

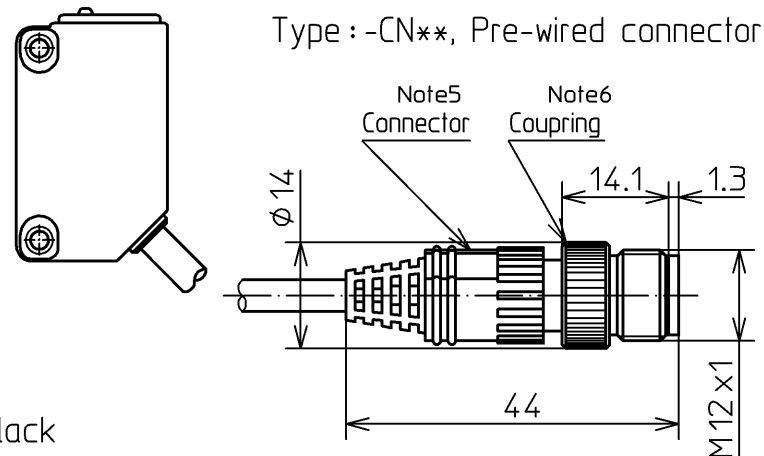
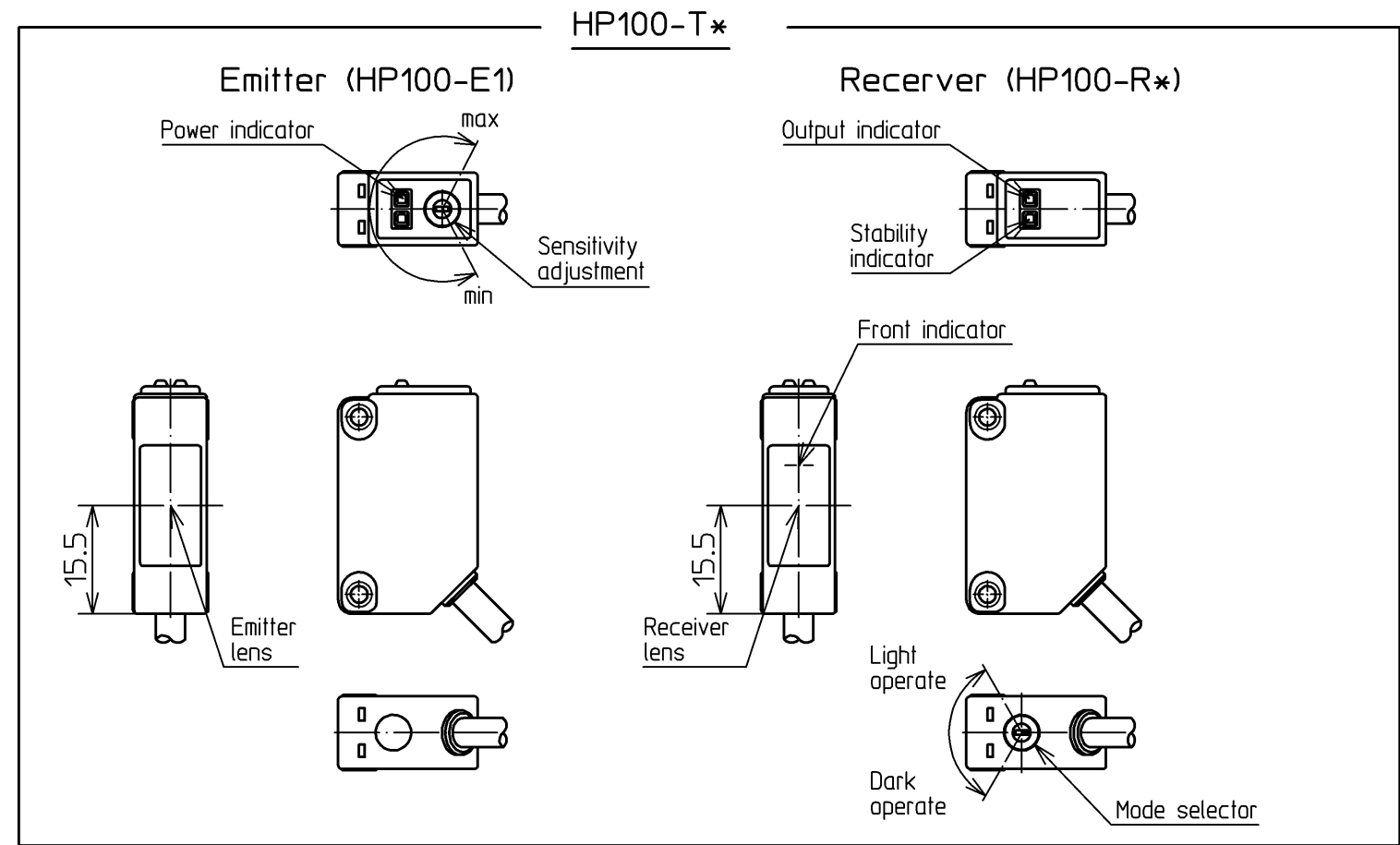
