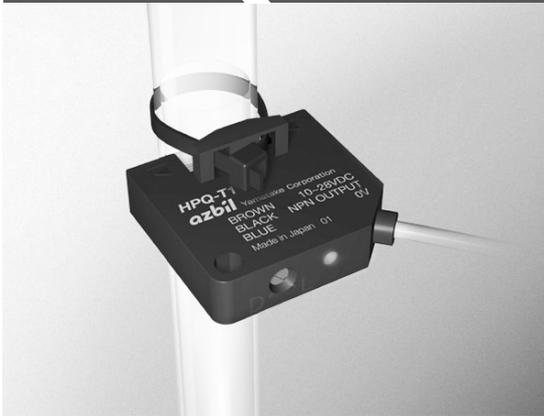


HPQ-T Series

Liquid is easily detected using a pipe-mounted sensor.



- Stable detection
- Operation panel is located on the side.
- Suitable for various pipe diameters
- One model can detect both upper limit and lower limit.

Stable detection

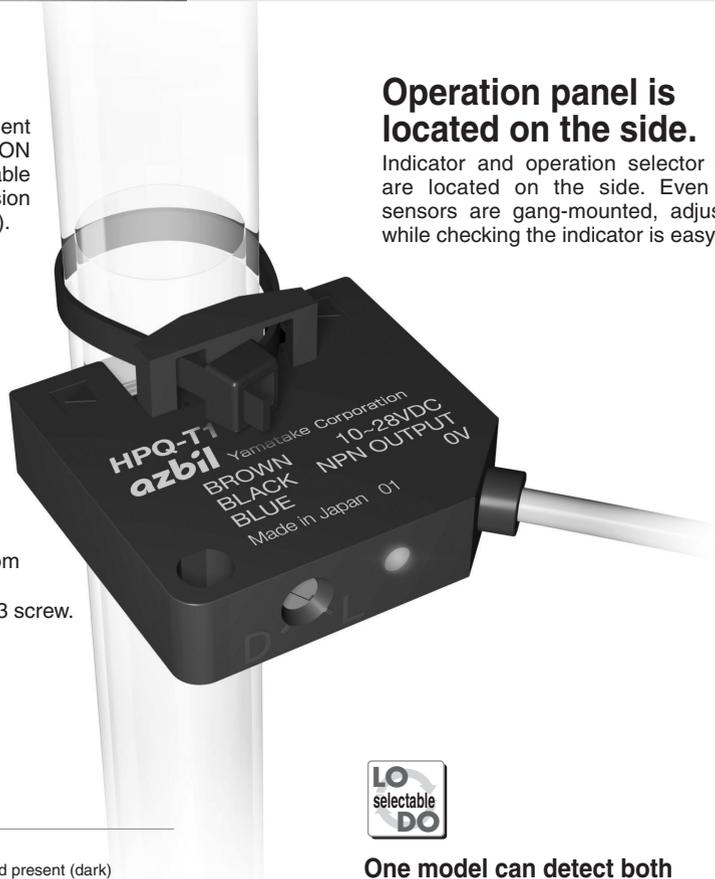
Refractive detection ensures sufficient gain between light-ON and dark ON light levels. This sensor is also suitable for liquids with poor light transmission (such as resist liquid and waste fluid).

Operation panel is located on the side.

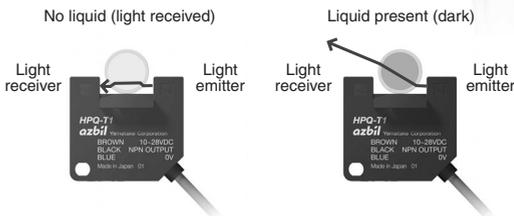
Indicator and operation selector switch are located on the side. Even when sensors are gang-mounted, adjustment while checking the indicator is easy.

Suitable for various pipe diameters

Made for pipe diameters from 8 to 13mm (1mm thick). Mount with a cable tie or M3 screw.



Principle



One model can detect both upper limit and lower limit.

Note: For pipe diameters of less than 8mm contact Yamatake Corporation, as adjustable sensitivity sensors are also available.

CATALOG LISTING

Detection method	Pipe diameter	Output mode	Catalog listing
Pipe-mounted liquid-level detection	8 to 13mm	Open collector NPN transistor	HPQ-T1
	1/8" or 1/4"		HPQ-T1-004
	8 to 13mm	Open collector PNP transistor	HPQ-T2
	1/8" or 1/4"		HPQ-T2-005

Note: Cord is 2m long.

SPECIFICATIONS

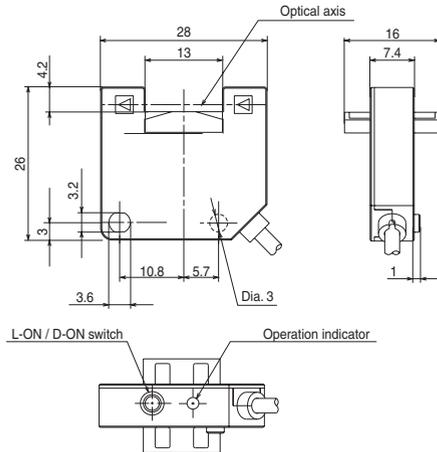
Catalog listing	HPQ-T1, HPQ-T1-004	HPQ-T2, HPQ-T2-005
Power supply voltage	10 to 28Vdc (ripple voltage 10% max.)	
Current consumption	25mA max.	
Applicable pipe types	PFA transparent pipe, 1mm thick	
Applicable medium	Transparent or opaque liquids	
Repetitive detection positional accuracy	1mm max.	
Operation mode	Light ON (L-ON) or dark ON (D-ON), selectable by switch Liquid detection: dark. Liquid non-detection: light	
Output mode	NPN transistor output, open collector	PNP transistor output, open collector
Control output	Switching current	100mA max. (resistive load)
	Output dielectric strength	30V
	Voltage drop	1V max. (at 100mA switching current)
Response time	2ms max. (for operation and release)	
Light emitter	Red LED (peak emission wavelength 950nm)	
Indicator	Operation indicator: red (lit when output ON)	
Ambient light immunity	1,000 lux max. (incandescent lamp)	
Operating temperature range	-10 to +55°C	
Operating humidity range	35 to 85% (no condensation allowed)	
Sealing	IP50 (IEC 529)	
Circuit protection	Built-in reverse connection protection circuit, malfunction prevention circuit at power ON (approx. 20ms), output short-circuit protection	

Note: Cord is 2m long.

*In some cases operation may not be reliable due to type of pipe, degree of liquid transparency, or liquid refractive properties. Be sure to confirm operation before actual use. When using pipes other than those of recommended materials and thicknesses, be sure to test in advance that operation is satisfactory, or contact Yamatake Corporation.

EXTERNAL DIMENSIONS

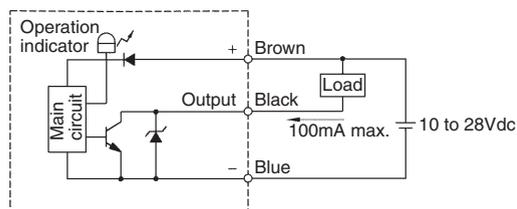
(unit: mm)



CAD File No. HP-0034

OUTPUT CIRCUIT DIAGRAM

HPQ-T1 (NPN type)



HPX-T2 (PNP type)

