

Combination

Tachogenerator and encoder in combination

Solid shaft with EURO flange B10 or housing foot B3

25...5000 pulses per revolution

TDP 0,2 + OG 9, TDPZ 0,2 + OG 9



TDP 0,2 + OG 9

Features

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

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	TDP: 12 W (speed ≥3000 rpm) TDPZ: 2x 3 W (speed ≥3000 rpm)
Armature-circuit time-constant	<75 40 μs (TDPZ)
Open-circuit voltage	TDP: 10...150 mV per rpm TDPZ: 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	25...5000
Phase shift	90° ±20°
Duty cycle	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)	ø115 mm
Shaft type	ø11 mm solid shaft
Admitted shaft load	≤60 N axial ≤80 N radial
Flange	EURO flange B10 Housing foot B3
Protection DIN EN 60529	IP 55
Operating speed	≤10000 rpm
Torque	1.5 Ncm
Rotor moment of inertia	1.4 kgcm ² (TDP) 1.5 kgcm ² (TDPZ)
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.	3.3 kg (TDP), 3.5 kg (TDPZ)
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE

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Part number

TDP

	0,2 LT-			55 + OG9	DN			
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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

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

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 _o [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)			

Combination

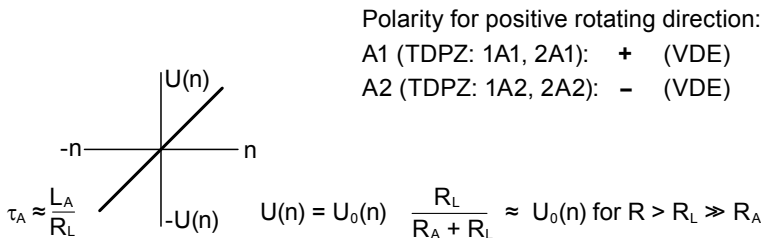
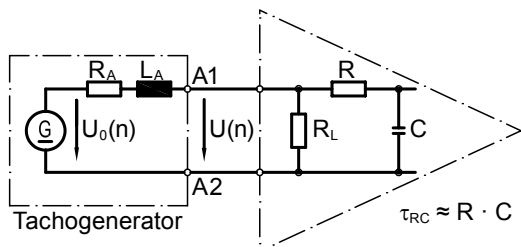
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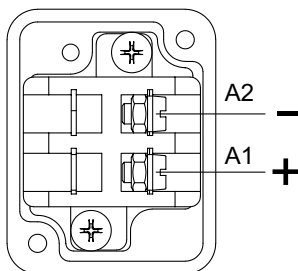
Replacement switching diagram



Terminal assignment

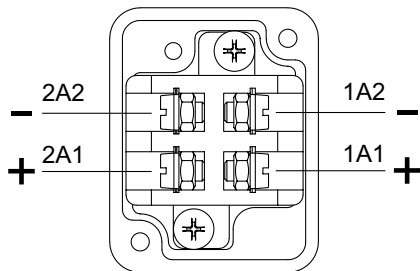
View A - Connecting terminal TDP 0,2

Polarity for positive direction of rotation

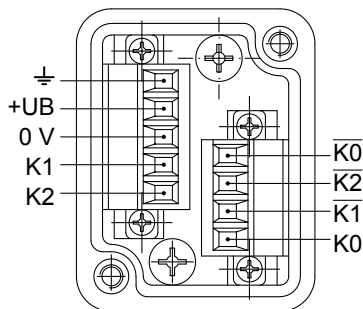


View A - Connecting terminal TDPZ 0,2

Polarity for positive direction of rotation



View B - Connecting terminal OG 9



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

11075858 Analyzer for encoders HENQ 1100

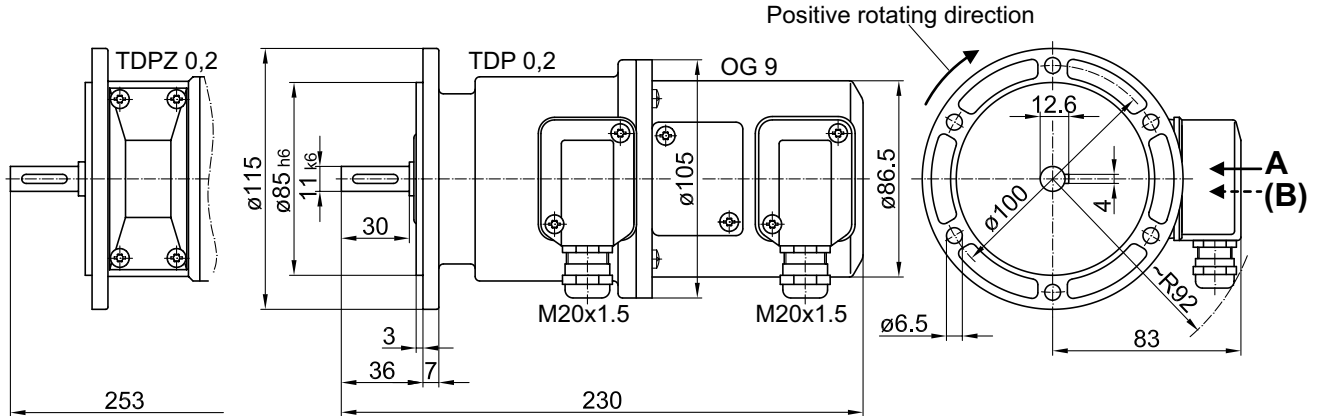
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Dimensions

EURO flange B10



Housing foot B3

