

Tachogenerators

End shaft $\varnothing 16$ mm

Housing $\varnothing 95$ mm, bearingless configuration

GTR 9



GTR 9

Features

- High response speed
- Open circuit voltage 20...60 mV per rpm
- End shaft $\varnothing 16$ mm
- Top signal quality over the total rotational speed range by patented Longlife technique
- Connector output
- Recognition of sense of rotation
- No auxiliary energy source required

Technical data - electrical ratings

Reversal tolerance	≤ 0.1 %
Linearity tolerance	≤ 0.15 %
Temperature coefficient	± 0.05 %/K (open-circuit), optional: 0.005 %/K
Isolation class	B
Calibration tolerance	± 5 %
Climatic test	Humid heat, constant (IEC 60068-2-3, Ca)
Performance	0.9 W (speed >5000 rpm)
Armature-circuit time-constant	<5 μ s
Open-circuit voltage	20...60 mV per rpm

Technical data - mechanical design

Dimensions (flange)	$\varnothing 95$ mm
Shaft	$\varnothing 16$ mm end shaft
Protection DIN EN 60529	IP 56
Torque	0.35...0 Ncm
Rotor moment of inertia	1.95 kgcm ²
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.	1.1 kg
Connection	Connector

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Part number

GTB 9.16 L / 4

Open-circuit voltage

20 20 mV per rpm

30 30 mV per rpm

40 40 mV per rpm

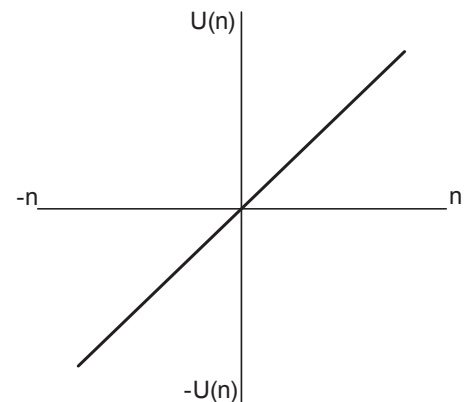
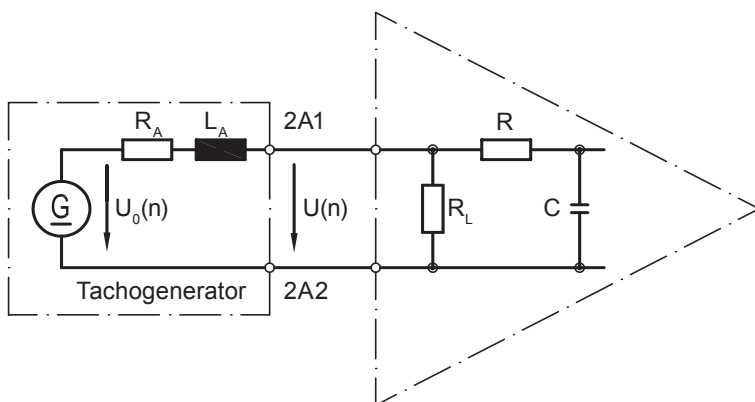
60 60 mV per rpm

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 $R_A(20^\circ C)$ [Ω]	Armature inductance L_A [mH]
		0 - 3,000	0 - 6,000	0 - n_{max}			
		R_L [k Ω]	R_L [k Ω]	R_L [k Ω]			
GTR 9.16 L / 420	20	≥ 7	≥ 16	≥ 36	9,000	39	31
GTR 9.16 L / 430	30	≥ 15	≥ 36	≥ 82	9,000	84	69
GTR 9.16 L / 440	40	≥ 27	≥ 64	≥ 144	9,000	165	122
GTR 9.16 L / 460	60	≥ 60	≥ 144	----	6,000	340	275

Superimposed ripple (for $\tau_{RC} = 0.3$ ms): ≤ 0.4 % (peak-peak) ≤ 0.15 % (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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Terminal assignment

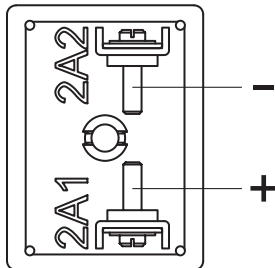
View A - Connecting terminal

Polarity for positive direction of rotation

Accessories

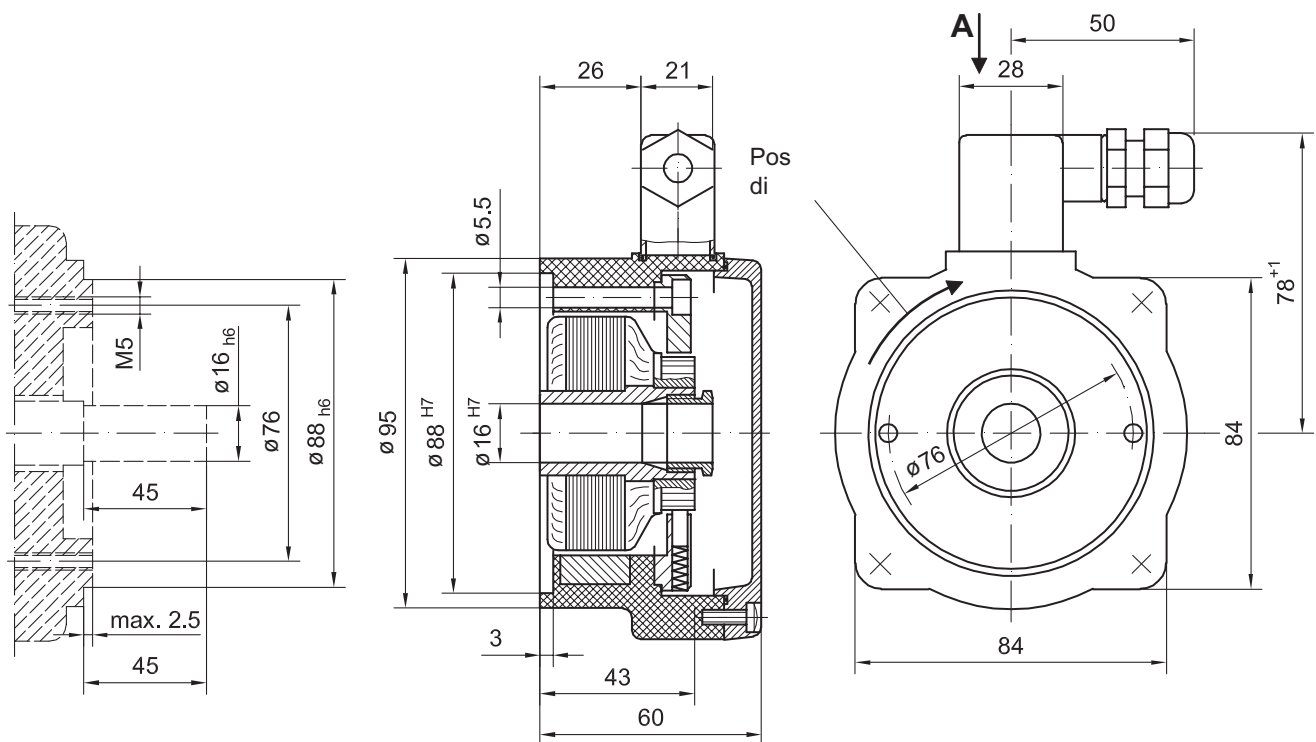
Mounting cone

Carbon brushes



Dimensions

GTR 9.16



HM87M21438

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