

# Tachometer Generator

REO 110 & REO 0122

**RADIO-ENERGIE SAS**

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www.radio-energie.eu - Capital de 300 000 Euros immatriculée au RCS de Poitiers sous n° 829 195 668  
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## RE.0110 RE.0122

### Direct Current Tachometer generator



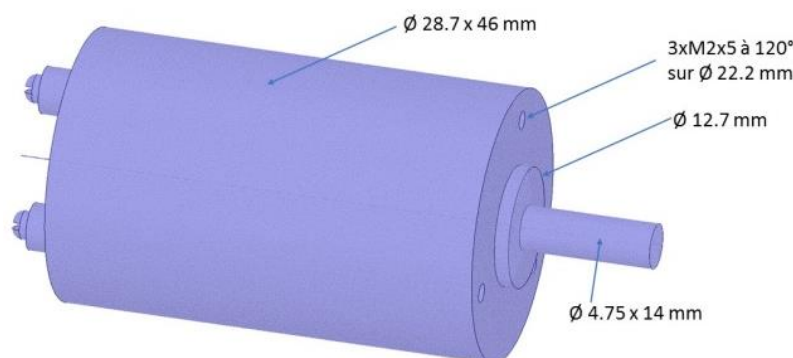
#### Destination :

- General applications
- Small dimensions

#### Description :

- Small size DC tachometer generator
- Permanent magnets
- Armature with frontal commutator
- Connection on two terminals used also as brush-holders
- Flange B 14

### DIAGRAM



### MAIN CHARACTERISTICS

DESIGNATION	SYMB	UNIT	VALUES	
			RE.0110	RE.0122
Max. speed (mechanical)	$n_m$	rpm	12 000	<b>12 000</b>
Moment of inertia	J	Kg cm <sup>3</sup>	0.011	<b>0.024</b>
No load driving torque	$M_r$	N.cm	0.10	<b>0.16</b>
Max. radial shaft stress	F	da N	0.10	<b>0.10</b>
Maximum E.M.F.	$E_m$	V	100	<b>100</b>
Maximum linearity error	$\Delta E$	%E <sub>T</sub>	≤ 0.15	≤ 0.15
Overall ripple rate (peak to peak)	$\Delta E_c$	%E <sub>c</sub>	≤ 3	≤ 3
Rotation harmonics (f=2 p.n)	$\Delta E_p$	%E <sub>c</sub>	≤ 3	≤ 3
Slot harmonics (f=Z.n.)	$\Delta E_z$	%E <sub>c</sub>	≤ 2.7	≤ 2.7
Calibration precision	$\Delta E_o$	%E <sub>T0</sub>	±1	±1
E.M.F. temp. drift	$\Delta E_e$	% / °C	-	-
- Not compensated			0.005	0.005
- Compensated				
Time constant	$C_t$	ms	0.2	0.2
*Filter: Time constant		ms	0.33	0.33
Load current		mA	3	3
Speed		rpm	3 000	3 000

#### CONSTRUCTION DETAILS

Number of poles 2p	2
Number of armature slots	11
Number of collector blades	11
Insulation class	B (IEC34-1)
Operating temperature	-30°C -130°C
Climatic protection	C <sub>a</sub> (IEC68-11)
Protection degree	IP 44 (IEC3A-S)
Direction of rotation:	réversible
Excitation: permanent magnets	Alnico

	RE.0110	RE.0122
Net weight	0.10 kg	0.15 kg



## MECHANICAL OPTIONS

Shaft ends and bearings

	MOUNTING SIDE			OPPOSITE MOUNTING SIDE (on request)		
	D (mm)	L (mm)	Bearings	D (mm)	L (mm)	Bearings
Standard	4.75	14	5 x 13 x 4 ZZ	-	-	3 x 8 x 3 FF
Max	4.75	-	5 x 13 x 4 ZZ	-	-	3 x 8 x 3 FF



