

HFS32D(DC Type)

SOLID STATE RELAY



Vertical



Horizontal

Features

- Small dimensions for high packing density PCB assembly or socket mount
- Photo isolation with 2500V dielectric strength
- Full compatibility to the electromechanical standard relay HF115F and HF41F
- TTL and CMOS compatible
- For interface application between PLC and external loads
- Environmental friendly product (RoHS compliant)

DESCRIPTION

This SPST-NO SSR with small dimensions provides both AC output switching and DC output switching for PCB assembly or socket mount occasion, especially for some high density mounting applications. The HFS32's DC input is compatible with 5V, 12V, 24V, 48V and 60V logic systems. The relays provide 2500Vrms opto-isolation between input and output. The relays are full compatibility to the electromechanical standard relay HF115F and HF41F, so is very convenient for using in industrial control.

INPUT PARAMETERS (Ta = 25°C)

Control voltage range	05D	4 VDC to 6VDC
	12D	9.6 VDC to 14.4VDC
	24D	19.2VDC to 28.8VDC
	48D	38.4VDC to 57.6VDC
	60D	48VDC to 72VDC
Must turn on voltage	05D	4VDC
	12D	9.6VDC
	24D	19.2VDC
	48D	38.4VDC
	60D	48VDC
Must turn off voltage	5D	1VDC
	12D	3VDC
	24D	10VDC
	48D	10VDC
	60D	20VDC
Max. Input current		25mA
Nominal input impedance	05D	400Ω
	12D	1010Ω
	24D	3200Ω
	48D	10800Ω
	60D	21300Ω
Max. reverse protection voltage	5D	6VDC
	12D	14.4VDC
	24D	28.8VDC
	48D	57.6VDC
	60D	72VDC

OUTPUT PARAMETERS (Ta = 25°C)

Operating voltage range	24D	0 VDC to 28.8VDC
	48D	0 VDC to 57.6VDC
Max. transient overvoltage	24D	33VDC
	48D	58VDC
Load current ¹⁾	24D3M	0.02A to 3A
	24D4M	0.02A to 4A
	24D5M	0.02A to 5A
	48D3M	0.02A to 3A
Max. surge current ²⁾	24D3M	48A
	24D4M	48A
	24D5M	60A
	48D3M	30A
Max. on-state voltage drop	24D3M	0.2VDC
	24D4M	0.35VDC
	24D5M	0.2VDC
	48D3M	0.35VDC
Name of protection		Polarity Protection
Max. turn-on time		50μs
Max. turn-off time		300μs



HONAF A RELAY

ISO9001, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2009 Rev. 1.01

GENERAL PRAMETERS (Ta = 25°C)

Dielectric strength (input-output)	2500VAC 1min
Insulation resistance	1000MΩ (at 500VDC)
Vibration resistance	10 Hz~ 55Hz 1.5mm DA
Ambient temperature	operating: -30°C to 80°C storage: -30°C to 100°C
Ambient humidity	45% ~ 85% RH
Unit weight	Approx. 4g(Vertical) Approx. 11g(Horizontal)
Shock resistance	Acceleration 1000m/s ² continuous surge 11ms
Recommended soldering temperature	260 °C ,10s or 350°C,5s

Notes: 1) Refer to fig.1 & fig.3 Max.Load current vs.Ambient Temperature for load current.
2) Refer to fig.4 & fig.6 Surge current vs.duration time.

