

SR. No.
800-8-141-0

Yamatake Corporation

製品仕様書
SPECIFICATIONS

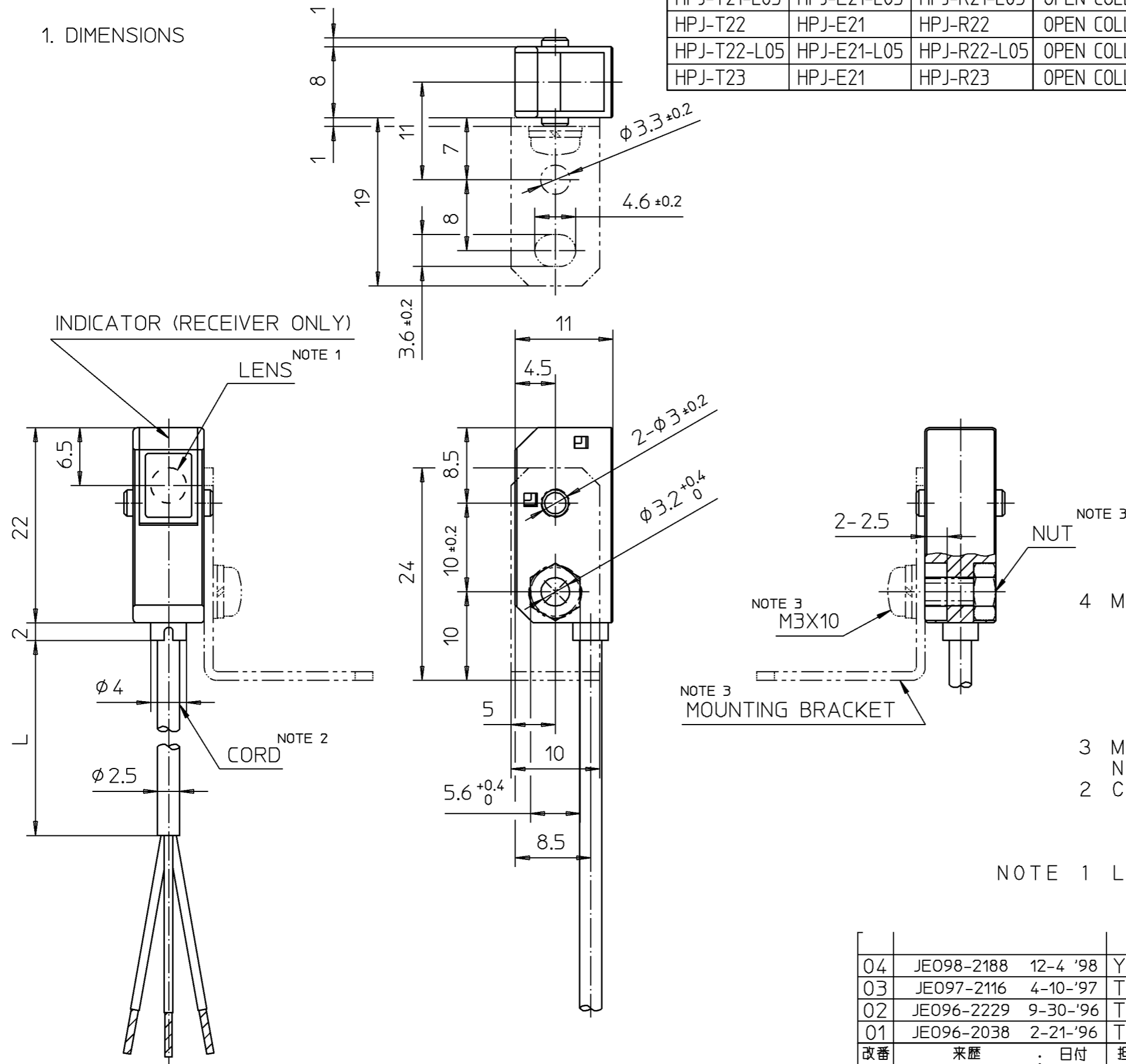
THROUGH SCAN

OUTPUT MODE

OPERATING MODE CORD LENGTH (L)

