Click to go to Product Selector

Hydrogen Flame detector
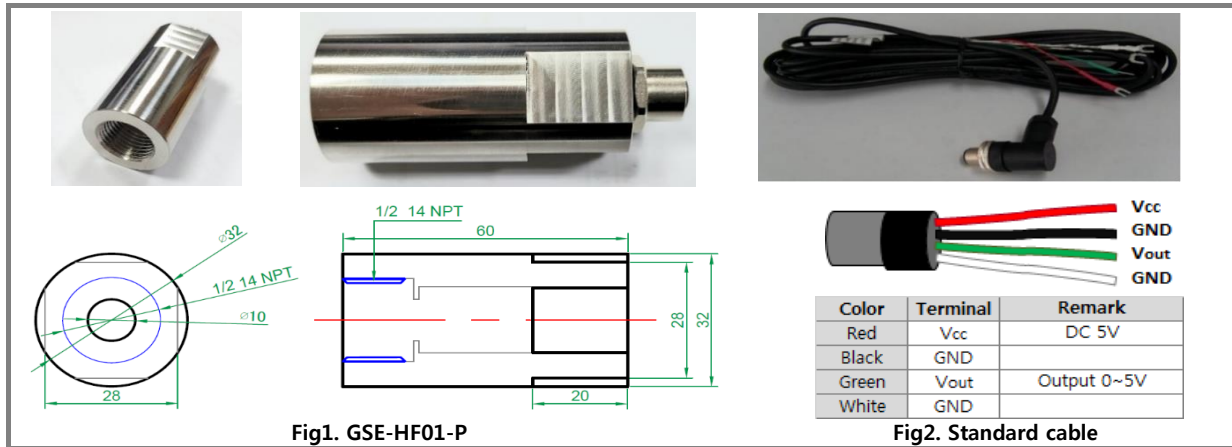
GSE-HF01-P

GENU SEN

Features

- Single Supply Voltage, 0-5V Voltage Output
- UV Power Measure, 310nm Monitoring for hydrogen flame detecting, Fast response
- Ready to install, no programming necessary

Applications

- Hydrogen flame High sensitive detecor (~310nm)
- Low light intesity Monitoring(~100$\mu W/cm^2$)
- burner monitoring
- Hydrogen flame plant monitoring

Color	Terminal	Remark
Red	Vcc	DC 5V
Black	GND	
Green	Vout	Output 0~5V
White	GND	

Fig1. GSE-HF01-P   **Fig2. Standard cable**

Case Dimensions

Thread/Length for Mounting	Diameter (㎜)	Window (㎜)	Wrench Size (㎜)	Length (㎜)	Weight (g)	Body (stainless steel)
1/2 14 NPT(female) / 20mm	32	12.7	26	60	200	SUS 316-L

Absolute Maximum Ratings

Parameter	Symbol	Value			Unit	Remark
		Min.	Typ.	Max.		
Operating Temperature	T_{op}	-30		85	℃	

Electro-Optical Characteristics (at 25 ℃)

Parameter		Symbol	Value			Unit	Remark
			Min.	Typ.	Max.		
Supply Voltage		V_{cc}		5		V	DC
			9		24		
Detection Range	GSE-HF01-P	λ	270		320	nm	
Output	Voltage	V_{out}	0		5	V	
Detection Power Range		P	0		100	$\mu W/cm^2$	*Standard

