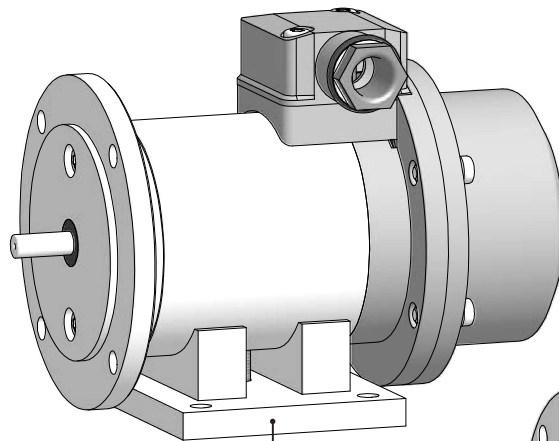
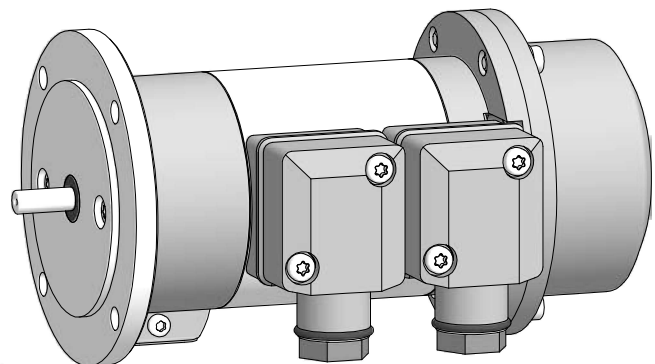




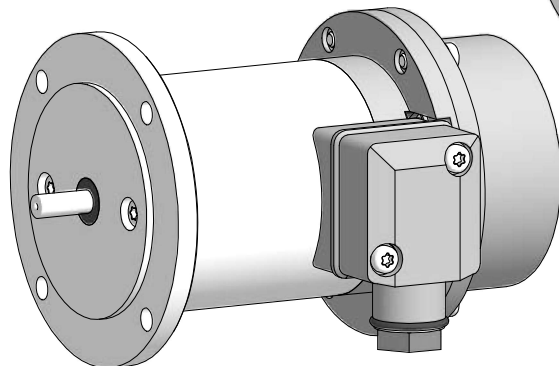
Montage- und Betriebsanleitung *Mounting and operating instructions*



Option B3: Gehäusefuß
Option B3: Housing foot



Option Z: Doppel-Tachogenerator
Option Z: Twin tachogenerator



TDP 0,09 (TDPZ 0,09) **Tachogenerator (Doppel-Tachogenerator)** ***Tachogenerator (Twin Tachogenerator)***

10 Technical data

10.1 Technical data - electrical ratings

• Reversal tolerance:	≤0.1 %
• Linearity tolerance:	≤0.15 %
• Temperature coefficient:	±0.05 %/K (open-circuit)
• Isolation class:	B
• Calibration tolerance:	±3 %
• Climatic test:	Humid heat, constant (IEC 60068-2-3, Ca)
• Interference immunity:	EN 61000-6-2
• Emitted interference:	EN 61000-6-3
TDP 0,09	
• Performance:	1.2 W (speed >3000 rpm)
• Armature-circuit time-constant (τ_A):	<25 μ s
• Open-circuit voltage:	10...60 mV per rpm (as ordered)
TDPZ 0,09	
• Performance:	2x 0.3 W (speed >3000 rpm)
• Armature-circuit time-constant (τ_A):	<8 μ s
• Open-circuit voltage:	10...40 mV per rpm (as ordered)

10.2 Technical data - mechanical design

• Size (flange):	ø85 mm
• Shaft type:	ø6 mm solid shaft
• Protection DIN EN 60529:	IP56
• Torque:	1.5 Ncm
• Admitted shaft load:	≤40 N axial ≤60 N radial
• 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 300 g, 1 ms
TDP 0,09	
• Operating speed:	≤10000 rpm
• Rotor moment of inertia:	0.25 kgcm ²
• Weight approx.:	1.1 kg
• Connection:	Terminal box
TDPZ 0,09	
• Operating speed:	≤9000 rpm
• Rotor moment of inertia:	0.29 kgcm ²
• Weight approx.:	1.5 kg
• Connection:	2x terminal box

10.3 Type data

Type	Open-circuit voltage (DC) 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 [kΩ]	0 - 6000: R_L [kΩ]	0 - n_{max} : R_L [kΩ]			
TDP0,09LT-1	10	≥0.75	≥0.3	≥8.5	10000	20	18
TDP0,09LT-2	20	≥3	≥12	≥34	10000	82	75
TDP0,09LT-7	30	≥6.8	≥27	≥75	10000	190	167
TDP0,09LT-3	40	≥12	≥48	≥134	10000	320	300
TDP0,09LT-8	50	≥19	≥75	≥134	8000	492	465
TDP0,09LT-9	60	≥27	≥108	≥134	6700	750	675

Twin tachogenerator with two separate tachogenerator voltages
(The data refer to each of the two tachogenerator outputs)

TDPZ0,09LT-1	10	≥3	≥12	≥28	9000	35	23
TDPZ0,09LT-2	20	≥12	≥48	≥109	9000	140	88
TDPZ0,09LT-3	40	≥48	≥192	≥433	9000	698	350

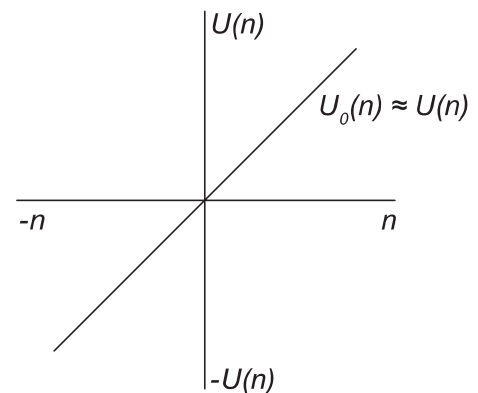
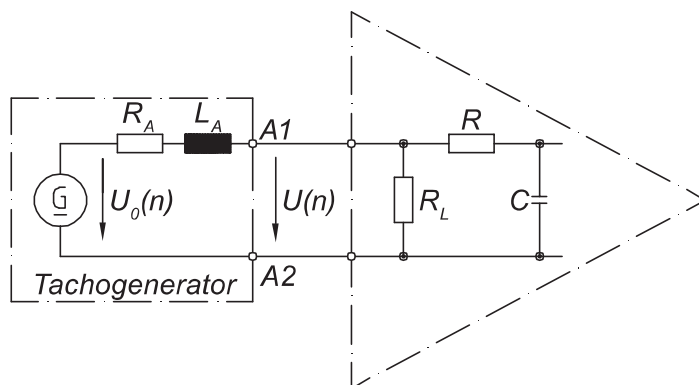
Superimposed ripple (for $\tau_{RC} = 0.7$ ms): ≤0.55% peak-peak ≤0.25% rms

10.4 Replacement switching diagram

Polarity for positive direction of rotation, see section 5:

TDP: A1: + A2: - (VDE)

TDPZ: 1A1/2A1: + 1A2/2A2: - (VDE)



$$\tau_{RC} \approx R \cdot C$$

$$\tau_A \approx \frac{L_A}{R_L}$$

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