

## Tachogenerators - TDP 0,2; TDPZ 0,2

### Solid Shaft with EURO Flange B10 with own bearings

#### Features

- Low response time
- Open circuit voltage 10...150 mV per rpm
- Redundant output (TDPZ)
- EURO-flange B10 / solid shaft  $\varnothing$ 11 mm (Std.: 11k6 x 30 mm)
- 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) / Housing (B3) foot mounted

#### Technical Data - Electrical Ratings

Reversal tolerance	$\leq 0.1\%$	
Linearity tolerance	$\leq 0.15\%$	
Temperature coefficient	$\pm 0.05\%/K$ (open-circuit)	
Isolation class	B	
Calibration tolerance	$\pm 1\%$	
Climatic test	Humid heat, constant (IEC 60068-2-3, Ca)	
Interference immunity	EN 61000-6-2	
Emitted interference	EN 61000-6-3	
	<b>TDP 0,2</b>	<b>TDPZ 0,2</b>
Performance (speed $\geq 3000$ rpm)	12 W	2 x 3 W
Armature-circuit time-constant	$< 75 \mu s$	$< 40 \mu s$
Open-circuit voltage	10...150 mV per rpm	20...100 mV per rpm



#### Technical Data - Mechanical Design

Size (flange)	$\varnothing 115$ mm (PCD: 100 mm)
Shaft type	<b><math>\varnothing 11</math> mm solid shaft (Standard)</b> $\varnothing 7$ mm / $\varnothing 14$ mm solid shaft (optional)
Flange	EURO flange B10
Protection DIN EN 60529	<b>IP 55</b> (IP 56 optional)
Operating speed	$\leq 10000$ rpm
Torque	1.5 Ncm
Shaft load	$\leq 60$ N axial; $\leq 80$ N radial
Materials	Housing: Aluminium Coated 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
Connection	Terminal box (Screws)
	<b>TDP 0,2</b> <b>TDPZ 0,2</b>
Rotor moment of inertia	1.1 kgcm <sup>2</sup> 1.2 kgcm <sup>2</sup>
Weight approx.	2.4 kg                              2.9 kg

#### Data according to type

\* Marked Models are available in Ex-Stock against Rupee Payment with us.

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 <sub>max</sub>			
	U <sub>0</sub> [mV/rpm]	R <sub>L</sub> [k $\Omega$ ]	R <sub>L</sub> [k $\Omega$ ]	R <sub>L</sub> [k $\Omega$ ]	n <sub>max</sub> [rpm]	R <sub>A</sub> (20°C) [ $\Omega$ ]	L <sub>A</sub> [mH]
TDP0,2LT-6	10	$\geq 0.1$	$\geq 0.3$	$\geq 0.9$	10000	3	6
* TDP0,2LT-7	<b>20</b>	$\geq 0.3$	$\geq 1.2$	$\geq 3.3$	10000	11	23
TDP0,2LT-10	30	$\geq 0.7$	$\geq 2.7$	$\geq 7.5$	10000	26	50
TDP0,2LT-5	40	$\geq 1.2$	$\geq 5$	$\geq 13.5$	10000	47	90
* TDP0,2LT-4	<b>60</b>	$\geq 2.7$	$\geq 11$	$\geq 30$	10000	99	200
* TDP0,2LT-3	<b>100</b>	$\geq 7.5$	$\geq 30$	$\geq 30$	6000	271	550
TDP0,2LT-1	150	$\geq 16$	----	$\geq 30$	4000	630	1260

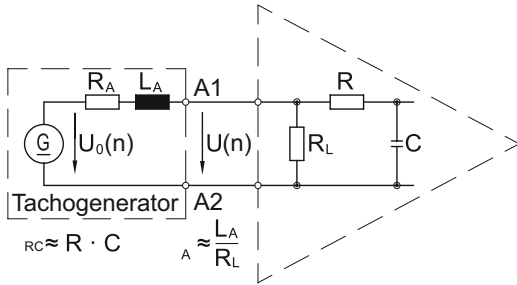
#### Twin tachogenerator with redundant output (The data refer to each of the two tachogenerator outputs)

