

GAS DETECTOR HEAD

GD-81D SPECIFICATION

Model	GD-81D
Detection principle (Sensor)	Catalytic combustion method (NCF, NCU) / Semiconductor method (SGF, SGU) / Hot-wire semiconductor method (SHF, SHU) / Electrochemical method (ESF, ESU ^{*1}) / Galvanic cell method (OSU) / Non-dispersive infrared method (IRF, IRU) / Pyrolysis-particle method (SSU) ^{*2}
Detection target gas	Combustible gases / Toxic gases / Oxygen / Carbon dioxide etc.
Concentration display	Full-dot display
Detection method	Pump suction type
Suction flow rate	Approx. 0.5 L/min
Power supply indication	POWER lamp lit (green)
Display items	Gas name display, flow rate display, mode display, pyrolyzer connection display ^{*2}
Gas alarm type ^{*3}	Two-step alarm (H-HH) / Oxygen (ESU) sensor: Two-step alarm (L-LL) / Oxygen (ESF, OSU) sensor: Two-step alarm (L-LL / L-H / H-HH)
Gas alarm indication	First alarm: ALM1 lamp lit (red), Second alarm: ALM2 lamp lit (red)
Gas alarm pattern ^{*3}	Non-latching / latching
Fault alarm, self-diagnosis	System error, sensor error, flow error, pyrolyzer error ^{*2}
Fault alarm indication	FAULT lamp lit (yellow), information display
Fault alarm pattern ^{*3}	Non-latching / latching
Alarm contact ^{*3} (For each ALM1, ALM2, Fault)	Dry N.O. Contact: Closes on Alarm (Relay normally de-energized). Dry N.C. Contact: Opens on Alarm (Relay normally de-energized). Dry N.C. Contact: Opens on Alarm (Relay normally energized). Dry N.O. Contact: Closes on Alarm (Relay normally energized).
Contact capacity	24 V DC, 0.5 A (resistance load)
Contact cable	Cable 1.25 mm ² (AWG16), maximum 6 cores
Transmission method	3-wire analog transmission (Common for power and signal) / 2-wire analog transmission
Transmission cable	Shielded cable 1.25 mm ² (AWG16), 3 cores / 2 cores
Power supply	24 V DC $\pm$ 10 %
Power supply cable	Cable 1.25 mm ² (AWG16), 2 cores (Not required for 3-wire analog transmission.)
Power consumption	Refer to the table on the next page.
Tube connecting port	One-touch quick connect coupler, PTFE tube O.D.6 $\times$ I.D.4 mm (1/4 $\times$ 1/8 in) / (1/4 $\times$ 3/16 in)
Functions	White backlight, alarm delay, suppression, zero follower, sensitivity correction, flow control, adjustment history, alarm trend history, event history
Initial clear	Approx. 25 seconds
Operating temperature range ^{*4}	-10 $^{\circ}$ C to +40 $^{\circ}$ C (14 $^{\circ}$ F to 104 $^{\circ}$ F) (no sudden changes)
Operating humidity range ^{*4}	0 to 95 %RH (no condensation)
Mounting type	Wall-mounting type
Dimensions (excluding projections)	Approx. 70 (W) $\times$ 120 (H) $\times$ 145 (D) mm (Approx. 2.76 $\times$ 4.72 $\times$ 5.71 in)
Weight	Approx. 0.8 kg (Approx. 1.76 lb)
Color	Main unit: Black, Front door: White

^{*1} For certain gas types, a pyrolyzer unit (PLU-80) is used.