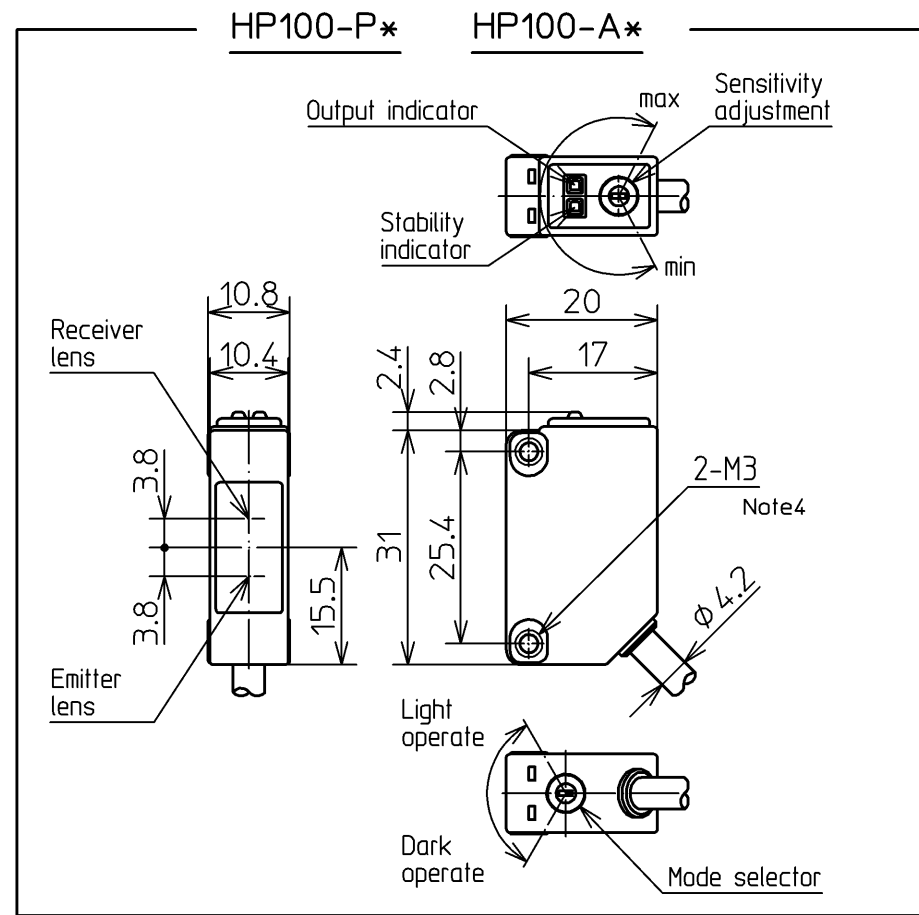
S.P. No.