* TDPZ0,2LT-7	<b>20</b>	$\geq 1.2$	$\geq 4.8$	$\geq 14$	10000	19	45
TDPZ0,2LT-5	40	$\geq 4.8$	$\geq 20$	$\geq 54$	10000	70	170
* TDPZ0,2LT-4	<b>60</b>	$\geq 11$	$\geq 44$	$\geq 120$	10000	160	390
TDPZ0,2LT-3	100	$\geq 30$	$\geq 120$	----	6000	445	1080
Superimposed ripple (for $R_C = 0.7$ ms):		$\leq 0.5\%$ (peak-peak)			$\leq 0.2\%$ (rms)		

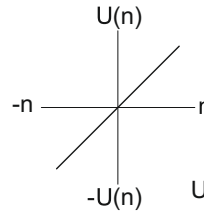
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**Replacement switching diagram**



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



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

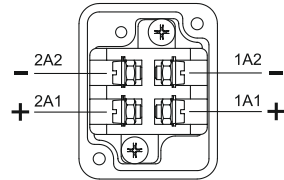
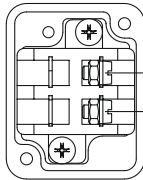
**Terminal assignment**

**View A**

Polarity for positive direction of rotation

Connecting terminal **TDP 0,2**

Connecting terminal **TDPZ 0,2**



**Accessories (Optional at additional cost)**

**Carbon Brush (Set)** I-No. ET.02.1057L. Size: 5x4x8.5 mm

Consisting of each 1 Twin Electro Graphite (H7) & Silver Graphite (S7) Brushes

**Mounting Accessories: Spring Disk Coupling (Optional at additional cost)**

**Model: K 35** for solid shaft  $\phi 6 \dots 12$  mm

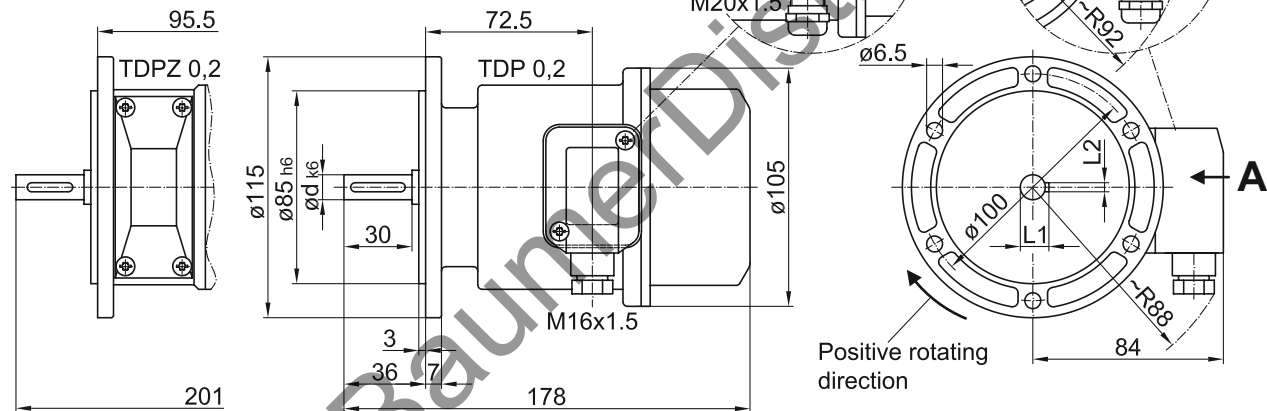
**Model: K 50** for solid shaft  $\phi 11 \dots 16$  mm

**Model: K 60** for solid shaft  $\phi 11 \dots 22$  mm

**Dimensions**

**TDP 0,2 (TDPZ 0,2) - Version with Euro Flange Mounting (B10)**

$\phi d$	L1	L2
7	8.3	3
11	12.6	4
14	16.1	5



**TDP 0,2 (TDPZ 0,2) - Version with Foot Mounting Housing (B3)**

$\phi d$	L1	L2
7	8.3	3
11	12.6	4
14	16.1	5

