

Combination

Twin tachogenerator and encoder in combination

Solid shaft with EURO flange B10

25...5000 pulses per revolution

TDPZ 0,2 + OG 9



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Features

- Logic level HTL or TTL
- Low response time
- Open circuit voltage 20...100 mV per rpm
- Redundant tachogenerator output
- EURO-flange B10 / solid shaft $\varnothing 11$ mm
- High signal quality due to patented LongLife technology
- Recognition of sense of rotation possible via control

Optional

- Housing foot (B3)

Technical data - electrical ratings

Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE

Technical data - electrical ratings (tachogenerator)

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	2x 0,3 W (speed ≥ 3000 rpm)
Armature-circuit time-constant	< 40 μ s
Open-circuit voltage	20...100 mV per rpm

Technical data - electrical ratings (encoder)

Voltage supply	9...30 VDC 5 VDC ± 5 % 9...26 VDC
Consumption w/o load	≤ 100 mA
Pulses per revolution	1...5000
Phase shift	$90^\circ \pm 20^\circ$
Scan ratio	40...60 %
Reference signal	Zero pulse, width 90°
Output frequency	≤ 120 kHz ≤ 300 kHz (on request)
Output signals	K1, K2, K0 + inverted
Output stages	HTL-P (power linedriver) TTL/RS422
Sensing method	Optical

Technical data - mechanical design

Size (flange)	$\varnothing 115$ mm
Shaft type	$\varnothing 11$ mm solid shaft
Admitted shaft load	≤ 60 N axial ≤ 80 N radial
Flange	EURO flange B10
Protection DIN EN 60529	IP 55
Operating speed	≤ 10000 rpm
Torque	1.5 Ncm
Rotor moment of inertia	1.5 kgcm ²
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-30...+100 °C -25...+100 °C (> 3072 pulses per revolution)
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 100 g, 6 ms
Connection	2x terminal box
Weight approx.	3.5 kg

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Part number

Twin tachogenerator with incremental encoder

TDPZ0,2LT- +OG9 DN

Voltage supply / signals

I 9...30 VDC / HTL + inv. signals
TTL 5 VDC / TTL + inv. signals
R 9...26 VDC* (9...30 VDC*) / TTL + inv. signals

Pulse number - see table

Output signals

DN K1, K2, K0

Open-circuit voltage

7 20 mV per rpm
5 40 mV per rpm
4 60 mV per rpm
3 100 mV per rpm

Pulse number

25	256	720	2048	5000
120	360	1000	2500	
128	500	1024	3072	
180	512	1250	4096	

Other pulse numbers on request.

* <95 pulses: 9...26 VDC / ≥95 pulses: 9...30 VDC

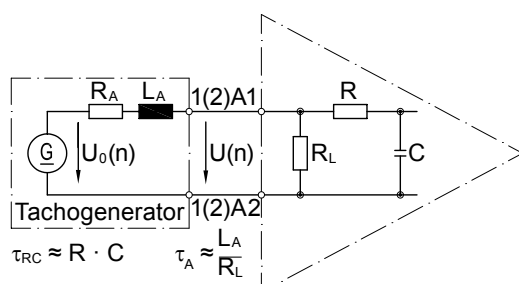
Data according to type

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]
TDPZ0,2LT-7	20	≥1.2	≥4.8	≥14	10000	19	45
TDPZ0,2LT-5	40	≥4.8	≥20	≥54	10000	70	170
TDPZ0,2LT-4	60	≥11	≥44	≥120	10000	160	390
TDPZ0,2LT-3	100	≥30	≥120	---	6000	445	1080

The data refer to each of the two tachogenerator outputs

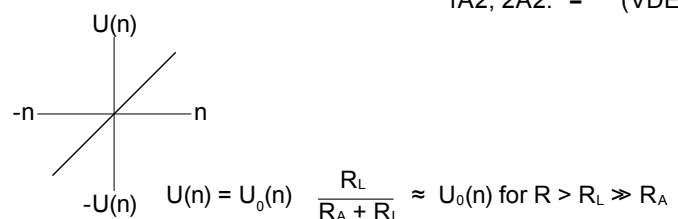
Superimposed ripple (for τ_{RC} = 0.7 ms): ≤0.5% (peak-peak) ≤0.2% (rms)

