

Caliber 4002.B – 12½"



Product Specifications

Analog quartz movement

Line xtratech

Caliber 4002.B

Size 12½"

Version Swiss Made 5 Jewels / gold plated

Standard battery life 60 months

Standard hand fitting height 0

Features

- Very long battery life
- Repairable metal watch movement
- Power saving mechanism with pulled out stem:
Reduction of consumption approximately 70%
- Big date with quick change

Functions

- Multifunction
- Big date
- 2 hands

Quartz Movements

Multifunctions

RONDA xtratech

Caliber 4002.B – 12½"

Technical Specifications

Diameter Total	28.60 mm
Case fitting	28.00 mm
Movement height	4.40 mm
Height over standard battery	4.40 mm
Movement rest	0.60 mm
Height over stem	1.90 mm
Length of stem travel	0.90 mm
Stem thread	0.90 mm
Useful torque minute – typical	300 µNm
Operating temperature	0 - 50 °C
Instantaneous rate	-10/ +20 sec/month
Resistance to magnetic fields	18.8 Oe
Resistance against shock	NIHS 91-10



Battery Specifications

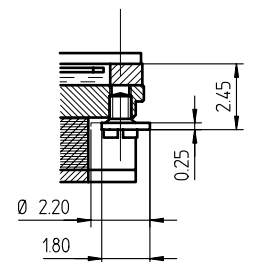
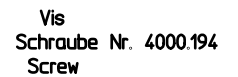
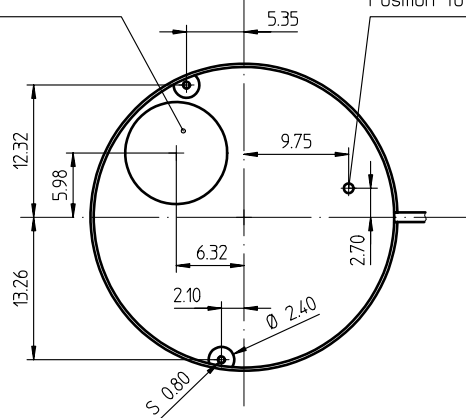
Standard battery	No. 395
Standard battery life	60 months
Battery voltage	1.5 V
Current consumption – typical	1.19 µA (Date Mechanism not in Gear)
Current consumption – maximum	1.65 µA (Date Mechanism not in Gear)

Important: l'aiguillage peut varier selon le modèle
Wichtig: die Zeigerwerkhöhe kann bei verschiedenen Modellen unterschiedlich sein
Important: the hand height can vary between different models

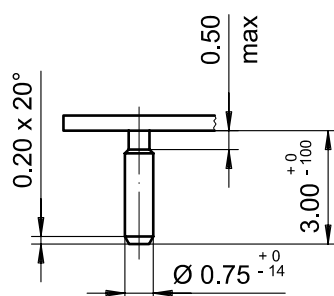
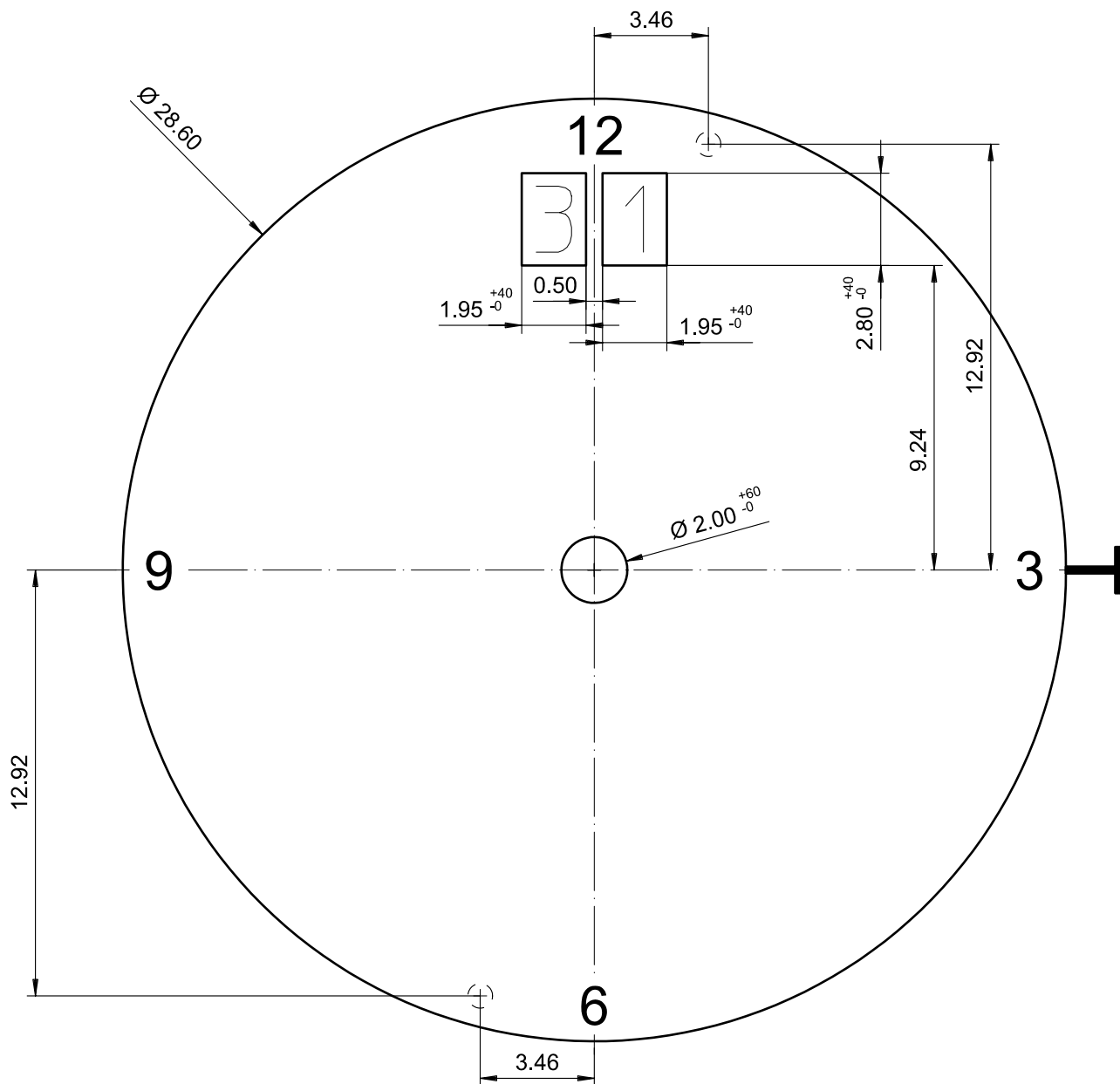
Le cadran doit être tenu par la boîte
Das Zifferblatt muss durch die Schale gehalten werden
The dial must be hold by the case



