HFE22 MINIATURE HIGH POWER LATCHING RELAY

c UL us
File No.: E133481

Features

- 100A Latching relay
- Making test 1500A 10ms
  short circuit current without explosion
- Heavy load up to 27700VA
- 4kV dielectric strength (between coil and contacts)
- Micro switch on mounting board available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (60.0 x 40.0 x 21.0) mm

CONTACT DATA

Contact arrangement	1A, 1B
Contact resistance	1mΩ max.(at 1A 24VDC)
Contact material	$AgSnO_2$
Contact rating (Res. load)	100A 277VAC/28VDC
Max. switching voltage	440VAC
Max. switching current	100A
Max. switching power	27700VA / 2800W
Mechanical endurance	1 x 10^5OPS
Electrical endurance	1 x 10^4OPS

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	4000VAC 1 min
	Between open contacts	2000VAC 1 min
Creepage distance		8mm
Operate time (at nomi. volt.)		20ms max.
Release time (at nomi. volt.)		20ms max.
Shock resistance	Functional	294m/s²
	Destructive	980m/s²
Vibration resistance		10Hz to 55Hz 1.5mm DA
Humidity		5% to 85% RH
Ambient temperature		-40°C to 70°C
Termination		QC
Unit weight		Approx. 100g
Construction		Dust protected

Notes: The data shown above are initial values.

COIL

Coil power	1 coil latching: Approx. 2.4W 2 coils latching: Approx. 4.8W

COIL DATA at 23°C

Nominal Voltage VDC	Set / Reset Voltage VDC max.	Pulse Duration ms min.	Coil Resistance x (1±10%) Ω	
6	4.8	100	1 coil latching	16
12	9.6	100		60
24	19.2	100		250
48	38.4	100		1000
6	4.8	100	2 coils latching	8+8
12	9.6	100		30+30
24	19.2	100		125+125
48	38.4	100		500+500

Notes: When requiring other nominal voltage, special order allowed.

ORDERING INFORMATION

HFE22 -A / 12 -D 1 T 2 1 -R (XXX)

Type			
Version	**A:** Type A contact terminal **B:** Type B contact terminal **C:** Type C contact terminal		
Coil voltage	6, 12, 24, 48VDC		
Contact form [1]	**D:** 1 Form B	**H:** 1 Form A	
Coil terminal type	**1:** Type 1	**2:** Type 2	
Contact material	**T:** $AgSnO_2$		
Sort	**1:** 1 coil latching	**2:** 2 coils latching	
Mounting board form	**1:** Without micro switch	**2:** With micro switch	
Polarity	**R:** Negative polarity	**Nil:** Positive polarity	
Customer special code			

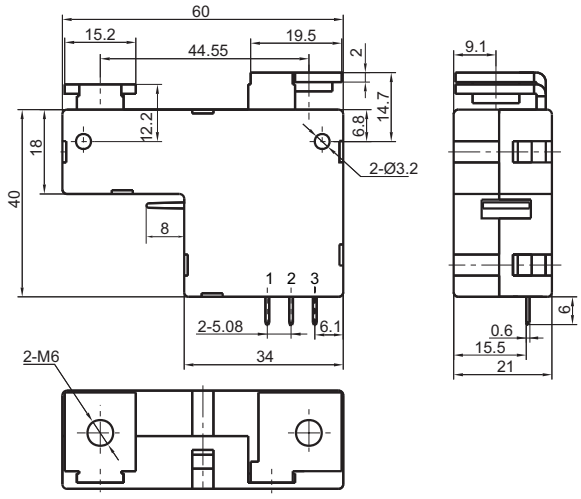
Notes: 1) H means that relay is on the "reset" status when delivery; D means that relay is on the "set" status when delivery.If no speical required by customer,we will keep the relay on the "set" status when delivery.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

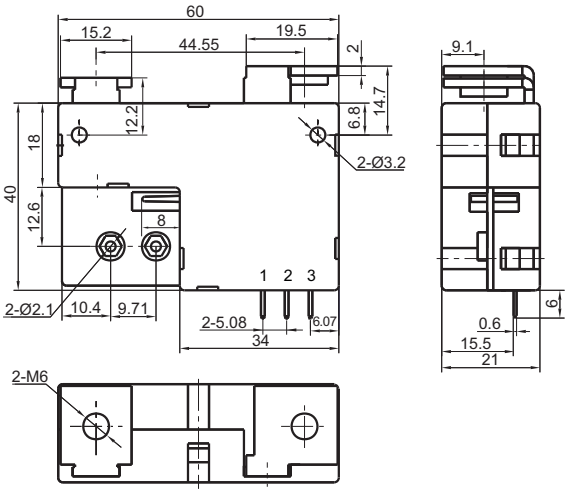
Unit: mm

Outline Dimensions

Type A contact terminal, Without micro switch



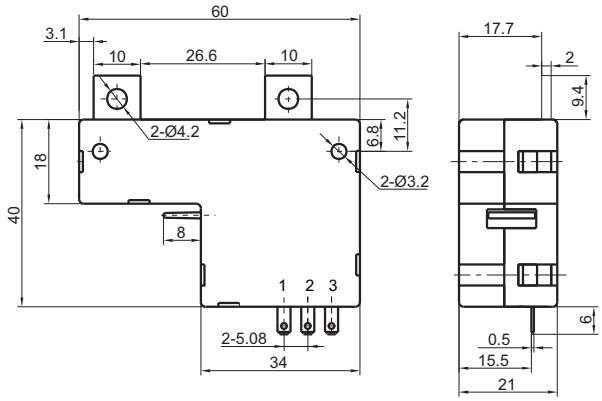
Type A contact terminal, With micro switch



