

Tachogenerators

Blind hollow shaft $\varnothing 12$ -16 mm or cone shaft $\varnothing 17$ mm (1:10)

Housing $\varnothing 89$ mm, bearingless configuration

GT 9



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Features

- Low response time
- Open circuit voltage 10...20 mV per rpm
- Blind hollow shaft $\varnothing 12$ -16 mm or cone shaft $\varnothing 17$ mm (1:10)
- 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	± 0.05 %/K (open-circuit)
Isolation class	B
Calibration tolerance	± 5 %
Climatic test	Humid heat, constant (IEC 60068-2-3, Ca)
Performance	0.3 W (speed ≥ 5000 rpm)
Armature-circuit time-constant	< 9 μ s
Open-circuit voltage	10...20 mV per rpm
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE

Technical data - mechanical design

Size (flange)	$\varnothing 89$ mm
Shaft type	$\varnothing 12$...16 mm (blind hollow shaft) $\varnothing 17$ mm (cone shaft 1:10)
Protection DIN EN 60529	IP 00, IP 44 (with cover)
Torque	0.35 Ncm
Rotor moment of inertia	0.95 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.	0.6 kg
Connection	Plug-in terminals

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Part number

GT9.06L/4

Design

- Cylindrical shaft
- K Cone shaft

Open-circuit voltage

- 10 10 mV per rpm
- 20 20 mV per rpm

Accessories

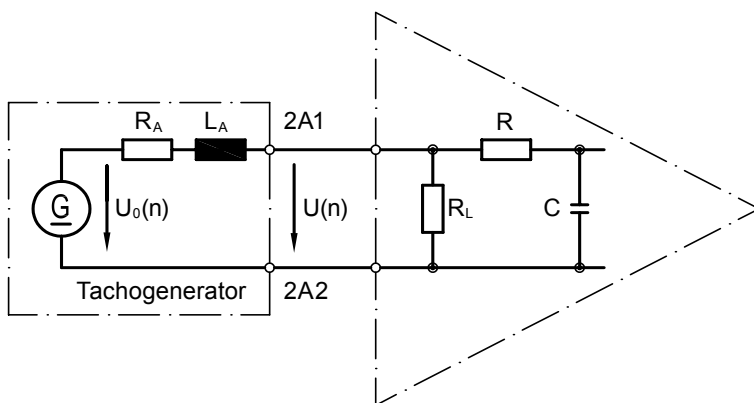
Mounting cone

Carbon brushes

Data according to type

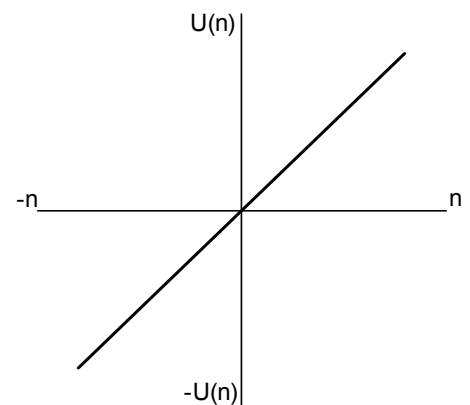
Type	Off-load voltage U_0 [mV/rpm]	Minimum load required depending on speed range [rpm]			Maximum operating speed n_{max} [rpm]	Armature resistance R_A (20°C) [Ω]	Armature inductance L_A [mH]
		0-3000	0-6000	0- n_{max}			
		R_L [kΩ]	R_L [kΩ]	R_L [kΩ]			
GT9.06L/410	10	≥5	≥12	≥27	9000	105	40
GT9.06L/420	20	≥20	≥48	≥108	9000	370	169
Superimposed ripple (for $\tau_{RC} = 0.3$ ms):		≤0.5% (peak-peak)			≤0.25% (rms)		

