

G-TRAN Series  
Smartphone-Direct Pirani Gauge  
SWU10-U  
Specifications



Components Division,  
ULVAC, Inc.

# 1 Specifications

## 1.1. Basic specifications

Name	Smartphone-Direct Pirani vacuum gauge							
Model	SWU10-U							
Measurement principle	Pirani vacuum gauge that uses thermal conduction by gas molecules							
Number of gauge heads	1pc							
Connecting flange	NW16、 R1/8、 Φ18tube、 Φ15tube、 NW25、 CF16、 sanitary							
Measurement pressure range	5x10 <sup>-2</sup> Pa to 1x10 <sup>+5</sup> Pa							
Output pressure range	1x10 <sup>-2</sup> Pa to 1x10 <sup>+5</sup> Pa							
Accuracy (N <sub>2</sub> )	1.0x10 <sup>-1</sup> Pa to 1.0x10 <sup>+4</sup> Pa: ±10% 5.0x10 <sup>-2</sup> Pa to 1.0x10 <sup>-1</sup> Pa: ±20% 1.0x10 <sup>+4</sup> Pa to 1.0x10 <sup>+5</sup> Pa: ±20%							
Repeatability	1.0x10 <sup>-1</sup> Pa to 1.0x10 <sup>+4</sup> Pa: ±2%							
Sampling time	50 ms, 5x moving average							
Gauge head material	Filament: Pt Other:SUS304, FeNiCo、 Ni、 Au、 Glass、 Ceramic、 Pt							
Gauge head withstand pressure	2x10 <sup>+5</sup> Pa (abs) *Take the withstand pressure for flanges, clamps, and other components into account separately.							
Operating temperature range	10 to 40°C							
Operating humidity range	15% to 85% RH (no condensation)							
Storage temperature	-20 to 65°C (no condensation)							
Bake out temperature	150decrease C(when controller is disconnected)							
Mounting Direction	Free							
IP code	IP30							
Power supply voltage	5 VDC ± 5%							
CE standard	Radiation electromagnetic field test: EN61000-4-3:2006 Static electricity test: EN61000-4-2:1995, A1:1998,A2:2001 Transient burst test: EN61000-4-4:2004 Conduction test: EN61000-4-6:2007							
I/O connector	USB microB							
Gauge head	Type	NW16	R1/8	Φ18tube	Φ15tube	NW25	CF16	sanitary
	Weight	85g	94g	93g	80g	88g	80g	145g

## 1.2. Available smartphone

Android6 or later
Connector: USB Type-C
USB Cable length: 5m or less

※Some models cannot be automatically recognized.