Position pour extraire la tige
Position zum Entfernen der Stellwelle
Position to remove the stem



Cage Uhrwerkgestell Frame		Issued		01 Nov 2004	mk
		Modified		20.Juni 2007 ÅA 2180	mk
		Released		YES	
		Tolerance		+/- 20 µm	
		Scale		10 : 1 (5 : 1) (A3H)	
RONDA	4002.B	Sous réserve de modifications Aenderungen vorbehalten Modifications reserved			
		No.	5000.346	01	



Epaisseur du cadran selon hauteur de l'aiguillage
Zifferblattdicke gemäss Zeigerwerkhöhen
Dial thickness according to hand fitting heights

Tige	Date
Stellw.	Datum
Stem	Date
3H	12H

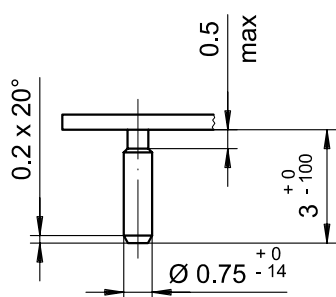
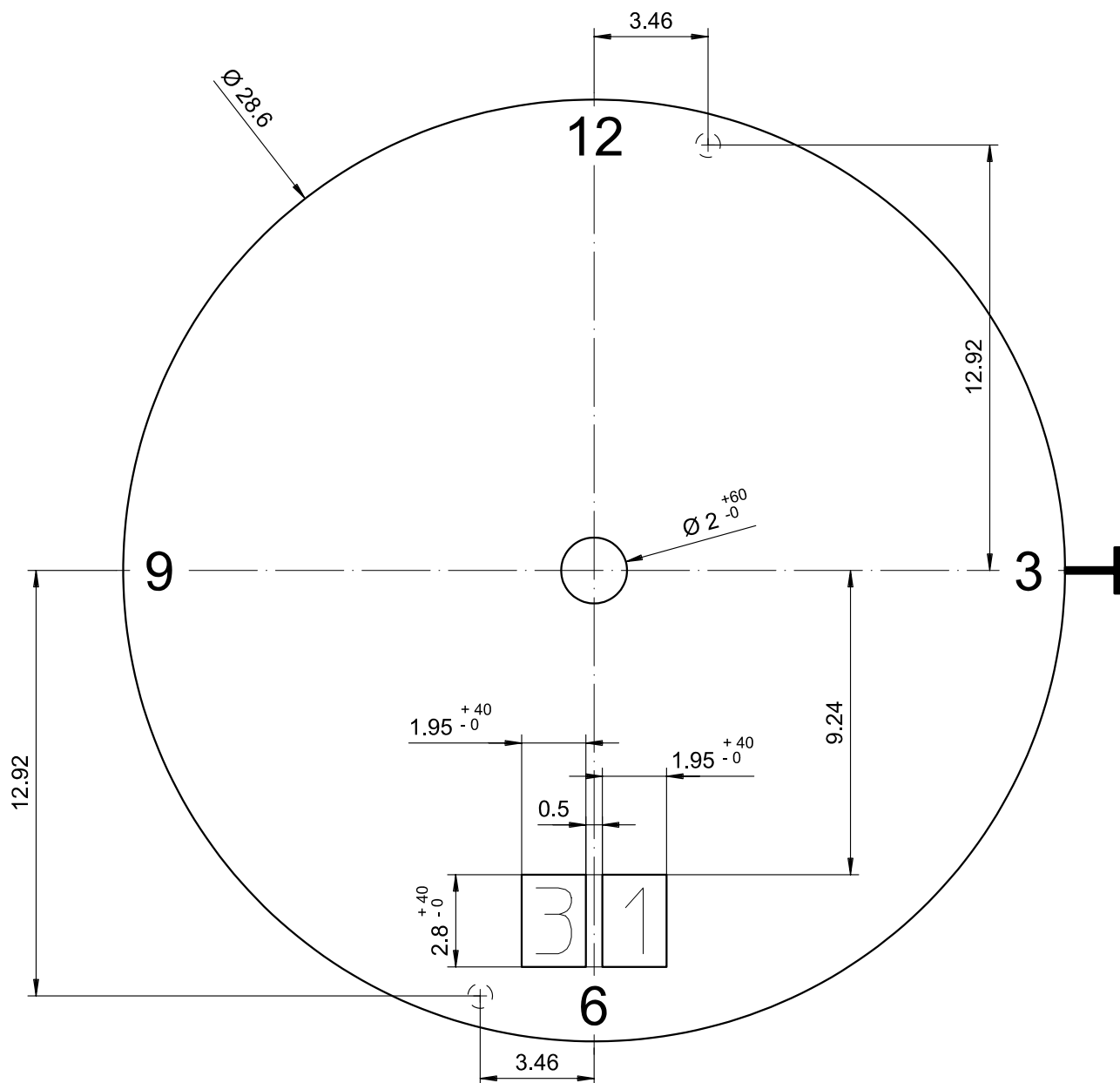
Cadran
Zifferblatt
Dial

12 1/2"

Issued	13 Dez 2006	cw
Modified	15.Dez.2006 ÄA ----	cm
Released	YES	
Tolerance	+/- 20 µm	
Scale	5 : 1 (A4V)	
Sous réserve de modifications Äenderungen vorbehalten Modifications reserved		
No.	5010.701	01

