

Watch Movement Specification and Drawing

CALENDAR

Cal. VX12E

Movement Size

8 3/4""

Casing Diameter

Ø 19.4mm

Height

2.60mm

Battery Life

3 years



Date: 18/Sep./'20

Cal. VX12E

Items	Rev.	Page
Specifications	04	1
Appearance	04	2
Casing	05	3
Hand fitting	05	4
Hand setting stem	04	5
Dial-01	02	6-01
Dial-02	01	6-02
Dial-05	01	6-05
Dial-06	01	6-06
Casing ring	02	7

Cal.

VX12E

Specifications

Date: 18/Sep./'20

Rev.: 04

Analog Quartz 8 3/4" Slim Movement / Three hands(H/M/S) with Calendar

1. MOVEMENT DIMENSIONS

 $\begin{array}{ll} \text{Outside diameter} & \phi \, 20.00 \text{mm} \, \times \, 18.00 \text{mm} (3\text{-9H}) \\ \text{Casing diameter} & \phi \, 19.40 \text{mm} \, \times \, 18.00 \text{mm} (3\text{-9H}) \\ \text{Total height} & 2.60 \text{mm (including battery)} \end{array}$

2. TIME STANDARD

Type of quartz oscillator Tuning fork Frequency of quartz oscillator 32,768 Hz

Accuracy ± 20 seconds per month (on wrist)

Operating temperature range -5° C to $+50^{\circ}$ C Regulation device Nil (Pre-adjusted)

3. INDICATOR / FUNCTIONS

3 Hands Hour / Minute / Second

Calendar Instant setting device for date calendar

Reset switch

Setting mechanism Crown at normal position : Free

Crown pulled out 1st click : Instant date change Crown pulled out 2nd click : Time setting / Reset

4. FEATURES

Jewels 0 Jewels

Anti-magnetism Over 1600A/m (Direct current magnetic field) Maximum unbalance of hands Hour hand : $0.5\,\mu\,\text{N}\cdot\text{m}$ Minute hand : $0.6\,\mu\,\text{N}\cdot\text{m}$ Second hand : $0.07\,\mu\,\text{N}\cdot\text{m}$

5. BATTERY

Type / Size Silver oxide battery / ϕ 7.9mm × t 1.6mm

Recommended battery SR716SW (Maxell, Murata)

Nominal voltage 1.55 V

Battery life Approx. 3 years Driving current consumption Approx. 0.80μ A

Operation stopping voltage 0.9 V

6. SEPARATED PARTS (Parts code)

Hand setting stem 0351177 or 0351578

Battery SR716SW

7. TEST OF ACCURACY

Equipment to be used SEIKO quartz tester QT-99,

Greiner quartz timer-C , Witschi Q-tester 4000

Duration of measurement 10 seconds

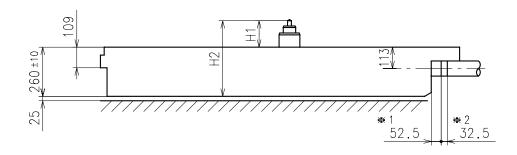
All specifications are subject to change without notice.

Cal. Date:28/Feb./'14 Appearance VX12E Rev.:04 Hands type Mark Type S (1) Type M (2) £(0) 0 \bigcirc Dial leg hole C (Sub hole) Dial leg hole A (Main hole) Dial leg hole B (Main hole)

