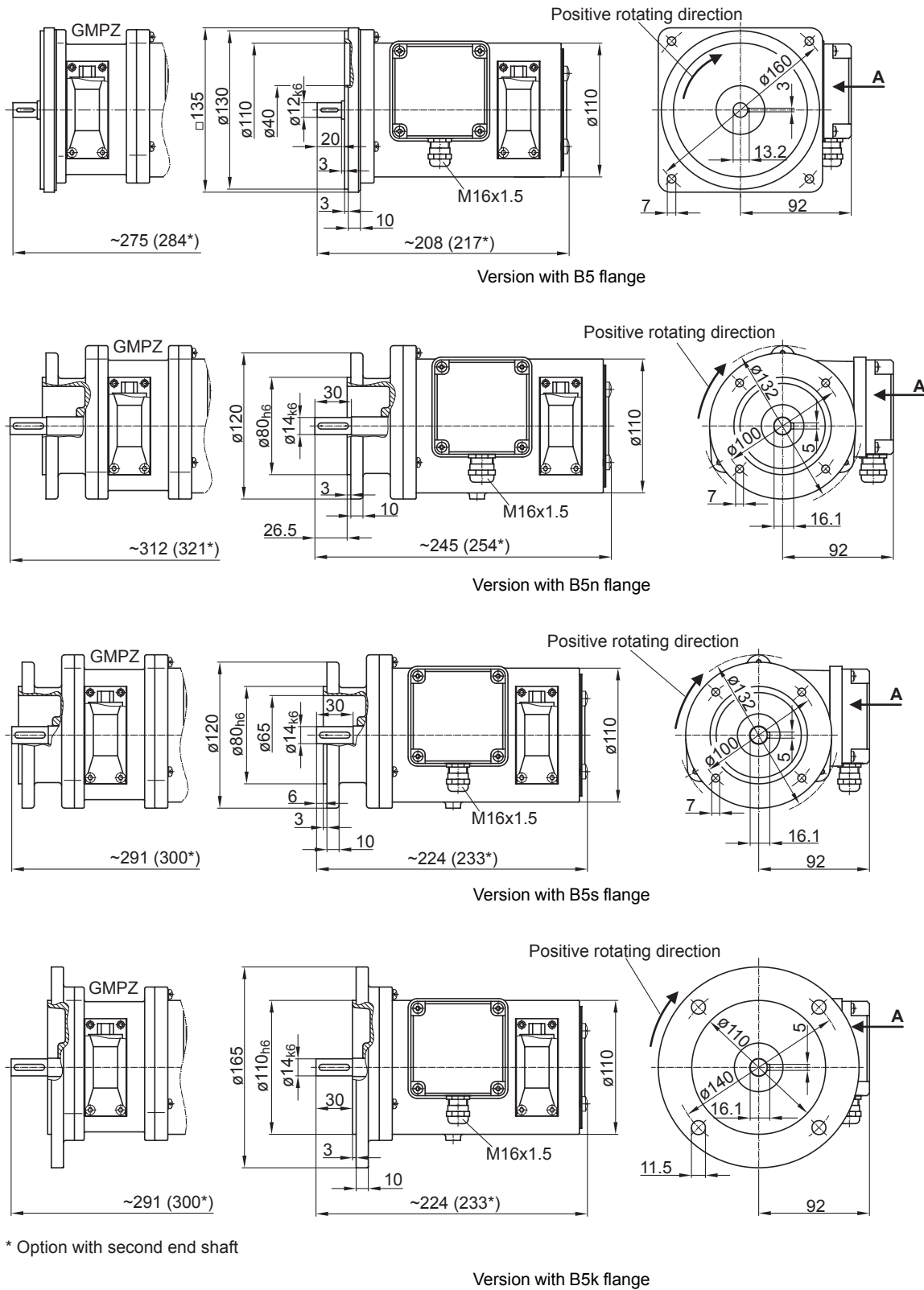


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Solid shaft  $\varnothing 11$  to  $\varnothing 14$  mm with flange

