

DC-Motor-Tacho Combinations

5 mNm

Graphite Commutation

For combination with:
Gearheads: 16/7, 20/1

Series 1727 ... C

Characteristics of the DC-Motor-Tacho Combination

Series	mechanical time constant	moment of inertia	angular acceleration	frequency	weight response
1727 U 006 C 001 G	τ_m 11 ms	J 1,61 gcm ²	$\alpha_{max.}$ $73 \cdot 10^3 \text{ rad s}^{-2}$	1930 Hz	43 g
1727 U 012 C 001 G	11 ms	1,61 gcm ²	$71 \cdot 10^3 \text{ rad s}^{-2}$	1930 Hz	43 g
1727 U 024 C 001 G	11 ms	1,61 gcm ²	$71 \cdot 10^3 \text{ rad s}^{-2}$	1930 Hz	43 g

The characteristics of the DC-Micromotor Series 1727 ... C, used for these combinations are listed on the main catalogue.

Tachogenerator		001 G	
EMF constant	K_E	1,0	mV/rpm
Tolerance of EMF constant		9,55	mV/rad s ⁻¹
Load resistance	R_L	± 2	%
Operating speed, max. continuous	$n_{e \text{ max.}}$	≥ 20	k Ω
Terminal resistance	R	≤ 5000	rpm
		210	Ω
Ripple, peak-peak, typical		7	%
Ripple frequency, cycles		14	per turn
Linearity, without load, between 500 and 5000 rpm		$\pm 0,2$	%
Reversion error		$\pm 0,2$	%
Temperature coefficient of EMF		0,02	% / °C
Temperature coefficient of armature resistance		0,4	% / °C
Rotor inductance	L	3000	μH
Direction of rotation		reversible	
Polarity		dependent on direction of rotation	

Features

Mono-axis design

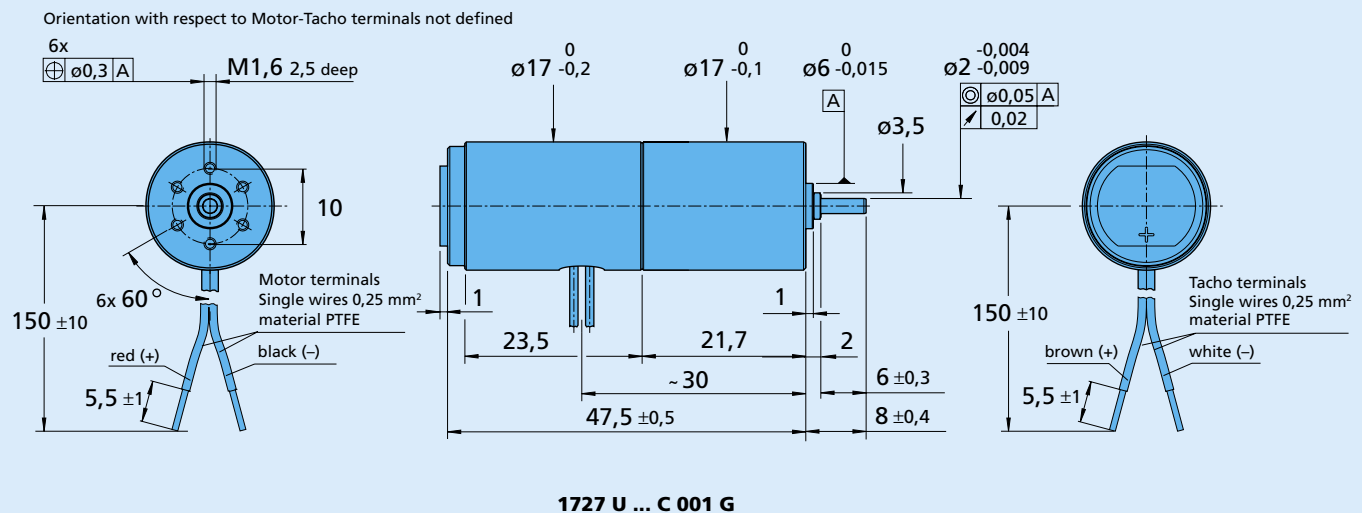
Motor and tachogenerator feature the patented skew wound ironless rotors (System FAULHABER®). The mono-axis design with the two commutator systems, facing each other in a patented arrangement, mounted on a single solid shaft, has excellent torsion characteristics and the highest frequency response possible.

Commutation system

The motors are built with copper commutators and copper impregnated graphite brushes. The tachogenerator have commutators and brushes made of gold alloy to assure a high quality output signal.

Operating temperature ranges:

Motor-Tacho, standard -30 ... + 85 °C
 Motor-Tacho, optional -30 ... + 125 °C
 Rotor, max. permissible + 125 °C



For notes on technical data refer to "Technical Information" on the main catalogue

Specifications subject to change without notice.