

Tachogenerators

Solid shaft with EURO flange B10 or housing foot B3

With own bearings



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TDP 0,2, TDPZ 0,2



TDP 0,2

Features

- Low response time
- Open circuit voltage 10...150 mV per rpm
- Redundant output (TDPZ)
- EURO flange B10 or housing foot B3
- Very high resistance to shock
- High signal quality due to patented LongLife technology
- Recognition of sense of rotation possible via control

Optional

- Marine air protected/tropicalized
- Second shaft end (B14)

Technical data - electrical ratings

| | |
|--------------------------------|---|
| Reversal tolerance | ≤0.1 % |
| Linearity tolerance | ≤0.15 % |
| Temperature coefficient | ±0.05 %/K (open-circuit) |
| Isolation class | B |
| Calibration tolerance | ±1 % |
| Climatic test | Humid heat, constant (IEC 60068-2-3, Ca) |
| Performance | TDP: 12 W (speed ≥3000 rpm) TDPZ: 2x 3 W (speed ≥3000 rpm) |
| Armature-circuit time-constant | <75 μs (TDP) <40 μs (TDPZ) |
| Open-circuit voltage | TDP: 10...150 mV per rpm TDPZ: 20...100 mV per rpm |
| Interference immunity | EN 61000-6-2 |
| Emitted interference | EN 61000-6-3 |
| Approval | CE |

Technical data - mechanical design

| | |
|-------------------------|---|
| Size (flange) | ø115 mm |
| Shaft type | ø11 mm solid shaft ø7 mm solid shaft (optional) ø14 mm solid shaft (optional) |
| Flange | EURO flange B10 Housing foot B3 |
| Protection DIN EN 60529 | IP 55, IP 56 (option) |
| Operating speed | ≤10000 rpm |
| Torque | 1.5 Ncm |
| Rotor moment of inertia | 1.1 kgcm ² (TDP) 1.2 kgcm ² (TDPZ) |
| Admitted shaft load | ≤60 N axial ≤80 N radial |
| Materials | Housing: aluminium die-cast 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. | 2.4 kg (TDP), 2.9 kg (TDPZ) |
| Connection | Terminal box |



Part number

TDP

Mounting type
B10 EURO flange B10
B3 Housing foot B3

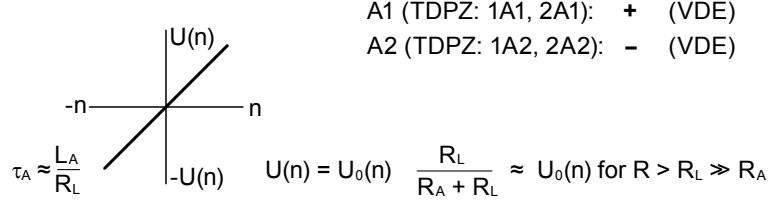
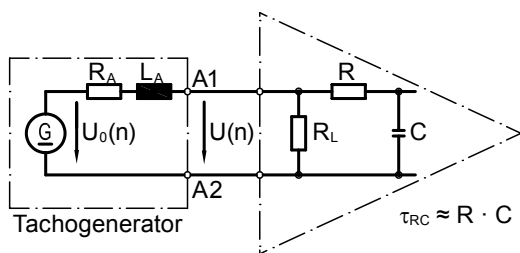
Open-circuit voltage
6 10 mV per rpm (not available for TDPZ)
7 20 mV per rpm
10 30 mV per rpm (not available for TDPZ)
5 40 mV per rpm
4 60 mV per rpm
3 100 mV per rpm
1 150 mV per rpm (not available for TDPZ)

