

SR. No.

Yamatake Corporation

製品仕様書  
SPECIFICATIONS

Catalog listing

Output

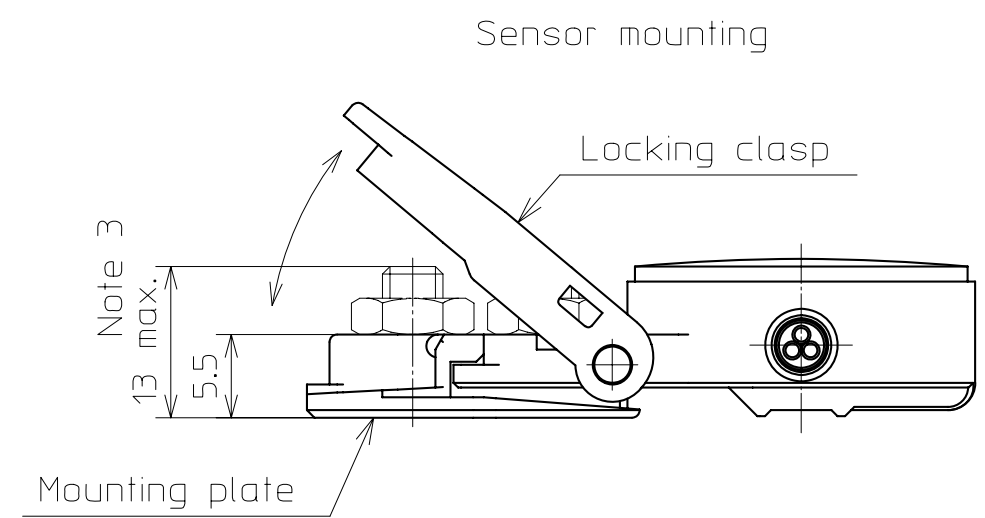
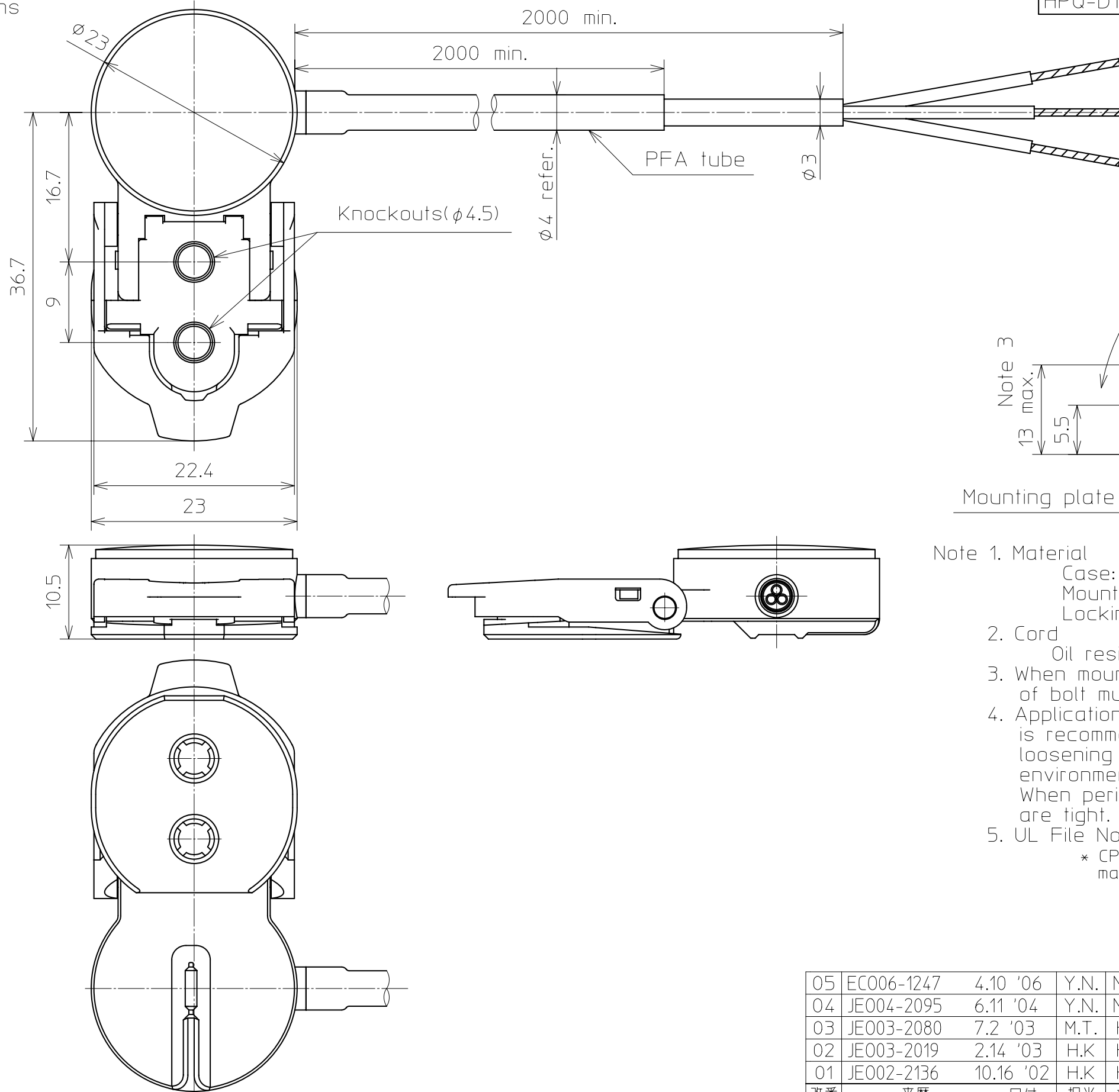
HPQ-D11