1㎽/㎠ more possible, Conference upon request

Responsivity Curve
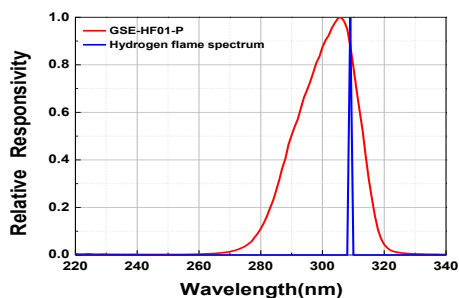
Hydrogen flame power along Output Voltage
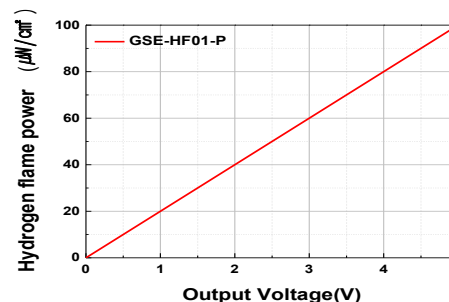
Hydrogen flame Power ($\mu W/cm^2$) = Vout (V) × 20

Electro Optical Components, Inc.

5464 Skylane Boulevard, Suite D, Santa Rosa, CA 95403
Toll Free: 855-EOC-6300
www.eoc-inc.com | info@eoc-inc.com

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Technical Note 1/5

GSE-HF01-P

Application Guide lines for GSE-HF01-P

1. GSE-HF01-P *(Features)*

- *310nm Monitoring for hydrogen flame detecting - Custom products can be supplied*

- *Output type : DC 0~5V Output*

- *Ready to install, no programming necessary*

2. Applications

- *Hydrogen flame High sensitive detecor (~310nm)*

- *Low light intesity Monitoring(~100uW/cm2) - burner monitoring*

- *Hydrogen flame plant monitoring*

3. Features and advantages - *High accuracy*

- *Custom Product supply available to meet customer orders*

- *Calibration Service offers tailored to customers requests - Voltage of analog type 0~5V can provide*

- *Excellent corrosion resistance SUS316-L Materia*

- *Reliable implementation at an affordable price*

4. *Point that must be taken into account in product selection*

- *Consider the thread type of Socket*

- *Select maximum detection power range (Std.100uW/cm2)*

- *Check the operating voltage (5V or 24V)*

- *The chosen shape and length of the Connector*
- *Length 5m Connection default and possible adjustment according to customer's request (Max.15m)*

Image	Name	Fixing Hole Specifications	Feature
	GSE-HF01-P	1/2 14 NPT (female), 20mm	*Hydrogen flame detector*

• *Connector type*
- *Install by adopting a form suitable for the installation Environment. (Free option)*


'L' Angled connector

'I' shaped connector

5. GSE-HF01-P

Precautions Sensor probe design in the Chamber
- *With more than 85 C the temperature of the product's installation conditions does not exceed in an environment should be used*
- *Check the thread sizes and Sensor Probe Socket type of installation you want*

GSE-HF01-P

6. *roduct Installation examples*

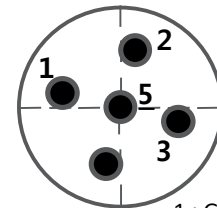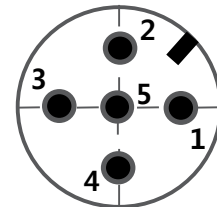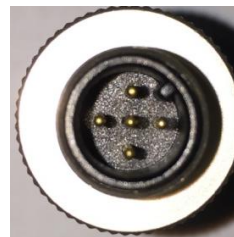GSE-HF01-P

1/2 14 NPT
(female),
20mm

burner pipe
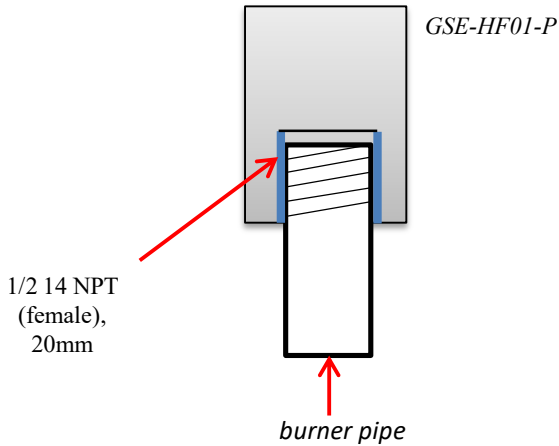
1) *Check the pipe and probe thread specifications to be installed.*
2) *Connect Check the wiring connection terminals If you connect wrong polarity it will cause the module damaged or broken*

