HFE20 MINIATURE HIGH POWER LATCHING RELAY

c UL us
File No.:E134517

Features

- 16A switching capability
- Latching relay
- Capacitor load up to 200uF
  (Min. inrush current at 500A/10μs)
- Min. inrush current Capacitor 170A(1A,1C)
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (29.0 x 13.0 x 15.7)mm

CONTACT DATA

Contact arrangement	1A, 1B, 1C
Contact resistance	50mΩ (at 1A 24VDC)
Contact material	$AgSnO_2$, $W+AgSnO_2$
Contact rating	1A,1B: 16A 250VAC,1 x 10^5 OPS(Resistive) 20A 250VAC,3 x 10^4 OPS(Resistive) 1.5HP 240VAC(Motor) 8A 220VAC COSØ=0.4, 1x10^5OPS(Inductive) HFE20-1/X-1HXD: 3000W 220VAC, 1.5 x 10^4 OPS (Incandescent & fluorescent lamp) 1C: 16A 250VAC,5 x 10^4 OPS
Max. switching voltage	277VAC
Max. switching current	16A
Max. switching power	5000VA
Mechanical endurance	3 x 10^6OPS
Electrical endurance	See "Contact rating"

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	4400VAC 1min
	Between open contacts	1000VAC 1min
Creepage distance		8mm
Operate time (at nomi. volt.)		15ms max.
Release time (at nomi. volt.)		15msmax.
Shock resistance	Functional	98m/s^2
	Destructive	980m/s^2
Vibration resistance		10Hz to 55Hz 1.5mm DA
Humidity		5% to 85% RH, 40°C
Ambient temperature		PCB
Termination		-40°C to 85°C
Unit weight		Approx. 13g
Construction		Plastic sealed, Flux proofed

Notes: The data shown above are initial values.

COIL

Coil power	1 coil latching: 400mW; 2 coils latching: 600mW

COIL DATA at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC	Coil Resistance x (1±10%) Ω	
3	2.4	1 coil latching	22.5
5	4.0		62.5
6	4.8		90
12	9.6		360
24	19.2		1440
3	2.4	2 coils latching	15+15
5	4.0		42+42
6	4.8		60+60
12	9.6		240+240
24	19.2		886+886

ORDERING INFORMATION

	HFE20	- 3	/12	-1Z	S	T	-L2	-R	(XXX)
Type									
Version	1: 5mm pin 2: 3.5mm pin 3: 2.5mm pin								
Coil voltage	3, 5, 6, 12, 24 VDC								
Contact form [1]	**1H:** 1 Form A **1D:** 1 Form B **1Z:** 1 Form C (Only for HFE20-1, HFE20-2)								
Construction [2]	**S:** Plastic sealed **Nil**: Flux proofed								
Contact material	**T:** $AgSnO_2$ **D:** $W+AgSnO_2$(Only for HFE20-1/XX-1H) **Nil**:AgNi								
Sort	**L1:** 1 coil latching **L2:** 2 coils latching								
Polarity	**R:** Reverse polarity **Nil**: Positive polarity								
Customer special code									

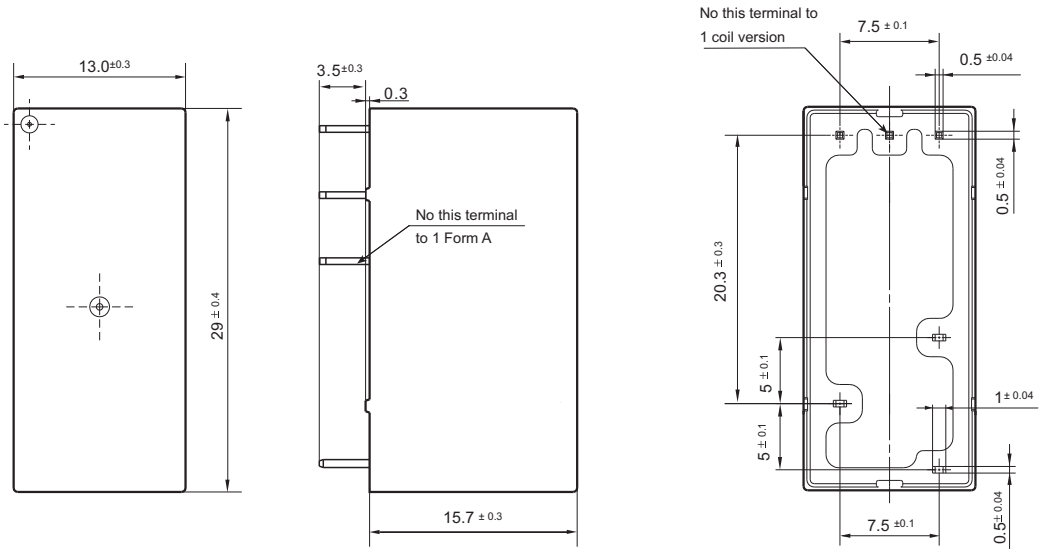
Notes: 1) H means that relay is on the "reset" status when delivery; D means that relay is on the "set" status when delivery
2) If water cleaning is required after the relay is assembled on PCB, please contact us for suggestion about suitable parts.

