

## Chapter 2. SPECIFICATIONS

### 2.1 General Specifications

Table 2.1 shows the common specifications of GLOFA GM series.

No	Items	Specifications	Reference Specification				
1	Operating ambient temperature	0 ~ 55 °C					
2	Storage ambient temperature	-25 ~ 70 °C					
3	Operating ambient humidity	5 ~ 95%RH, non-condensing					
4	Storage ambient humidity	5 ~ 95%RH, non-condensing					
5	Vibration	Occasional vibration				10 times in each direction for X, Y, Z	IEC 1131-2
		Frequency	Acceleration	Amplitude	Sweep count		
		10 ≤ f < 57 Hz	-	0.075mm			
		57 ≤ f ≤ 150 Hz	9.8 m/s <sup>2</sup> {1G}	-			
		Continuous vibration					
		Frequency	Acceleration	Amplitude			
		10 ≤ f < 57 Hz	-	0.035mm			
57 ≤ f ≤ 150 Hz	4.9 m/s <sup>2</sup> {0.5G}	-					
6	Shocks	<ul style="list-style-type: none"> <li>Maximum shock acceleration: 147 m/s<sup>2</sup> {15G}</li> <li>Duration time :11ms</li> <li>Pulse wave: half sine wave pulse (3 times in each of X, Y and Z directions )</li> </ul>	IEC 1131-2				
7	Noise immunity	Square wave impulse noise	± 1,500 V			LGIS Standard	
		Electrostatic discharge	Voltage :4kV(contact discharge)			IEC 1131-2 IEC 801-2	
		Radiated electromagnetic field	27 to 500 MHz, 10V/m			IEC 1131-2 IEC 801-3	
		Fast transient & burst noise	Severity Level	All power modules	Digital I/Os(Ue ≥ 24 V)	Digital I/Os (Ue < 24 V) Analog/Os communication I/Os	IEC 1131-2 IEC 801-4
Voltage	2kV		1kV	0.25kV			
8	Operating atmosphere	Free from corrosive gases and excessive dust					
9	Altitude for use	Up to 2,000m					
10	Pollution degree	2 or lower					
11	Cooling method	Self-cooling					

[Table 2.1] General Specifications

#### REMARK

- IEC(International Electrotechnical Commission)  
:The international civilian organization which produces standards for electrical and electronics industry..
- Pollution degree  
:It indicates a standard of operating ambient pollution level.  
The pollution degree 2 means the condition in which only non conductive pollution occurs. Occasionally, however, a temporary conductivity caused by condensation shall be expected.

## 2.2 Performance Specifications

Table 2.2 shows performance specification of D/A conversion module.

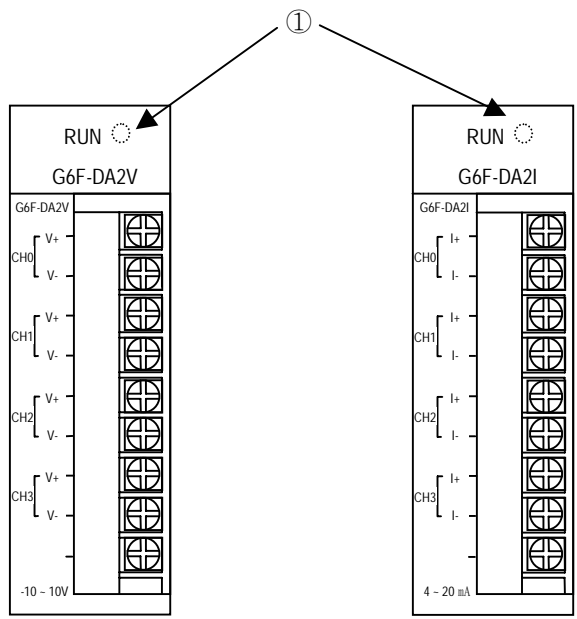
Items	Specifications		
	G6F-DA2I	G6F-DA2V	
Digital input	16bit(data part :12bits)signed binary		
Analog output	DC 4 ~ 20mA (External load resistance less than 510 $\Omega$ )	-10 ~ 10 VDC (External load resistance :2K $\Omega$ ~ 1M $\Omega$ )	
Max. resolution	4 $\mu$ A(1/4000)	5 mV(1/4000)	
Accuracy	$\pm 0.5\%$ [Full Scale]		
Max. conversion speed (ms/channel)	10ms/ 4 channels		
Max. absolute input	DC 24mA	15 VDC	
Analog output points	4 channels/1module		
Isolation	Between input terminals and the PLC: Photo-coupler isolation		
Terminals connected consumption	9-point terminal block		
*1 Internal Current Consumption	DC+5V	40mA	40mA
	DC+15V	120mA	80mA
	DC-15V	25mA	60mA
Weight	200 g	200 g	