1) *After installing the sensor, check that there is no abnormality.*

2) *Insert Sensor probe to determine the direction of the Connector.*

3) *To connect the wiring, check the connection terminals.*

4) *black lines and white lines (GND) is connected to the Sensor probe interior.*

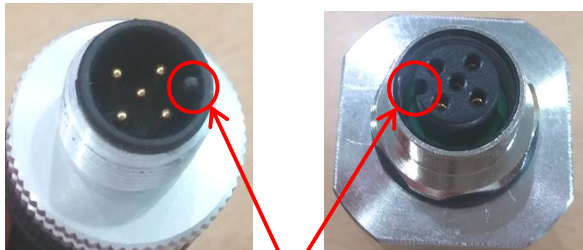| Color	Terminals	Remark
Red	VCC	(5V or 24V)
Black	GND	
Green	Vout	(0~5V)
White	GND	
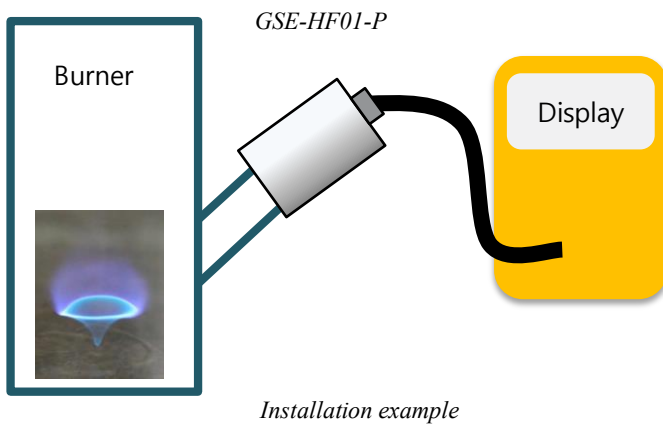
8. *Connector Pin number*

1 : GND(Black)
3 : VCC(Red)
5 : Vout or Iout(Green)

7. *Wiring connections*

Insert direction

9. *Calibration Period*
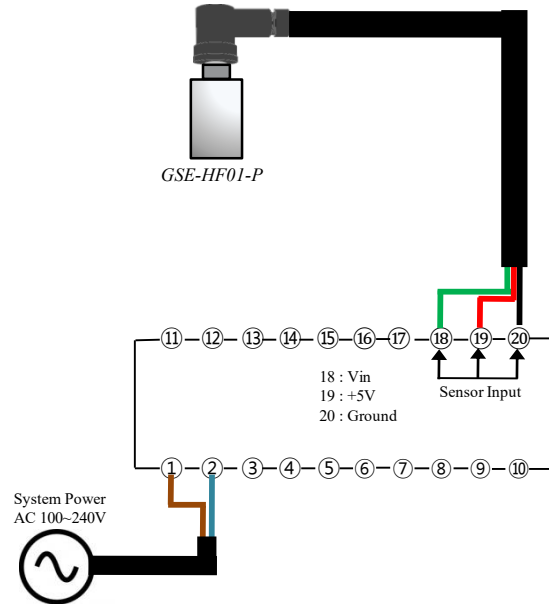
- *Calibration recommended period is two years.*