OUTLINE DIMENSIONS AND WIRING DIAGRAM

Unit: mm

Outline Dimensions

HFE20-1

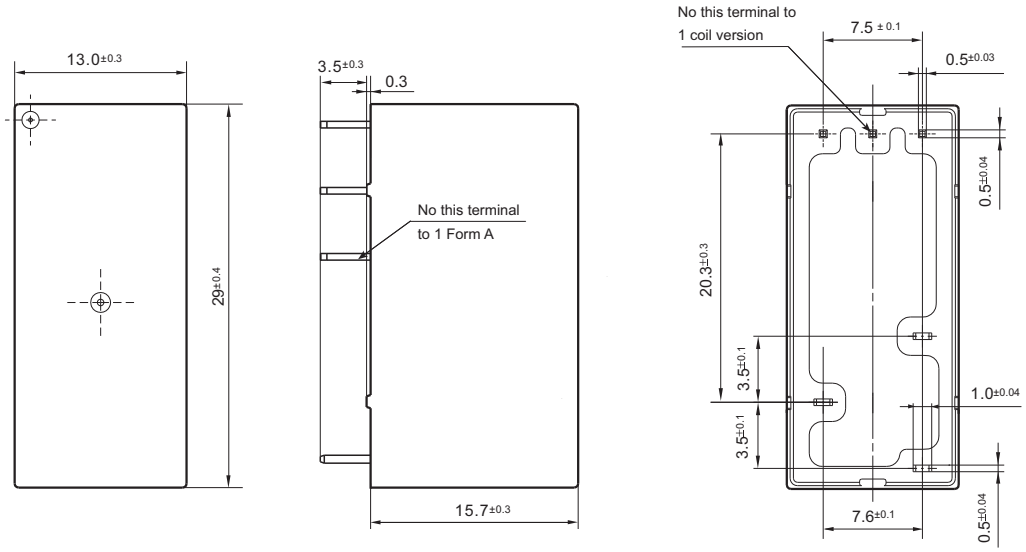


OUTLINE DIMENSIONS AND WIRING DIAGRAM

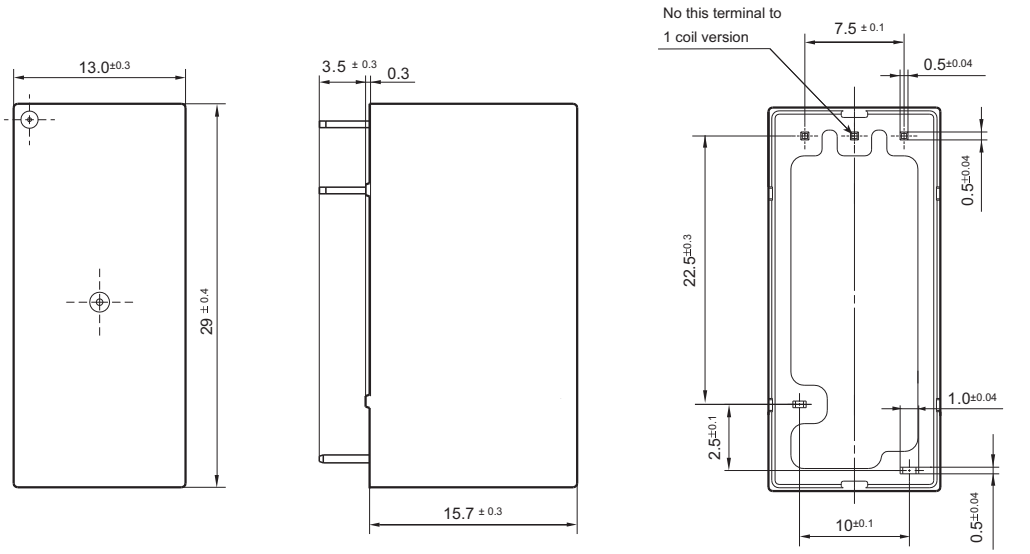
Unit: mm

Outline Dimensions

HFE20-2



HFE20-3



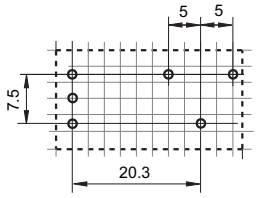
OUTLINE DIMENSIONS AND WIRING DIAGRAM

Unit: mm

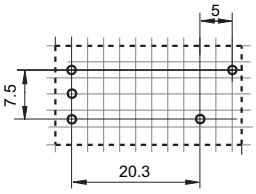
PCB Layout (Bottom view)