Dial leg hole D (Sub hole) cai. VX12E Casing

Date:28/Feb./'14

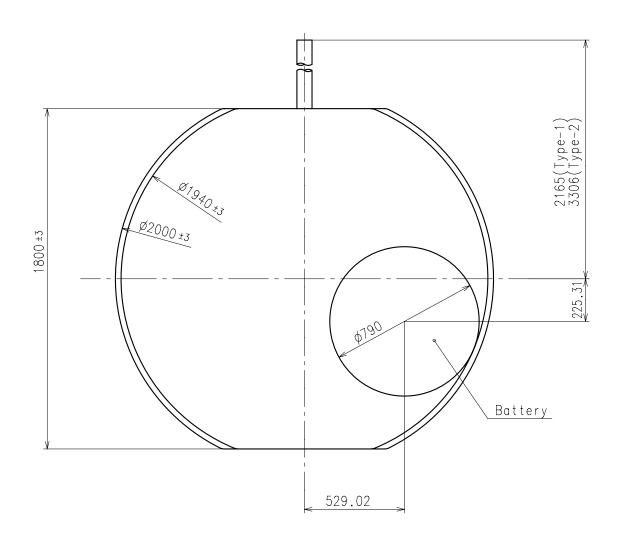
Rev.:05



Center post		Type S (1) VX12E1*	Type M (2) VX12E2*
Maximum height from dial support	H1	140	182
Total height including movement	Н2	400	442

- ★ 1:First pullout stroke
- ★ 2:Second pullout stroke

P. 3



Unit : 1=1/100mm

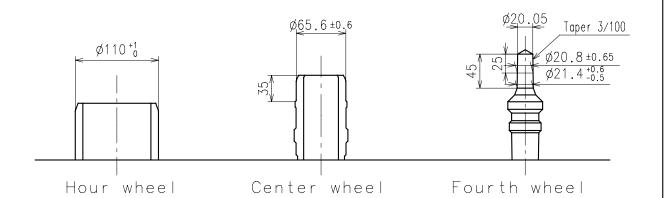
Cal. VX12E

Hand fitting

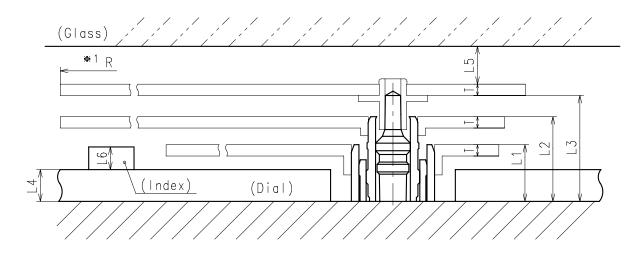
Date:11/Jan./'19

Rev.:05

- * Hour hand unbalance $\leq 0.5\mu \text{ N} \cdot \text{m} (50\mu \text{ g} \cdot \text{m})$
- * Minute hand unbalance $\leq 0.6\mu \text{ N} \cdot \text{m} (60\mu \text{ g} \cdot \text{m})$
- * Second hand unbalance $\leq 0.07\mu \text{ N} \cdot \text{m}(7\mu \text{ g} \cdot \text{m})$



	Parts No.					
	Hour wheel	Center wheel	Fourth wheel			
Type S (1) VX12E1*	0271929	0221929	0241929			
Type M (2) VX12E2*	0271942	0221904	0241904			



	L 1	L2	L3	L4	L5	L6	Т	*1 R
Type S (1) VX12E1*	75	112	140	40	MIN: 50	MAX: 30	15	MAX: 1250
Type M (2) VX12E2*	105	154	182	40	MIN: 50	MAX: 60	15	MAX: 1250

★1:It is the size taken into consideration for hands attachment.

Please observe some standard value specified in unbalance when using long hands.

Unit: 1=1/100mm

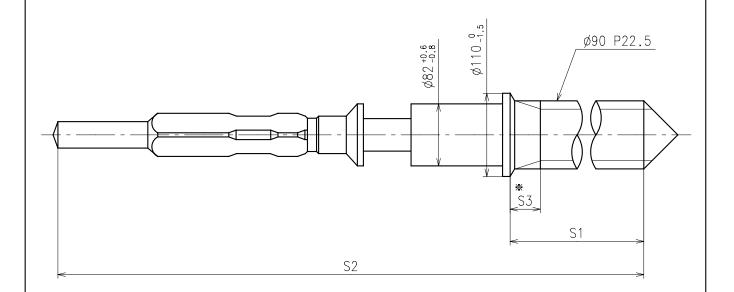
P. 4

Cal. VX12E

Hand setting stem

Date:28/Feb./′14

Rev.:04



* Not threaded

	Part No.	S1	S2	* S3
Type-1 (Standard)	0351177	1366	1964	60
Type-2	0351578	2507	3105	650