Design
Tachogenerator
Z Twin tachogenerator

Data according to type

| Type | Open-circuit 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] | | | |
| TDP0,2 LT-6 | 10 | ≥0.1 | ≥0.3 | ≥0.9 | 10000 | 3 | 6 |
| TDP0,2 LT-7 | 20 | ≥0.3 | ≥1.2 | ≥3.3 | 10000 | 11 | 23 |
| TDP0,2 LT-10 | 30 | ≥0.7 | ≥2.7 | ≥7.5 | 10000 | 26 | 50 |
| TDP0,2 LT-5 | 40 | ≥1.2 | ≥5 | ≥13.5 | 10000 | 47 | 90 |
| TDP0,2 LT-4 | 60 | ≥2.7 | ≥11 | ≥30 | 10000 | 99 | 200 |
| TDP0,2 LT-3 | 100 | ≥7.5 | ≥30 | ≥30 | 6000 | 271 | 550 |
| TDP0,2 LT-1 | 150 | ≥16 | --- | ≥30 | 4000 | 630 | 1260 |
| Twin tachogenerator with redundant output (The data refer to each of the two tachogenerator outputs) | | | | | | | |
| TDPZ0,2 LT-7 | 20 | ≥1.2 | ≥4.8 | ≥14 | 10000 | 19 | 45 |
| TDPZ0,2 LT-5 | 40 | ≥4.8 | ≥20 | ≥54 | 10000 | 70 | 170 |
| TDPZ0,2 LT-4 | 60 | ≥11 | ≥44 | ≥120 | 10000 | 160 | 390 |
| TDPZ0,2 LT-3 | 100 | ≥30 | ≥120 | --- | 6000 | 445 | 1080 |
| Superimposed ripple (for $\tau_{RC} = 0.7$ ms): | | ≤0.5% (peak-peak) | | | ≤0.2% (rms) | | |

Replacement switching diagram



Polarity for positive rotating direction:
A1 (TDPZ: 1A1, 2A1): + (VDE)
A2 (TDPZ: 1A2, 2A2): - (VDE)

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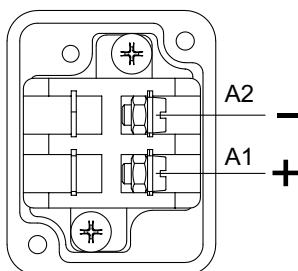
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Terminal assignment