[Table 2.2] Performance Specifications

**2.3 Names of Parts and Functions**

Names of parts and functions are shown as below.

G6F-DA2V / G6F-DA2I



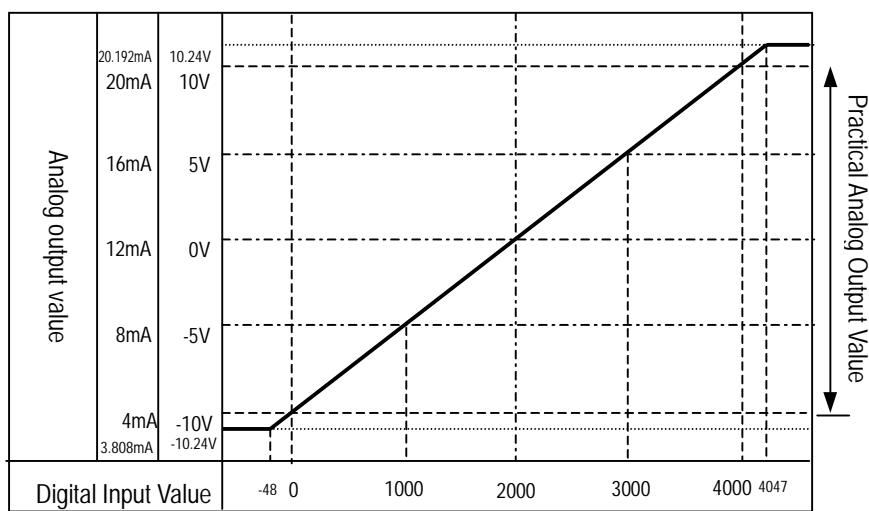
No.	Descriptions
①	<p>RUN LED</p> <p>Indicates the operating condition of the D/A conversion module</p> <ul style="list-style-type: none"> <li>* On: Normal operation</li> <li>* Off : 5 VDC power off or D/A conversion module fault</li> </ul>

**2.4 Input/Output Conversion Characteristics**

I/O characteristics are displayed as a slant of the line connecting offset value and gain value in converting an digital signal from the external PLC into an analog signal(voltage or current).

Offset value and Gain value of D/A converter are fixed and should not be modified.

Input/ output conversion characteristic example is shown on Fig 2.1



[Fig 2.1] Input/ output conversion characteristic example

G6F-DA2V : Digital input value of 1 is equal to 5mV.

G6F-DA2I : Digital Input value of 1 is equal to 4  $\mu$ A.

**2.5 D/A Conversion Speed**

Conversion speed indicates the period of time between D/A conversion processing and changing analog value to set value.

Conversion speed of each D/A conversion module is like value in the table 2.2

Products	Conversion speed
G6F-DA2I	10 ms/ All channel
G6F-DA2V	10 ms/ All channel

[Table 2.3] Conversion Speed

That is, conversion speed of each D/A conversion module is constant regardless of used channels.