Material : Steel

Hardness: Vickers 600±50

Unit: 1=1/100mm P. 5

Cal. Date:28/Feb./'14 Dial-01 VX12E Rev.:02 12H (157.12)652.31 (909.02)652.31 692 3H 600.57 (D)(C) 700.23 (594.81) Battery (D)(C) A,B 100 -20 $\phi 165^{+5}_{-10}$ Ø75 ±2 Ø75 ±2 ★ Use dial leg A-B or (C-D)

Unit : 1=1/100mm

P. 6-01

Cal. Date:28/Feb./'14 Dial-02 VX12E Rev.:01 12H (157.12) 652.31 (C) (909.02)652.31 3H 600.57 (705.13)692 (D) 150 (C) (594.81) 700.23 Battery (D)(C) A,B 100 -20 180 ±50 Ø165 +5 Ø75 ±2 Ø75 ±2 ***** Use dial leg A-B or (C-D)

Unit : 1=1/100mm

P. 6-02

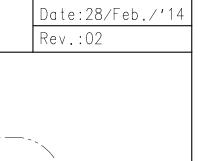
Cal. Date:28/Feb./'14 Dial-05 VX12E Rev.:01 12H (157.12) 652.31 (C) | (909.02)150 652.31 692 3H 600.57 705.13) (D)(C) (594.81) 700.23 Battery (D)(C) А,В 100 -20 180 ±50 0165^{+5}_{-10} Ø75 ±2 Ø75 ±2 ★ Use dial leg A-B or (C-D)

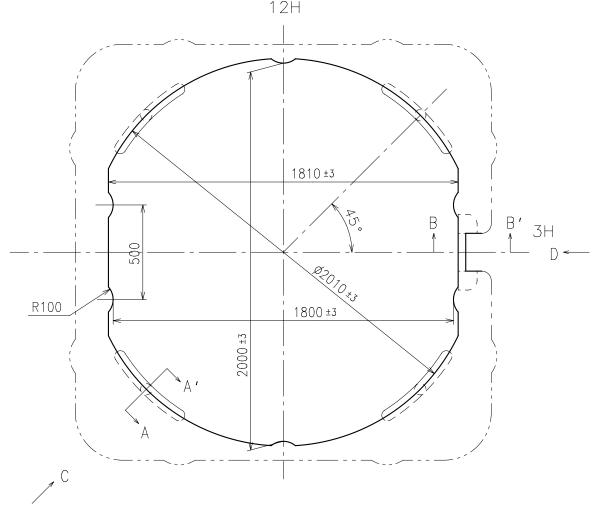
Unit: 1=1/100mm P. 6-05

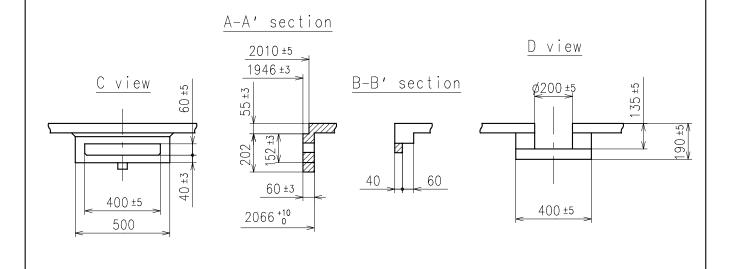
Cal. Date:28/Feb./'14 Dial-06 VX12E Rev.:01 12H (157.12) 652.31 (C) (909.02) 652.31 3H 600.57 692 (D) (C) (594.81) 700.23 Battery (D)(C) A,B 100 -20 180 ±50 Ø165 +5 Ø75 ±2 Ø75 ±2 ★ Use dial leg A-B or (C-D)

Unit: 1=1/100mm P. 6-06

Cal.
VX12E Casing ring







Unit: 1=1/100mm P. 7