

Tachogenerators

Solid shaft $\varnothing 6$ mm with flange

With own bearings

TDP 0,09, TDPZ 0,09



TDP 0,09

Features

- Low response time
- Open circuit voltage 10...60 mV per rpm
- Redundant output (TDPZ)
- Solid shaft $\varnothing 6$ mm with flange
- Very high resistance to shock
- High signal quality due to patented LongLife technology
- Robust design

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) |
| Performance | TDP: 1.2 W (speed ≥ 3000 rpm) TDPZ: 2x 0,3 W (speed ≥ 3000 rpm) |
| Armature-circuit time-constant | < 25 μ s (TDP) < 8 μ s (TDPZ) |
| Open-circuit voltage | TDP: 10...60 mV per rpm TDPZ: 10...40 mV per rpm |
| Interference immunity | EN 61000-6-2 |
| Emitted interference | EN 61000-6-3 |
| Approval | CE |

Technical data - mechanical design

| | |
|-------------------------|---|
| Size (flange) | $\varnothing 85$ mm |
| Shaft type | $\varnothing 6$ mm solid shaft |
| Protection DIN EN 60529 | IP 56 |
| Operating speed | ≤ 10000 rpm ≤ 9000 U/min (TDPZ) |
| Torque | 1.5 Ncm |
| Rotor moment of inertia | 0.25 kgcm ² (TDP) 0.29 kgcm ² (TDPZ) |
| Admitted shaft load | ≤ 40 N axial ≤ 60 N radial |
| 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 IEC 60068-2-27 Shock 300 g, 1 ms |
| Weight approx. | 1.1 kg (TDP), 1.5 kg (TDPZ) |
| Connection | Terminal box |

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Part number

TDP 0,09LT-

Open-circuit voltage

- 1 10 mV per rpm
- 2 20 mV per rpm
- 7 30 mV per rpm (not available for TDPZ)
- 3 40 mV per rpm
- 8 50 mV per rpm (not available for TDPZ)
- 9 60 mV per rpm (not available for TDPZ)

Design

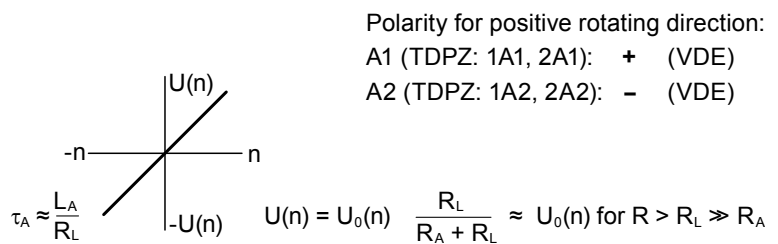
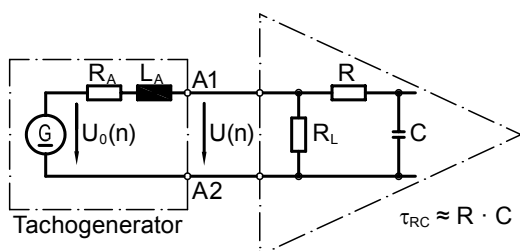
Tachogenerator

Z Twin tachogenerator

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 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 redundant output (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) | | | |

Replacement switching diagram



Tachogenerators

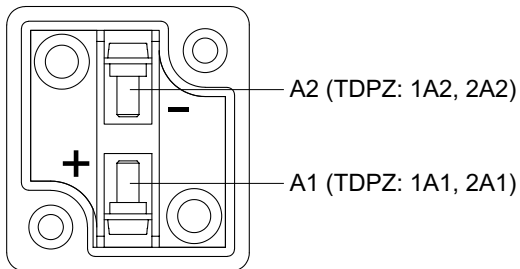
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Terminal assignment

View A - Connecting terminal

Polarity for positive direction of rotation



Accessories

Carbon brushes

Mounting accessories

K 35 Spring washer coupling
for solid shaft $\varnothing 6 \dots 12$ mm

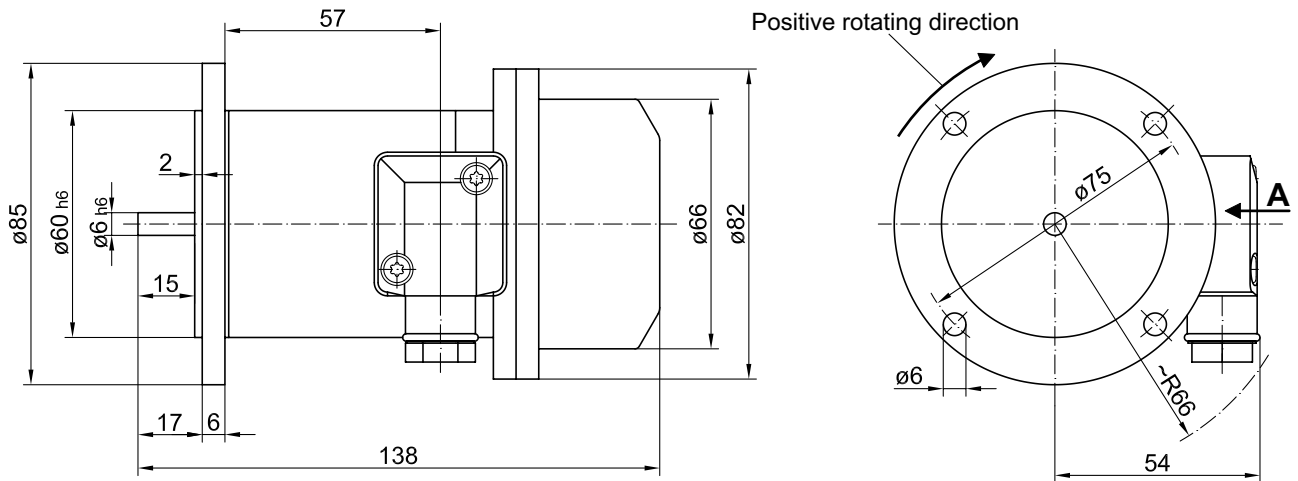
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Dimensions

Standard version



Version with redundant output