SET	EMITTER	RECEIVER	OUTPUT MODE	OPERATING MODE	CORD LENGTH (L)
HPJ-T21	HPJ-E21	HPJ-R21	OPEN COLLECTOR OF NPN TRANSISTOR	DARK ON	2000 min.
HPJ-T21-L05	HPJ-E21-L05	HPJ-R21-L05	OPEN COLLECTOR OF NPN TRANSISTOR	DARK ON	5000 min.
HPJ-T22	HPJ-E21	HPJ-R22	OPEN COLLECTOR OF PNP TRANSISTOR	DARK ON	2000 min.
HPJ-T22-L05	HPJ-E21-L05	HPJ-R22-L05	OPEN COLLECTOR OF PNP TRANSISTOR	DARK ON	5000 min.
HPJ-T23	HPJ-E21	HPJ-R23	OPEN COLLECTOR OF NPN TRANSISTOR	LIGHT ON	2000 min.

1. DIMENSIONS



- 4 MATERIAL CASE : PC/ABS ALLOY / BLACK
- LENS : PC / CLEAR ORANGE
- MOUNTING BRACKET : AL +1
- 3 MOUNTING BRACKET, SCREW AND NUT ARE INCLUDED.
- 2 CORD 0.08mm² (16/0.08) COLOR: GRAY (RECEIVER) BLACK (EMITTER)
- NOTE 1 LENS DIAMETER: φ4

作成DR. T.Koike 9-5-'95	検図CHK. T.Nakao 9-5-'95	認可APPD S.Nonaka 9-5-'95	日付DATE	尺度SCALE 2:1	記入のない公差TOL. UNLESS NOTED ±0.5
形番 MODEL	HPJ SERIES				
名称 NAME	PHOTOELECTRIC SWITCH				
図番 NO.	AD41451E	改番REV. 04	1/2		

04	JE098-2188	12-4 '98	Y.N.	T.N.
03	JE097-2116	4-10-'97	T.K.	T.N.
02	JE096-2229	9-30-'96	T.K.	T.N.
01	JE096-2038	2-21-'96	T.K.	T.N.
改番 REV.	来歴 RECORD	: 日付 DATE	担当 BY	検閱 APPD.

