

# Tachogenerators

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

Housing  $\varnothing 89$  mm, bearingless configuration

## GT 9



GT 9

### Features

- High response speed
- Open circuit voltage 10...20 mV per rpm
- End shaft  $\varnothing 12-16$  mm or cone shaft  $\varnothing 17$  mm (1:10)
- 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 (open-circuit)
Isolation class	B
Calibration tolerance	$\pm 5$ %
Climatic test	Humid heat, constant (IEC 60068-2-3, Ca)
Performance	0.3 W (speed $> 5000$ rpm)
Armature-circuit time-constant	$< 9$ $\mu$ s
Open-circuit voltage	10...20 mV per rpm

### Technical data - mechanical design

Dimensions (flange)	$\varnothing 89$ mm
Shaft	$\varnothing 12...16$ mm end shaft $\varnothing 17$ mm cone shaft 1:10
Protection DIN EN 60529	IP 00, IP 44 (with cover)
Torque	0.35...0 Ncm
Rotor moment of inertia	0.95 kgcm <sup>2</sup>
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.	0.6 kg
Connection	Plug-in terminals

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**Part number**

GT 9.06 L / 4

Design  
- Cylindrical shaft  
K Cone shaft

Open-circuit voltage  
10 10 mV per rpm  
20 20 mV per rpm

**Accessories**

Mounting cone

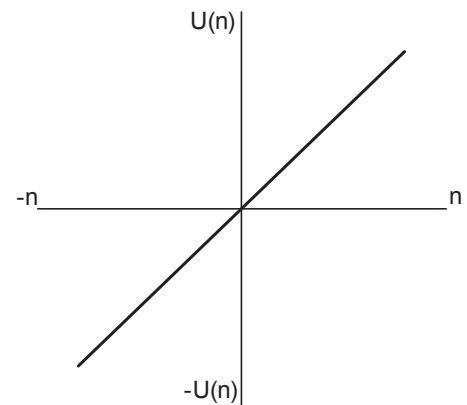
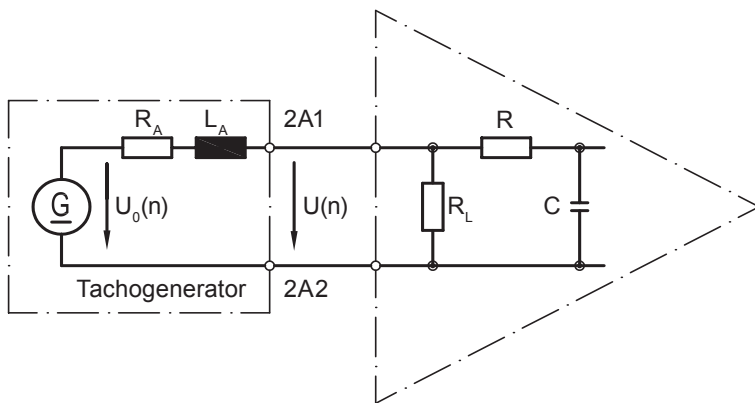
Carbon brushes

**Data according to type**

Type	Off-load voltage	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]	$R_A(20^\circ C)$ [ $\Omega$ ]	$L_A$ [mH]
GT 9.06 L / 410	10	$\geq 5$	$\geq 12$	$\geq 27$	9,000	105	40
GT 9.06 L / 420	20	$\geq 20$	$\geq 48$	$\geq 108$	9,000	370	169

Superimposed ripple (for  $\tau_{RC} = 0.3$  ms):  $\leq 0.5$  % (peak-peak)  $\leq 0.25$  % (rms)