RONDA

4002.B, 4003.B

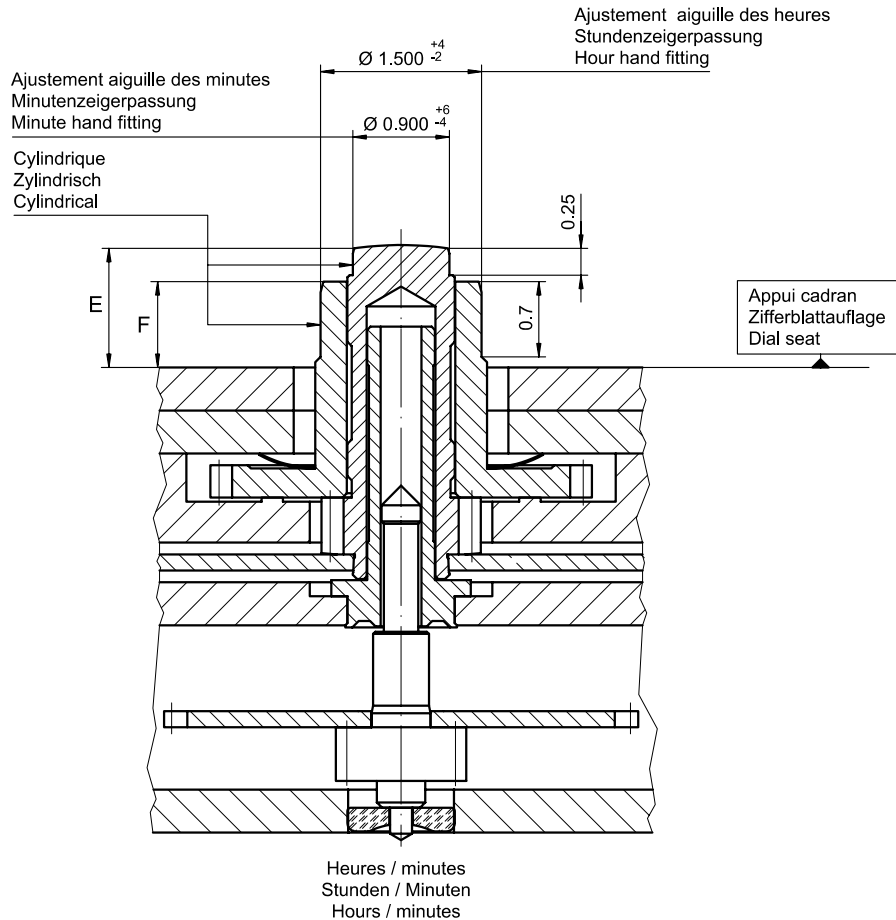


Epaisseur du cadran selon hauteur de l'aiguillage
 Zifferblattdicke gemäss Zeigerwerkhöhen
 Dial thickness according to hand fitting heights

Tige	Date
Stellw.	Datum
Stem	Date
3H	6H
<input type="checkbox"/>	

Cadran Zifferblatt Dial		12½"		Issued	13 Dez 2006	cw
				Modified	15.Dez.2006 ÄÄ ----	cm
				Released	YES	
				Tolerance	+/- 20 µm	
				Scale	5 : 1 (A4V)	
RONDA	4002.B, 4003.B	Sous réserve de modifications Aenderungen vorbehalten Modifications reserved				
		No.	5010.702	01		

12½"



	Aig. des minutes Minutenzeiger Minute hand	Aig. des heures Stundenzeiger Hour hand	Lors de la pose d'aiguilles, le mouvement doit être soutenu. Beim Zeigersetzen muss das Werk abgestützt werden. The movement needs to be supported for hand setting.
mg max.	30	30	Masse / Masse / Weight *
µNm max.	0.80	0.80	Balourd / Unwucht / Unbalance *
gmm ² max.	-	-	Inertie / Massenträgheit / Inertia *
N max.	40	40	Force de chassage / Aufpresskraft / Force

Aiguillages Zeigerwerkhöhe Hand fitting height		
Dépassement Höhe über Zifferblattauflege Height over dial seat		
	Chaussée Minutenrohr Cannon-pinion	Roue des heures Stundenrad Hour wheel
No	E	F
0	1.10	0.80
-		

Aiguillages Zeigerwerkhöhe Hand fitting height			
Peinture comprise / inkl. Farbe / Paint included			
Epaisseur maximum du cadran Maximale Zifferblattstärke Maximum dial thickness			Epaisseur des aiguilles Zeigerdicke Hands thickness
Sous l'aiguille des minutes Unter Minutenzeiger Under minute hand	Sous l'aiguille des heures Unter Stundenzeiger Under hour hand		
No			
0	0.70	0.40	0.15
-			

Sous réserve de toutes modifications

Aenderungen vorbehalten

All modifications reserved

Aiguillages Zeigerwerkhöhen Hand fitting heights		12½"	
		Issued	01 Nov 2004 mk
		Modified	02.08.2010 ÅA 2120 dh
		Released	Yes
		Tolerance	µm
		Scale	20 : 1 (A3H)
RONDA	4002.B	Sous réserve de modifications Aenderungen vorbehalten Modifications reserved	
		No.	3316.091 01



Tige de travail (intégrée dans le mouvement)
Arbeitsstellwelle (im Werk eingebaut)
Working stem (implemented in the movement)

No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.177.CO	20.00	10.23	24.23	10.15	0.90	1.10



Couleur de la couronne Kronenfarbe Crown color	bleu foncé dunkelblau dark blue
Code	UN 5002

Tige (normale) / Stellwelle (normal) / Stem (normal)

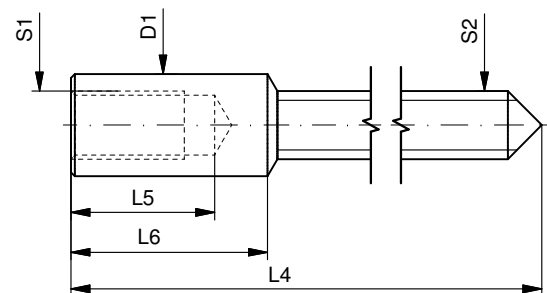
No. d'article Artikelnummer Part number	L	L1	L2	L3	S	D
3000.177	20.00	10.23	24.23	10.15	0.90	1.10
3000.191	32.00	22.23	36.23	22.15	0.90	1.10



