

INVASIVE LIQUID FLOW

3013-8446
Issue 2

Demo Kit

ILFE00400 (Reuseable Base Station)/IFS00400B1B1 (Disposable)

Thermopile Liquid Flow Sensor (0 mL/hr to 400 mL/hr)

IFS00400B1B1 DISPOSABLE
SENSOR



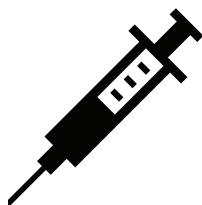
ILFE00400 REUSABLE
BASE STATION

APPLICATIONS



Medical Fluid Management

Dialysis, urology, and infusion



Large Volume Wearable Injectors

Patch pump, injector, infusion, pump/injector



In-Vitro Diagnostics

Immunoassays, hematology, molecular diagnostics, and microbiology



Single Use Bioreactor

Antibodies, vaccines, stem cells, and gene modified cells

DESCRIPTION

The liquid flow demo kit is used to demonstrate Honeywell Liquid Flow sensing technology providing a USB interface and desktop application. The sensing system is fully calibrated, and temperature compensated over the specified flow range. The sensor has a linear flow output over the temperature range of 10°C to 40°C [50°F to 104°F] and is calibrated with distilled water.

DESIGN FEATURES

- High resolution measurements
- Plug and play USB-C interface
- Easy-to-use PC application
- Flexible mounting options

INVASIVE LIQUID FLOW DEMO KIT

TABLE 1. SPECIFICATIONS

Characteristic	Minimum	Typical	Maximum	Unit
Operating/calibrated temperate range ¹	10 [50]	–	40 [104]	°C [°F]
Humidity range (non-condensing)	0	–	95	% RH
Liquid flow operating/ calibrated range	0	–	400	mL/hr
Liquid flow full scale span (FSS): full sale	–	400	–	mL/hr
Null accuracy ^{2,3}	–	1 %	–	FSS
Total Error Band ⁴ (forward flow)	–	±1/±5.00 (whichever is greater)	–	%FSS/%reading
Total Error Band ⁴ (reverse flow)	–	–	–	%FSS/%reading
Startup time ⁵	–	1	–	second
Storage temperature	10	–	55	°C
Useful life of disposable		96 hours		
Wetted materials ⁶	Polymer, epoxy, gold, silicon dioxide, silicon nitride			
Calibration liquid ²		clean water		

¹Custom and extended temperature compensated ranges are possible. Contact Honeywell for details.

²Customization for other liquids is possible

³Null accuracy is the maximum deviation in output from nominal at null flow over the entire calibrated temperature range.

⁴Total Error Band (TEB) is the maximum deviation from the ideal transfer function over the entire compensated temperature and flow range. Includes all errors due to offset, full scale span, flow non-linearity, flow hysteresis, repeatability, thermal effect on offset, thermal effect on span and thermal hysteresis.

⁵Startup time is specific to the evaluation module and is not technology driven.

⁶Designed using bio-compatible materials. The manufacturer is responsible for determining the biocompatibility of the finished product.

USAGE CONSIDERATIONS

1. Parts are susceptible to damage if dropped onto hard surfaces.
2. The connection between the disposable sensor and the base station is not sealed. If the connector is exposed to moisture, the disposable sensor should be removed from the reusable base station and both parts should be dried before applying power.
3. Due to the size of the disposable sensor, radiated fields may cause an error in the measured flow value. This condition can be corrected with smaller geometries for specific customer application solutions.

INVASIVE LIQUID FLOW DEMO KIT

Figure 1. Ø 1/2-inch to 1½ inch Pole
[Ø12,7 mm to Ø38,1 mm Pole]



Figure 2. Standard 1-inch [25,4 mm] T-slotted Frame



Figure 3. Mounted to a Flat Plate using
a 1/4-20 machine screw



Figure 4. Mounted Using a Vice



NOTE **MOUNTING**

The sensor should be mounted vertically with “UP” direction arrow pointing upward.

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Figure 4. Reusable Dimensions (mm, for reference only)

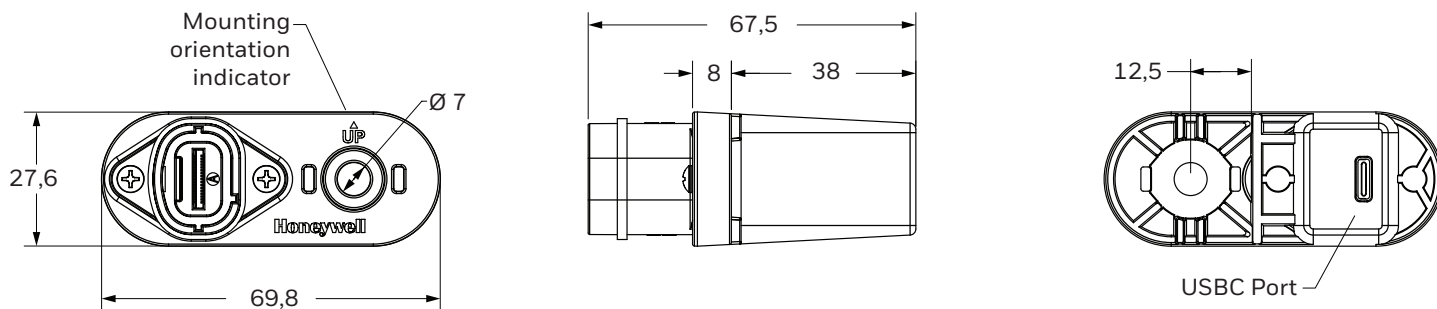
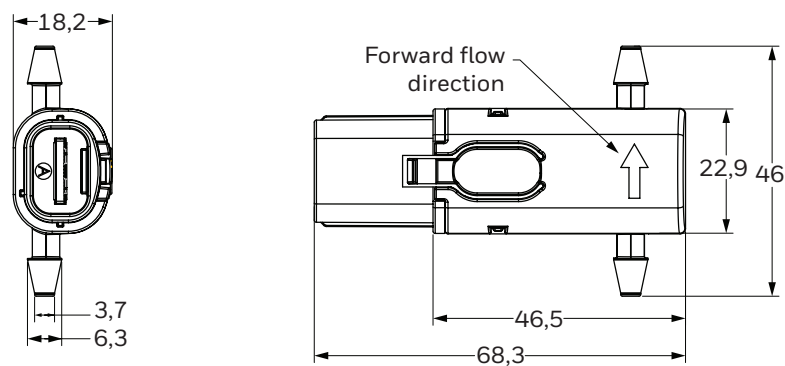


Figure 5. Disposable Dimensions (mm, for reference only)



NOTE

Recommended for use with 3/16-in [4,76 mm] ID silicone tubing, 1/16-in [1,59 mm] wall, 50 SHORE A durometer

Figure 6. Kit Contents



- Reusable base station
- Two (2) disposable liquid flow sensor cartridges
- 3/16-in ID silicon tubing
- USB-C cable
- Reusable zip tie
- T-slot frame mounting screw

WARNING

PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

WARNING

MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. The Honeywell standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgment or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items that Honeywell, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While Honeywell may provide information or engineering support for its products through Honeywell personnel, literature and website, it is the buyer's sole responsibility to determine the suitability of the Honeywell product(s) for the buyer's requirements

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