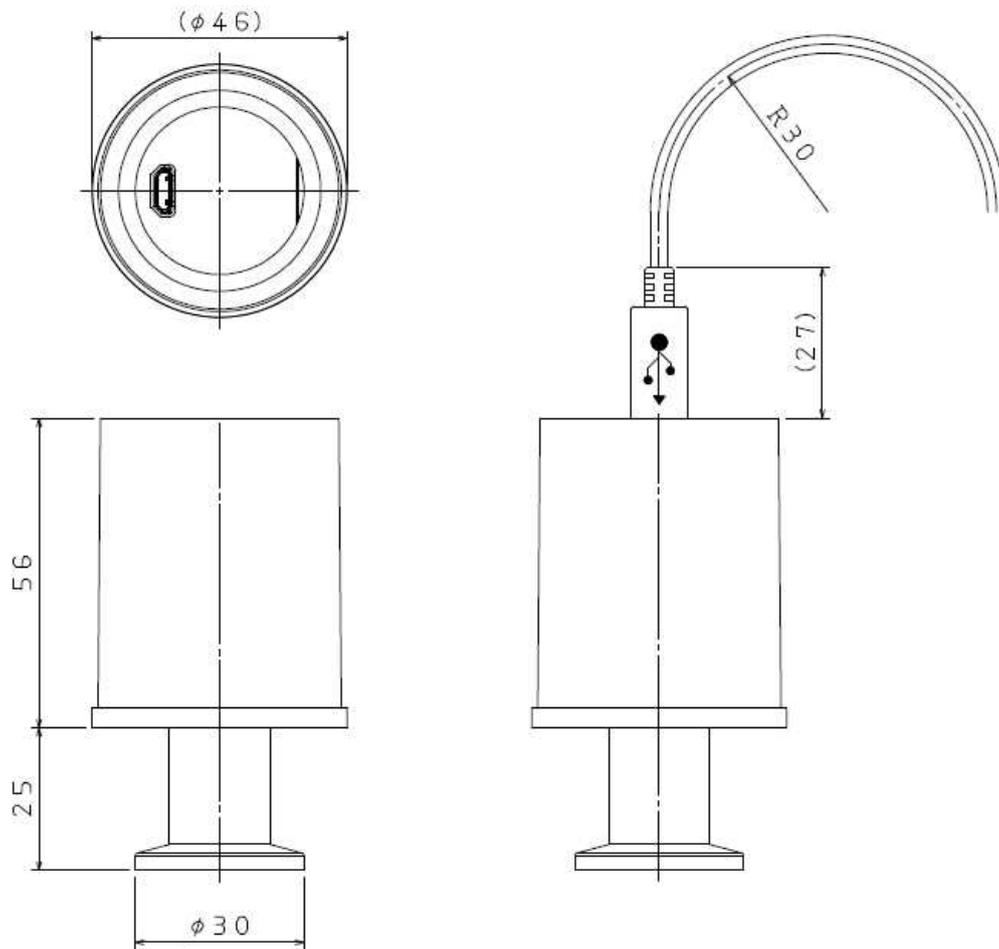
Please refer to ULVAC website for available models list.

## 1.3. Option

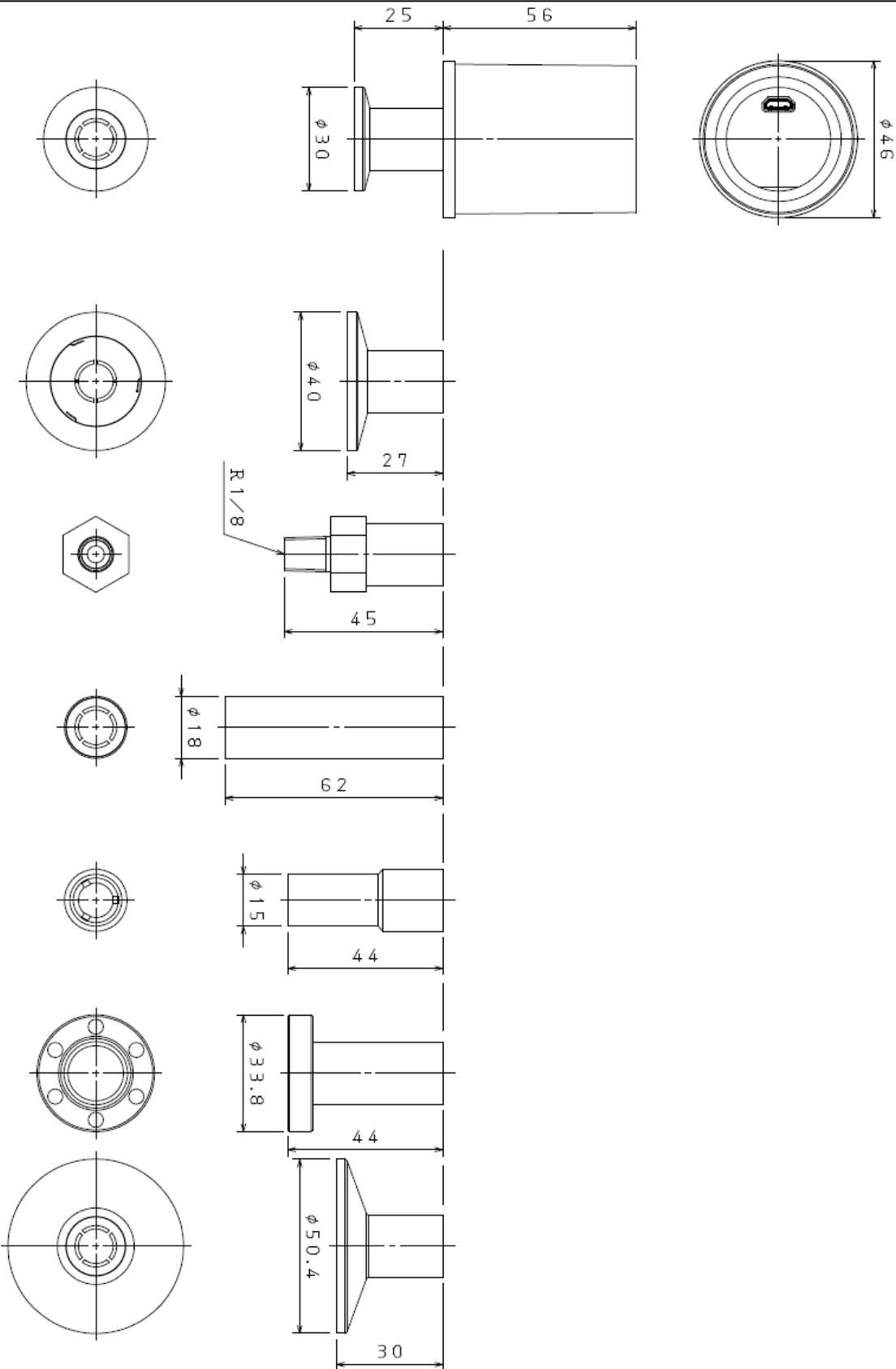
USB2.0 cable (certified product, C-microB) 1.5m (model: U2C-CMB15NBK)
JCSS Calibration certificate
Calibration certificate
Test results certificate
Traceability certificate