Couronne vissée Geschraubte Krone Screwed crown	
Force ⇄ min. Kraft ⇄ min. Force ⇄ min.	10 N
Force ⇄ max. Kraft ⇄ max. Force ⇄ max.	15 N

Rallonge de tige / Stellwelle Verlängerung / Stem extension

No. d'article Artikelnummer Part number	L4	L5 (min)	L6	S1	S2	D1
3000.040	12.00	1.90	2.60	0.90	0.90	1.35



Tige (dimensions / forces)
Stellwelle (Dimensionen / Kräfte)
Stem (dimensions / forces)

RONDA

4002.B, 4003.B, 4120.B,
4210.B, 4220.B

Issued	05 Sep 2012	ds5222
Modified	17 Mär 2017 ÄA 34582	mg5224
Released	YES	
Tolerance	---	
Scale	10:1 (A3)	
Sous réserve de modifications Änderungen vorbehalten Modifications reserved		
No.	5030.018	02



Movement holder
Removing setting stem
H5XXX.1T



Movement holder
Setting hands
H5XXX.1A

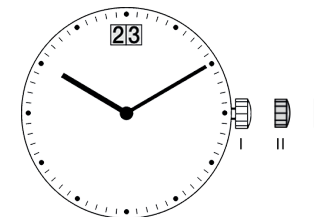
Fitting dial and hands

- Crown in position II
- Wind crown until date 02 appears
- Crown in position III
- Wind hour hand forwards until date changes to 03
- Remove working hand
- Fit dial
- Point all hands towards 12 o'clock
- Set time
- Crown in position II
- Set date
- Crown in position I

Date switching duration:

First and tenth digit discs

~2hrs



General Instructions

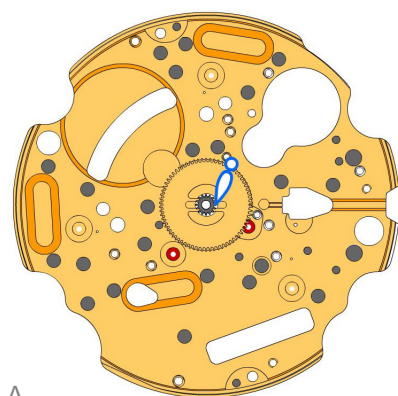
Removing the setting stem can only be effected in Pos. I.

The use of supporting screws is essential when mounting the hands.

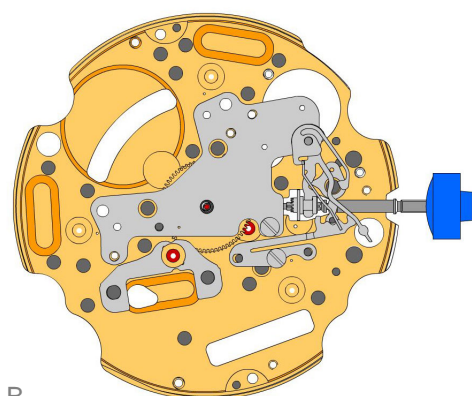
Permitted hand setting strengths:

Hr / min. hands: <40N

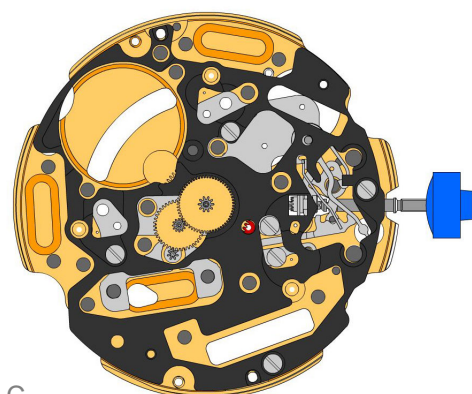
During quick date correction (setting stem in position II), a date switching speed of 5 d/s must not be exceeded.



A



B



C

2000.577.G

1.



Main plate

3305.315.CO

2.



Cannon pinion with driver (Aig.0, closed)

2030.017.CO

3.



Centre bridge

Centre bridge held by 1 screw 4000.250. Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together.

4000.250

4.



Screw

3001.055.FI

5.



Sliding pinion

3000.177.CO

6.



Setting stem

3017.049

7.



Setting lever

3905.049

8.



Setting lever jumper (3 positions)

Setting lever jumper held by 1 screw 4000.250.

4000.250

9.



Screw

3015.081

10.



Yoke (3 positions)

Parts 3015.081 and 3905.067 must be exchanged together.

3905.067

11.



Yoke spring

Tensioning the spring arm. Parts 3015.081 and 3905.067 must be exchanged together.

3622.039

12.



Stator (counter 6h, 9h, chrono)

3603.079

13.



Plastic bracket

Plastic bracket held by 4 screws 4000.250.

4000.250

14.



Screw

3715.094.RK

15.



Rotor

3147.047.CO

16.



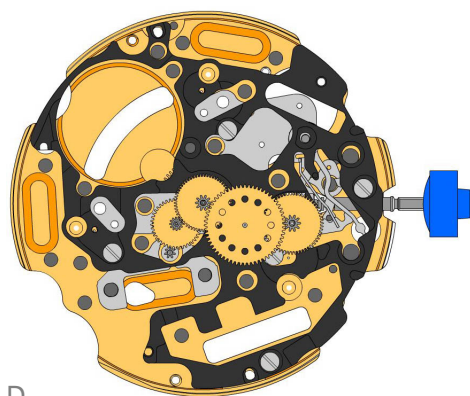
Intermediate wheel (chrono)

3136.170.CO

17.




Center second wheel (short)



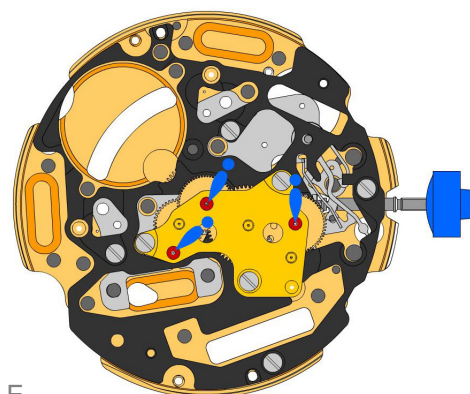
D

3136.148.CO
18.  Second wheel (short)


3122.056.CO
19.  Third wheel

2020.164.G
20.  Train wheel bridge
Train wheel bridge held by 3 screws 4000.250.

