

# Wide Measurement Range from -100°C to 1300°C\*

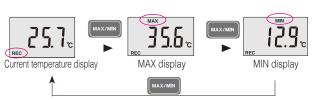




#### ■ 3441/3442 Extended Operation, Max/Min Temperature Recording, Water-resistant Construction (3442 only)

- The 3442 has a water-resistant construction.
- Measurement in damp environments is possible by using the thermometer in combination with the 9472 or 9475 temperature probe. (-100°C to 1300°C)\*
- Choose from 9 different temperature probes (optional), according to your application.

Recording of maximum temperature and minimum temperature



The 3441 and 3442 support temperature management by recording maximum and minimum temperatures in memory. By pressing the MAX/MIN key, you can switch to display of the current maximum and minimum temperatures at any time.

 $\ensuremath{^{*}}$  Measurable temperature range varies according to temperature sensor type.





#### 3441/3442 Specifications (Accuracy guaranteed for 6 months, Post-adjustment accuracy guaranteed for 6 months/ Accuracy at 23°C ±5°C, 80% rh or less

Measurement sensor: Type K thermocouple

Measurement range : -100°C to 1300°C (-148°F to 2372°F)

: 0.1°C (100.0 to 199.9°C), 1°C (200 to 1300°C)/ 0.1°F (-148°F to 392°F), 1°F (393°F to 2372°F)

Accuracy : ±0.1% rdg. ±0.8°C (from -100.0 to 199.9°C)/ (Period of guaranteed ±0.1% rdg. ±1.4°F (-148°F to 392°F) accuracy:6 months)

±0.2% rdg. ±1°C (from 200 to 1300°C)/ ±0.2% rdg. ±1.8°F (393°F to 2372°F)

(Accuracy of temperature sensor is added.) Temperature coefficient:  $0.03^{\circ}\text{C/°C}$  (from -100.0 to  $199.9^{\circ}\text{C}$ ) /  $0.05^{\circ}\text{F/°F}$  (-148°F to  $392^{\circ}\text{F}$ ) 0.05°C/°C (from 200 to 1300°C) / 0.09°F/°F (393°F to 2372°F)

Sampling rate 2 / second Display : LCD display Reference contact compensation: Automatic

Functions : Max/Min temperature recording and display, display data hold, sensor

discontinuity display (----), over-range display (O.F, - O.F), auto power save (operates after 30 min, can be disabled), low battery warning

Operating environment: Indoors, at altitude up to 2000 m

Power supply

for use: 0 to 40°C (32°F to 104°F), 80% rh or less (non-condensating) for storage: -10 to 50°C (14°F to 122°F), 80% rh or less (non-condensating)

Applicable standards: Safety, EN61010, Pollution level 2

EMC, EN61326

Water resistance: IP54 (EN60529)

: LR6 alkaline battery × 4

R6P manganese battery × 4

Maximum rated power: 35 mVA

Continuous operating time: 200 hours or more (using manganese batteries) Dimensions and : Approx. 74(W)  $\times$  155(H)  $\times$  24(D) mm (2.91 $\times$ 6.10 $\times$ 0.94 mass

9180 / 9183 SHEATH TYPE

in), approx. 160g (5.6 oz) (not including batteries or probe) R6P manganese battery X 4, Strap band, Instruction

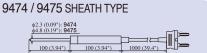
#### Choose from a wide range of temperature sensors for various applications (optional)

■ TEMPERATURE PROBE for 3441 / 3442 •:water--resistant structure

Accessories

unit=mm (inch)

## 9472 / 9473 SHEATH TYPE



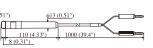
### φ<u>13 (0.51"</u>)

#### 9182 SHEATH TYPE φ3.2 (0.13")

#### 9181 SURFACE TYPE

TIME OF

#### 9476 SURFACE TYPE



■ Probe specifications



■ Probe specifications (9472, 9473, 9474, 9475: Waterproof construction)

2000 (78.8"

· · · · · · · · · · · · · · · · · · ·						
Model	9472	9473	9474	9475	9476	
Material type	K type thermocouple (Chromel / Almel)					
Contact type	Non-grounded	Non-grounded	Non-grounded	Non-grounded	Grounded	
Tolerance	*2			*3		
Response (90%)*1	About 5 sec	About 10 sec	About 5 sec	About 10 sec	About 3 sec	
Size of Sheath (mm), (inch)	φ 2.3 × 150 (mm) φ 0.09 × 5.91 (in)	φ 4.8 × 300 (mm) φ 0.19 × 11.81 (in)	φ 2.3 × 100 (mm) φ 0.09 × 3.94 (in)	φ 4.8 × 100 (mm) φ 0.19 × 3.94 (in)	φ 20 (mm) φ 0.79 (in)	
Compensation lead	Conventional type (-20 to 90°C, -4 to 194°F), 1m (3.28 ft)					
Grip heat resistance	80 °C (176 °F)					
Measurement temperature	-100 to 300°C -148 to 572°F	0 to 800°C 32 to 1472°F	-100 to 300°C -148 to 572°F	-100 to 500°C -148 to 932°F	-40 to 500°C -40 to 932°F	

- \*I Sheath type: Responsiveness in ice water at 0°C (32°F) and in boiling water at 100°C (212°F) Surface type: Responsiveness on a metal surface at 0°C (32°F) and at 100°C (212°F) \*2 At ... 40°C (-40°F) and more, the greater of ±1.5°C (±2.7°F) and ±0.4 % of the measured value \*3 ±2.5°C [175] ... -0.03 × 7°C to +2.5°C [100°C (C175)].