**Replacement switching diagram**



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

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

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

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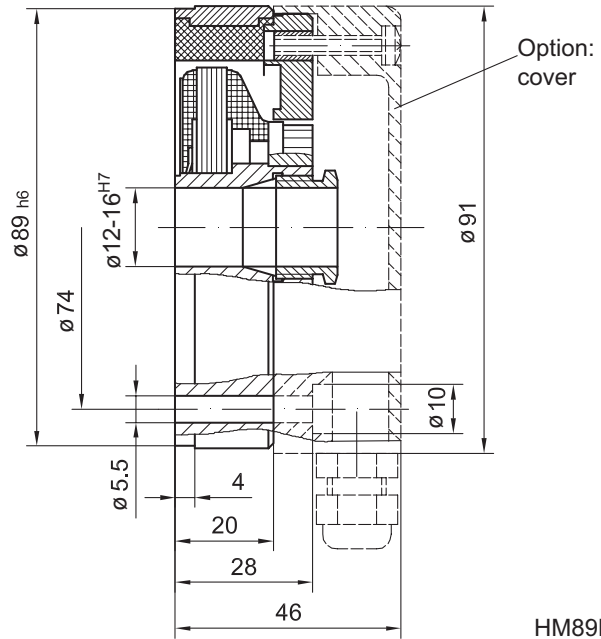
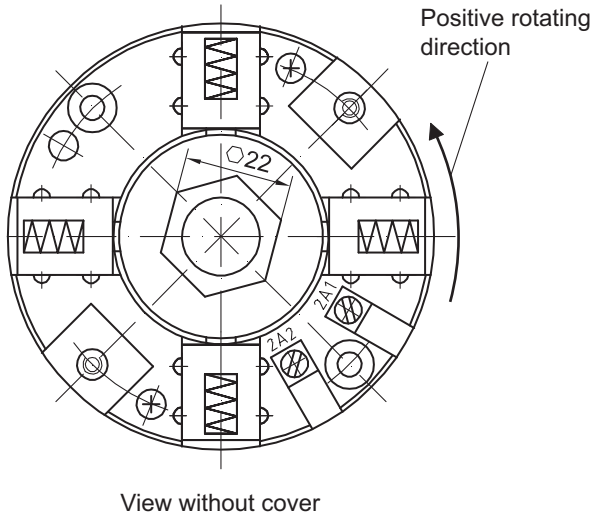
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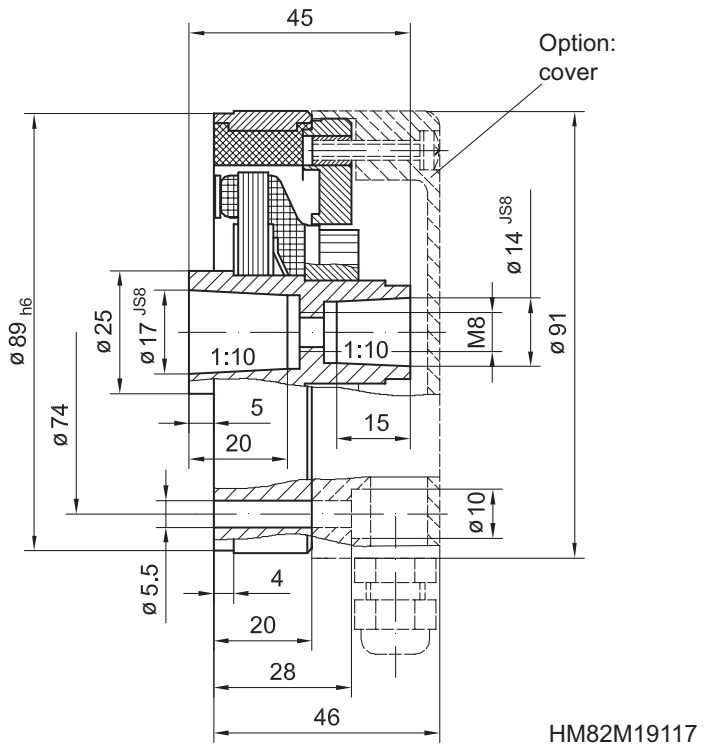
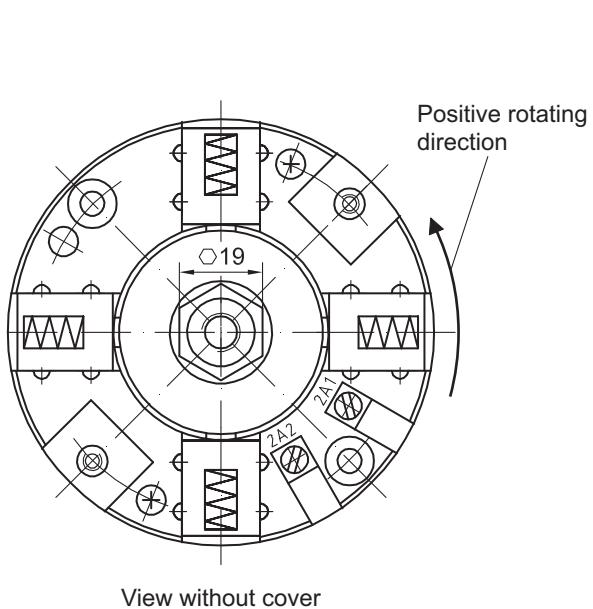
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### Dimensions

#### GT 9.06 - cylinder shaft design



#### GT 9.06 K - cone shaft design



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