4000.250
21.  Screw



E

3621.079.RK
22.  Coil (center)
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

4000.250
23.  Screw

3603.034
24.  Battery insulator

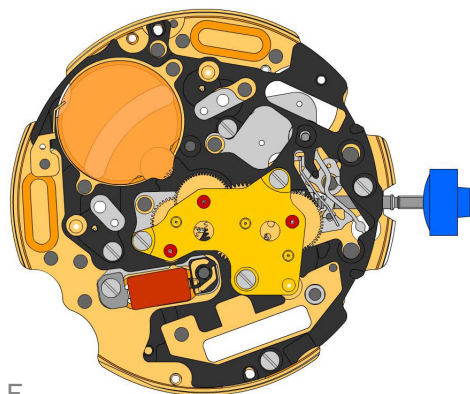
3503.071
25.  Tube

3601.118
26.  Contact strip
Contact strip held by 1 screw 4000.250.

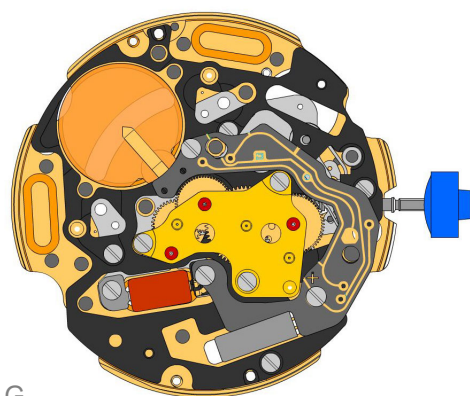
4000.250
27.  Screw

3503.059
28.  Tube

3503.068
29.  Tube



F



G

3612.147.4003
30.



Electronic module
Electronic module held by 1 screw 4000.248. Electronic measurements may be realised now.

4000.248
31.



Screw

3603.069
32.

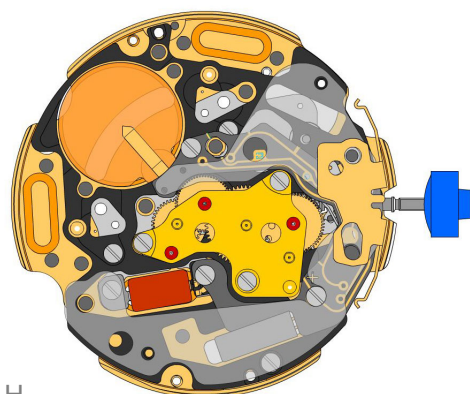


Circuit insulator

3601.107.G
33.



Pusher contact spring



H

2130.176.G.M01.4002B
34.



Electronic module cover
Electronic module cover held by 3 screws 4000.250.

3600.010.HGF
35.



Battery 395

3601.109.G
36.

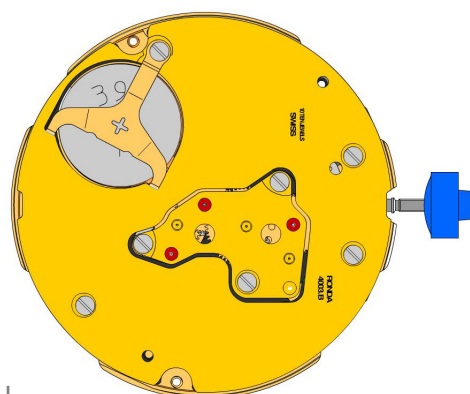


Bridge +
Bridge held by 1 screw 4000.250.

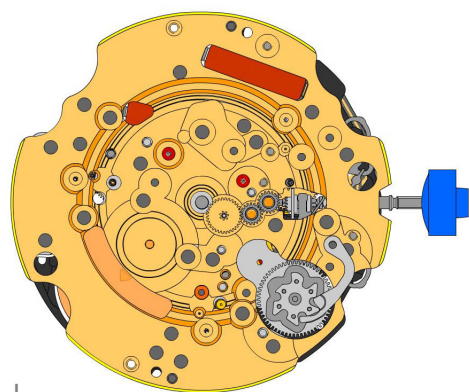
4000.250
37.



