Baumer
Passion for Sensors

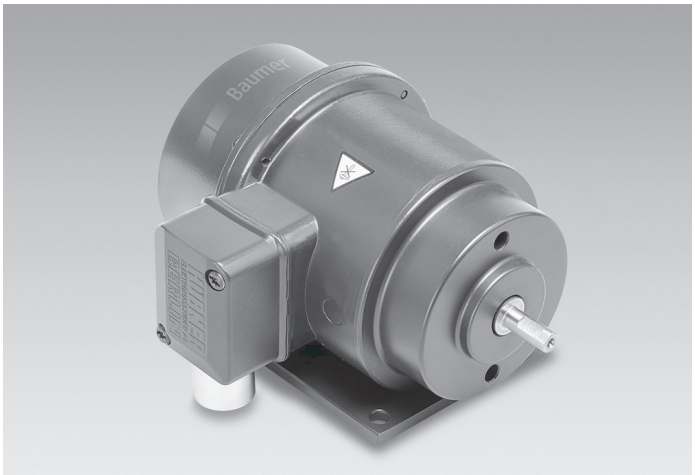
Tachogenerators

FAPY

LongLife DC tachogenerator in industrial NEMA 12 housing with foot mount and solid shaft
With own bearings

Overview

- For direct replacement of "PY" or "BC" style tachogenerators
- Low response time
- Open circuit voltage 50…100 mV per rpm
- Housing foot B3
- Very high resistance to shock
- High signal quality due to patented LongLife technology
- Recognition of sense of rotation possible via control
- CSA / C / US approved



LongLife® HÜBNER BERLIN A Baumer Brand

Technical data

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)
Armature-circuit time-constant	<75 µs
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE, CSA C/US
Technical data - mechanical design	
Size (flange)	3.88"
Shaft type	.312" DIA / .318" DIA solid shaft

Technical data - mechanical design	
Flange	NEMA 12 housing with foot mount
Protection DIN EN 60529	IP 55
Operating speed	≤10000 rpm
Torque	1,5 Ncm
Rotor moment of inertia	1,1 kgcm²
Admitted shaft load	≤60 N axial ≤80 N radial
Material	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-22...+266 °F
Resistance	IEC 60068-2-6 Vibration 10 g, 10...2000 Hz IEC 60068-2-27 Shock 300 g, 1 ms
Weight approx.	2,6 kg
Connection	Terminal box

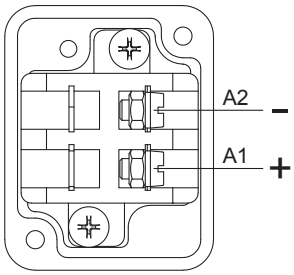
The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.
2020-01-31

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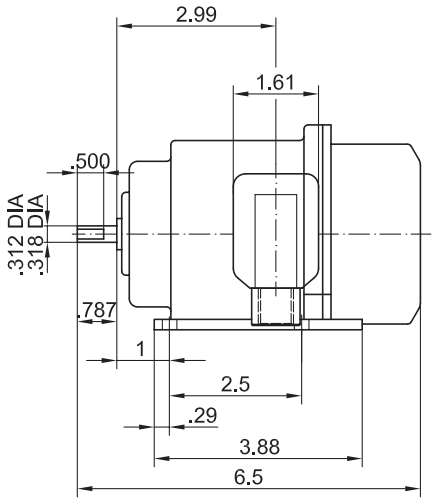
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Terminal assignment

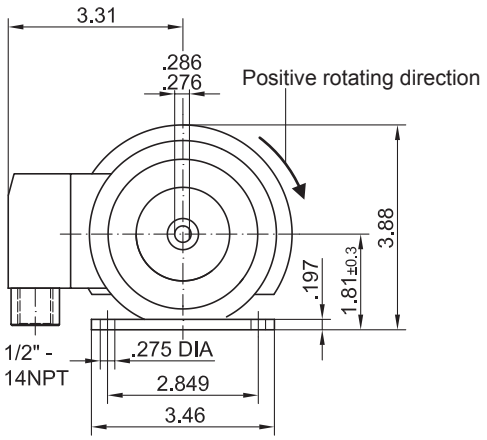
Polarity for positive rotating direction



Dimensions



All dimensions
in inch



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Ordering reference

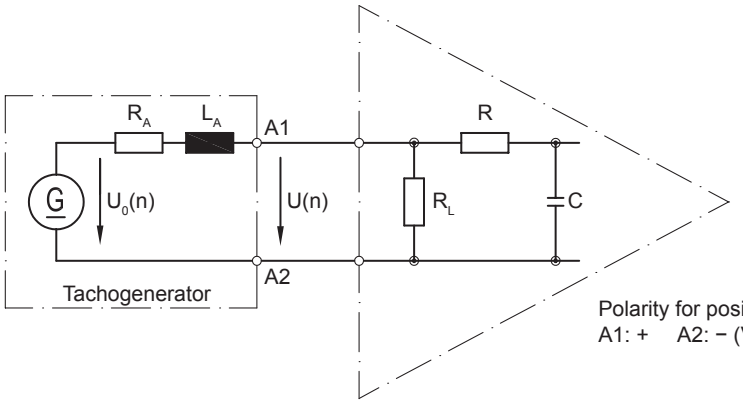
Order key	########
Design	
FAPY 50 - Open-circuit voltage 50 mV per rpm	11055497
APY 100 - Open-circuit voltage 100 mV per rpm	11055498

Data according to type

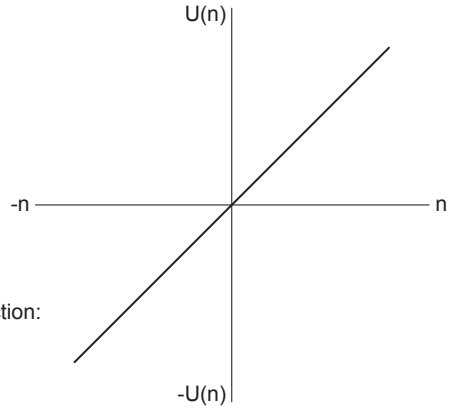
Type	Off-load voltage	Minimum load required depending on speed range [rpm]			Maximum operating speed	Armature resistance	Armature inductance
		0-3000	0-6000	0-n_{max}			
	U_0 [mV/rpm]	R_L [kΩ]	R_L [kΩ]	R_L [kΩ]	n_{max} [rpm]	R_A (68°F) [Ω]	L_A [mH]
FAPY **50**	50	≥1.9	≥7.8	≥21.5	10000	66	137
FAPY **100**	100	≥7.5	≥30	≥30	6000	271	546

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

Replacement switching diagram



Polarity for positive rotating direction:
A1: + A2: − (VDE)



$\tau_{RC} \approx R \cdot C$ $\tau_A \approx \frac{L_A}{R_L}$ $U(n) = U_0(n) \frac{R_L}{R_A + R_L} \approx U_0(n)$ for $R > R_L >> R_A$

Accessories

Mounting accessories

Spring disk coupling K 35 (shaft ø6...12 mm)

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