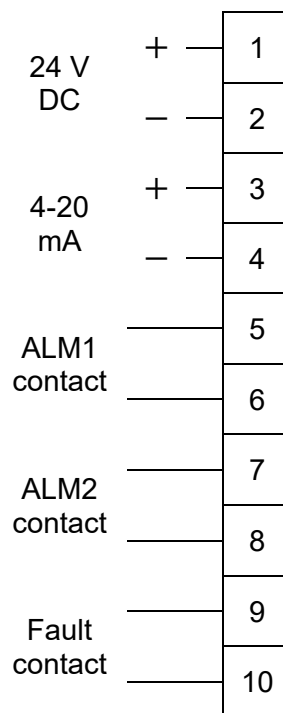
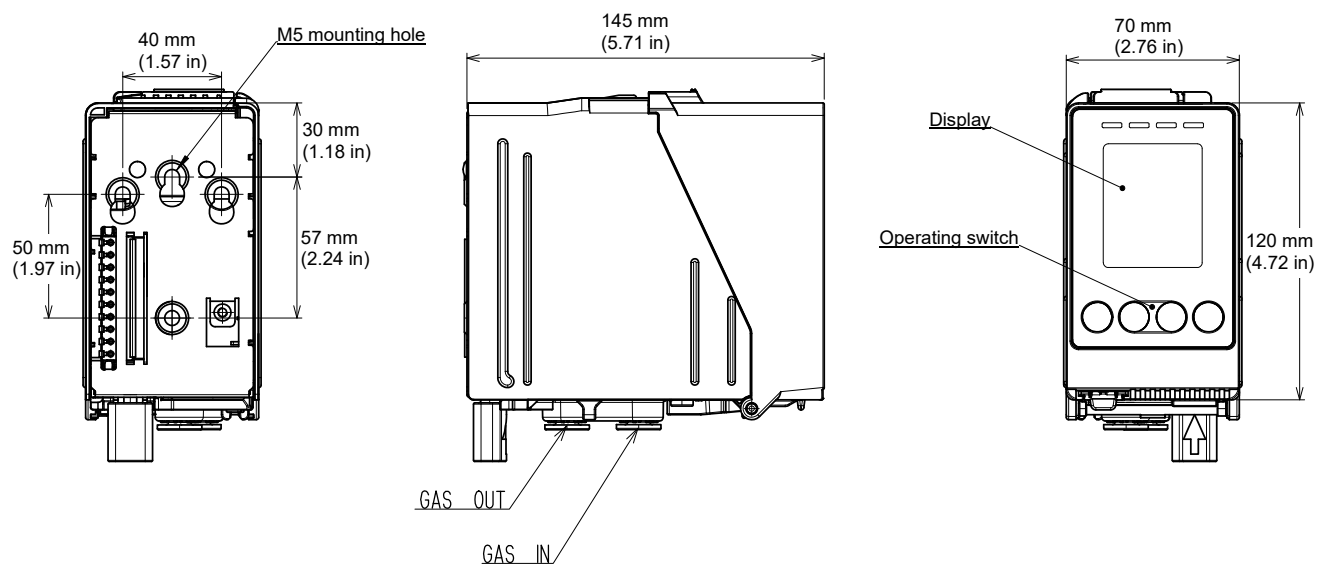
^{*2} With the pyrolyzer unit (PLU-80) in use

^{*3} Please specify your request when ordering.

^{*4} Depend on the sensor used

Power consumption

Sensor	TYP(W)	MAX(W)
NCF	2.5	5.0
NCU	3.0	5.5
SGF	2.5	5.0
SGU	2.5	5.0
SHF	2.0	4.5
SHU	2.5	5.0
ESF	1.5	4.0
ESU	1.5	4.0
OSU	1.5	4.0
IRF	2.5	5.0
IRU	2.5	5.0
SSU	1.5	4.0

Terminal DrawingsOutline Drawings

* The RJ-45 connector for Ethernet cable connection is located on the bottom of the unit.

GAS DETECTOR HEAD

GD-81D-ETD SPECIFICATION

Model	GD-81D-ETD
Detection principle (Sensor)	Catalytic combustion method (NCF, NCU) / Semiconductor method (SGF, SGU) / Hot-wire semiconductor method (SHF, SHU) / Electrochemical method (ESF, ESU ^{*1} , M Sensor) / Galvanic cell method (OSU) / Non-dispersive infrared method (IRF, IRU) / Pyrolysis-particle method (SSU) ^{*2}
Detection target gas	Combustible gases / Toxic gases / Oxygen / Carbon dioxide etc.
Concentration display	Full-dot display
Detection method	Pump suction type
Suction flow rate	Approx. 0.5 L/min
Power supply indication	POWER lamp lit (green)
Display items	Gas name display, flow rate display, mode display, communication status display, pyrolyzer connection display ^{*2}
Gas alarm type ^{*3}	Two-step alarm (H-HH) / Oxygen (ESU) sensor: Two-step alarm (L-LL) / Oxygen (ESF, OSU) sensor: Two-step alarm (L-LL / L-H / H-HH)
Gas alarm indication	First alarm: ALM1 lamp lit (red), Second alarm: ALM2 lamp lit (red)
Gas alarm pattern ^{*3}	Non-latching / latching
Fault alarm, self-diagnosis	System error, sensor error, flow error, communication error, pyrolyzer error ^{*2}
Fault alarm indication	FAULT lamp lit (yellow), information display
Fault alarm pattern ^{*3}	Non-latching / latching
Alarm contact ^{*3 *4} (For each ALM1, ALM2, Fault)	Dry N.O. Contact: Closes on Alarm (Relay normally de-energized). Dry N.C. Contact: Opens on Alarm (Relay normally de-energized). Dry N.C. Contact: Opens on Alarm (Relay normally energized). Dry N.O. Contact: Closes on Alarm (Relay normally energized).
Contact capacity	24 V DC, 0.5 A (resistance load)
Contact cable	Cable 1.25 mm ² (AWG16), maximum 6 cores
Transmission method	Ethernet (10BASE-T / 100BASE-TX)
Transmission cable	Category 5 or better Ethernet cable
Power supply	24 V DC $\pm$ 10 % / PoE connection
Power supply cable	Cable 1.25 mm ² (AWG16), 2 cores (Shared with digital transmission cable when PoE connection is used)
Power consumption	Refer to the table on the next page.
Tube connecting port	One-touch quick connect coupler, PTFE tube O.D.6 × I.D.4 mm (1/4 × 1/8 in) / (1/4 × 3/16 in)
Functions	White backlight, alarm delay, suppression, zero follower, sensitivity correction, flow control, adjustment history, alarm trend history, event history
Initial clear	Approx. 25 seconds
Operating temperature range ^{*5}	-10 °C to +40 °C (14 °F to 104 °F) (no sudden changes)
Operating humidity range ^{*5}	0 to 95 %RH (no condensation)
Mounting type	Wall-mounting type
Dimensions (excluding projections)	Approx. 70 (W) × 120 (H) × 145 (D) mm (Approx. 2.76 × 4.72 × 5.71 in)
Weight	Approx. 0.8 kg (Approx. 1.76 lb)
Color	Main unit: Black, Front door: White

^{*1} For certain gas types, a pyrolyzer unit (PLU-80) is used.

