Tachogenerators

Solid shaft with EURO flange B10 or housing foot B3

With own bearings

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 kgcm² (TDP) 1.2 kgcm² (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

Subject to modification in technic and design. Errors and omissions excepted.

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Part number

TDP | | 0,2LT- | | | |

Mounting type
- B10 EURO flange B10
- B3 Housing foot B3

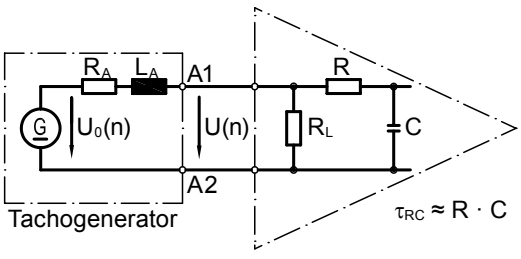
Open-circuit voltage
- 6 10 mV per rpm (not available for TDPZ)
- 7 20 mV per rpm
- 10 30 mV per rpm (not available for TDPZ)
- 5 40 mV per rpm
- 4 60 mV per rpm
- 3 100 mV per rpm
- 1 150 mV per rpm (not available for TDPZ)

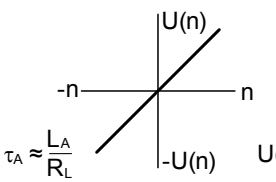
Design
- Tachogenerator
- Z Twin tachogenerator

Data according to type

Type	Open-circuit voltage	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]
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 τ_{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)

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

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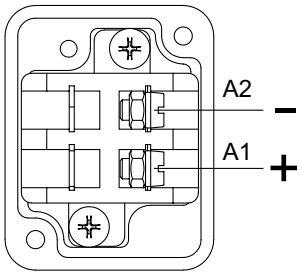
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Terminal assignment

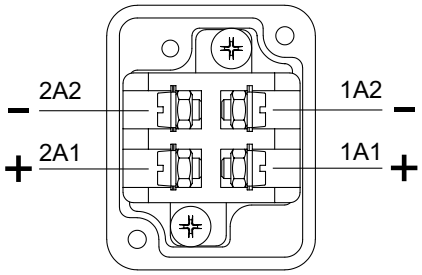
View A - Connecting terminal TDP 0,2

Polarity for positive direction of rotation



View A - Connecting terminal TDPZ 0,2

Polarity for positive direction of rotation



Accessories

Carbon brushes

Mounting accessories

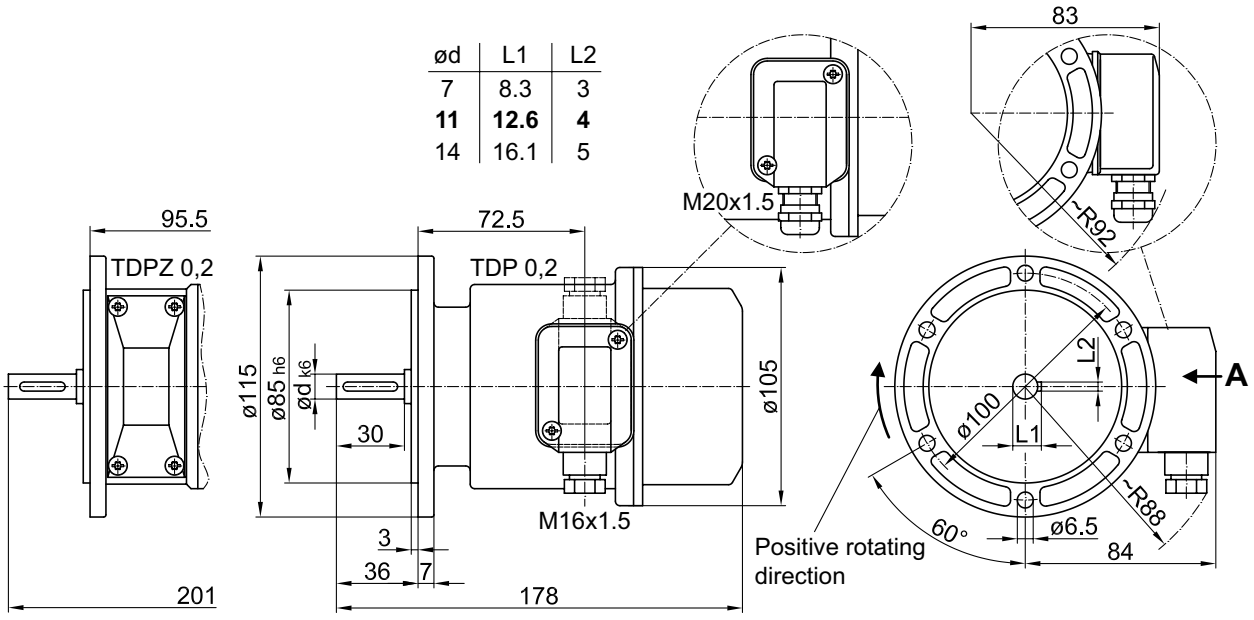
K 35	Spring washer coupling for solid shaft ø6...12 mm
K 50	Spring washer coupling for solid shaft ø11...16 mm
K 60	Spring washer coupling for solid shaft ø11...22 mm