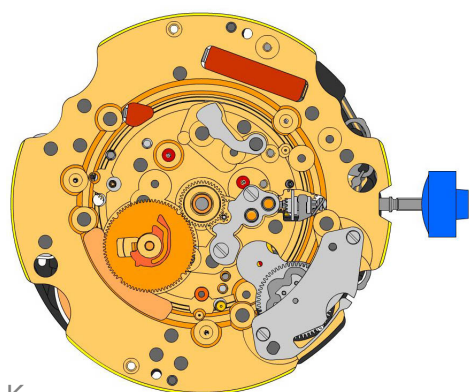
Screw

















I

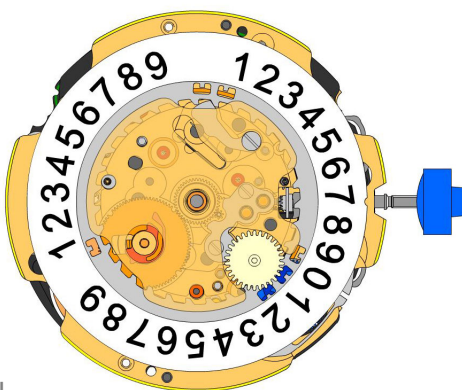


J

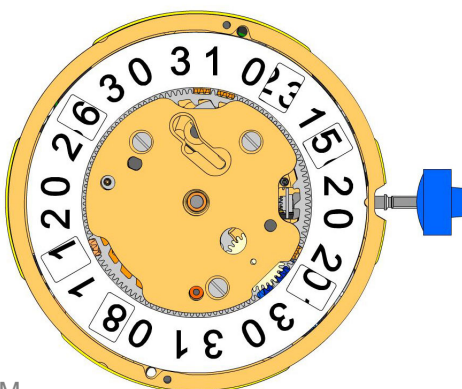


K

2000.577.G 38.		Main plate
3004.164 39.		Setting wheel
3004.164 40.		Setting wheel
3007.054.CO 41.		Minute wheel
2130.143 42.		Minute train bridge Minute train bridge held by 2 screws 4000.250.
4000.305 43.		Screw
3004.223 44.		Tens indicator driving wheel Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together. The short tooth of the tens indicator driving wheel must point to the center of the movement.
3500.059 45.		Tens jumper Parts 2030.017.CO, 3004.223 and 3500.059 must be exchanged together.
2130.142 46.		Tens jumper maintaining plate Tens jumper maintaining plate held by 2 screws 4000.332. Tensioning the spring arm.
4010.306 47.		Screw
3301.285 48.		Hour wheel (Aig.0)
3315.016 49.		Friction spring
3004.224.CO 50.		Date indicator driving wheel
3500.049 51.		Date jumper



L



M

3504.214.AD.1.A
52. Units indicator (standard)
Nick of the indicator at 3 o'clock.



3147.054
53. Tens intermediate wheel



2130.141
54. Date indicator maintaining plate
Date indicator maintaining plate held by 1 screw 4000.250.



3905.070
55. Date jumper spring
Insert the date jumper spring in the provided opening.



3504.215.AD.1.A
56. Tens indicator (standard)
Nick of the indicator at 3 o'clock.



2130.140.G
57. Date mechanism maintaining plate
Date mechanism maintaining plate held by 2 screws 4000.250.



4000.250
58. Screw



3506.072.G
59. Dial support



8200
60. Moebius 8200



9014
61. Moebius 9014



124
62. Jismaa 124

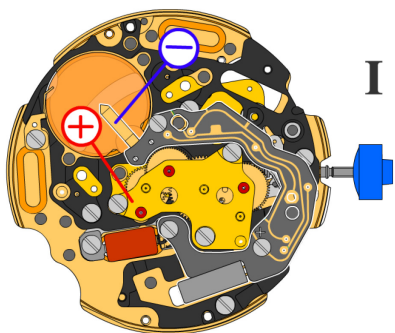


9020
63. Moebius 9020



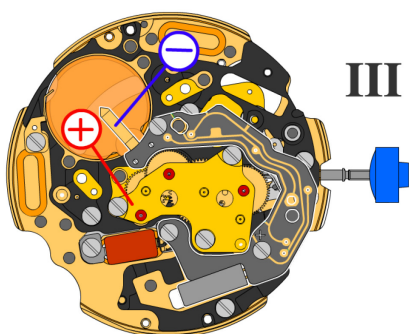


Battery	395
Voltage	1.55 V



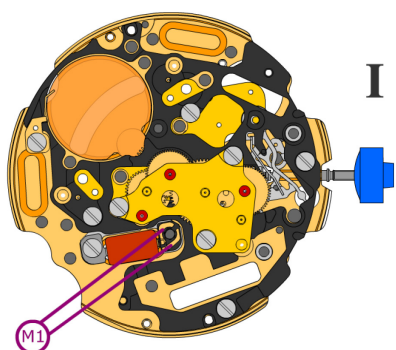
*Setting stem in position I, calendar not in gear,
60 s measuring interval for rate and consumption:*

Typical consumption	1.19 μA
Maximal consumption	1.65 μA
Rate	-10s/M. .. +20s/M.
Lower working voltage limit	1.20 V

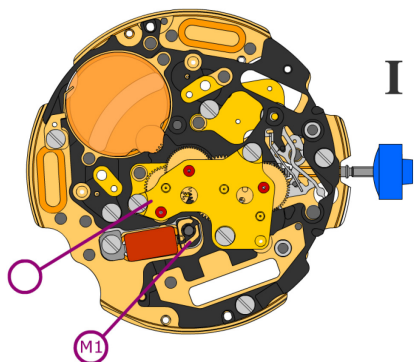


Setting stem in position III, 60 s measuring interval:

Typical consumption	0.10 μA
Maximal consumption	0.30 μA

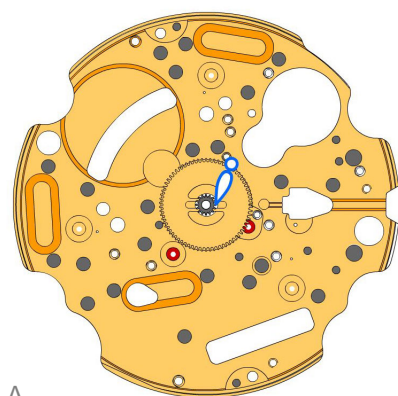


Coil resistance M1

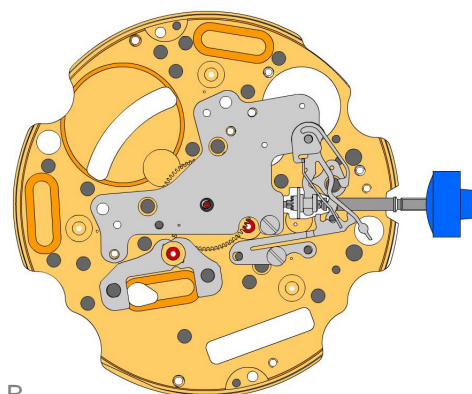
2.20 k Ω .. 2.40 k Ω


Coil isolation M1

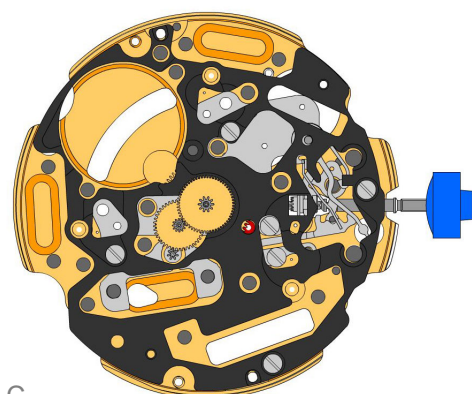
 ∞ k Ω



A



B



C

2000.577.G

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Main plate

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2.



Cannon pinion with driver (Aig.0, closed)

2030.037.CO

3.