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## Dimensions

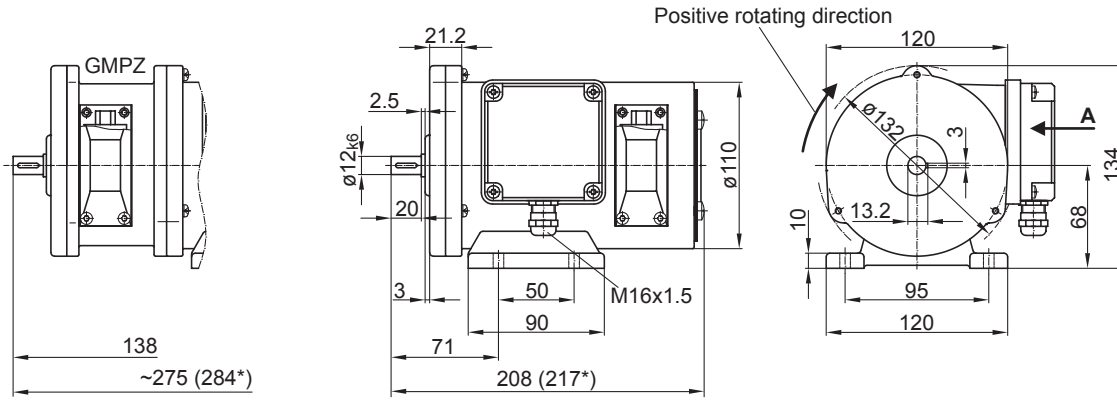


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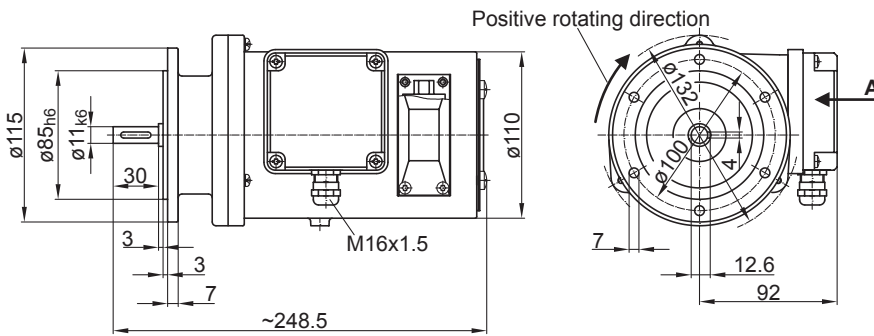
Solid shaft  $\varnothing 11$  to  $\varnothing 14$  mm with flange

With own bearings

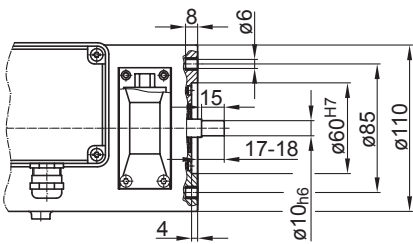
## Dimensions



Version with housing foot (B3)



Version with B10 Euro flange



Option second shaft end

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## Ordering reference

		<b>GMP #</b>	<b>#####</b>
<b>Product</b>	Tachogenerator	GMP	
<b>Design</b>	Tachogenerator		
	Twin tachogenerator		Z
<b>Open-circuit voltage</b>	40 mV per rpm		1,0LT-10
	65 mV per rpm		1,0LT-7
	100 mV per rpm		1,0LT-4
	175 mV per rpm		1,0LT-1

