

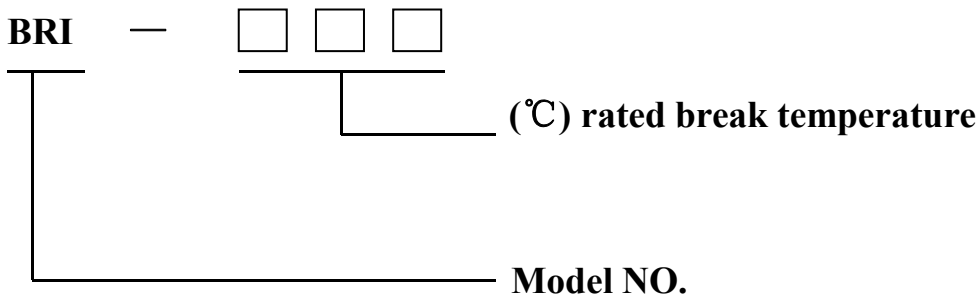
BRI 3 Wires Thermal Protector

Datasheet

一、 Overview:

The BRI series thermal protector are temperature and current protectors, which made of thermal bimetal, a high-quality thermal sensitive material imported from Japan. This product is mainly used for overheat overload protection of motors and electric appliances. There are these features: quick temperature sensing, sensitive action and reliable performance. Versatility and no need maintenance.

1.1 Type and Meaning:



1.2 Working Environment and Application:

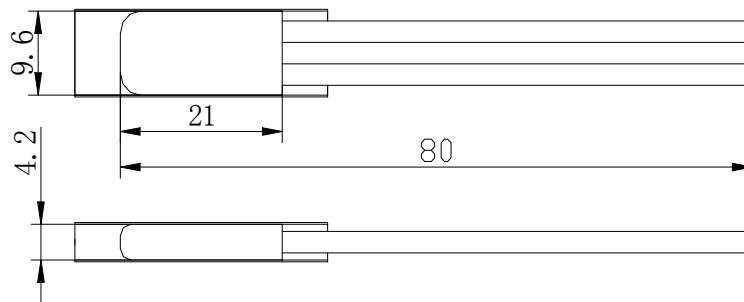
1. There is no corrosive and damaging medium around;
2. The thermal protector is mainly embedded in the winding of rotating motor, which is used as overheat and overcurrent protection caused by the fault of rotating motor overload or blocking.
3. Thermal protectors can also be used for thermal protection of other electrical equipment and electrical components with temperature

control requirements, or as thermal signal and thermal sensor.

1.3 Main Specification and Technical Parameter

- 1. rated break temperature : 110°C-150°C(±5°C)**
- 2. reset temperature : break temperature -30°C (± 15°C)**
- 3. rated voltage : 380V**
- 4. contact resistance : $\leq 50\text{m}\Omega$**
- 5. Max passing current: 16A**
- 6. electrical strength: AC 1500V/min**
- 7. durability: >2000 times**
- 8. wire diameter: 1.5 mm²**
- 9. range of application : <3000W**

1.4 Size:



二、 Structure and Working Principle:

This product is produced according to the thermal bimetal material heated bending force characteristics, the butterfly double metal components for special treatment, with the increase of temperature, butterfly storing energy device, when the temperature reaches thermal protector rated breaking temperature, the effects of butterfly element force moment reverse action, disconnect contact, to cut off the circuit of protected, so as to achieve protection function;When the temperature drops to the automatic reset temperature of the thermal protector, the contact closes the connection circuit and the power is restored.When the current of the protected body exceeds the rated current, the butterfly element generates heat energy due to the current. When the temperature of the thermal protector is reached, the acting force generated by the butterfly element will reverse in an instant and cut off the circuit, thus achieving the protection function.

三、 Selection Principle of Thermal Protector:

3.1 Motor Protection Can Be Referred to The Following Table:

Motor insulation grade	A	E	B	F	H
temperature	105℃	120℃	130℃	140℃	150℃

3.2 The type of thermal protector is selected according to the power, structure, purpose of protection (overload or stop-over protection) and object of protection.

四、 Installation Points:

- 4.1 When the thermal protector is installed, it must be close to the heating part of the protected body to ensure the normal heat transfer;**
- 4.2 The metal casing thermal protection device is provided with insulation sleeve at the time of delivery. If it is not used at the time of installation, sufficient insulation protection shall be provided;**
- 4.3 during the installation and use, the outer casing deformation and insulation parts are not allowed to break or fall off, so as to avoid the performance being affected;**
- 4.4 wiring principle: after the operation of the thermal protector, the whole circuit of the protected body should be cut off.**

wiring diagram of 3 wires protection :

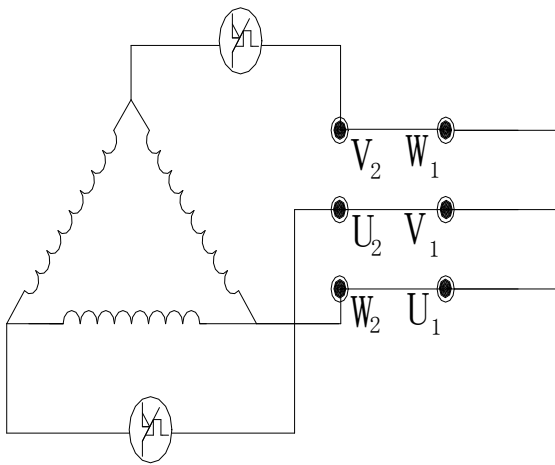


图 7

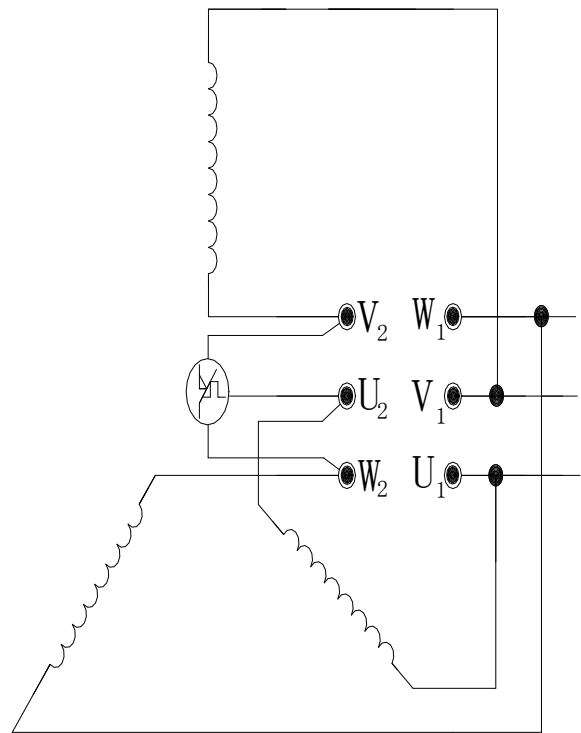


图 8

 ——— **thermal protector**

 ——— **centrifugal switch**

 ——— **capacitor**

 ——— **main winding**

 ——— **secondary winding**