Yamatake Corporation

製品仕様書  
SPECIFICATIONS

Polarized retroreflective scan	Diffuse scan	Through scan			Output
		Set	Emitter	Receiver	
HP100-P1	HP100-A1	HP100-T1	HP100-E1	HP100-R1	Open collector of NPN transistor
HP100-P2	HP100-A2	HP100-T2	HP100-E1	HP100-R2	Open collector of PNP transistor

DIMENSIONS



Cord length

Catalog listing	Cord length	Wiring type
HP100-**-LP5	500min	with cable
HP100-**-L05	5,000min	
HP100-**-CN03	300min	with pre-wired connector
HP100-**-CN05	500min	
HP100-**-CN1	1,000min	

- Note 1. MATERIAL (Photoelectric switch) Case: PBT resin/Black  
Cover: PMMA resin  
(Connector) Body: Polyester elastomer/Gray  
Pin: Brass Au plated  
Coupring: Brass Ni plated
2. Cord: Oil Resist 0.2mm<sup>2</sup>  
Color Gray (except through scan emitter)  
Black (through scan emitter only)
3. Lens diameter:  $\phi 7.3$
4. Please tighten the mounting screw at the torque less than 0.5N·m.  
Using the screw that enters the product more than 7mm.
5. Please use the "PA5" series (DC type) of our VA connector.
6. Screw the coupring by hand.(0.4 TO 0.6N·m)

≤3	≤6	≤30	≤120
±0.2	±0.3	±0.5	±0.8

作成DR. Y.Mochizuki April.28'05	形番 MODEL HP100 series	尺度 SCALE 1:1	記入のない公差 TOL. UNLESS NOTED REFER ABOVE TABLE FOR TOL. UNLESS NOTED.
検図CHK. I.Nakao May.30'05		名称 NAME Photoelectric switch	
認可APPD. S.Suzuki May.31'05	日付 DATE May.31'05	図番 NO. AD42920E	改番REV. 00/2

S.P. No.

Yamatake Corporation

製品仕様書  
SPECIFICATIONS

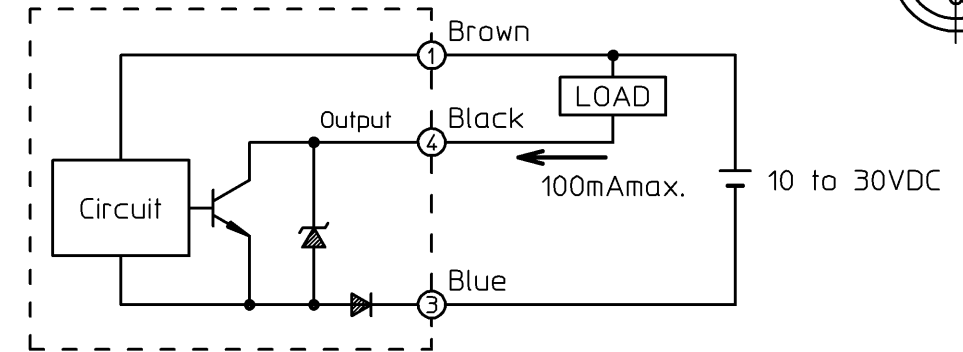
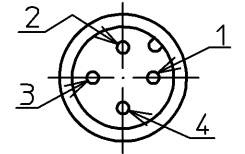
SPECIFICATIONS