## 2. Dimensions

### 2.1 SWU dimensions



2.2 SWU dimensions



### 3. Warranty

This product was shipped after rigid company inspection. However, in case any failure occurs under ULVAC's responsibility, such as defect in manufacturing and damage during transportation, Buyer shall inform ULVAC, Inc. or the local ULVAC representatives. ULVAC will repair or exchange it at free of charge.

#### Warrantable Items

- 1) This unit

#### Duration of guarantee

One (1) year after shipping date from ULVAC

#### Warranty scope

- 1) Domestic business in Japan: Product, which has damage, caused by a failure on delivery.
- 2) Direct export transaction: Product, which has damage, caused by a failure on delivery. The warranty scope shall conform to the new INCOTERMS.
- 3) Products not satisfying meet the standard specifications although the product is used under the normal service conditions such as temperature range and power etc.

#### Response procedure

- 1) Domestic business in Japan: ULVAC send a replacement or Buyer return the defective items to ULVAC, Inc. or to the local ULVAC representatives for repair. If field service is required, Buyer shall ask ULVAC, Inc. or the local ULVAC representatives.
- 2) Direct export transaction: ULVAC send a replacement or Buyer return the defective items to ULVAC, Inc. or to the local ULVAC representatives for repair. Return charge shall be paid by Buyer.

#### Disclaimer

- 1) Failure occurred after expiration of warranty period
- 2) Failure caused by force majeure, such as fire, storm and flood damage, earthquake, lightning strike, war etc
- 3) Failure occurred due to carelessness handling or faulty usage
- 4) Products remodeled, disassembled or repaired without ULVAC's acceptance
- 5) Failure occurred under abnormal environment, such as intense electromagnetic field, radiation, high-temperature, high-humidity, flammable gases, corrosive gases, dust etc.
- 6) Failure occurred by noise
- 7) Product deficiency or secondary damage occurred to Buyer, from law suit to ULVAC by third party for patent infringement.
- 8) Sensor head being used (expiration of life, measurement error, etc.)
- 9) Sensor head cable in use (cable burnout due to improper installation, poor contact, etc.)

#### Others

- 1) In case, special agreement or memorandum for specifications is made individually, the descriptions are prior to this article "13 Product Warranty".
- 2) Buyer shall inform ULVAC when this product is exported out of Japan. In the meantime, Buyer shall take necessary procedures according to Foreign Exchange and Foreign Trade Law.
- 3) As for the question and consultation, Buyer shall check the model and serial number and ask the local representative or ULVAC, Inc.
- 4) The content of this document is subject to change without notice in future.