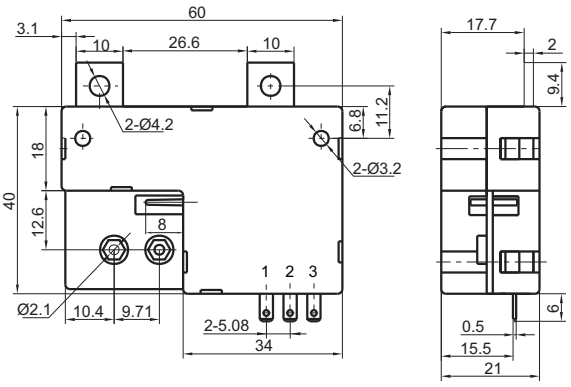
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

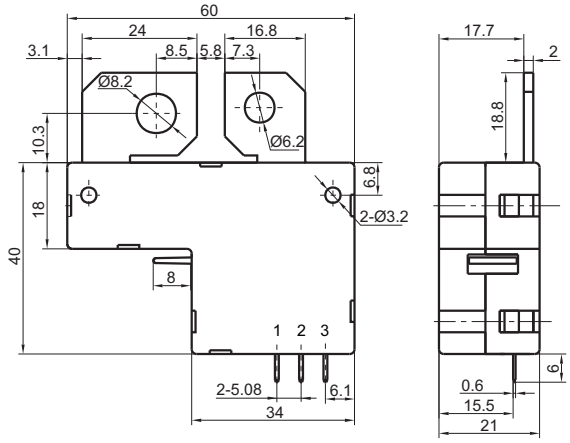
Type B contact terminal, Without micro switch



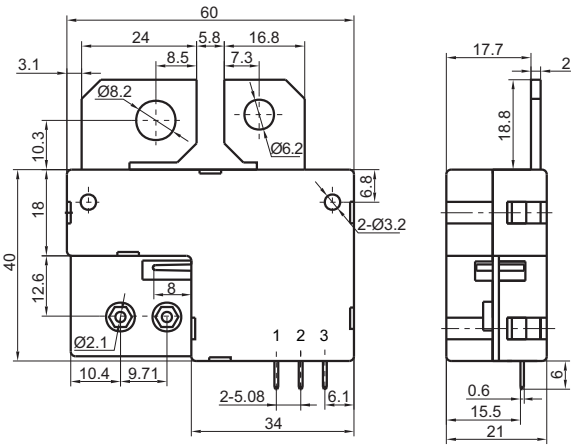
Type B contact terminal, With micro switch



Type C contact terminal, Without micro switch



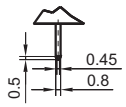
Type C contact terminal, With micro switch



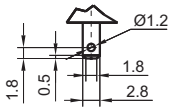
Remark: In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

Coil Terminal Type

type 1



type 2

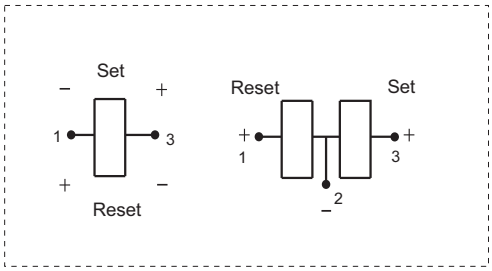


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

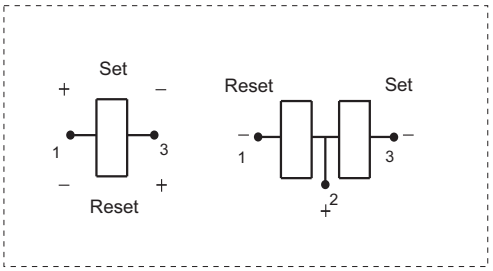
Unit: mm

Coil Wiring Diagram

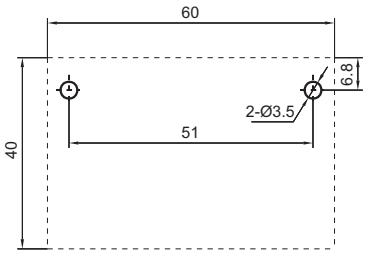
Positive polarity



Negative polarity



PCB Layout



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. The terminals of relay without twisted copper wire can not be tin-soldered, can not be moved willfully.
4. Relays used for metering measuring applications are usually made with dust proof structure, while most relays could be made specially per customer's specific requirements.No longer than 6 months' storage time is recommended for this kind of relay, and please pay attention to the storage environment. To ensure contact reliability, we will keep contact status be closed when delivery if no special required by customer.