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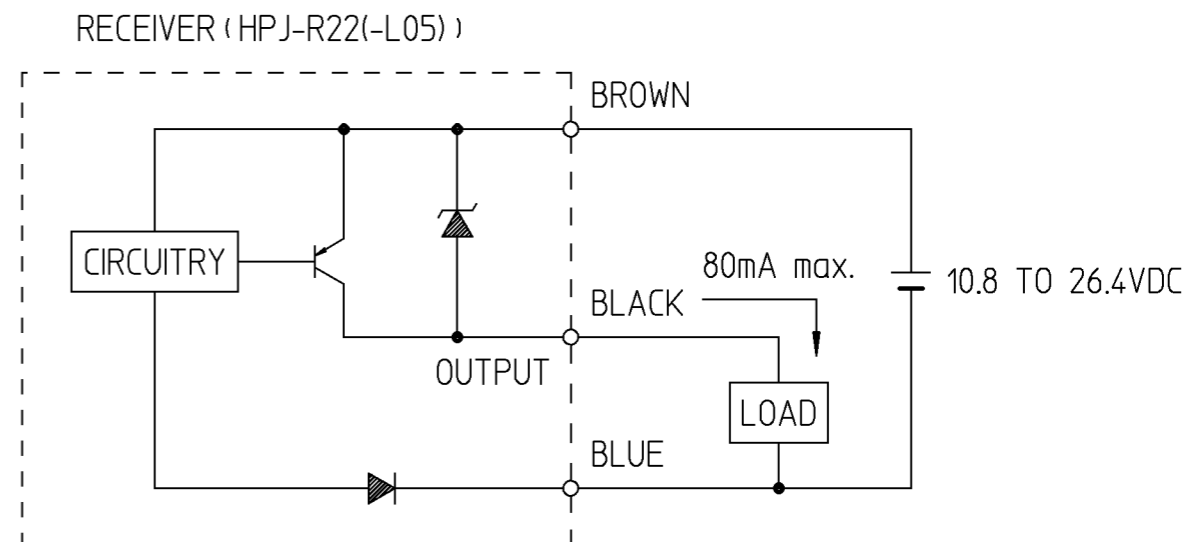
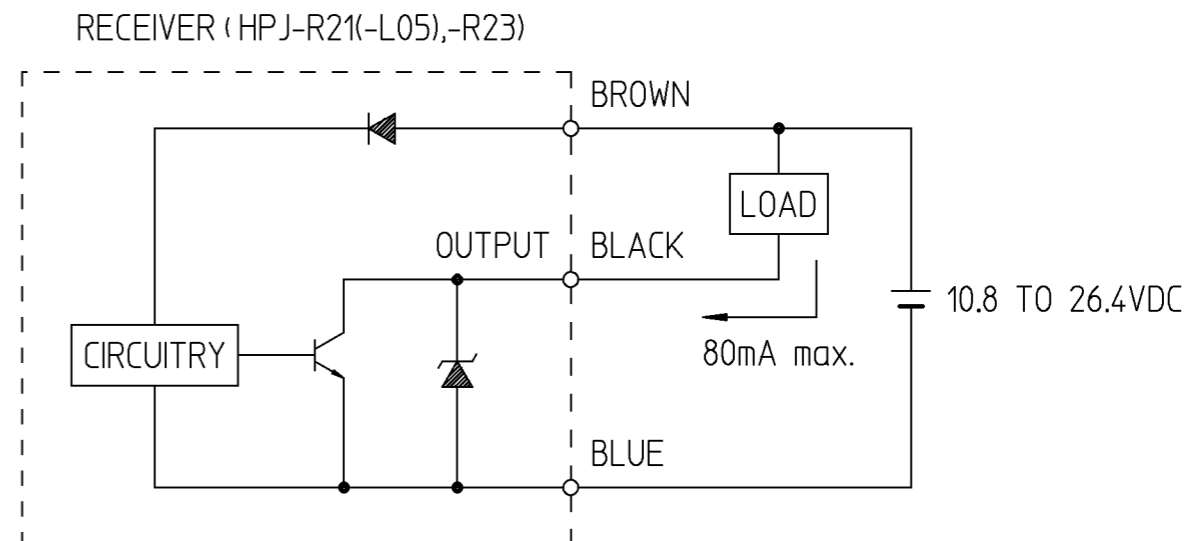
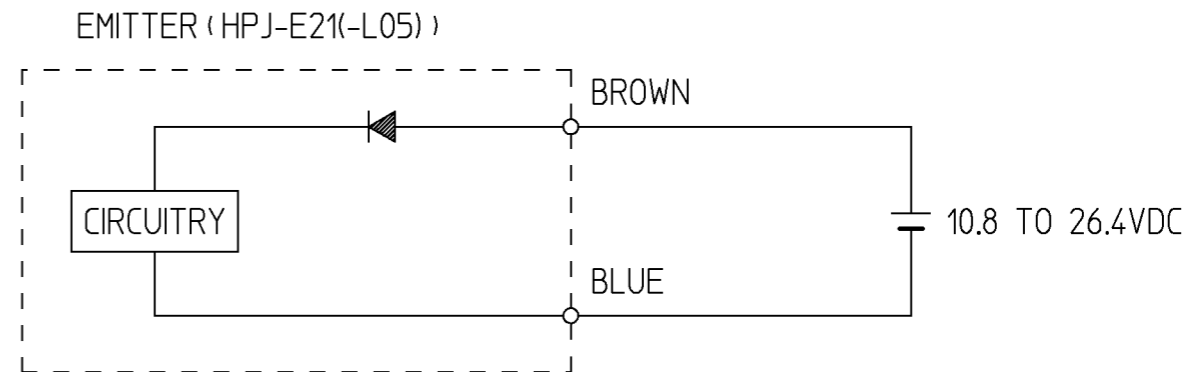
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2. SPECIFICATIONS