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

A1 : +  
A2 : -

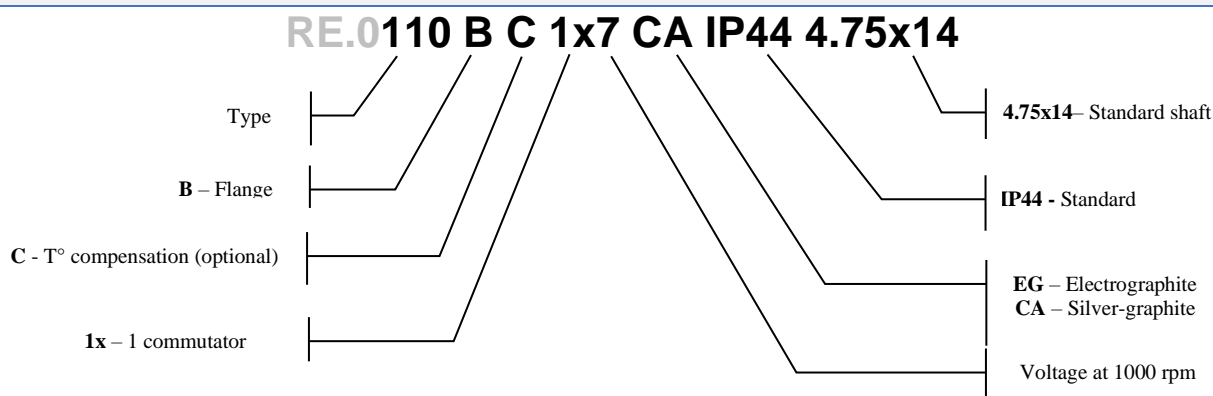
## ELECTRICAL OPTIONS

DESCRIPTION	SYMB	UNIT		VALUES			
				Min.			Max.
E.M.F. at 1 000 rpm	E <sub>n</sub>	V	RE.0110	2	3	5	7
			RE.0122				8 10 15 20
Voltage gradient	C <sub>v</sub>	V/rpm	RE.0110	0.002	0.003	0.005	0.007
			RE.0122				0.008 0.010 0.015 0.020
Armature resistance	R <sub>a</sub>	Ω	RE.0110	50	80	215	460
			RE.0122				185 290 670 900
Max. thermal load	I <sub>th</sub>	A	RE.0110	0.05	0.05	0.03	0.02
			RE.0122				0.04 0.03 0.02 0.02
Max. allowed speed	n <sub>a</sub>	rpm	RE.0110	12 000	12 000	12 000	12 000
			RE.0122				12 000 10 000 6 500 5 000

## BRUSHES


GRADE	CODE	APPLICATION LIMITS	DIMENSIONS	NUMBER
0110 CA - Carbo-argent	0001390	Standard < 100 V	2.5 x 2.5 x 6 mm	2
0122 CA - Carbo-argent	0001390	Standard < 100 V	2.5 x 2.5 x 6 mm	2

## PRODUCT DESCRIPTION



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

## Main Item / Part Number for RE.0110 & 0122

OUR CODE		OUR PRODUCT DESCRIPTION	Types	Mounting Type	Charac. at 1000 rpm	Comp.	Brush	IP	Shaft
<b>RE.0110 STANDARD</b>									
									
		<b>RE.0110 STANDARD 7V + Temp. Compensation</b>	<b>STANDARD</b>						
0000055	RE.0	110 B C1X7 CA IP44 4,75x14	RE.0110 S1	B > Flange	7 V	C	CA	44	4,75x14
<b>RE.0110 SPECIAL</b>									
0006622	RE.0	110 B C1X2 CA IP44 4,75x14	RE.0110 S1	B > Flange	2 V	C	CA	44	4,75x14
0007903	RE.0	110 B C1X3 CA IP44 4,75x14	RE.0110 S1	B > Flange	3 V	C	CA	44	4,75x14
0025090	RE.0	110 B C1X4 CA IP44 4,75x14	RE.0110 S1	B > Flange	4 V	C	CA	44	4,75x14
0005417	RE.0	110 B C1X5 CA IP44 4,75x14	RE.0110 S1	B > Flange	5 V	C	CA	44	4,75x14
<b>RE.0122 STANDARD</b>									
		<b>RE.0122 STANDARD 20V + Temp. Compensation</b>	<b>STANDARD</b>						
0000056	RE.0	122 B C1X20 CA IP44 4,75x14	RE.0122 S1	B > Flange	20 V	C	CA	44	4,75x14
<b>RE.0122 SPECIAL</b>									
		<b>RE.0122 SPECIAL 8-19V + Temp. Compensation</b>	<b>SPECIAL</b>						
On request	RE.0	122 B C1X (from 8 to 19V) CA IP44 4,75X14	RE.0122 S1	B > Flange	8 to 19 V	C	CA	44	4,75x14
0009150	RE.0	122 B C1X8 CA IP44 4,75x14	RE.0122 S1	B > Flange	8 V	C	CA	44	4,75x14
0006514	RE.0	122 B C1X10 CA IP44 4,75x14	RE.0122 S1	B > Flange	10 V	C	CA	44	4,75x14
0007261	RE.0	122 B C1X15 CA IP44 4,75x14	RE.0122 S1	B > Flange	15 V	C	CA	44	4,75x14