

# Tachogenerators

End shaft  $\varnothing 8$  to  $\varnothing 12$  mm

Housings  $\varnothing 52$  mm, bearingless configuration

## GT 5



GT 5

### Features

- High response speed
- Open circuit voltage 7...10 mV per rpm
- End shaft  $\varnothing 8$ -12 mm
- Top signal quality over the total rotational speed range by patented Longlife technique
- Recognition of sense of rotation
- No auxiliary energy source required

### Technical data - electrical ratings

Reversal tolerance	$\leq 0.1$ %
Linearity tolerance	$\leq 0.15$ %
Temperature coefficient	$\pm 0.05$ %/K (idle)
Isolation class	B
Calibration tolerance	$\pm 5$ %
Climatic test	Humid heat, constant (IEC 60068-2-3, Ca)
Performance	0.075 W (speed >5000 rpm)
Armature-circuit time-constant	<4.5 $\mu$ s
Open-circuit voltage	7...10 mV per rpm

### Technical data - mechanical design

Housing	$\varnothing 52$ mm
Shaft	$\varnothing 8$ ...12 mm end shaft
Protection DIN EN 60529	IP 00 IP 54 (with cover)
Materials	Housing: stainless steel / plastic Shaft: stainless steel
Operating temperature	-30...+130 °C
Resistance	DIN EN 60068-2-6 Vibration 10 g, 10-2000 Hz DIN EN 60068-2-27 Shock 100 g, 6 ms
Weight approx.	150 g
Connection	Plug-in terminals
Torque	0.3 Ncm
Rotor moment of inertia	0.05 kgcm <sup>2</sup>

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## Part number

GT 5.05 L / 4

Open-circuit voltage

- 07 7 mV per rpm
- 09 9.5 mV per rpm
- 10 10 mV per rpm

## Accessories

Mounting cone

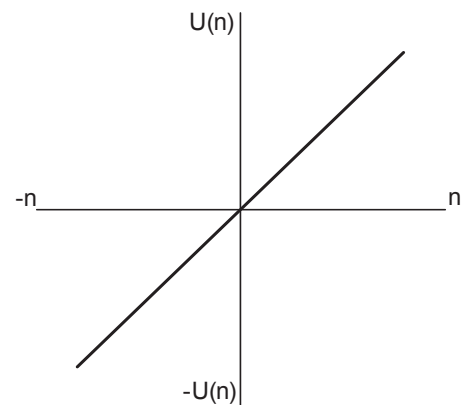
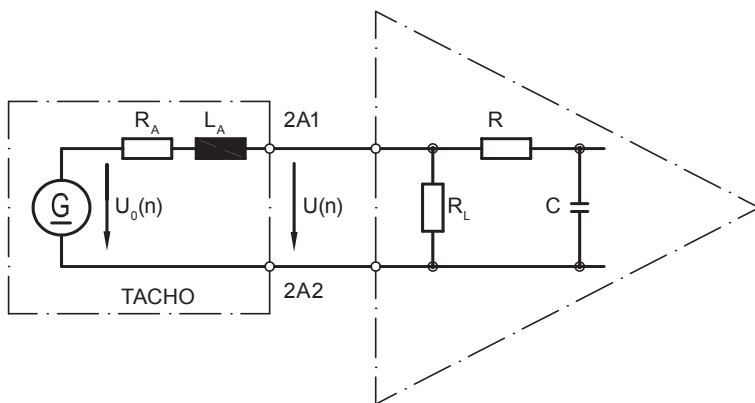
Carbon brushes

## Data according to type

Type	Off-load voltage	Minimum load required depending on speed range [rpm]			Maximum operating speed	Armature resistance	Armature inductance
		0 - 3,000	0 - 6,000	0 - $n_{max}$			
	$U_0$ [mV/rpm]	$R_L$ [k $\Omega$ ]	$R_L$ [k $\Omega$ ]	$R_L$ [k $\Omega$ ]	$n_{max}$ [rpm]	$R_A(20^\circ\text{C})$ [ $\Omega$ ]	$L_A$ [mH]
GT 5.05 L / 407	7	$\geq 10$	$\geq 23$	$\geq 65$	10,000	240	45
GT 5.05 L / 409	9.5	$\geq 18$	$\geq 44$	$\geq 121$	10,000	410	80
GT 5.05 L / 410	10	$\geq 20$	$\geq 48$	$\geq 133$	10,000	430	85

Superimposed ripple (for  $\tau_{RC} = 0.3$  ms):  $\leq 0.7$  % (peak-peak)  $\leq 0.35$  % (rms)

## Replacement switching diagram



$$\tau_{RC} \approx R \cdot C \quad \tau_A \approx \frac{L_A}{R_L}$$

$$U(n) = U_0(n) \frac{R_L}{R_A + R_L} \approx U_0(n) \text{ for } R > R_L \gg R_A$$

Polarity for positive direction of rotation: 2A1: + 2A2: - (VDE)

