



INPUT



OUTPUT

**Features**

- Photo isolation
- I/O modules for interface between CPU and external input devices or loads.
- 2500V dielectric strength.
- Printed circuit board mount
- RoHS compliant



File No.: CQC03001006582

## SPECIFICATIONS (TA = 25°C)

### INPUT MODULE

Item		AC Input module		DC Input module	
		110VAC Type	240VAC Type	12VDC Type	24VDC Type
INPUT side	Input voltage range	80 to 132VAC	160 to 265VAC	9.6 to 28.8VDC	
	Rating input current	7mA		5mA (at 14.4VDC)	10mA (at 28.8VDC)
	Power frequency range	47 to 63Hz		--	--
	Must operate voltage	80VAC	160VAC	9.6VDC	
	Must release voltage	30VAC	40VAC	5.0VDC	
OUTPUT side	DC supply voltage(V <sub>dd</sub> )	4 to 6VDC			
	Max. output current	4mA (at 5VDC)			
	Output logic	Operate with negative true logic(active low)			
Max. turn-on time		25ms		10ms	
Max. turn-off time		30ms		10ms	
Insulation resistance		1000MΩ (at 500VDC)			
Dielectric strength (input to output)		2500VAC, 50Hz/60Hz, 1min			
Operating temperature range		-30°C to 80 °C			
Storage temperature range		-30°C to 100 °C			
Case color		Yellow		White	
Unit weight		Approx. 3.5g			

### PRECAUTIONS

1. Soldering must be completed within 10 seconds at 260 °C or less or within 5 seconds at 350 °C or less.
2. To output module, the SSR case serves to dissipate heat. Install the relays so that they are adequately ventilated. If poor ventilation is unavoidable, reduce the load current by half.
3. When using the HFS8(output module) series for an AC load with a peak voltage of more than 450V, connect the load terminals of the relay to an inrush absorber (varistor) . The recommended varistor voltage, 440 to 470V.



## OUTPUT MODULE

	Item	AC Output module	DC Output module	Remarks
INPUT side	Operate voltage range	±20% of nominal voltage		
	Must operate voltage	80% of nominal voltage		
	Must release voltage	1VDC		
	Max. input current	25mA (at 120% of Nominal Voltage)		
OUTPUT side	Load voltage range	75 to 280VAC	3 to 30VDC	
	Max. load current	1.0A	1.0A	see CHARACTERISTIC DATA
	Max. surge current (10ms)	5A	2A	
	Max. off-State leakage current	0.1mA	0.1mA	
	Max.on-state voltage drop	1.5Vrms	1.5Vrms	at max. load current
	Max. turn-on time	1ms		
	Max. turn-off time	1/2 cycle+1ms	1ms	
	Insulation resistance	1000MΩ (at 500VDC)		for input-output
	Dielectric strength	2500VAC, 50Hz/60Hz, 1min		
	Operating temperature range	-30°C to 80 °C		
	Storage temperature range	-30°C to 100 °C		
	Case color	Black	Red	
	Unit weight	Approx. 3.5g		

## ORDERING INFORMATION

Input module AC type	<b>HFS8 /</b>	<b>110</b>	<b>A-</b>	<b>05</b>	<b>D</b>	<b>(XXX)</b>
Type						
Input voltage	<b>110: 110V 240: 240V</b>					
Input voltage form	<b>A: AC</b>					
Output voltage	<b>05: 5V</b>					
Output voltage form	<b>D: DC</b>					
Customer special code	Only for special requirements, e.g. (555) stands for RoHS compliant					

**Notes:** HFS8 is an environmental friendly product, please mark special code (555) when order.

Input module DC type	<b>HFS8 /</b>	<b>12</b>	<b>D-</b>	<b>05</b>	<b>D</b>	<b>(XXX)</b>
Type						
Input voltage	<b>12: 12V 24: 24V</b>					
Input voltage form	<b>D: DC</b>					
Output voltage	<b>05: 5V</b>					
Output voltage form	<b>D: DC</b>					
Customer special code	Only for special requirements, e.g. (555) stands for RoHS compliant					