Open collector of NPN transistor

HPQ-D12

Open collector of PNP transistor

Dimensions



Note 1. Material

Case: PFA  
Mounting plate : CPVC \*  
Locking clasp : CPVC \*

2. Cord

Oil resist 0.3mm<sup>2</sup> (17/0.16)

3. When mounting with two nuts, the length of bolt must be 13mm max.

4. Application of spring washer or adhesives is recommended to protect the switch from loosening when used in high temperature environment.

When periodic inspection, make sure the nuts are tight. If loose, re-tighten them up.

5. UL File No. : E233024

\* CPVC is heat-proof type vinyl-chloride made by Sekisui chemical CO., LTD.

	Angular		Linear		
~	≤3	≤6	≤30	≤120	
+15'	+0.2	+0.3	+0.5	+0.8	

05	EC006-1247	4.10 '06	Y.N.	M.T.
04	JE004-2095	6.11 '04	Y.N.	M.T.
03	JE003-2080	7.2 '03	M.T.	H.M.
02	JE003-2019	2.14 '03	H.K.	H.M.
01	JE002-2136	10.16 '02	H.K.	H.M.
改番 REV.	来歴 RECORD	: 日付 DATE	担当 BY	検閲 APPD.

作成DR. H.Kitahara 9. 10. '02	検図CHK. M.Matsuno 9. 11. '02	認可APPD S.Nonaka 9. 11. '02	日付DATE	尺度SCALE 2:1	記入のない公差 TOL. UNLESS NOTED REFER ABOVE TABLE FOR TOL. UNLESS NOTED
形番 MODEL	HPQ-D Series				
名称 NAME	Leak sensor				
図番 NO.	AD42617E	改番REV. 05	1/3		