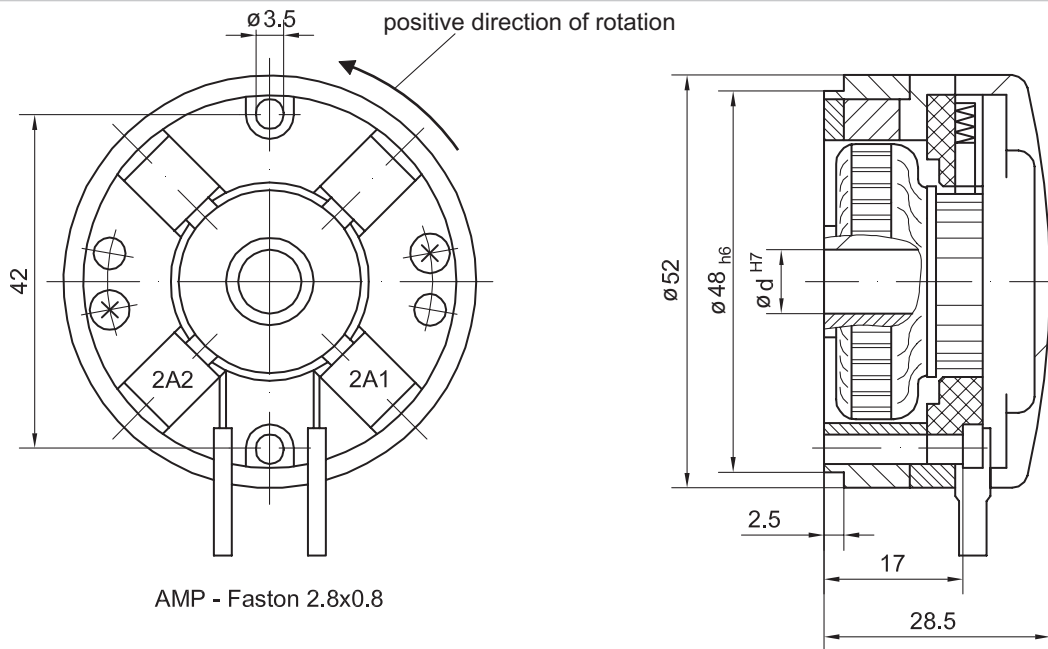
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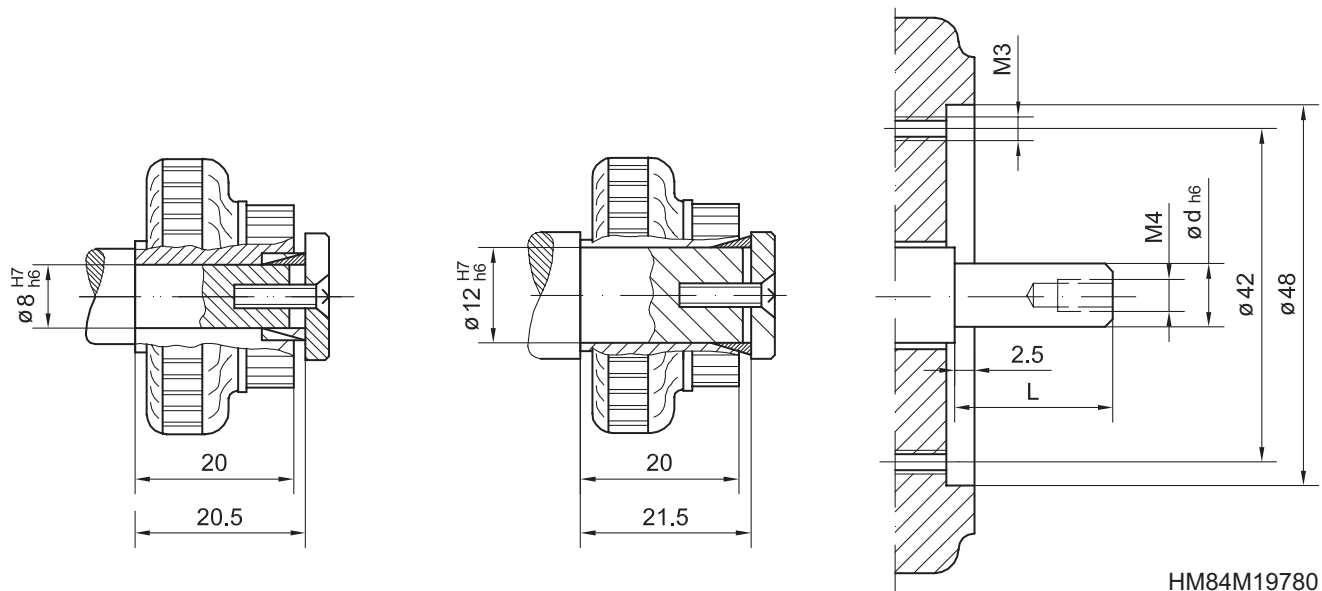
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### Dimensions



$\varnothing d$	L
8	19.5
12	20.5



Subject to modification in technic and design. Errors and omissions excepted.

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