ORDERING INFORMATION

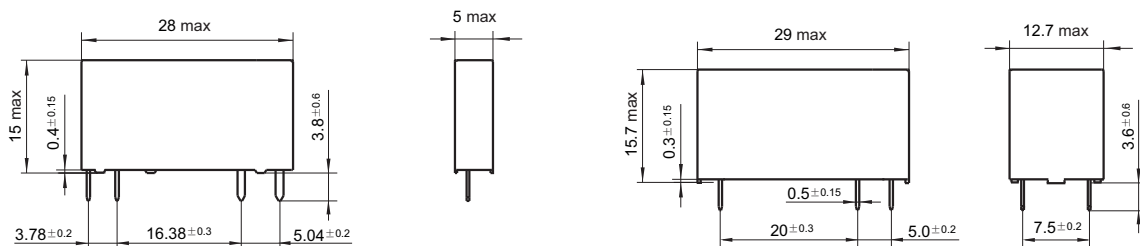
Type	HFS32D/ 24D- 24D 3 M -N H (XXX)
Input voltage	05D: 5VDC 12D: 12VDC 24D: 24VDC 48D: 48VDC 60D: 60VDC
Load voltage	24D: 24VDC 48D: 48VDC (Only for Vertical type)
Load current	3: 3A(Only for Vertical type) 4: 4A (Only for Vertical type) 5: 5A(Only for Horizontal type)
Output component	M: MOSFET output
RC snubber	N: Without RC snubber
Mounting mode	H: Horizontal type Nil: Vertical type
Special request code	

Notes : 1) There are HFS32D/□□D-24D3M-N, HFS32D/□□D-24D4M-N, HFS32D/□□D-48D3M-N, HFS32D/□□D-24D5M-NH available.
2) The HFS32 vertical type is full compatible to the electromechanical standard relay HF41F by pins,and the horizontal type is compatible to the HF115F.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions

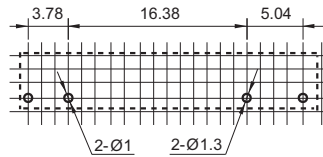


Vertical Type

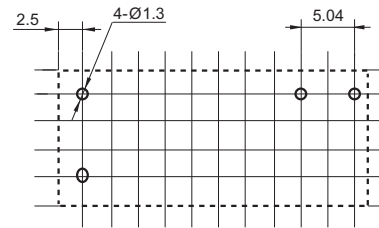
Horizontal Type

Mounting Holes Layout

PCB Layout
(Bottom view)

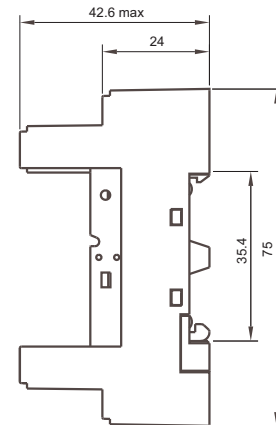
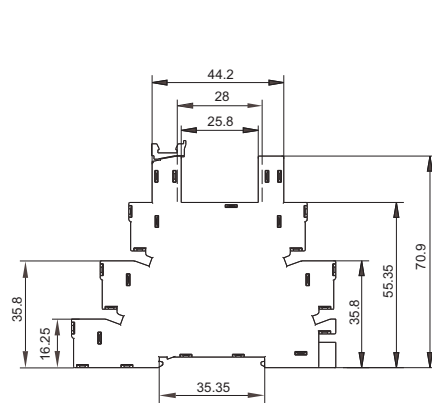


Vertical Type

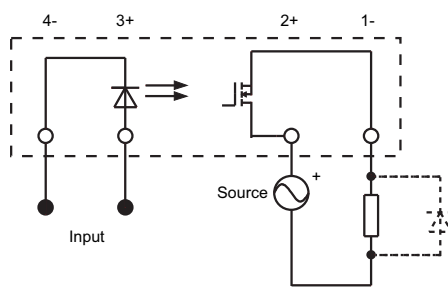


Horizontal Type

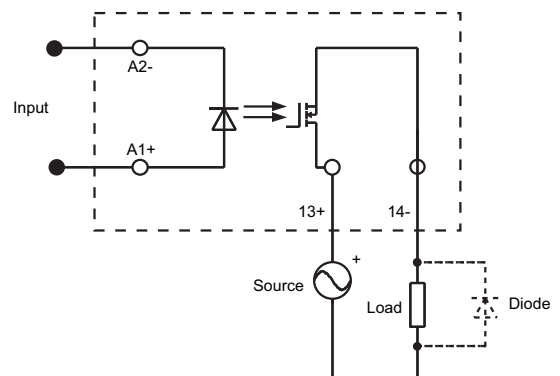
Socket Layout



Wiring Diagram



Vertical and AC output Type



Horizontal and AC output Type

CHARACTERISTIC CURVES

Fig.1 Max. Load Current vs. Ambient Temp.

