

# HPQ-D Series

Built-in amplifier, liquid absorbing paper not needed, usable with various liquids.



- Acids or alkaline liquids, IPA (isopropyl alcohol), pure water, Fluorinert, Galden, etc.
- Body and cable are protected by PFA.
- Easy maintenance
- Suitable for export equipment



## Easy maintenance

After leak detection, simply wipe the detector surface—a much easier process than with detection tape or a liquid-absorbing model.

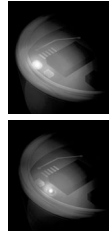
## Acids or alkaline liquids, IPA (isopropyl alcohol), pure water, Fluorinert, Galden, etc.

Notes: For explosion-proof applications, be sure to select a suitable fiber type. Fluorinert and Galden are registered trademarks of 3M and Solvay Solexis respectively.

## Operation indicator

Sensor status can be checked from the body side.

- Normal state (green LED lit)
- Liquid leakage (red LED lit)



## Body and cable are protected by PFA.

PVC brackets are available for acidic or alkaline liquids. PFA (partially SUS) brackets are available for organic solvents.

## Suitable for export equipment

CE marking, UL certified. Wide variety of output modes and types are available.

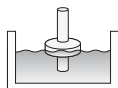
- NO/NC output
- NPN/PNP output



### Principle

Normal: no liquid (light received)

Leak: liquid present (dark)



Install this sensor in the pan by stud or adhesive (for PVC bracket type). Unlike the float type, sensor does not require a concave surface underneath.

## CATALOG LISTING

### Body

Detection method	Specifications	Catalog listing
Optical refraction system	NC, NPN, PVC bracket type	<b>HPQ-D11</b>
	NC, PNP, PVC bracket type	<b>HPQ-D12</b>
	NC, NPN, PFA bracket type	<b>HPQ-D21</b>
	NC, PNP, PFA bracket type	<b>HPQ-D22</b>
	NO, NPN, PVC bracket type	<b>HPQ-D13</b>
	NO, NPN, PFA bracket type	<b>HPQ-D23</b>

### Accessory

Specifications	Catalog listing
PVC bracket (10 units)	<b>HPQ-B01</b>
PFA bracket (10 units)	<b>HPQ-B02</b>

Notes: For **HPQ-D11/12/21** models, a sensor with 5m cable (2m PFA tube) is also available, specially produced for the U.S. market (-L05).  
Normally open type: no UL certification.  
Some UL-certified models are available. For details, contact Yamatake Corporation.

## SPECIFICATIONS

Catalog Listing	HPQ-D□1	HPQ-D□2
Power supply voltage	12 to 24Vdc (ripple voltage 10% max.)	
Current consumption	30mA max.	
Mounting face	Polyvinyl chloride plate, stainless steel plate, etc. (see note 1)	
Standard target liquid	Water (see note 2)	
Operation mode	Normal state: ON. State upon leak detection: OFF	
Output mode	NPN transistor output, open collector	PNP transistor output, open collector
Control output	Switching current	50mA max. (resistive load)
	Output dielectric strength	30V, with an output short-circuit protection circuit
	Voltage drop	1V max. (at 50mA switching current)
Light emitter	Infrared LED	
Indicator	Green light ON in normal state. Orange light ON when leak detected.	
Operating temperature range	-25 to +50°C	
Operating humidity range	35 to 85% RH (no condensation allowed)	
Sealing	IP67 (IEC standard)	
Circuit protection	Built-in reverse connection protection circuit, malfunction prevention circuit at power ON (approx. 20ms).	
Material	Body: PFA. Cable: PFA coating. Bracket: PVC or PFA (SUS).	

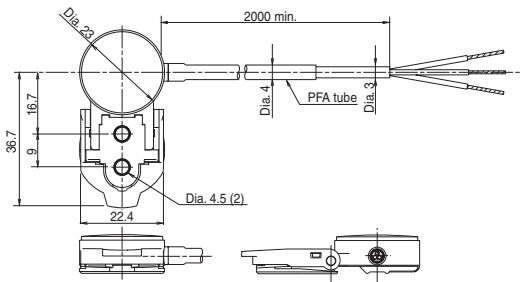
Notes: 1. Operation may be unstable with some mounting surface colors or conditions.

2. If the target liquid is other than the one specified, verify the device's operation or contact Yamatake Corporation in advance.

## EXTERNAL DIMENSIONS

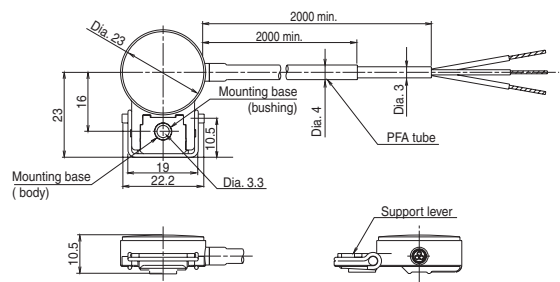
(unit: mm)

### HPQ-D1□



CAD File No. EC 10202

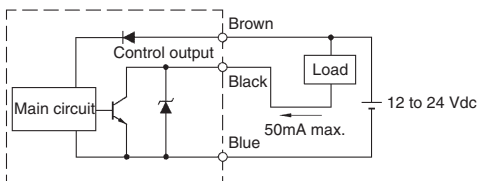
### HPQ-D2□



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## OUTPUT CIRCUIT DIAGRAM

### HPQ-D□1 (NPN type)



### HPQ-D□2 (PNP type)