Replacement switching diagram



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

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



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

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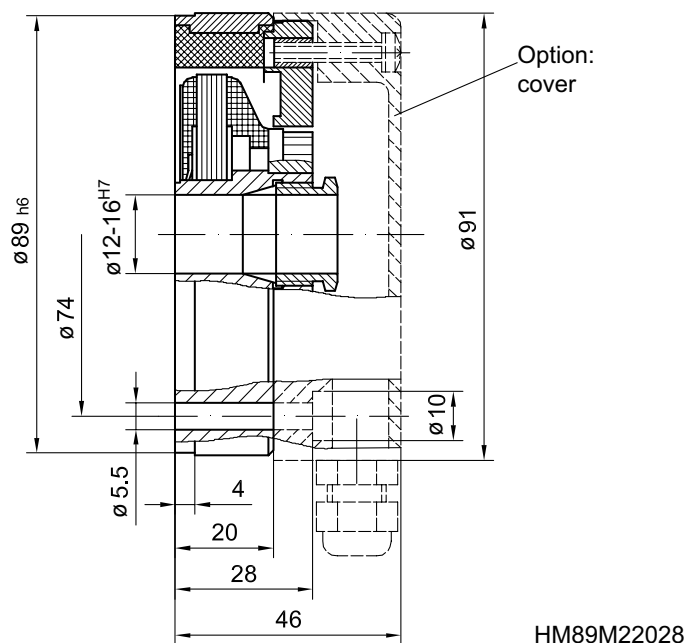
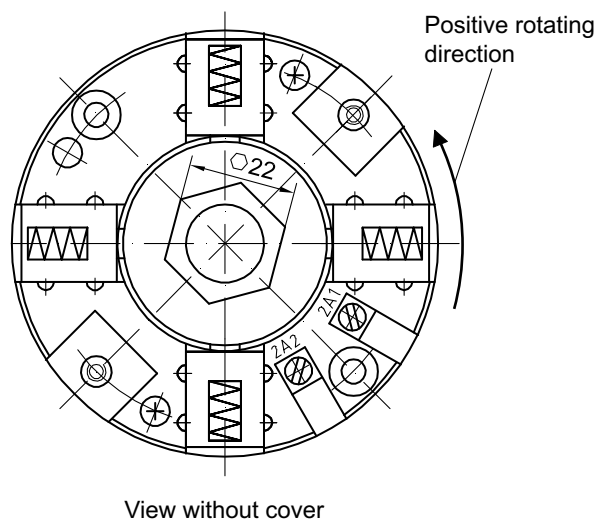
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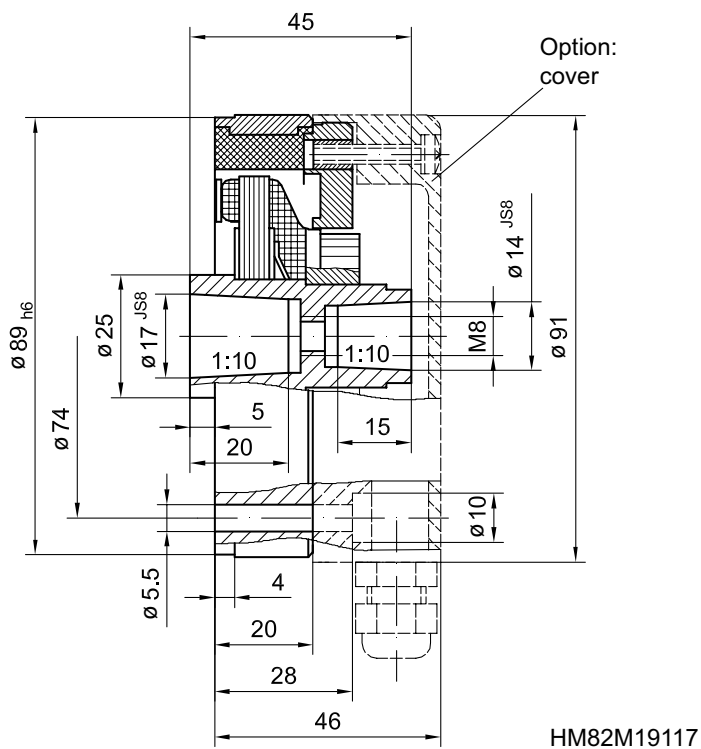
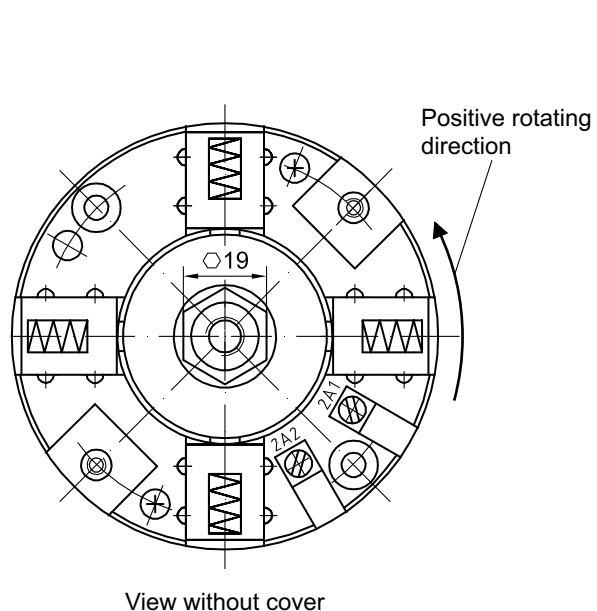
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Dimensions

GT 9.06 - cylinder shaft design



GT 9.06 K - cone shaft design



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