## Data according to type

Type	Off-load voltage $U_0$ [mV/rpm]	Minimum load required depending on speed range [rpm]			Maximum operating speed $n_{max}$ [rpm]	Armature resistance $R_A$ (20°C) [ $\Omega$ ]	Armature inductance $L_A$ [mH]
		0-1000 $R_L$ [k $\Omega$ ]	0-3000 $R_L$ [k $\Omega$ ]	0- $n_{max}$ $R_L$ [k $\Omega$ ]			
GMP1,0LT-10	40	$\geq 0.15$	$\geq 0.5$	$\geq 2$	6000	12	90
GMP1,0LT-7	65	$\geq 0.4$	$\geq 1.3$	$\geq 5$	6000	33	225
GMP1,0LT-4	100	$\geq 1$	$\geq 3$	$\geq 12$	6000	81	550
GMP1,0LT-1	175	$\geq 3$	$\geq 10$	$\geq 12$	3400	275	1650

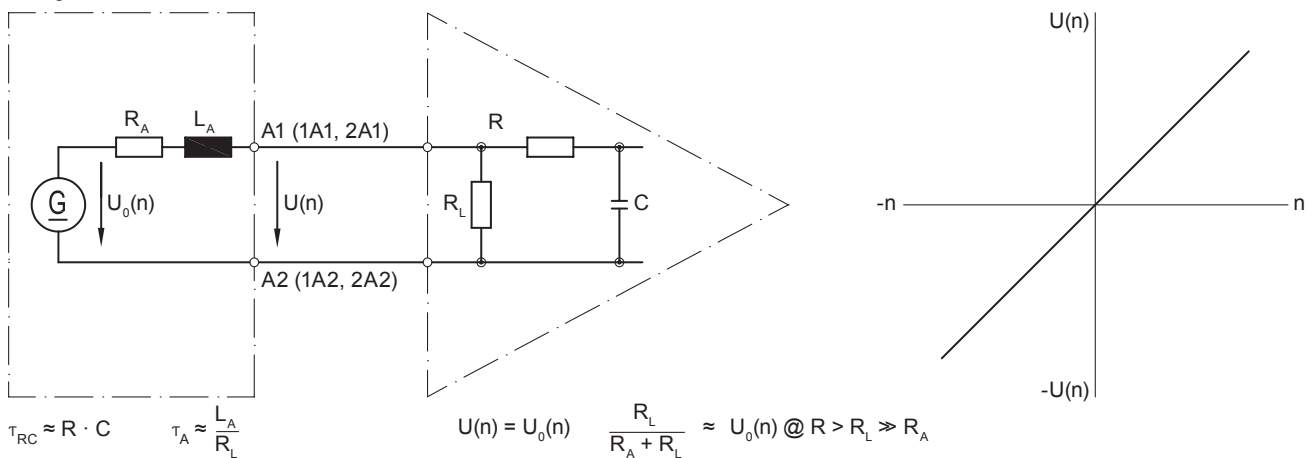
Twin tachogenerator with redundant output  
(The data refer to each of the two tachogenerator outputs)

GMPZ1,0LT-10	40	$\geq 0.15$	$\geq 0.5$	$\geq 2$	6000	9	40
GMPZ1,0LT-7	65	$\geq 0.4$	$\geq 1.3$	$\geq 5$	6000	23	110
GMPZ1,0LT-4	100	$\geq 1$	$\geq 3$	$\geq 12$	6000	56	270
GMPZ1,0LT-1	175	$\geq 3$	$\geq 10$	$\geq 12$	3400	175	745

Superimposed ripple (for  $\tau_{RC} = 1$  ms):  $\leq 1.0\%$  (peak-peak)  $\leq 0.5\%$  (rms)

## Equivalent circuit diagram

Tachogenerator



Polarity for positive rotating direction (see dimension) / A1 (1A1, 2A1): + (VDE) / A2 (1A2, 2A2): - (VDE)

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### Accessories

#### Mounting accessories

Spring disk coupling K 50 (shaft  $\varnothing 11 \dots 16$  mm)

Spring disk coupling K 60 (shaft  $\varnothing 11 \dots 22$  mm)