^{*2} With the pyrolyzer unit (PLU-80) in use

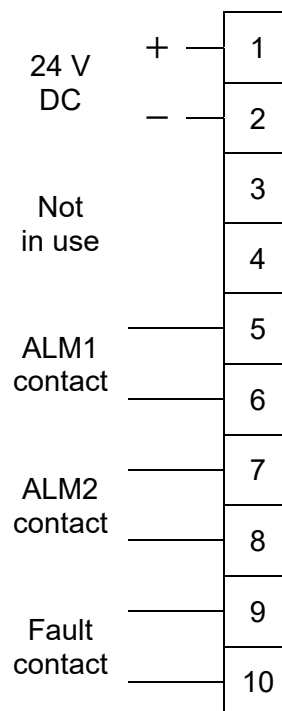
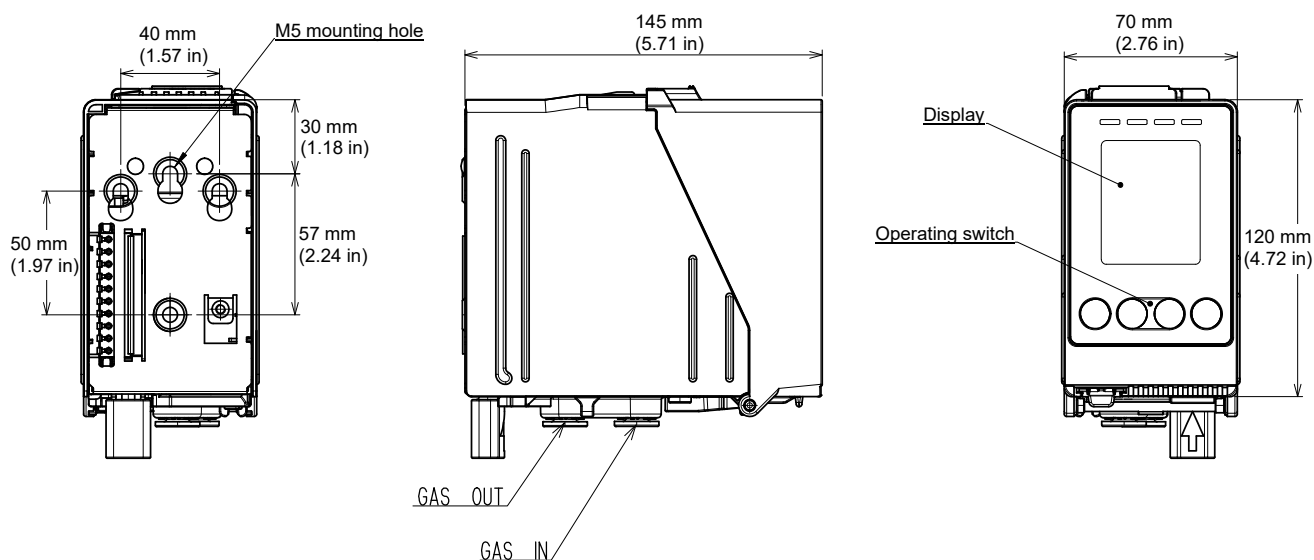
^{*3} Please specify your request when ordering.

^{*4} When the M sensor is installed, the contact will operate if either of the two gases triggers a gas alarm or a fault alarm.

^{*5} Depend on the sensor used

Power consumption

Power supply	Sensor	TYP(W)	MAX(W)
24 V DC	NCF	3.5	5.5
	NCU	4.0	6.0
	SGF	3.5	5.5
	SGU	3.5	5.5
	SHF	3.0	5.0
	SHU	3.5	5.5
	ESF	2.5	4.5
	ESU	2.5	4.5
	M sensor	3.0	5.0
	OSU	2.5	4.5
	IRF	3.5	5.5
	IRU	3.5	5.5
	SSU	2.5	4.5
PoE	NCF	4.5	7.5
	NCU	5.0	8.0
	SGF	4.5	7.5
	SGU	4.5	7.5
	SHF	4.0	7.0
	SHU	4.5	7.5
	ESF	3.5	6.5
	ESU	3.5	6.5
	M sensor	4.0	7.0
	OSU	3.5	6.5
	IRF	4.5	7.5
	IRU	4.5	7.5
	SSU	3.5	6.5

Terminal DrawingsOutline Drawings

* The RJ-45 connector for Ethernet cable connection is located on the bottom of the unit.