

TYPE

# ATEX SENSOR



## DESTINATION

- Potentially explosive atmospheres (Gas and dust)
- Speed control and regulation

## DESCRIPTION

- New mechanical design with terminal box
- tachogenerator and/or optical encoder are easily integrated for heavy duty or standard industrial applications
- with flange or feet

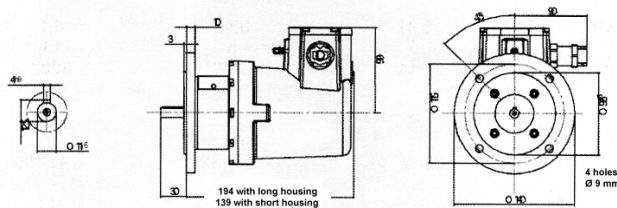


## Radio Energie Rotating Sensors A T E X II 2 G und D, EEx DII C – T5

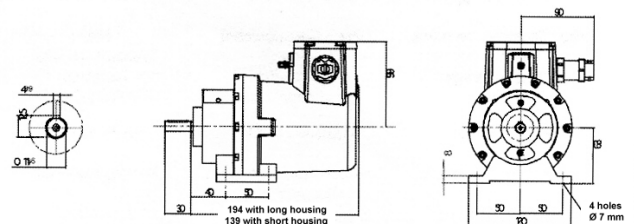
in conformity:

- with the decree n° 96-1010 of November 19, 1996 (modified by decree 2002-695 of April 30, 2002) bearing transposition of directive CE n°94/9 of March 23, 1994 with regard to the technical rules and the procedures of certification of conformity which are applicable for it,
- with the directive: 94/9/CE: Marking CE
- with the harmonized European standards:
- EN 50014: electric material for explosive atmospheres: general rules
- EN 50018: electric material for explosive atmospheres: "flameproof enclosure d"
- with the type subject of CE certificate of examination of type n°: **INERIS03ATEX0052X**

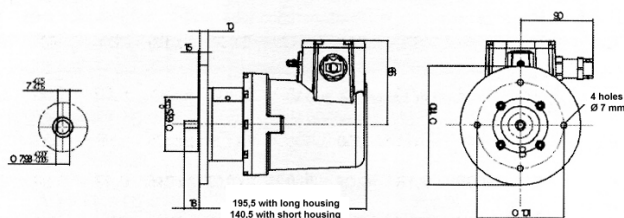
Version with flange RE.0444 ADF



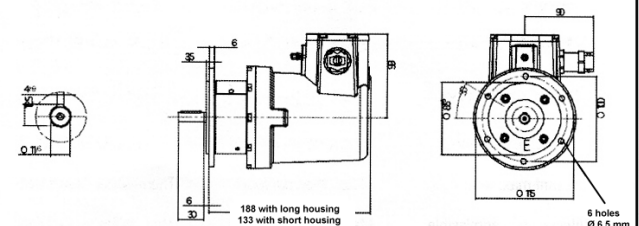
Version with foot RE.0444 ADF



Version with flange RE.0444 US



Version with flange RE.0444 std



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## Options

1. Short housing: Type RDC 215 ADF
2. Long housing: Type RE.0444 R1 ADF  
Type RE.0444 R2 ADF

Both housings can be used to integrate also encoders and centrifugal switches. It is possible to create combinations of encoders, tachogenerators and / or centrifugal switches,