Catalog listing	HP100-P1	HP100-P2	HP100-T1	HP100-T2	HP100-A1	HP100-A2
Scanning type	Polarized retroreflective scan		Through scan		Diffuse scan	
Supply voltage	10 to 30VDC (ripple 10% max.)					
Current consumption	20mA max.		30mA max. Emitter:20mA max. Receiver:10mA max.		20mA max.	
Scanning distance	5m (Reflector:FE-RR8)		15m		1m	
Target	Opaque materials more than $\phi 80$ (Reflector:FE-RR8)		Opaque materials more than $\phi 9$		White paper (KODAK Graycard 90%) 300X300mm	
Operating angle	Sensor : 0.5 to 10° / Reflector : 20° min.		2 to 20°			
Hysteresis			20% max. of scanning distance			
Operating mode	Convertible light operated / dark operated (with mode selector)					
Output mode	HP100-*1 : Open collector of NPN transistor (N-MOS FET is used for output device) HP100-*2 : Open collector of PNP transistor (P-MOS FET is used for output device)					
Output	Load current:100mA (resistive load),Output withstand voltage:30V,Saturation voltage:3V max. (at 100mA load current) Short circuit protection					
Response time	500 $\mu$ s max.					
Light source	Red LED			Infrared LED		
Indicator	except HP100-E1 : Orange 'ON' with output / Green 'ON' with atable light and stable dark HP100-E1 : Orange 'ON' with power on HP100-R* : Front indicator Red 'ON' with light receiving					
Ambient light	Incandescent light : 10,000lx max. / Sunlight : 40,000lx max.					
Operating temperature	-30 to +60°C (without condensation)					
Storage temperature	-40 to +70°C (without condensation)					
Humidity	35 to 85%RH (without condensation)					
Insulation resistance	20M $\Omega$ min. (at 500VDC)					
Dielectric strength	1000VAC 50/60Hz 1minute					
Vibration	10 to 55Hz 1.5mm double amplitude 2hours in each direction of X,Y,Z					
Shock	500m/s <sup>2</sup> 10times in each direction of X,Y,Z					
Sealing	IP67 (IEC standard)					
Weight	Approx.55g (only sensor with cable 2m)					
Protection	False pulse protection (8ms typ.) wrong wiring protection					

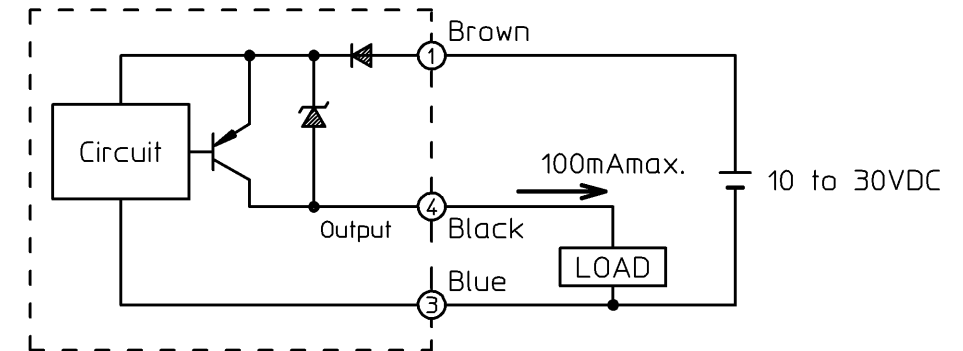
WIRING

NPN Type : Polarized retroreflective scan  
Through scan receiver  
Diffuse scan

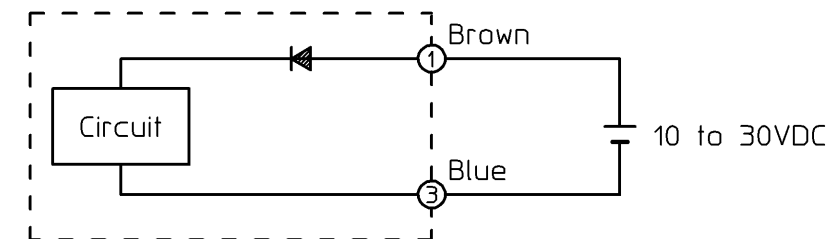
pre-wired connector  
pin layout



PNP Type : Polarized retroreflective scan  
Through scan receiver  
Diffuse scan



Through scan emitter



作成DR. Y.Machizuki April,28'05	尺度SCALE 1:1	記入のない公差 TOL. UNLESS NOTED REFER ABOVE TABLE FOR TOL. UNLESS NOTED.
検図CHK. T.Nakao May,30'05	形番 MODEL	HP100 series
認可APPD. S.Suzuki May,31'05	名称 NAME	Photoelectric switch
日付DATE May,31'05	図番 NO.	AD42920E
改番REV.	来歴 RECORD	日付 DATE
	担当 BY	検閲 APPD.
	改番REV.	00
		2/2

SP.NO.

**Yamatake Corporation**

製品仕様書  
**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.