  T: measured temperature (-40°C to 500°C), Ts: environmental temperature (0°C to 40°C)

Due to short range ordering, type K thermocouples exhibit increased thermal electromotive force when used to measure temperatures from 250°C to 600°C

Model	9180, 9183	9181	9182		
Material type	K type thermocouple (Chromel / Almel)				
Contact type	Non-grounded	Grounded	Non-grounded		
Tolerance	9180 : *4 9183 : *2	#2.5 °C (±4.5 °F) [(T-Ts) ≤ 100 °C (180 °F)] -0.035×T °C to +2.5 °C [100 °C (180 °F) < (T-Ts)] T: measurement temp. (-50°C to 400°C) Ts: environment temp. (0°C to 50°C)	*4		
Response (90%)*1	About 5 sec	About 3 sec	About 5 sec		
Size of Sheath (mm), (inch)	φ 3.2 × 150 (mm) φ 0.13 × 5.91 (in)	φ 13 (mm) φ 0.51 (in)	φ 3.2 × 500 (mm) φ 0.13 × 19.69 (in)		
Compensation lead	Conventional type (	Heat resisting type (0 to 150°C, 32 to 302°F) 2m (6.56 ft)			
Grip heat resistance	150°C (302°F), Grip	90°C (194°F), clamp size φ 8 × 30 mm (φ 0.31 × 1.18 in)			
Measurement temperature	−50 to 750°C −58 to 1382°F	−50 to 400°C −58 to 752°F	−50 to 750°C −58 to 1382°F		

- \*1 Sheath type: Responsiveness in ice water at 0°C (32°F) and in boiling water at 100°C (212°F) Surface type: Responsiveness on a metal surface at 0°C (32°F) and at 100°C (212°F)  $^2$   $^2$   $^4$   $^4$   $^4$  C(40°F) and more, the greater of  $^4$  1.5°C ( $^4$  C) and  $^4$  0.7°C (40°F) and more, the greater of  $^4$  2.5°C ( $^4$  C)°F) and  $^4$  0.7°C of the measured value \*4 At -40°C (-40°F) and more, the greater of  $^4$  2.5°C ( $^4$  C)°F) and  $^4$  0.75% of the measured value

#### TEMPERATURE HITESTER

These products cannot perform measurement alone.

3442	3442	(°C only, Waterproof construction)
3441	3441-02	(°C/°F selectable)
2441	3441	(°C only)
Model No.	(Order Code)	(Note)

#### Options for 3441(-02), 3442

SHEATH TYPE TEMPERATURE PROBE SHEATH TYPE TEMPERATURE PROBE SHEATH TYPE TEMPERATURE PROBE 9474

SHEATH TYPE TEMPERATURE PROBE 9180 SURFACE TYPE TEMPERATURE PROBE 9181 SHEATH TYPE TEMPERATURE PROBE SHEATH TYPE TEMPERATURE PROBE SURFACE TYPE TEMPERATURE PROBE 9476 SHEATH TYPE TEMPERATURE PROBE 9183

CARRYING CASE 9386-01

HIOKI (Shanghai) SALES & TRADING CO., LTD. TEL +86-21-6391-0090/0092 FAX +86-21-6391-0360

DISTRIBUTED BY

Note: Company names and Product names appearing in this catalog are trademarks or registered trademarks of various companies

## HIOKI E.E. CORPORATION

#### **HEADQUARTERS** 81 Koizumi

Ueda, Nagano 386-1192 Japan www.hioki.com

#### HIOKI USA CORPORATION

TEL +1-609-409-9109 FAX +1-609-409-9108 hioki@hiokiusa.com / www.hiokiusa.com

info@hioki.com.cn / www.hioki.cn

HIOKI SINGAPORE PTE.LTD. TEL +65-6634-7677 FAX +65-6634-7477 info-sg@hioki.com.sg / www.hioki.com.sg

#### HIOKI KOREA CO., LTD.

TEL +82-2-2183-8847 FAX +82-2-2183-3360 info-kr@hioki.co.jp / www.hiokikorea.com

#### HIOKI EUROPE GmbH

TEL +49-6173-31856-0 FAX +49-6173-31856-25 hioki@hioki.eu / www.hioki.com