HFS32D/□□D-□□D3M-N□ type

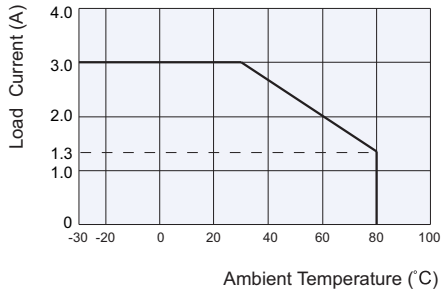


Fig.2 Max. Load Current vs. Ambient Temp.

HFS32D/□□D-24D4M-N type

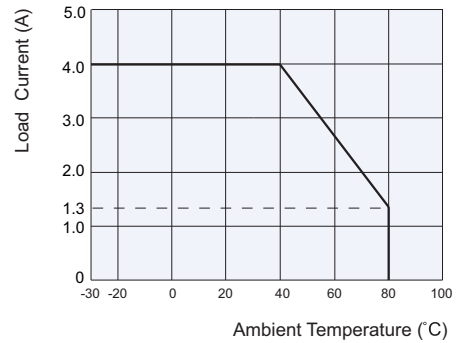


Fig.3 Max. Load Current vs. Ambient Temp.

HFS32D/□□D-24D5M-NH type

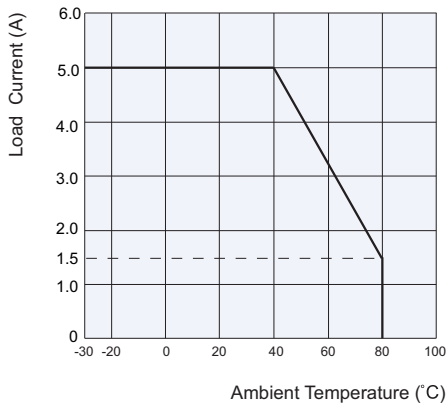


Fig.4 Max. surge current VS. Duration time

HFS32D/□□D-24D5M-NH type



Fig.5 Max. surge current VS. Duration time

HFS32D/□□D-24D3M-N type
HFS32D/□□D-24D4M-N type

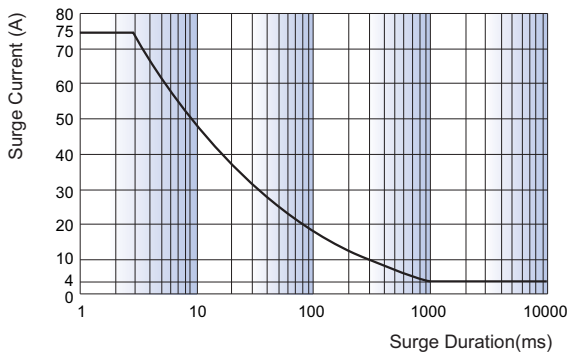
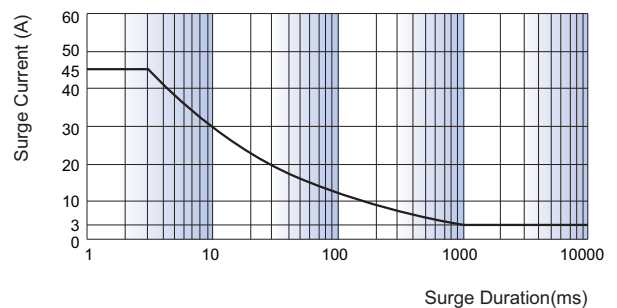


Fig.6 Max. surge current VS. Duration time

HFS32D/□□D-48D3M-N type



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.

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