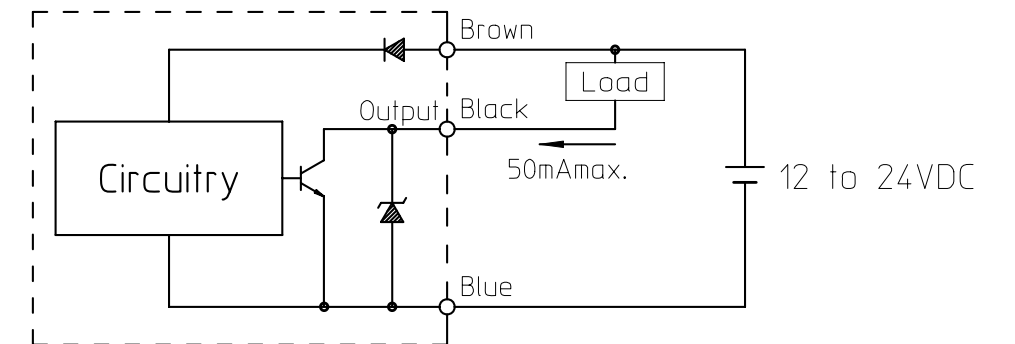
3 05  
2 05  
頁 改番

SR. No.	Yamatake Corporation		製品仕様書 SPECIFICATIONS	
	Specifications			
	Catalog listing	HPQ-D11	HPQ-D12	
	Supply voltage	12 to 24 VDC ±10% (ripple 10% max.)		
	Current consumption	30mA max.		
	Usable pan	PVC, stainless steel etc.	Note 1	
	Standard detecting object	Water	Note 1	
	Operating mode	Light-operated (Normal condition: light, liquid leakage: dark)		
	Output mode	Open collector of NPN transistor	Open collector of PNP transistor	
	Output	Load current : 50mA max. (resistive load) Saturation voltage : 1V max. (at 50mA load current) 30VDC max., short circuit protection		
	Light source	Infrared LED (875nm)		
	Indicator	Green on: normal condition , orange on: liquid leakage		
	Operating temperature	-25 to +50℃		
	Storage temperature	-40 to +70℃		
	Humidity	35 to 85%RH (without condensation)		
	Insulation resistance	20MΩ min. (at 500V DC)		
	Dielectric strength	1000V AC 50/60Hz 1 minute		
	Vibration	10 to 55Hz , 1.5mm double amplitude, 2 hours in each direction of X,Y,Z		
	Shock	500m/s <sup>2</sup> 3 times in each direction of X,Y,Z		
	Sealing	IP67 (IEC standard)		
	Protection	False pulse protection, reverse polarity protection		
EMC	Electrostatic discharges (ESD)	Contact : Level 2 Air : Level 3 (EN61000-4-2:1995)		
	Radiated radio-frequency electromagnetic fields (RS)	Level 3 (EN61000-4-3:1996)		
	Electrical fast transients (EFT)	Level 3 (EN61000-4-4:1995)		
	Conducted susceptibility (CS)	Level 3 (EN61000-4-6:1996)		
	Surge	Level 3 (IEC60255-5:1977)		
	Radiated emission (RE)	Within class B limit (radiated electric field strength) (EN55022:1998)		

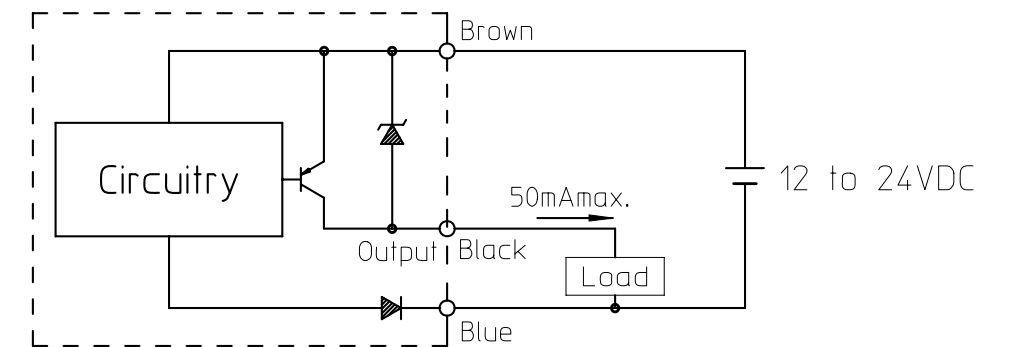
Note 1. Verification is required for actual materials.

Connection

HPQ-D11



HPQ-D12



05	~	~	~
04	~	~	~
03	~	~	~
02	~	~	~
01	~	~	~
改番 REV.	来歴 RECORD	: 日付 DATE	担当 検閲 BY APPD.

作成DR. H.Kitahara 9, 10, '02	検図CHK. M.Matsuno 9, 11, '02	認可APPD S.Nonaka 9, 11, '02	日付DATE	尺度SCALE UN	記入のない公差TOL. UNLESS NOTED ~
形番 MODEL		HPQ-D Series			
名称 NAME		Leak sensor			
図番 NO.		AD42617E		改番REV. 05	2/

SR. No.

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SPECIFICATIONS

Product revision change record

	Date	Catalog listing	Product Rev. No.	Content of change
1	4,10, '06	All	01	RoHS compliance

Product revision

The 2-digit product revision number is shown after the country of origin on the cord.

Example: JAPAN    01  
└───┬───┘ Product revision number  
└───┘ Country of origin

Catalog listing	Product Rev. No.
HPQ-D11	01
HPQ-D12	01

作成DR. Y.Naozaki 4,10, '06		尺度 SCALE ~	記入のない公差 TOL. UNLESS NOTED ~
検図CHK. M.Tanaka 4,10, '06	形番 MODEL	HPQ-D Series	
認可APPD. H.Matsuno 4,10, '06	名称 NAME	Leak sensor	
日付 DATE	図番 NO.	AD42617E	改番REV. 3/05

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**SPECIFICATIONS**

“RESTRICTIONS ON USE”

This product has been designed, developed and manufactured for general-purpose application in machinery and equipment.

Accordingly, when used in applications outlined below, special care should be taken to implement a fail-safe and/or redundant design concept as well as a periodic maintenance program.

- Safety devices for plant worker protection
- Start/stop control devices for transportation and material handling machines
- Aeronautical/aerospace machines
- Control devices for nuclear reactors

Never use this product in applications where human safety may be put at risk.

1	00	00	First issue	12-2-02	Harada	Miura
頁	改番	改番	来歴	日付	担当	検閲
	REV.	REV.	RECORD	DATE	BY	APPD.