Tachogenerators

Blind hollow shaft ø12...16 mm

Housing ø85 mm, bearingless configuration

GT 7

GT 7

Features

- **Temperature compensation of tacho voltage as standard**
- **Open circuit voltage 10...60 mV per rpm**
- **Blind hollow shaft ø12...16 mm**
- **High signal quality due to patented LongLife technology**
- **Low moment of inertia**
- **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	GT 7.08: 0.3 W (speed ≥5000 rpm) GT 7.16: 0.6 W (speed ≥5000 rpm)
Armature-circuit time-constant	<4 µs
Open-circuit voltage	10...60 mV per rpm
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE

Technical data - mechanical design

Size (flange)	ø85 mm
Shaft type	ø12...16 mm (blind hollow shaft)
Protection DIN EN 60529	IP 55
Torque	1.5 Ncm
Rotor moment of inertia	0.4 kgcm² (GT 7.08) 0.55 kgcm² (GT 7.16)
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.	110 g (GT 7.08), 180 g (GT 7.16)
Connection	Screw terminal connector Cable 0.6 m

Part number

GT7 ☐

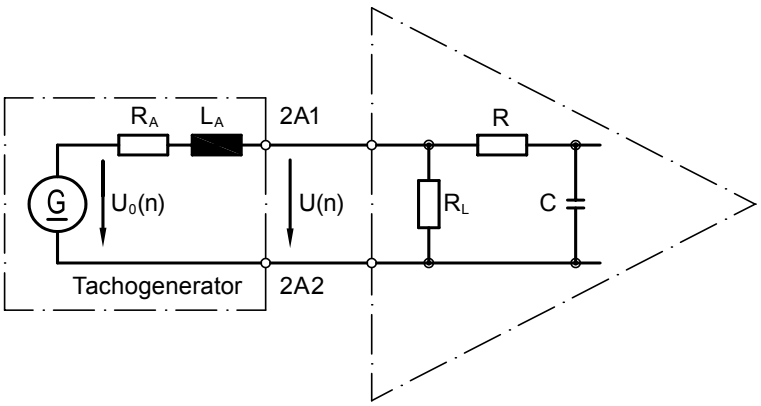
	Open-circuit voltage
.08L/410	10 mV per rpm
.08L/420	20 mV per rpm
.08L/430	30 mV per rpm
.16L/440	40 mV per rpm
.16L/460	60 mV per rpm

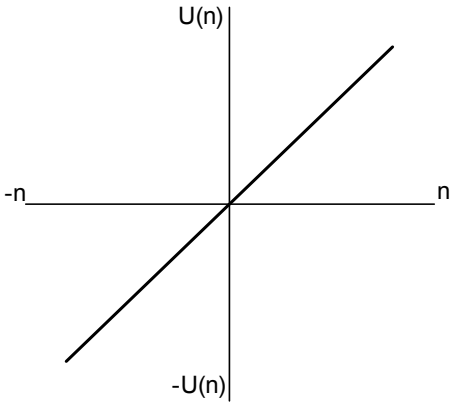
Data according to type

Type	Off-load voltage	Minimum load required depending on speed range [rpm]			Maximum operating speed	Armature resistance	Armature inductance
		0-3000	0-6000	0-n_{max}			
	U_0 [mV/rpm]	R_L [kΩ]	R_L [kΩ]	R_L [kΩ]	n_{max} [rpm]	R_A (20°C) [Ω]	L_A [mH]
GT7.**08L/410**	10	≥5	≥12	≥27	9000	60	20
GT7.**08L/420**	20	≥20	≥48	≥108	9000	230	80
GT7.**08L/430**	30	≥45	≥108	≥243	9000	550	180
GT7.**16L/440**	40	≥40	≥96	≥216	9000	410	160
GT7.**16L/460**	60	≥90	≥215	≥223	6100	760	360

Superimposed ripple (for τ_{RC} = 0.3 ms): ≤0.6% (peak-peak) ≤0.25% (rms)