Replacement switching diagram



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

1A2, 2A2: - (VDE)



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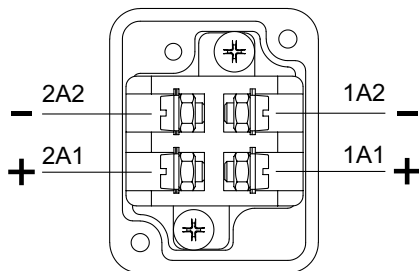
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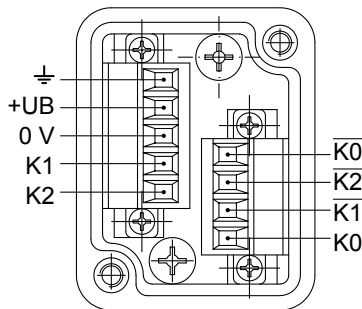
Terminal assignment

View A - Connecting terminal TDPZ 0,2

Polarity for positive direction of rotation

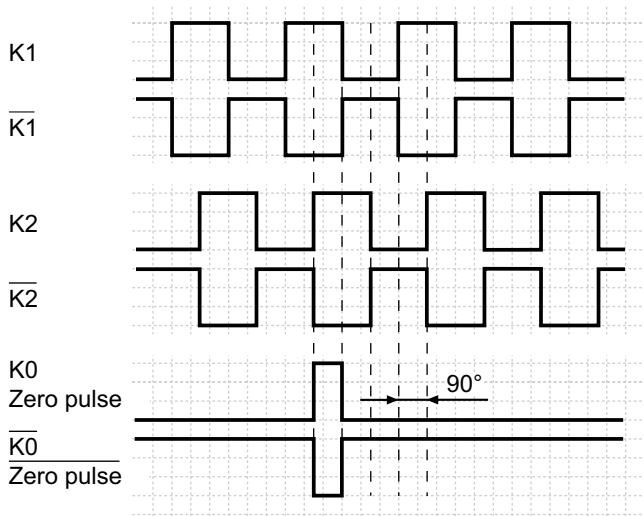


View B - Connecting terminal in terminal box OG 9



Output signals

At positive rotating direction



Accessories

Carbon brushes

Connectors and cables

HEK 8 Sensor cable for encoders

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

Diagnostic accessories

HENQ 1100 Analyzer for encoders

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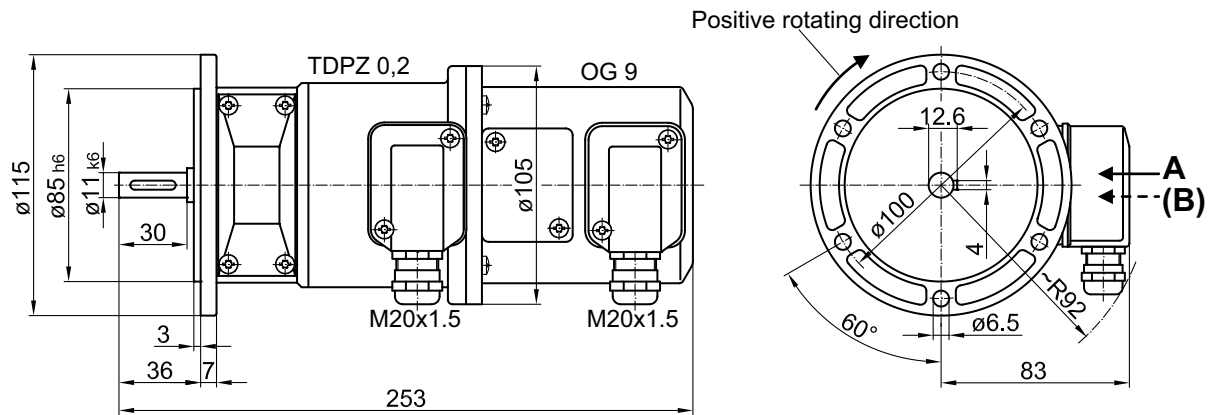
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Dimensions

TDP 0,2 + OG 9 (TDPZ 0,2 + OG 9) - Version with Euro flange (B10)



TDP 0,2 + OG 9 (TDPZ 0,2 + OG 9) - Version with housing foot (B3)

