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RE.0444N - Normal

Direct Current Tachometer generator

Applications :

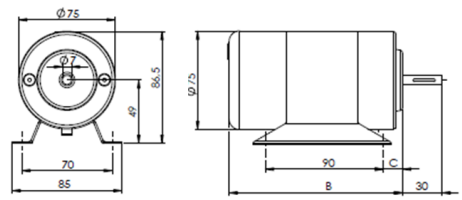
- Industry
- Speed control & regulation

Descriptions :

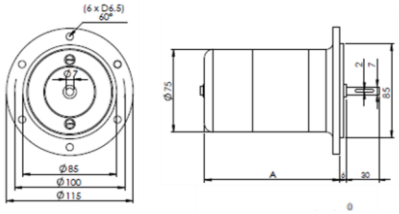
- The most common DC tachometer generator
- Permanent magnet excitation
- Brush-holders under cover
- Cable connection
- Low ripple
- Available with one or two commutator

DIAGRAMS

Base mounting – B3



Flange mounting – B5



	Shaft diameter	1 commutator	2 commutators
A	Ø 7 mm	126 mm	142 mm
	Ø 11 mm	131 mm	
	Ø 14 mm	128 mm	
B	Ø 7 mm	132 mm	148 mm
	Ø 11 mm	137 mm	
	Ø 14 mm	141 mm	
C	Ø 7 mm	14,5 mm	30 mm
	Ø 11 mm	17,5 mm	
	Ø 14 mm	21,5 mm	

MAIN CHARACTERISTICS

We deserve the right to modify technical features in the interest of technological advance.

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DESIGNATION	SYMB	VALUE
Max. speed	n_m	12 000 rpm
Moment of inertia	J	0,95 Kg cm²
No-load driving torque	Mr	1,5 N.cm
Max. radial shaft stress		
7x30 mm	F	0,4 da N
11x30 mm	F	1,0 da N
Maximum E.M.F.	E_m	600 V
Maximum linearity error	ΔE	$\leq$ 0,15 % E_T
Overall ripple rate (peak to peak)	ΔE_c	$\leq$ 0,5 % E_c
Rotation harmonics (f=2 p.n)	ΔE_p	$\leq$ 0,2 % E_c
Slots harmonics (f=Z.n.)	ΔE_z	$\leq$ 0,3 % E_c
Calibration precision	ΔE_o	$\pm$ 1 % E_{To}
E.M.F. temperature drift		
Not compensated	ΔE_e	0,02 %/°C
Compensated	ΔE_e	0,005 %/°C
Time constant	C_t	2,5 ms
Filter :		
Time constant		0,47 ms
Load current		5 mA
Speed		3 000 rpm

CONSTRUCTION DETAILS	
Number of poles	2
Armature slots number	19
Commutator blades number	57
Insulation class	B (IEC 34-1)
Operating temperature	-30 +130 °C
Climatic protection	C_a (IEC 68-1)
Ingress protection	IP44 (IEC 34-5)
Direction of rotation	reversible
Excitation Permanent magnets:	Alnico

Weight	**1.8 kg** (1 commutator) **2.1 kg** (2 commutators)

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MECHANICAL OPTIONS

	MOUNTING SIDE			OPPOSITE MOUNTING SIDE (upon request)		
	D (mm)	L (mm)	Bearings	D (mm)	L (mm)	Bearings
Standard	7	30	8 x 22 x 7 ZZ	7	30	8 x 22 x 7 ZZ
Shaft	11	30	12 x 28 x 8 ZZ			
Special shaft	14 max	30	15 x 32 x 9 ZZ	8	30	8 x 22 x 7 ZZ

Markings and polarity of terminals (cables) for counter-clockwise rotation, seen from the shaft.

1 COMMUTATOR	2 COMMUTATORS			
Red wire : +	1st comm.	Blue wire: +	2nd comm.	yellow wire: +
White wire : -		White wire: -		green wire: -

ELECTRICAL OPTIONS

DESCRIPTION	SYMB	UNIT		VALUES										
E.M.F at 1 000 rpm	E_n	V	1 com.	**6**	**20**	**30**	**40**	**50**	**60**	**80**	**100**	**120**	**150**	**200**
			2 com.		2 x 20	2 x 30		2 x 50	2 x 60		2 x 100			
Voltage gradient	C_v	V/rpm	1 com.	0,006	0,02	0,03	0,04	0,05	0,06	0,08	0,1	0,12	0,15	0,2
			2 com.		2 x 0,02	2 x 0,03		2 x 0,05	2 x 0,06		2 x 0,1			
Armature resistance	R_a	Ω	1 com.	1,5	12	28	45	70	100	180	280	400	640	900
			2 com.		2 x 24	2 x 55		2 x 150	2 x 200		2 x 470			
Max thermal load	I_{th}	A	1 com.	1.4	0,55	0,35	0,25	0,22	0,18	0,14	0,11	0,09	0,07	0,07
			2 com.		2 x 0,23	2 x 0,14		2 x 0,09	2 x 0,09		2 x 0,05			
Max. Allowed speed	n_a	rpm	**EG**	12 000	12 000	12 000	12 000	12 000	10 000	7 500	6 000	5 000	4 000	3 000
			CA	6 000	6 000	6 000	6 000	6 000	5 000	3 750	3 000	2 500	2 000	1 500

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BRUSHES

GRADE	CODE	APPLICATION LIMITS	DIMENSIONS	NUMBER
EG - Electrographite	/0002607	600 V	3,1 x 4,1 x 12,5 mm	4
CA - Silver-graphite	/0001397	< 300 V		

PRODUCT DESCRIPTION

RE.0444N B C 1x60 EG IP44 7x30

- Type
- **B** – Flange (B5)
  S – Base (B3)
- **C** - T° compensation (optional)
- **1X** – 1 commutator
  2X – 2 commutators
- **7X30** – Standard shaft
  11X30 – Standard shaft
- **IP44** - Standard
  IP55 - Optional
- **EG** – Electrographite
  CA – Silver-graphite
- Voltage at 1000 rpm

When inquiring, please advise the serial number of the tachogenerator to be replaced.

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