

Tachogenerators

Blind hollow shaft $\varnothing 8$ to $\varnothing 12$ mm

Housing $\varnothing 52$ mm, bearingless configuration

GT 5



GT 5

Features

- Low response time
- Open circuit voltage 7...10 mV per rpm
- Blind hollow shaft $\varnothing 8$...12 mm
- High signal quality due to patented LongLife technology
- No auxiliary energy source required

Technical data - electrical ratings

Reversal tolerance	≤ 0.1 %
Linearity tolerance	≤ 0.15 %
Temperature coefficient	± 0.005 %/K (open-circuit)
Isolation class	B
Calibration tolerance	± 5 %
Climatic test	Humid heat, constant (IEC 60068-2-3, Ca)
Performance	0.075 W (speed ≥ 5000 rpm)
Armature-circuit time-constant	< 4.5 μ s
Open-circuit voltage	7...10 mV per rpm
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE

Technical data - mechanical design

Size (flange)	$\varnothing 52$ mm
Shaft type	$\varnothing 8$...12 mm (blind hollow shaft)
Protection DIN EN 60529	IP 00, IP 54 (with cover)
Torque	0.3 Ncm
Rotor moment of inertia	0.05 kgcm ²
Materials	Housing: stainless steel / plastic 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.	150 g
Connection	Plug-in terminals

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Part number

GT5.05L/4

Open-circuit voltage

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

Accessories

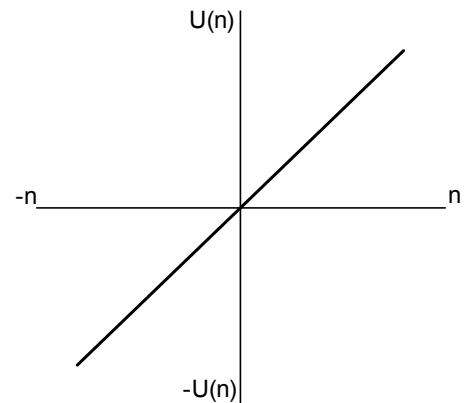
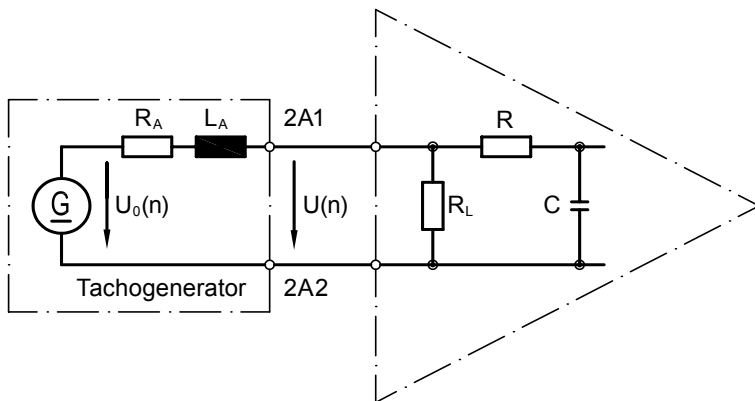
Mounting cone

Carbon brushes

Data according to type

Type	Off-load voltage U_0 [mV/rpm]	Minimum load required depending on speed range [rpm]			Maximum operating speed n_{max} [rpm]	Armature resistance R_A (20°C) [Ω]	Armature inductance L_A [mH]
		0-3000 R_L [k Ω]	0-6000 R_L [k Ω]	0- n_{max} R_L [k Ω]			
GT5.05L/407	7	≥ 10	≥ 23	≥ 65	10000	240	45
GT5.05L/409	9.5	≥ 18	≥ 44	≥ 121	10000	410	80
GT5.05L/410	10	≥ 20	≥ 48	≥ 133	10000	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 rotating direction: 2A1: + 2A2: - (VDE)