Burner

Display

Installation example

GSE-HF01-P

Cnections

Power Supply

RED : Vcc 5V or9~24V
Black : Gnd
Green : Vout
White: Gnd

GSE-HF01-P

PLC or Multimeter
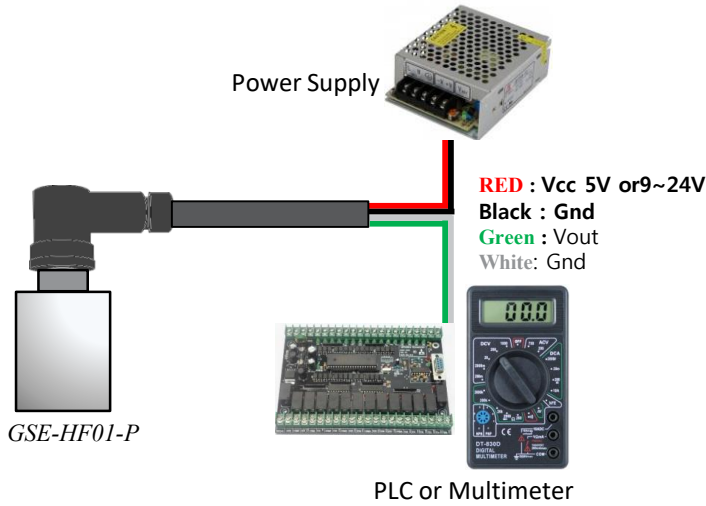
- *If you connect wrong polarity it will cause the module damaged or broken.*
  - **GUVD-MG02S** *(Connections)*

• **GUVD-MG05** *(Connections)*
 - GUVD-MG05S *(Diagrams)*

GSE-HF01-P

⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳

18 : Vin
19 : +5V   Sensor Input
20 : Ground

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

System Power
AC 100~240V

1) Connect AC power to #1 and # 2

2) *Connect Green wire to #18(Vout), Red wire to #19(+5V) , Black wire to #20 (GND)*

GSE-HF01-P

⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳

Sensor Power
DC 20V

(System GND)   Sensor Output
                     Max: DC 5V
        _   +

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

System Power
AC 100~240V
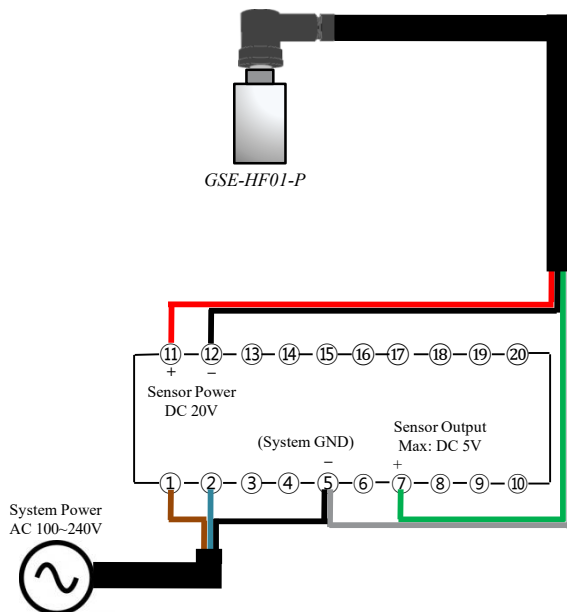
1) *Connect AC power to #1 and #2, and connect GND wire #5*

2) *Connect red wire to #11(VCC) , Black wire to #12(GND) ,*

   White wire to #5(GND) , Green wire to #7(Vout)

GSE-HF01-P

10. *Relay operation method*

If the abnormality is detected in the water treatment system,
It is necessary to generate an alarm.
In this case our indicator have relay alarm function Our indicator have relay
 alarm function (Dry contact type
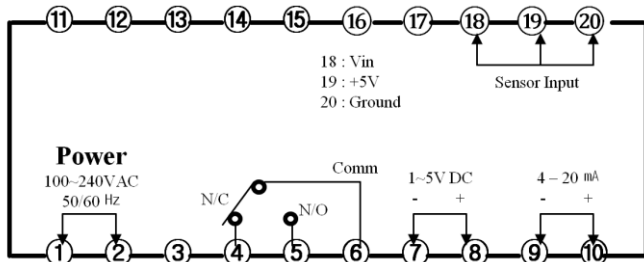
- Connect Ac power terminal #1 and #2 and connect sensor cable #18 (
 Green wire) , #19 (Red wire) , #20 (Black wire)

 Relay output terminal is (#4~#6), Voltage output terminal
 is #7 and #8 , Current output is #9 and #10.
 * Please turn off the indicator before connect output cables.