	SPECIFICATION		
CATALOG LISTING	SET:HPJ-T21(-L05) EMITTER:HPJ-E21(-L05) RECEIVER:HPJ-R21(-L05)	SET:HPJ-T22(-L05) EMITTER:HPJ-E21(-L05) RECEIVER:HPJ-R22(-L05)	SET:HPJ-T23 EMITTER:HPJ-E21 RECEIVER:HPJ-R23
SCANNING TYPE	THROUGH SCAN		
SUPPLY VOLTAGE	10.8 TO 26.4VDC (RIPPLE 10%max.)		
CURRENT CONSUMPTION	40mA max. (EMITTER:20mA max., RECEIVER:20mA max.)		
SCANNING DISTANCE	1.5m		
TARGET	OPAQUE MATERIALS MORE THAN 4mm DIA.		
OPERATING ANGLE	3 TO 30°		
OUTPUT MODE	OPEN COLLECTOR OF NPN TRANSISTOR	OPEN COLLECTOR OF PNP TRANSISTOR	OPEN COLLECTOR OF NPN TRANSISTOR
OPERATING MODE	DARK ON		LIGHT ON
OUTPUT	LOAD CURRENT : 80mA max. (RESISTIVE LOAD) SATURATION VOLTAGE : 1V max. (AT 80mA LOAD CURRENT) OUTPUT WITHSTAND VOLTAGE : 26.4V		
RESPONCE TIME	1ms max.		
FALSE PULSE (AFTER POWER ON)	1ms max.		
LIGHT SOURCE	INFRARED LED		
INDICATOR	RED 'ON' WITH OUTPUT ON		
AMBIENT LIGHT	INCANDESENT LIGHT : 3000lx max. SUNLIGHT : 10000lx max.		
OPERATING TEMPERATURE	-20 TO +50°C (WITHOUT CONDENSATION)		
OPERATING HUMIDITY	35 TO 85%RH (WITHOUT CONDENSATION)		
STORAGE TEMPERATURE	-40 TO +70°C (WITHOUT CONDENSATION)		
STORAGE HUMIDITY	35 TO 85%RH (WITHOUT CONDENSATION)		
INSULATION RESISTANCE	20MΩ min. (AT 500VDC)		
DIELECTORIC STRENGTH	1000VAC 50/60Hz 1MINUTE (BETWEEN LIVE PARTS AND ENCLOSURE)		
VIBRATION	10 TO 55Hz 1.5mm DOUBLE AMPLITUDE 2HOURS IN EACH DIRECTION OF X,Y,Z		
SHOCK	500m/s ² 3TIMES IN EACH DIRECTION OF X,Y,Z		
SEALING	IP40 (IEC STANDARD)		
WEIGHT	APPROX. 20g (ONLY SENSOR WITH CABLE 2m)		
PROTECTION	REVERSE POLARITY PROTECTION		
EMC	EN61000-4-2:1995	LEVEL 1	
	ENV50140:1993	LEVEL 3	
	ENV50204:1995	LEVEL 3	
	EN61000-4-4:1995	LEVEL 3	
	IEC255-5:1977	LEVEL 0	
	ENV50141:1993	LEVEL 3	

3. CONNECTION



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

作成DR. K.TSUTSUI 8-23-'95	検図CHK. T.NAKAO 9-5-'95	認可APPD. S.NONAKA 9-5-'95	日付DATE	尺度SCALE	記入のない公差TOL. UNLESS NOTED
形番 MODEL		HPJ SERIES			
名称 NAME		PHOTOELECTRIC SWICH			
図番 NO.		AD41451E		改番REV. 04	2/2

SP.NO.

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“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.