Replacement switching diagram





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

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

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

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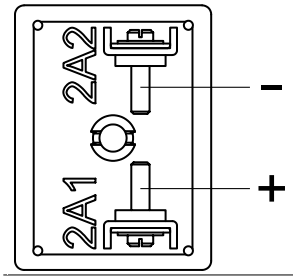
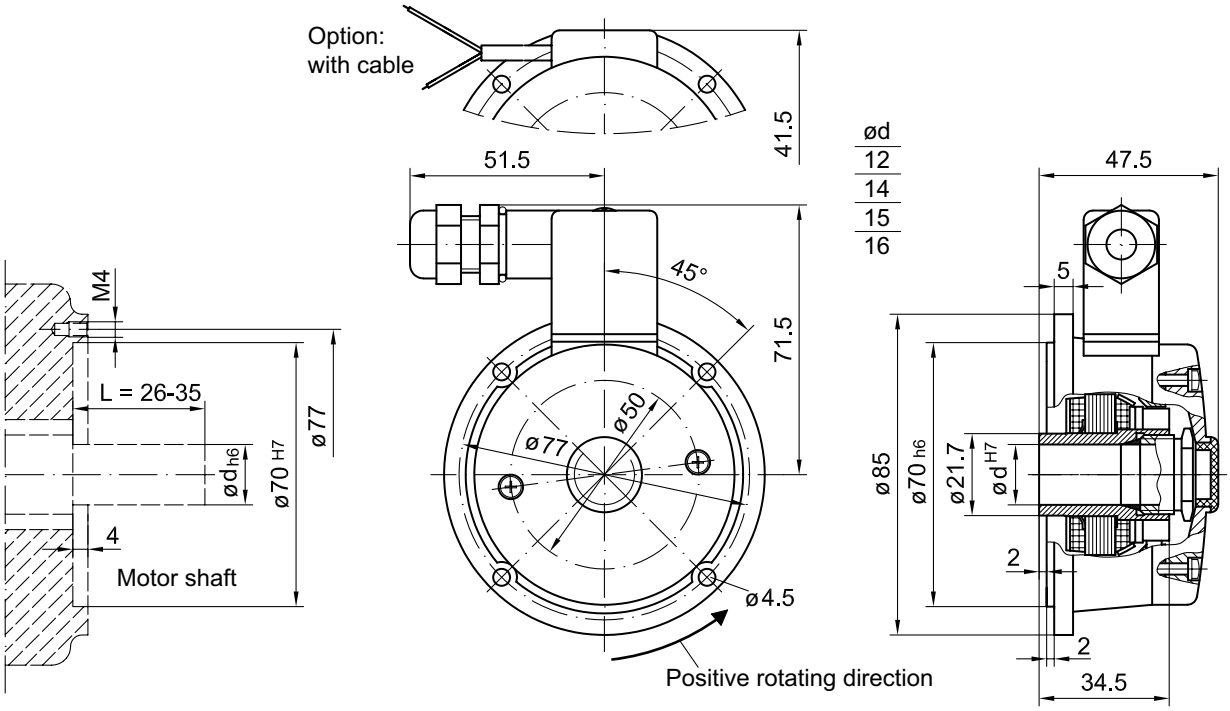
Terminal assignment
View A - Connecting terminal
Polarity for positive direction of rotation



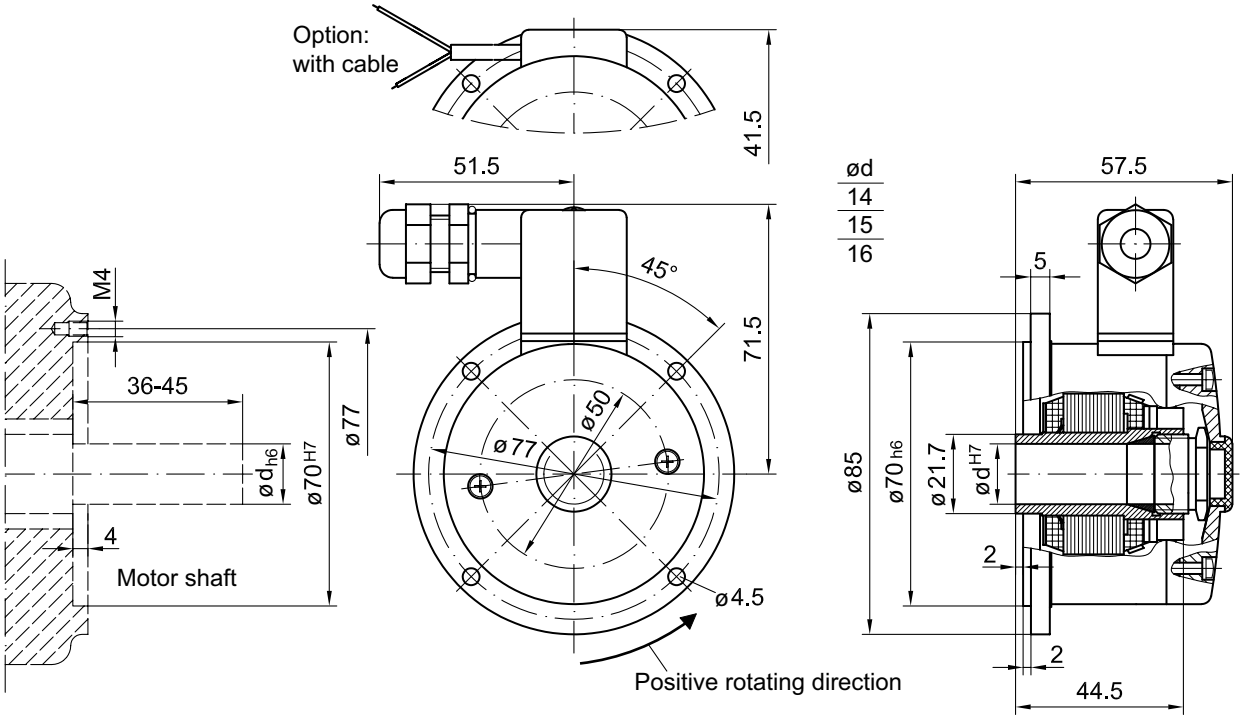
Accessories
Mounting cone
Carbon brushes

Dimensions

GT 7.08 - Open-circuit voltage 10...30 mV per rpm



GT 7.16 - Open-circuit voltage 40...60 mV per rpm



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