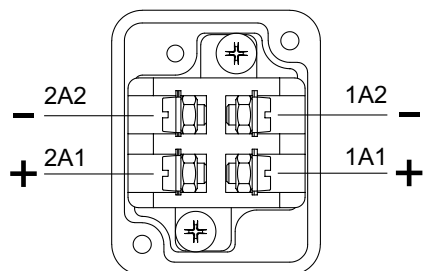
View A - Connecting terminal TDP 0,2

Polarity for positive direction of rotation



View A - Connecting terminal TDPZ 0,2

Polarity for positive direction of rotation



Accessories

Carbon brushes

Mounting accessories

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

K 50 Spring washer coupling
for solid shaft $\varnothing 11...16$ mm

K 60 Spring washer coupling
for solid shaft $\varnothing 11...22$ mm



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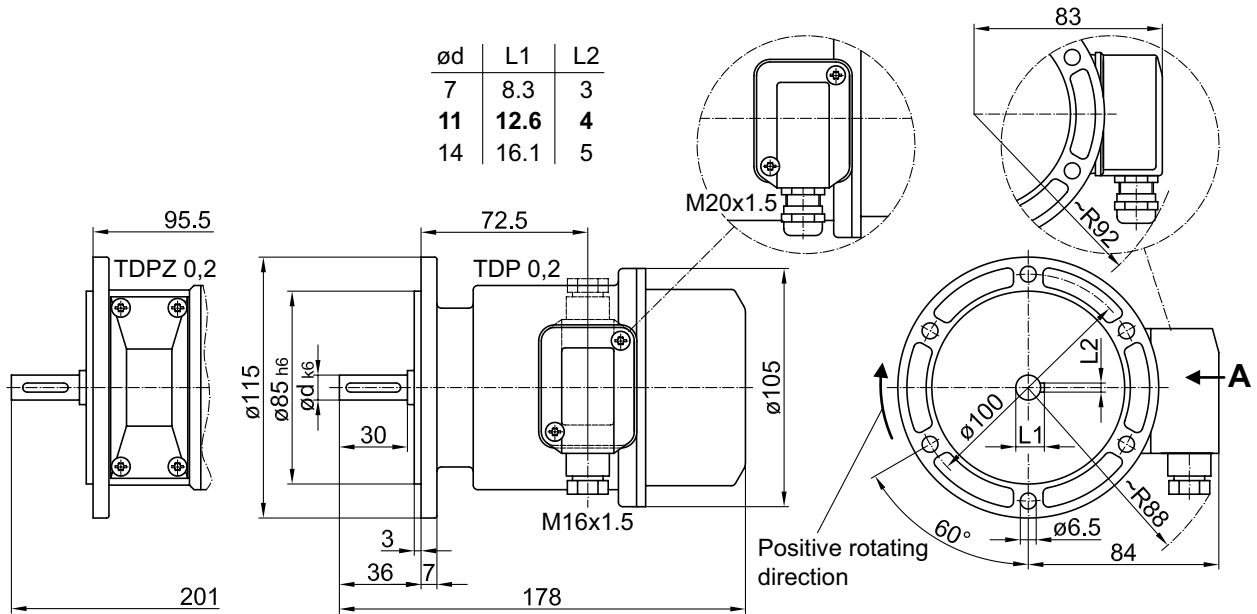
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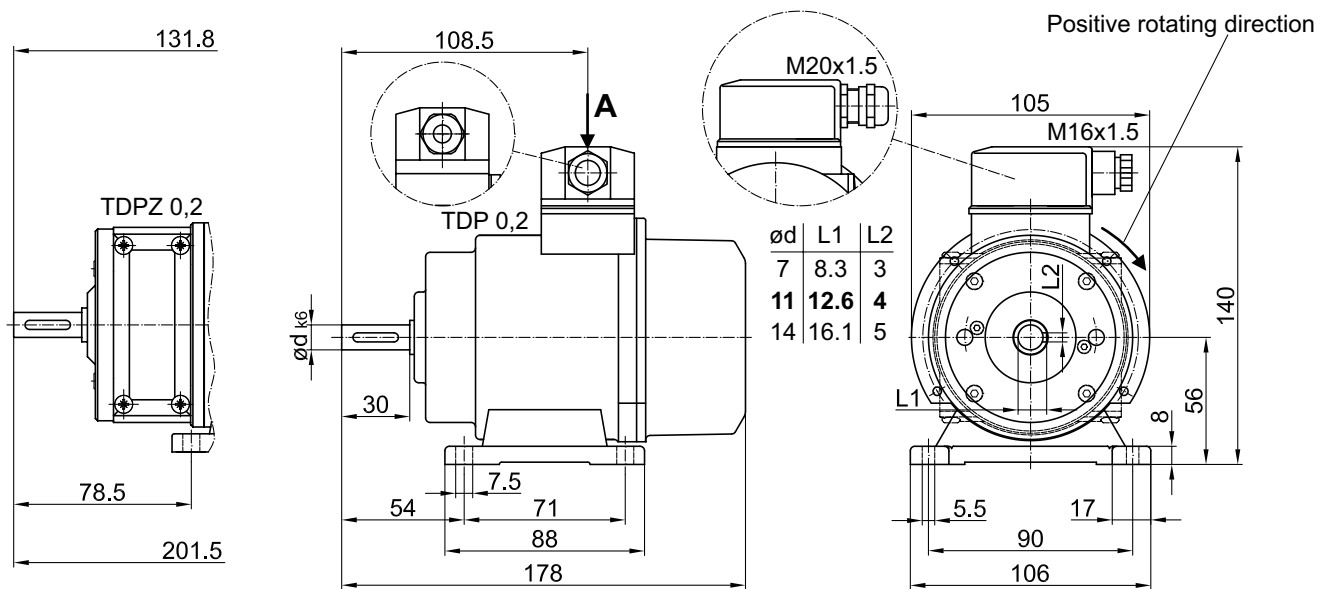
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Dimensions

Version with Euro flange (B10)



Version with housing foot (B3)



21/1/2019 Subject to modification in technic and design. Errors and omissions excepted.