

TYPE

# RDC 210



## DESTINATION

- Industrial applications
- Machine tools
- Robots

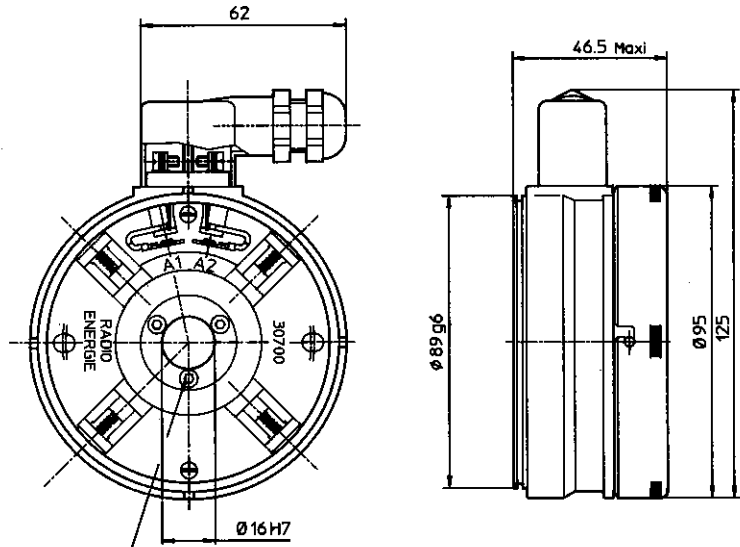
## DISCRIPTION

- Hollow shaft tachometer generator: rotor / stator set
- Permanent magnet excitation
- Collector on opposite of mounting side
- Several mechanical options (IP 00 – IP 68)
- Small version
- **SILVER COLLECTOR**

## RDC 210 ME/MF



Weight	kg	0,5
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Armature fixing: 3 screws of type CHc M3

Recommended torque: 140 N.cm

## GENERAL DATA

Designation	Symbol	Unit	Value
Maximum speed (mechanical)	$n_m$	rpm	6000
Moment of inertia	J	Kg cm <sup>2</sup>	0,7
No load driving torque	$M_r$	N. cm	≤ 0,5
Maximum E.M.F.	$E_m$	V	120
Maximum linearity error	$\Delta E$	% $E_T$	≤ 0,15
Overall ripple rate (peak to peak)	$\Delta E_c$	% $E_c$	≤ 0,5
Rotation harmonics (f = 2 p. n.)	$\Delta E_p$	% $E_c$	≤ 0,05
Slot harmonics (f = Z. n.)	$\Delta E_z$	% $E_c$	≤ 0,45
Calibration precision	$\Delta E_o$	% $E_{T0}$	± 2,0
E.M.F. temperature drift - not compensated - compensated	$\Delta E_e$	% /°C	0,03
Time constant	$C_t$	Ms	0,45
*Filter: Time constant	RF x CF	Ms	0,1
Load current	$I_c$	mA	3
Speed	n	rpm	3000

## Construction Details

Number of poles	4
Number of armature slots	33
Number of collector blades	33
Insulation class	B (IEC 34-1)
Operating temperature	-20° - 80 °C
Climatic protection	C <sub>a</sub> (IEC 68-1)
Protection degree	IP00 (IEC 34-5) IP68 (DIN 40050)**
Direction of rotation	Reversible
Excitation	Permanent magnets SmCo

\* Filter-connection diagram see following pages

\*\* The protection degree refers to a mounted machine

Rev.: 02

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

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**Mechanical options**

Armature bore Ø d (mm)			Motor centring end frame Ø D (mm)			Armature clamping device
Standard	Max.	Min.	Standard			
16 <sup>H7</sup>	16	8	89			Key or expanding device

**Options**

- For incorporation purpose: IP 00
- Closed version: IP 44
- Watertight version: IP 68
- Conic bore

**Available options****Markings and Polarity of Terminals (cables) for counter clockwise rotation viewing the mounting face**

1 collector	2 collector
A1: + - A2: -	

**Electrical options**

			Min.				Max.						
E.M.F. at 1000 rpm.	E <sub>n</sub>	V	5	7	10	14	20						
Voltage gradient	C <sub>v</sub>	V/rpm	0,005	0,007	0,010	0,014	0,02						
Armature resistance	R <sub>a</sub>	Ω	5	11	22	45	80						
Max. thermal load	I <sub>th</sub>	A	280	190	136	92	74						
Max. allowed speed	n <sub>a</sub>	rpm	6000	6000	6000	6000	6000						

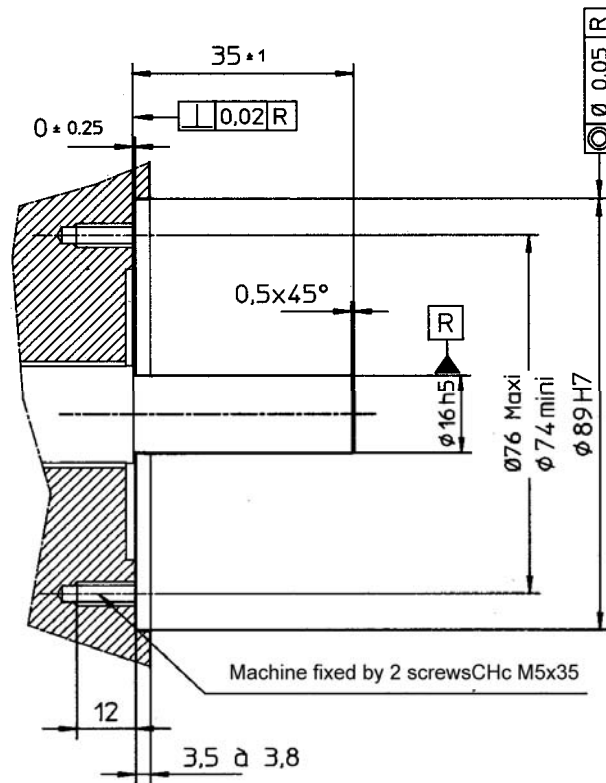
**Brushes**

Number	Size	Quality	Application limits	Reference
4	4 x 6 x 13	Electro-graphite (EG)	Special applications, on request	
		Silver-graphite (CA)	STANDARD for normal use at E.M.F. < 300 V	60 - 40 - CA

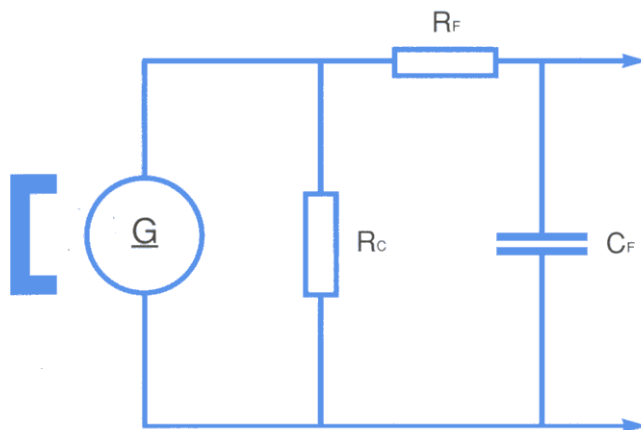
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# MOUNTING INSTRUCTION



## Filter Scheme



$R_C$ : Load resistance  
 $R_F$ : Filter resistance  
 $C_F$ : Filter capacity