

# Tachogenerators

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

With own bearings

## GMP 1,0, GMPZ 1,0



GMP 1,0

### 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)
Open-circuit voltage	40...175 mV per rpm
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE

### GMP 1,0

Performance	30 W (speed $\geq 3000$ rpm)
Armature-circuit time-constant	$< 0.55$ $\mu$ s

### GMPZ 1,0

Performance	2x 30 W (speed $\geq 3000$ rpm)
Armature-circuit time-constant	$< 0.27$ $\mu$ s

### Features

- 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

### Optional

- Second shaft end (B14)

### Technical data - mechanical design

Size (flange)	135 x 135 mm $\varnothing 120$ mm $\varnothing 165$ mm $\varnothing 115$ mm
Shaft type	$\varnothing 11$ ...14 mm solid shaft
Flange	EURO flange B10 B5, B5k, B5n und B5s flange
Protection DIN EN 60529	IP 55
Operating speed	$\leq 6000$ rpm
Admitted shaft load	$\leq 80$ N axial $\leq 100$ N radial
Materials	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
Connection	Terminal box

### GMP 1,0

Torque	2 Ncm
Rotor moment of inertia	4.5 kgcm <sup>2</sup>
Weight approx.	4.5 kg

### GMPZ 1,0

Torque	3.3 Ncm
Rotor moment of inertia	8.5 kgcm <sup>2</sup>
Weight approx.	7 kg

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Solid shaft  $\varnothing 11$  to  $\varnothing 14$  mm with flange  
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**GMP 1,0, GMPZ 1,0**

## Part number

### Tachogenerator

GMP1,0LT-

	Open-circuit voltage
10	40 mV per rpm
7	65 mV per rpm
4	100 mV per rpm
1	175 mV per rpm

### Twin tachogenerator

GMPZ1,0LT-

	Open-circuit voltage
10	40 mV per rpm
7	65 mV per rpm
4	100 mV per rpm
1	175 mV per rpm

## Data according to type

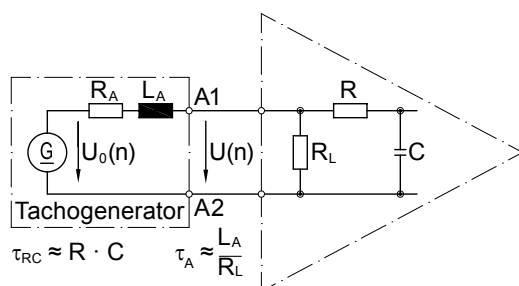
Type	Off-load voltage $U_0$ [mV/rpm]	Minimum load required depending on speed range [rpm]			Maximum operating speed $n_{max}$ [rpm]	Armature resistance $R_A$ (20°C) [ $\Omega$ ]	Armature inductance $L_A$ [mH]
		0-1000	0-3000	0- $n_{max}$			
GMP1,0LT-10	40	$\geq 0.15$	$\geq 0.5$	$\geq 2$	6000	12	90
GMP1,0LT-7	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)

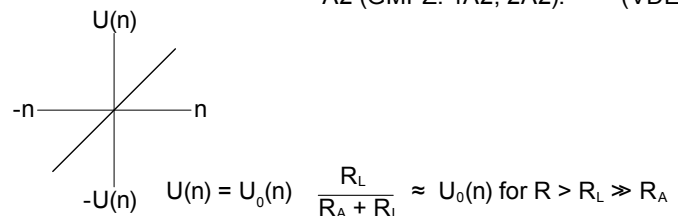
GMPZ1,0LT-10	40	$\geq 0.15$	$\geq 0.5$	$\geq 2$	6000	9	40
GMPZ1,0LT-7	65	$\geq 0.4$	$\geq 1.3$	$\geq 5$	6000	23	110
GMPZ1,0LT-4	100	$\geq 1$	$\geq 3$	$\geq 12$	6000	56	270
GMPZ1,0LT-1	175	$\geq 3$	$\geq 10$	$\geq 12$	3400	175	745

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

## Replacement switching diagram



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



# Tachogenerators

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

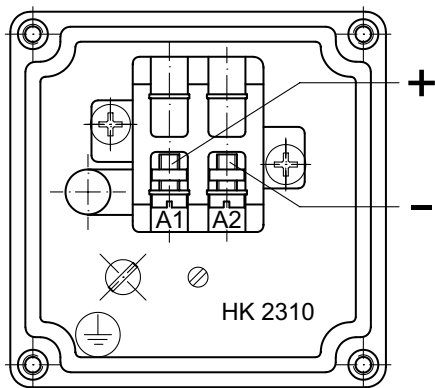
With own bearings

## GMP 1,0, GMPZ 1,0

### Terminal assignment

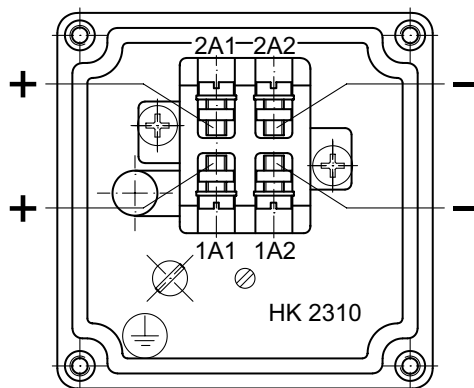
**View A** - Connecting terminal GMP 1,0

