Reflective sensors

KODENSHI

HS- 101S

HS- 101S are reflection sensors which aim at the human body detection such as ATM. HS- 101S has high resistance to ambient light by using modulated light. HS- 101S are installed with a screw and also can be connected very easily with 3 pin connector.
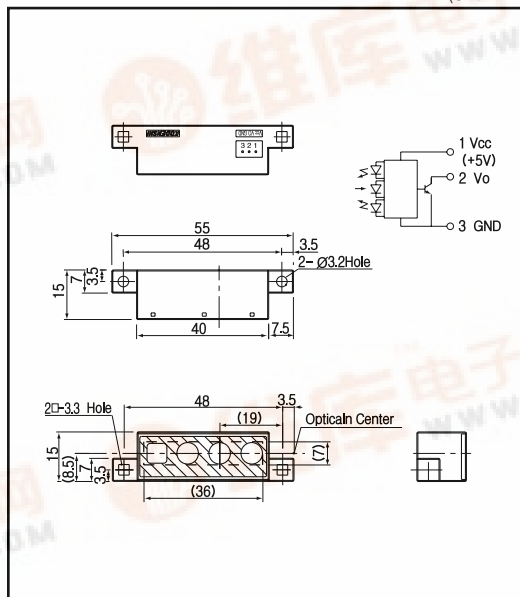
FEATURES
- Compact
- 3pin connector type
- With the reflection prevention seal

APPLICATIONS
- Human body detection for ATM etc.

DIMENSIONS   (Unit: mm)

1 Vcc (+5V)
2 Vo
3 GND

55
48
3.5
2- Ø3.2Hole
15
7
3.5
40
7.5

2□-3.3 Hole
48
3.5
(19)
Opticaln Center
15
(8.5)
7
3.5
(36)
(7)

MAXIMUM RATINGS
(Ta= 25)

Item	Symbol	Rating	Unit
Supply voltage	V_{cc}	5. 5	V
Output voltage [*1]	V_o	28	V
Low level output current [*2]	I_{OL}	30	mA
Operating temp. [*3*4]	Topr.	10 60	
Storage temp. [*3*4]	Tstg.	20 70	

*1. C- E voltage for output transistor
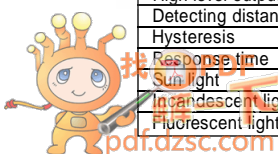*2. Collector current for output transistor
*3. No icebound or dew
*4. The connector shall be inserted or pulled out at normal temperature.
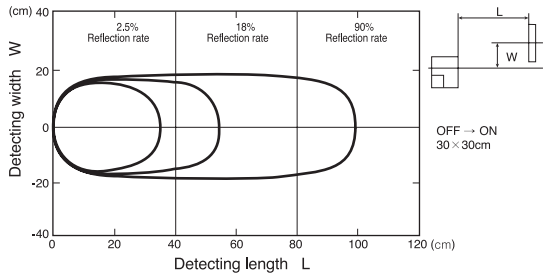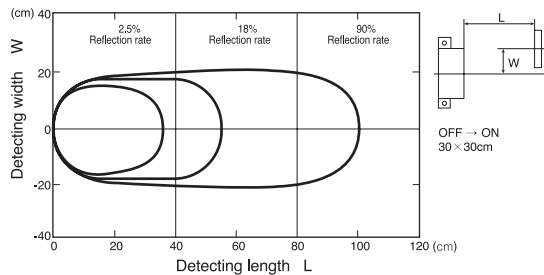
ELECTRO-OPTICAL CHARACTERISTICS
(Ta= 25)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Supply voltage	V_{CC}		4. 75	5	5. 25	V
Current consumption	I_{CC}			6. 5	12	mA
Low level output voltage	V_{OL}	detecting V_o= 5V, R_L= 1k			0. 2	V
High level output voltage	V_{OH}	non detecting V_o= 5V, R_L= 1k	4. 5			V
Detecting distance	L_{HL}	reflection rate 90%, OFF ON 30cm×30cm	50	100	150	cm
Hysteresis	E_{VLH}/E_{VHL}	reflection rate 90%, 30cm× 30cm		85		%
Response time	t	reflection rate 90%, L=50cm, 30cm×30cm		100	200	ms
Sun light	E_{VS}		10,000			lx
Incandescent light	E_{VT}	Luminous intensity at sensing area	3,000			lx
Fluorescent light	E_{VW}		3,000			lx

Reflective sensors

HS- 101S

Detection area characteristics (Vcc=5V, Ta=25 C)

(cm) 40

2.5%
Reflection rate

18%
Reflection rate

90%
Reflection rate

Detecting width   W

20

0

-20

-40

0   20   40   60   80   100   120 (cm)

Detecting length   L

OFF → ON
30×30cm

(cm) 40

2.5%
Reflection rate

18%
Reflection rate

90%
Reflection rate

Detecting width   W

20

0

-20

-40

0   20   40   60   80   100   120 (cm)

Detecting length   L

OFF → ON
30×30cm

Detection length / Ambient temp.chracteristics

Relative detecting length   L

(%)
125

100

75

50

-20   0   25   50   75   120 (℃)

Ambient temperature   Ta
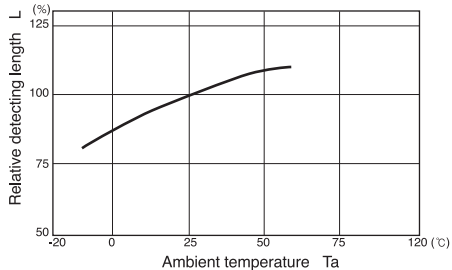
Reflection prevention seal is needed for installing a transparent panel to the front of HS-101.
Also, the panel should be adhered to HS-101.

Quality level of HS-101S is set up on the assumption that main application of
HS-101S is general electronic equipments, such as electric household products, O.A.
equipements and A.V equipments.