Centre bridge

Centre bridge held by 1 screw 4000.250.

4000.250

4.



Screw

3001.055.FI

5.



Sliding pinion

3000.177.CO

6.



Setting stem

3017.049

7.



Setting lever

3905.049

8.



Setting lever jumper (3 positions)

Setting lever jumper held by 1 screw 4000.250.

4000.250

9.



Screw

3015.081

10.



Yoke (3 positions)

3905.067

11.



Yoke spring

Tensioning the spring arm.

3622.039

12.



Stator (counter 6h, 9h, chrono)

3603.079

13.



Plastic bracket

Plastic bracket held by 4 screws 4000.250.

4000.250

14.



Screw

3715.094.RK

15.



Rotor

3147.047.CO

16.



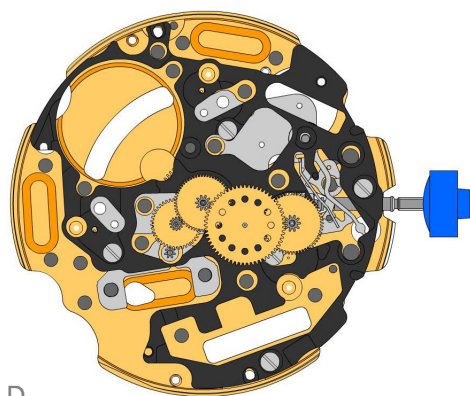
Intermediate wheel (chrono)

3136.170.CO

17.




Center second wheel (short)



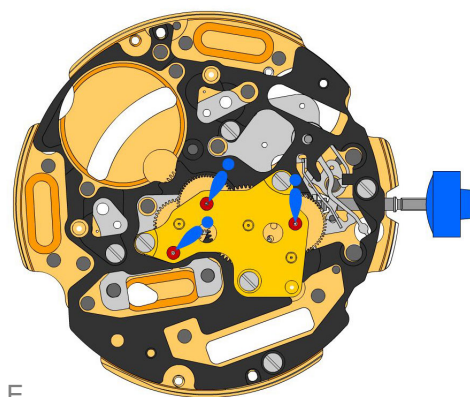
D

3136.148.CO
18.  Second wheel (short)


3122.056.CO
19.  Third wheel

2020.164.G
20.  Train wheel bridge
Train wheel bridge held by 3 screws 4000.250.

4000.250
21.  Screw



E

3621.079.RK
22.  Coil (center)
Attention: Please hold the coil only on the grey coil core. Coil held by 1 screw 4000.250.

4000.250
23.  Screw

3603.034
24.  Battery insulator

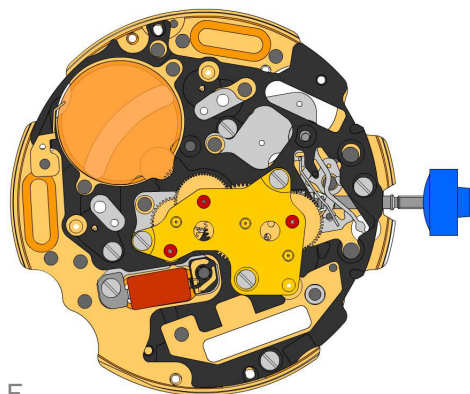
3503.071
25.  Tube

3601.118
26.  Contact strip
Contact strip held by 1 screw 4000.250.

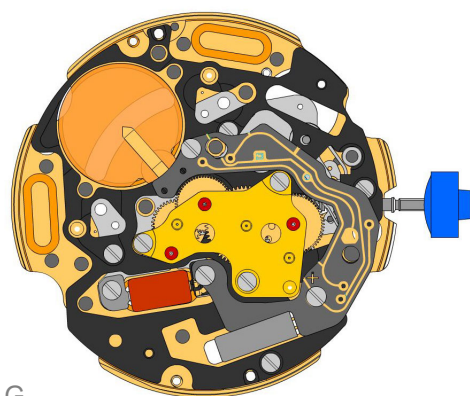
4000.250
27.  Screw

3503.059
28.  Tube

3503.068
29.  Tube



F



G

3612.147.4003
30.



Electronic module
Electronic module held by 1 screw 4000.248. Electronic measurements may be realised now.

4000.248
31.



Screw

3603.069
32.

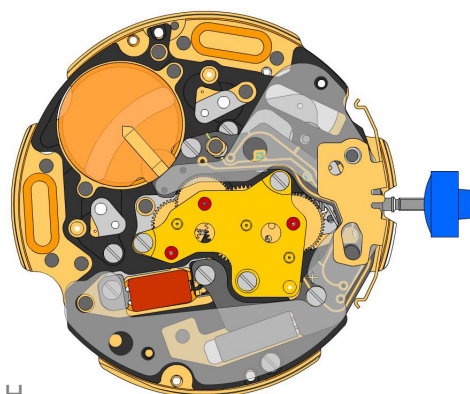


Circuit insulator

3601.107.G
33.



Pusher contact spring



H

2130.176.G.M01.4002B
34.



Electronic module cover
Electronic module cover held by 3 screws 4000.250.

3600.010.HGF
35.



Battery 395

3601.109.G
36.

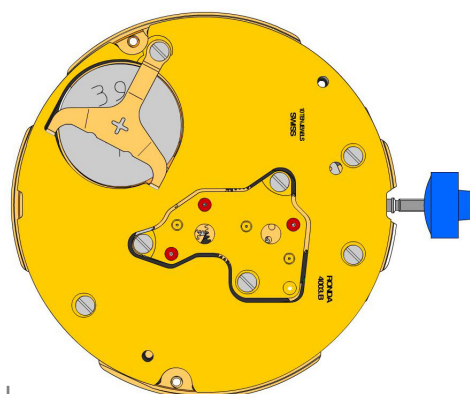


Bridge +
Bridge held by 1 screw 4000.250.