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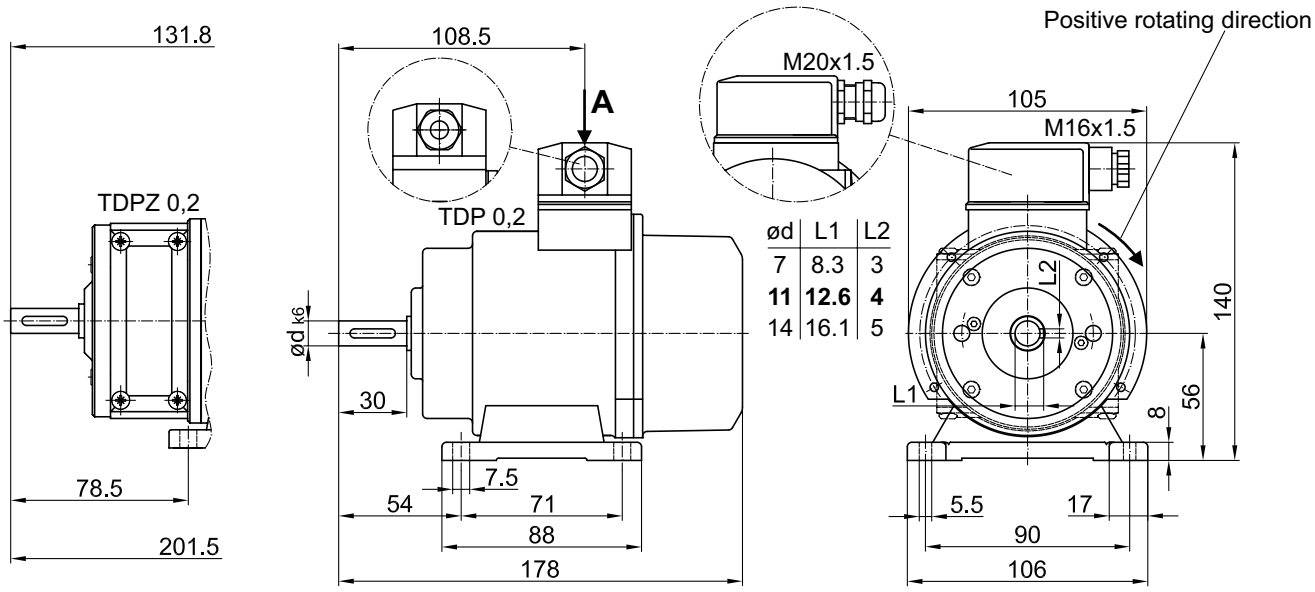
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Dimensions

Version with Euro flange (B10)



Version with housing foot (B3)



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