## GENERAL DATA

Designation	Symbol	Unit	Value for Type								
			RE.0444 R1 ADF			RE.0444 R2 ADF			RDC2015 ADF		
Max. speed (mechanical)	$n_m$	rpm.	12000			12000			7500		
Moment of inertia	J	kg cm <sup>2</sup>	0,950			0,950			1,8		
No load driving torque	Mr	N. cm	1,5			1,5			0,5		
Max. radial shaft stress	F	da N	1,0			1,0			1,0		
Maximum E.M.F.	$E_m$	V	600			600			300		
Max. linearity error	$\Delta E$	% $E_T$	$\leq 0,15$			$\leq 0,15$			$\leq 0,15$		
Overall ripple rate (peak to peak)	$\Delta E_C$	% $E_C$	$\leq 0,5$			$\leq 0,5$			$\leq 0,5$		
Calibration precision	$\Delta E_O$	% $E_{T0}$	$\pm 1,0$			$\pm 1,0$			$\pm 2,0$		
E.M.F. temperature drift - not compensated - compensated	$\Delta E_e$	% /°C	0,02 0,005			0,02 0,005			0,03 -		
Time constant	Ct	ms	2,5			2,5			0,6		
*Filter: Time constant Load current Speed	RF x CF Ic n	ms mA rpm.	0,47 5 3000			0,47 5 3000			0,1 1,5 3000		
Insulation class		IEC 34-1	B			B			B		
Operating temperature		°C	-30 / + 130			-30 / + 130			-20 / + 80		
Climatic protection		IEC 68-1	C <sub>a</sub>			C <sub>a</sub>			C <sub>a</sub>		
Protection degree		IEC 34-5	IP 56			IP 56			IP 56		
Direction of rotation			reversible								
Excitation: Permanent magnets			Alnico			Alnico			SmCo		
E.M.F. at 1000 rpm.	$E_n$	V	20	60	200	2 x 20	2 x 60	2 X 100	20	40	60
Voltage gradient	$C_v$	V/rpm.	0,02	0,060	0,2	2 X 0,02	2 X 0,06	2 X 0,1	0,02	0,04	0,06
Armature resistance	$R_a$	$\Omega$	12	100	900	2 X 24	2 X 200	2 X 470	24	62	130
Max. thermal load	$I_{th}$	A	0,05	0,18	0,07	2 X 0,23	2 X 0,09	2 X 0,05	0,17	0,08	0,06
Max. allowed speed	$n_a$	rpm.	12000	10000	3000	12000	10000	6000	7500	7500	5000

Rev.: 01

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



(2) **Equipment and protective systems intended for use in potentially explosive atmospheres  
Directive 94/9/EC**

(1) **EC-TYPE EXAMINATION CERTIFICATE**

(3) Number of the EC type examination certificate: **INERIS 03ATEX0052X**

(4) Equipment or protective system:

**ROTATING SENSORS TYPES RT or RYO or RCI or RCA or RAC  
or REO or RDC or RCC or RCO ... ..**

(The dots are replaced by numbers corresponding to the different production versions.)

(5) Manufacturer: **PRECILEC RADIO ENERGIE**

(6) Address: 41, 47 rue Guynemer  
BP 239  
F- 89002 AUXERRE CEDEX

(7) This equipment or protective system and any other acceptable alternative of this one are described in the appendix of this certificate and the descriptive documents quoted in this appendix.

(8) The INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23<sup>rd</sup> March 1994, certifies that this equipment or protective system fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, described in appendix II of the Directive.

The examinations and the tests are consigned in official report No P45661/03

(9) The respect of the Essential Health and Safety Requirements is ensured by:

- conformity with:

EN 50 014	of June	1997 + A1 and A2
EN 50 018	of November	2000 + A1
EN 50 281-1-1	of June	1998 + A1

- specific solutions adopted by the manufacturer to meet the Essential Health and Safety Requirements described in the descriptive documents.

(10) Sign X, when it is placed following the Number of the EC type examination certificate, indicates that this equipment and protective system is subjected to the special conditions for safe use, mentioned in the annex of this certificate.

- (11) This EC type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system, these are not covered by this certificate.
- (12) The marking of the equipment or the protective system will have to contain:



II 2 GD or II 2G

EEx d IIC T5 IP66 T100°C

Verneuil-en-Halatte, on 2003 12 01

X. LEFEBVRE

Engineer at the Laboratory for Certification  
of ATEX Equipment

Director of the Certifying Body,  
By delegation  
B. PIQUETTE  
Deputy manager of Certification