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Output module	AC type	HFS8 /	05	D-	240	A	1	(XXX)
<b>Type</b>								
Input voltage	05: 5V 12: 12V 24: 24V							
Input voltage form	D: DC							
Load voltage	240: 240V							
Load voltage form	A: AC							
Load current	1: 1A							
Customer special code	Only for special requirements, e.g. (555) stands for RoHS compliant							

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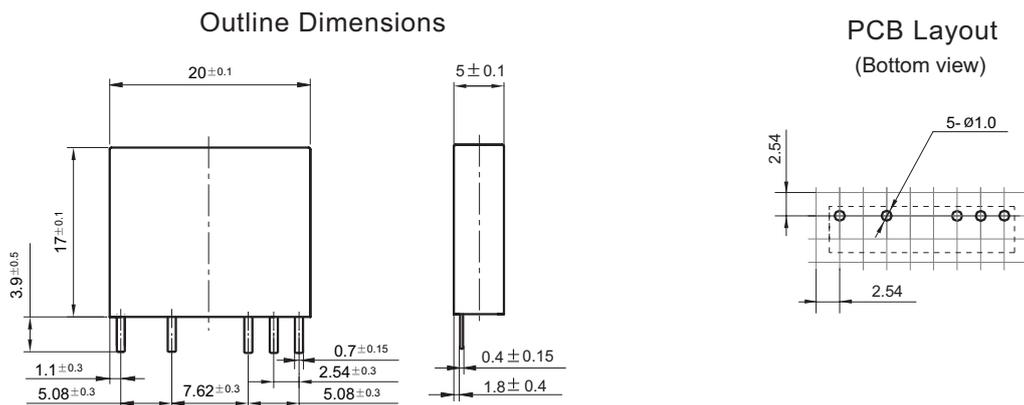
Output module	DC type	HFS8 /	05	D-	30	D	1	T	(XXX)
<b>Type</b>									
Input voltage	05: 5V 12: 12V 24: 24V								
Input voltage form	D: DC								
Load voltage	30: 30V								
Load voltage form	D: DC								
Load current	1: 1A								
Output component	T: Transistor output								
Customer special code	Only for special requirements, e.g. (555) stands for RoHS compliant								

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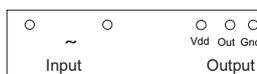
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

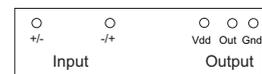
### Input module



AC input type

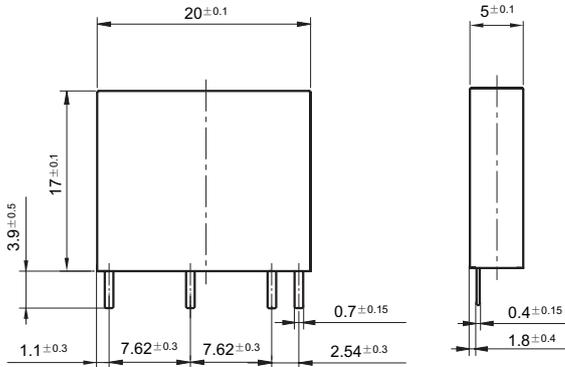


DC input type

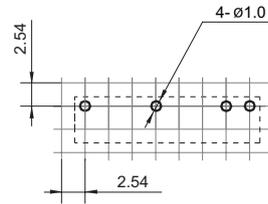


**Output module**

**Outline Dimensions**



**PCB Layout (Bottom view)**

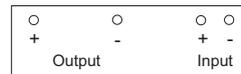


**Wiring Diagram (Bottom view)**

**AC output type**

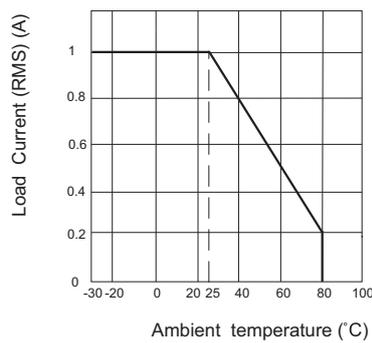


**DC output type**



**CHARACTERISTIC CURVES**

**Max. Load Current vs. Ambient Temperature (Output module)**



**Disclaimer**

This datasheet is for the customers' reference. All the specifications are subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact Hongfa for the technical service. However, it is the user's responsibility to determine which product should be used only.