

# RE.0444N - Normal

*Direct Current Tachometer generator*



**Applications :**

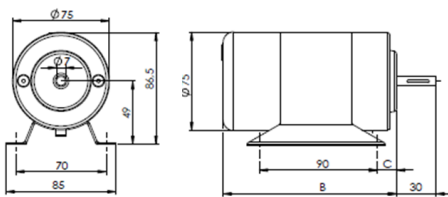
- Industry
- Speed control & regulation

**Descriptions :**

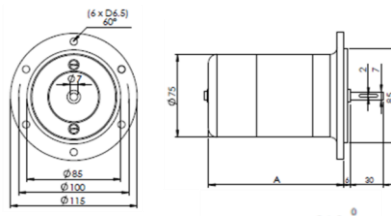
- The most common DC tachometer generator
- Permanent magnet excitation
- Brush-holders under cover
- Cable connection
- Low ripple
- Available with one or two commutator

## DIAGRAMS

**Base mounting – B3**



**Flange mounting – B5**



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

## MAIN CHARACTERISTICS

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## Direct Current Tachometer generator

DESIGNATION	SYMB	VALUE
Max. speed	$n_m$	12 000 rpm
Moment of inertia	J	0,95 Kg cm <sup>2</sup>
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	$\Delta E$	$\leq 0,15 \% E_T$
Overall ripple rate (peak to peak)	$\Delta E_c$	$\leq 0,5 \% E_c$
Rotation harmonics (f=2 p.n)	$\Delta E_p$	$\leq 0,2 \% E_c$
Slots harmonics (f=Z.n.)	$\Delta E_z$	$\leq 0,3 \% E_c$
Calibration precision	$\Delta E_o$	$\pm 1 \% E_{T0}$
E.M.F. temperature drift		
Not compensated	$\Delta E_e$	0,02 %/°C
Compensated	$\Delta E_e$	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 <sub>a</sub> (IEC 68-1)
Ingress protection	IP44 (IEC 34-5)
Direction of rotation	reversible
Excitation Permanent magnets:	Alnico

<b>Weight</b>	<b>1.8 kg</b> (1 commutator)
	<b>2.1 kg</b> (2 commutators)

## RADIO-ENERGIE

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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

Red wire : +  
White wire : -

#### 2 COMMUTATORS

1 <sup>st</sup> comm.	Blue wire: +	2 <sup>nd</sup> comm.	yellow wire: +
	White wire: -		green wire: -

### ELECTRICAL OPTIONS

DESCRIPTION	SYMB	UNIT	VALUES											
			1 com.	6	20	30	40	50	60	80	100	120	150	200
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	$R_a$	$\Omega$	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	<b>EG</b>	12 000	12 000	12 000	12 000	12 000	10 000	7 500	6 000	5 000	4 000	3 000
			<b>CA</b>	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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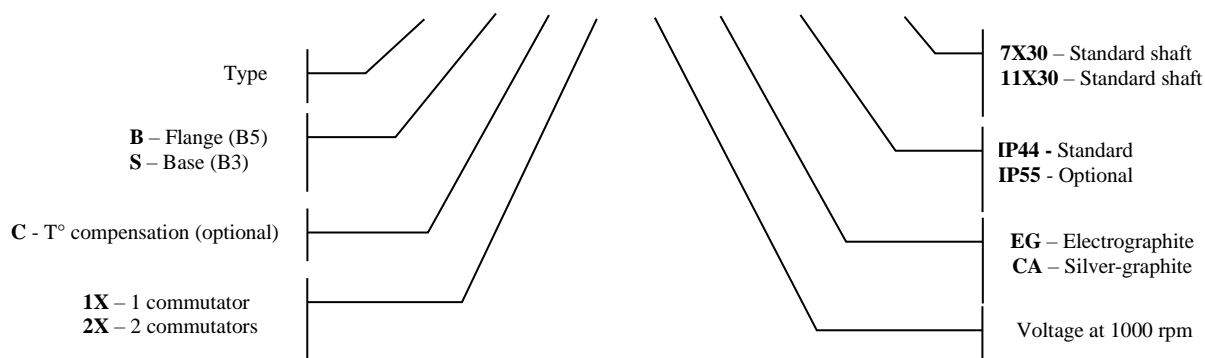
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### BRUSHES

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



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

### RADIO-ENERGIE

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[www.radio-energie.eu](http://www.radio-energie.eu)

Société par Actions Simplifiée au capital de 300 000 Euros immatriculée au RCS de Poitiers sous n° 829 195 668

TVA intracommunautaire : FR94829195668

Code APE 2711Z