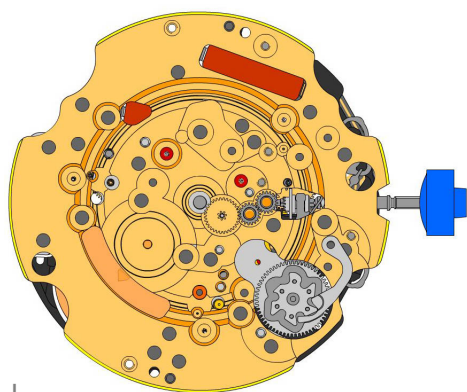
4000.250
37.



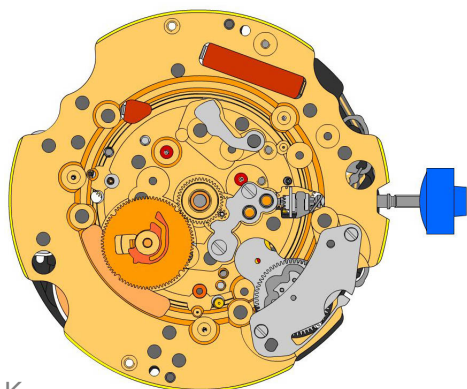
Screw

















I

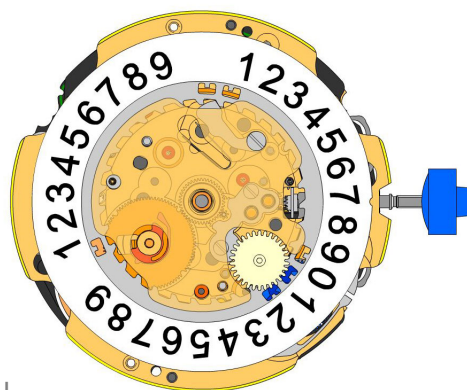


J

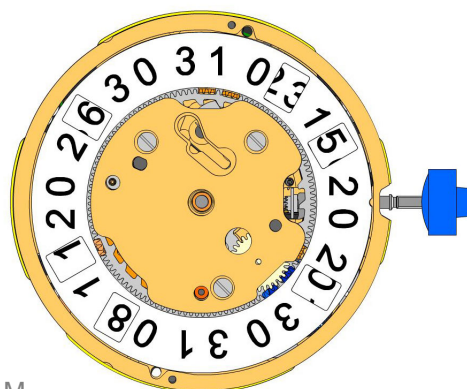


K

2000.577.G 38.		Main plate
3004.164 39.		Setting wheel
3004.164 40.		Setting wheel
3007.054.CO 41.		Minute wheel
2130.143 42.		Minute train bridge Minute train bridge held by 2 screws 4000.250.
4000.305 43.		Screw
3004.227 44.		Tens indicator driving wheel The short tooth of the tens indicator driving wheel must point to the center of the movement.
3500.075 45.		Tens jumper
2130.142 46.		Tens jumper maintaining plate Tens jumper maintaining plate held by 2 screws 4000.332. Tensioning the spring arm.
4010.306 47.		Screw
3301.285 48.		Hour wheel (Aig.0)
3315.016 49.		Friction spring
3004.224.CO 50.		Date indicator driving wheel
3500.049 51.		Date jumper



L



M

3504.214.AD.1.A
52. Units indicator (standard)
Nick of the indicator at 3 o'clock.



3147.054
53. Tens intermediate wheel



2130.141
54. Date indicator maintaining plate
Date indicator maintaining plate held by 1 screw 4000.250.



3905.070
55. Date jumper spring
Insert the date jumper spring in the provided opening.



3504.215.AD.1.A
56. Tens indicator (standard)
Nick of the indicator at 3 o'clock.



2130.140.G
57. Date mechanism maintaining plate
Date mechanism maintaining plate held by 2 screws 4000.250.



4000.250
58. Screw



3506.072.G
59. Dial support



8200
60. Moebius 8200



9014
61. Moebius 9014



124
62. Jismaa 124

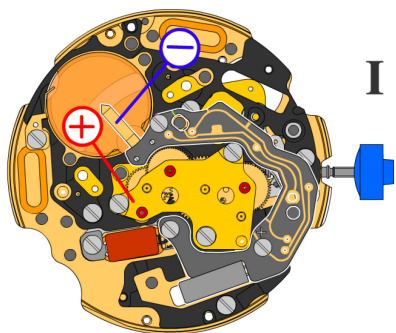


9020
63. Moebius 9020



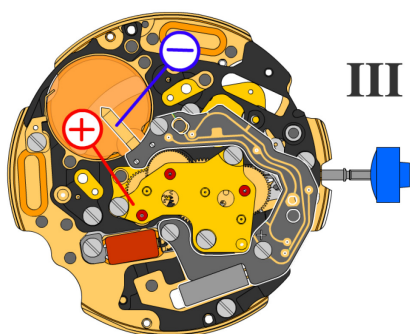


Battery	395
Voltage	1.55 V



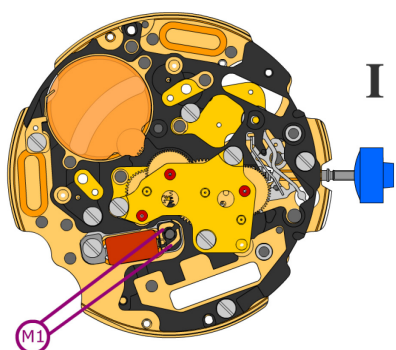
*Setting stem in position I, calendar not in gear,
60 s measuring interval for rate and consumption:*

Typical consumption	1.19 μA
Maximal consumption	1.65 μA
Rate	-10s/M. .. +20s/M.
Lower working voltage limit	1.20 V

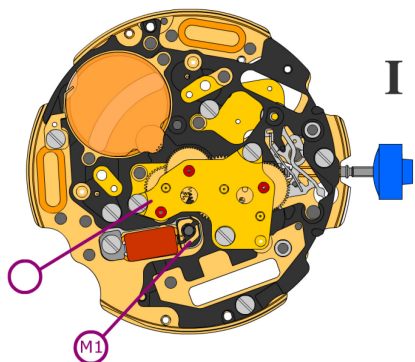


Setting stem in position III, 60 s measuring interval:

Typical consumption	0.10 μA
Maximal consumption	0.30 μA



Coil resistance M1

2.20 k Ω .. 2.40 k Ω


Coil isolation M1

 ∞ k Ω