Polarity for positive rotating direction



**View A** - Connecting terminal GMPZ 1,0

Polarity for positive rotating direction



### Accessories

Carbon brushes

### Mounting accessories

K 50	Spring washer coupling for solid shaft $\varnothing 11 \dots 16$ mm
K 60	Spring washer coupling for solid shaft $\varnothing 11 \dots 22$ mm

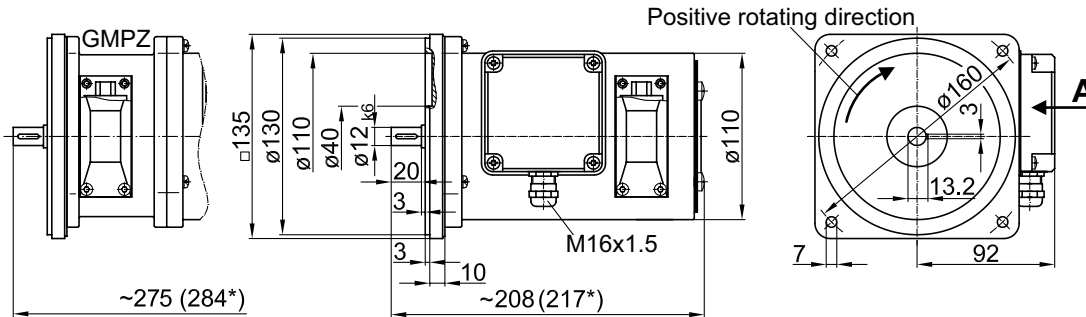
# Tachogenerators

Solid shaft  $\varnothing 11$  to  $\varnothing 14$  mm with flange  
With own bearings

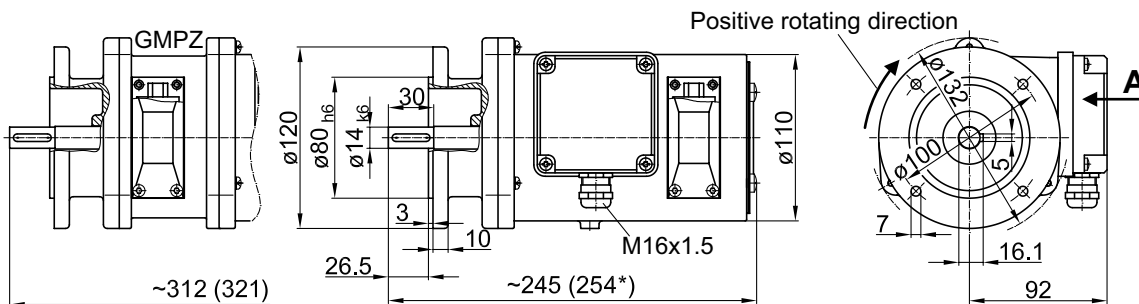
GMP 1,0, GMPZ 1,0

## Dimensions

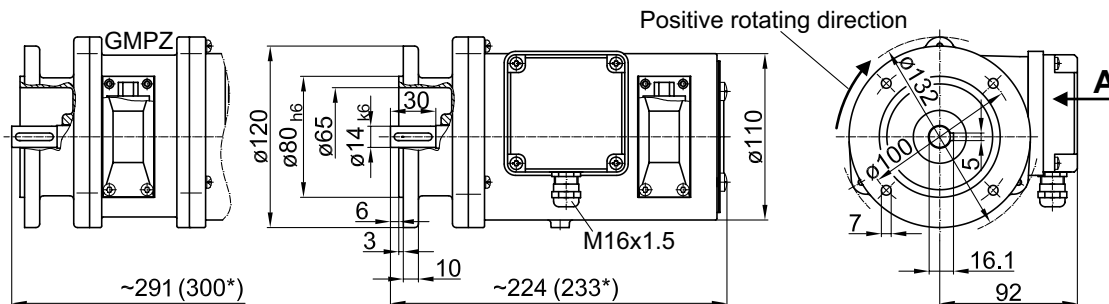
### GMP 1,0 (GMPZ 1,0) - Version with B5 flange