If you want to use relay output, Please use with #6 and #5.
- (N/O : Normal open in normal case terminal status is open
but if the signal is ON, the terminal will be closed. Or #6 and #4 N/C :
Normal Close , in normal case the terminal status is close, but if the
signal is ON, the terminal will be open)

In normal status the relay will contact #6 and #4 and
In abnormal status the relay will close #6 and #5.

If you use large capacity ballast, please use capacitor
 (22pF/220kV) as below.

Voltage output (DC 1~5V #7 and # 8) , and Current output
(4 ~ 20mA , #9 and10) will operate based on RP(%)power

 If RP power(%) is 0% , Voltage output will be DC 1V
 Current output will be 4mA.

 If RP power(%) is 100%, Voltage output will be DC 5V
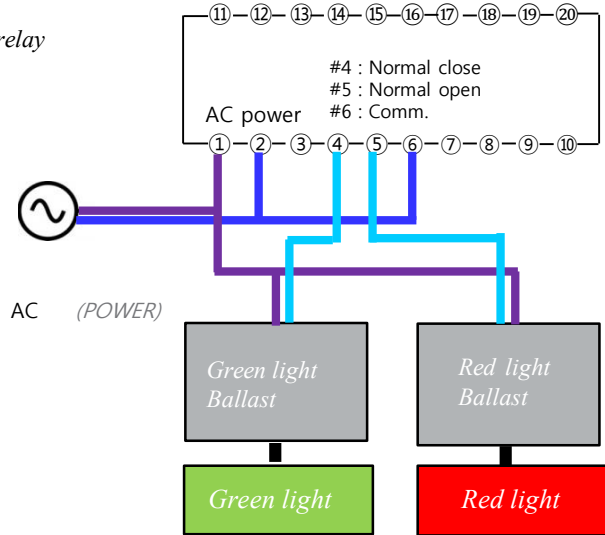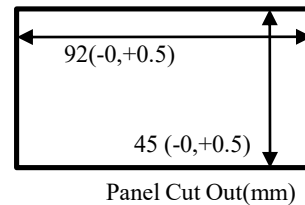 Current output will be 20mA

Fig. *Wiring diagram of Green light and Red light*

14. Panel cutting size
 - GUVD-MG02S, GUVD-MG05S have same panel cutting size

92(-0,+0.5)

45 (-0,+0.5)

Panel Cut Out(mm)

10. *Checks in when the amount of light output is not out*

1) *Make sure that wiring is properly wired*

2) *Supply voltage (5V or 24V) Check if supply is being properly*

3) *Check lighting of the light source (UV lamp)*

4) *Ensure that the connectors are not separated*

5) *Ensure that the GSE-HF01-P is installed correctly*

 - No dirt or contamination on the Window of the UV Sensor window

 - If the irradiation amount is not enough

 - Detection Power range is set too high compared to the amount of irradiation

ex) *The maximum measurement range is 1,000mW/cm2, and when the amount of irradiation 5mW/cm2 less*

12. *A/S request in case of product failure*

 1) *Should any failure is found in product, please call the sales company or customer center for A/S.*

 2) *Product warranty period is 1 year from the date of As of the shipping date with no charge. However, failure which caused by user's misuse or carelessness within warrant period or any failure after the warrant period shall be chargeable for it's A/S.*

3) *Product inquiry and on-line customer service :*

 Tel : 042-862-3982, Fax : 042-862-2982
 E-mail : uvsensor@geni-uv.com
 Web site : http://www.geni-uv.com

11. *Product Handling Precautions*

- Take appropriate measures to avoid contact with electrical connections. If not, there is a risk of electric shock.

- When you install the product , Turn off the Power source