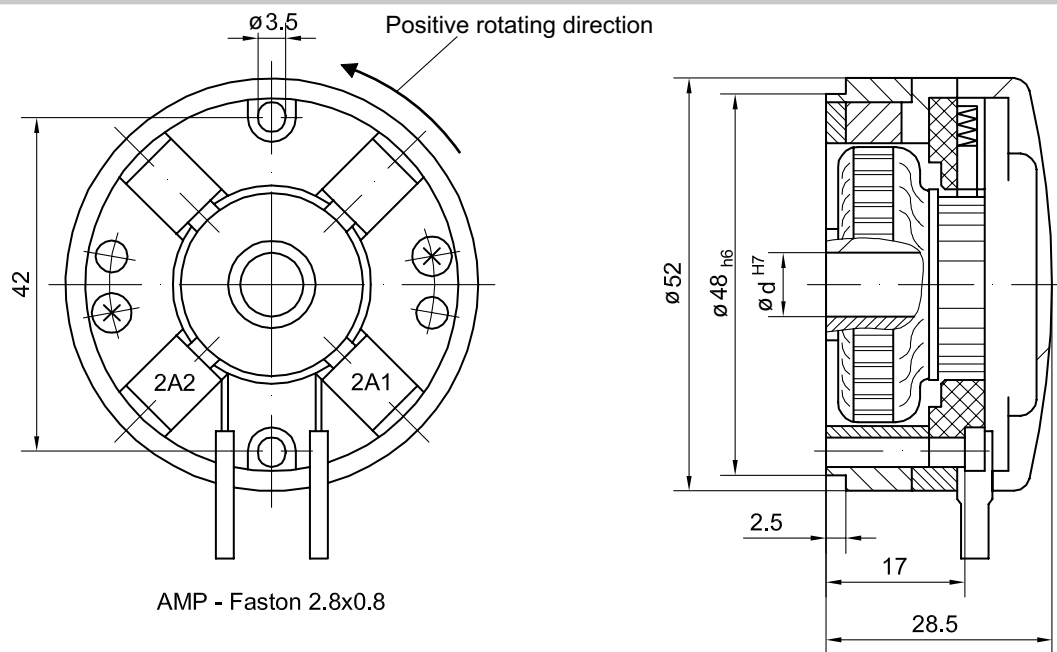
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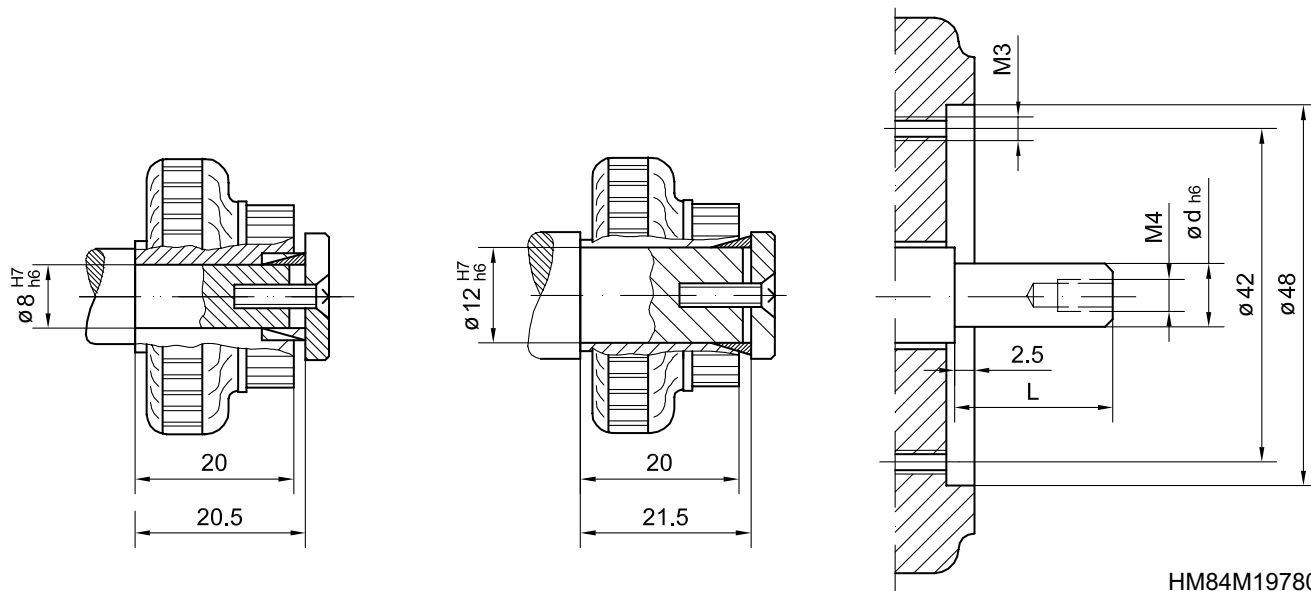
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Dimensions



$\varnothing d$	L
8	19.5
12	20.5



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