HFE20-1

1 Form C

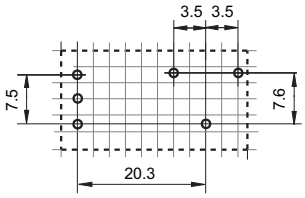


1 Form A, 1 Form B, 1 Form U

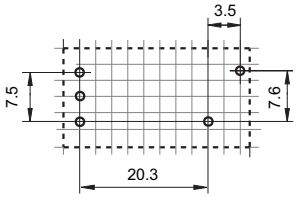


HFE20-2

1 Form C

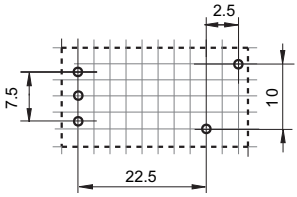


1 Form A, 1 Form B



HFE20-3

1 Form A, 1 Form B

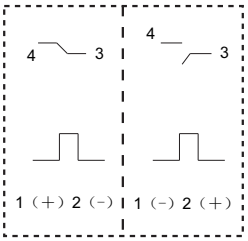


Wiring Diagram (Bottom view)

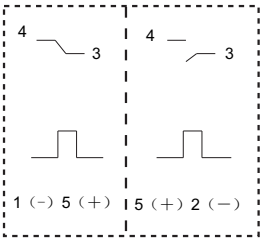
HFE20-3

Positive polarity

1 coil latching, 1 Form A

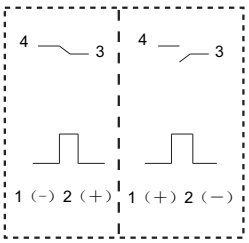


2 coils latching, 1 Form A

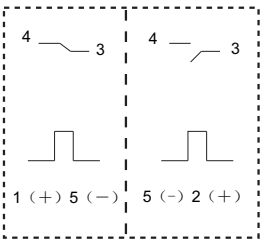


Reverse polarity

1 coil latching, 1 Form C



2 coils latching, 1 Form C

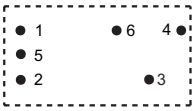


OUTLINE DIMENSIONS AND WIRING DIAGRAM

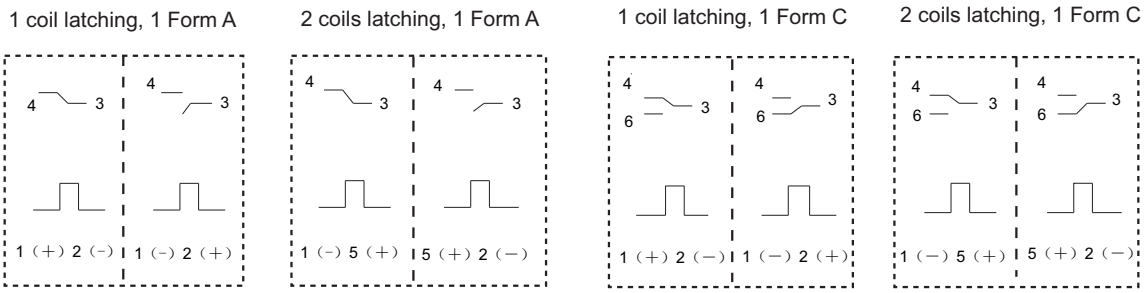
Unit: mm

Wiring Diagram (Bottom view)

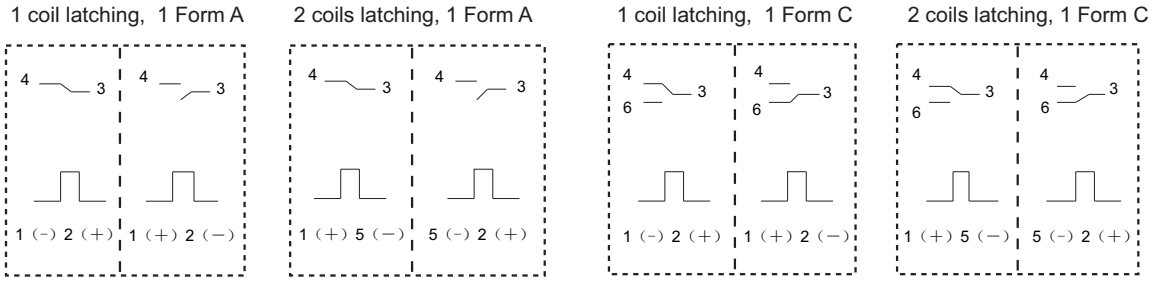
HFE20-1
HFE20-2



Positive polarity



Reverse polarity



Notice

1. Relay is on the “reset” or "set" status when being released from stock, with the consideration of shock risen from transit and relay mounting, relay would be changed to “set” or "reset" status, therefore, when application (connecting the power supply), please reset the relay to “set” or “reset” status on request.
2. In order to maintain “set” or “reset” status, energized voltage to coil should reach the rated voltage, impulse width should be 5 times more than “set” or “reset” time. Do not energize voltage to “set” coil and “reset” coil simultaneously. And also long energized time (more than 1 min) should be avoided.
3. In order to avoid changing operate voltage, products should not be kept in strong magnetic field during transportation, storage and application.