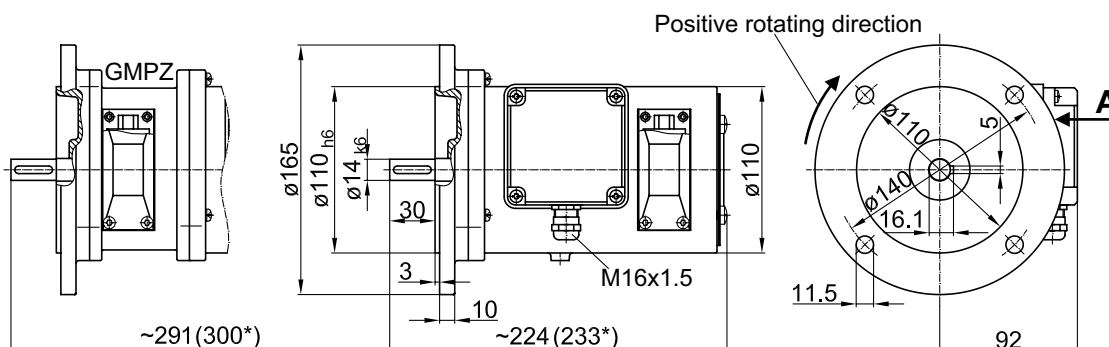
### GMP 1,0 (GMPZ 1,0) - Version with B5n flange



### GMP 1,0 (GMPZ 1,0) - Version with B5s flange



### GMP 1,0 (GMPZ 1,0) - Version with B5k flange



\* Option with second shaft end

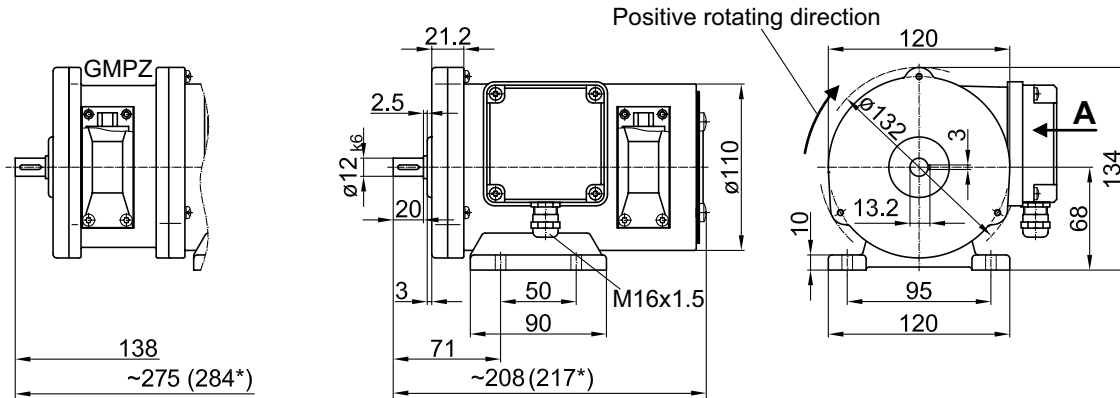
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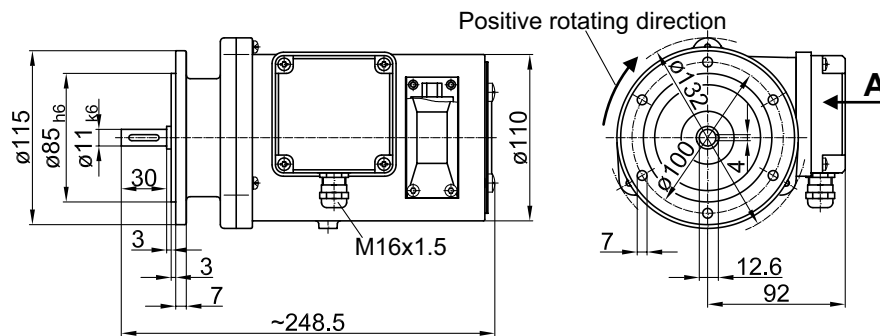
With own bearings

## GMP 1,0, GMPZ 1,0

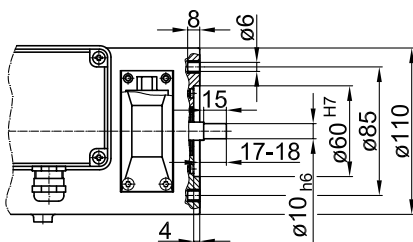
### GMP 1,0 (GMPZ 1,0) - Version with housing foot (B3)



### GMP 1,0 (GMPZ 1,0) - Version with B10 Euro flange



### GMP 1,0 (GMPZ 1,0) - Option second shaft end



\* Option with second shaft end