BALSEAL

BSA Single-phase AC Solid State Relay

BSS AC output Series

SSR 10 - 120Amp

- Rated load current 10A to 120A
- Top cover bolt protection for easier maintenance
- With LED input status indicator AC/DC control optional
- Compliant with CE and RoHS standards



- The BSS series relays feature a flame-retardant engineering plastic housing, epoxy resin potting, and threaded terminal connections. They boast high structural strength, impact resistance, strong anti-shutdown capability, and low input drive current, facilitating easy interface with computer terminals and digital security control circuits. They are widely evaluated in automation control applications across petrochemical instruments and equipment, pharmaceutical machinery, food processing machinery, packaging machinery, plastics machinery, CNC machine tools, and entertainment facilities.

- They are particularly suitable for corrosive, high-humidity environments, explosion-proof plasma environments, and switching applications.

The main application

Heating systems

Injection molding machines; Furnaces; Power supply and distribution systems; Air conditioning; Textile machinery; Household heaters; Infrared heating; Thermoforming dryers; etc.



Lighting

Public lighting

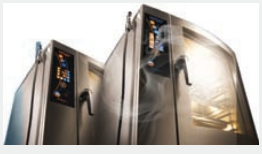
Cinema lighting

Theater lighting

Airport runway lighting

Street lighting

etc...



Control

PLC interface

Heating element control

Solenoid valve

Contactor coil

Sensor optocoupler

etc...



Other applications

Transformer starting,

Power factor correction,

Uninterruptible power supplies, Power switches,

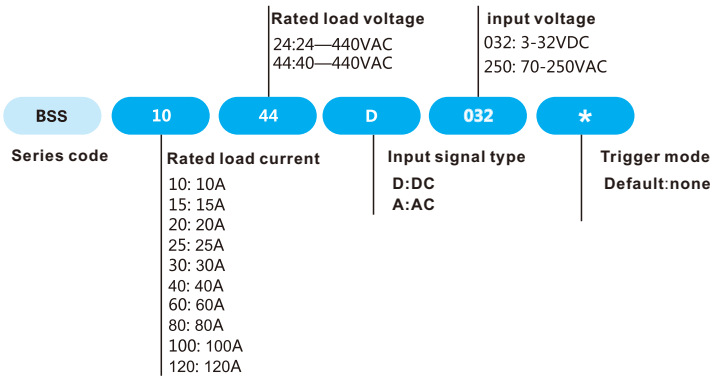
Capacitor control,

etc.



Model listing

Valid product listings



The main application

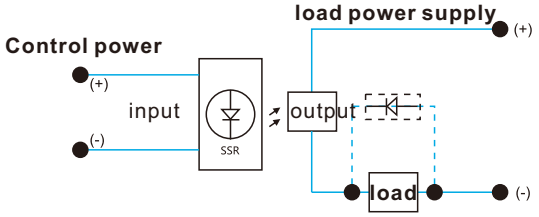
Output parameters	10A	15A	20A	25A	30A	40A
Rated load voltage	24:24~280VAC 44:40~480VAC	24:24~280VAC 44:40~480VAC	24:24~280VAC 44:40~480VAC	24:24~280VAC 44:40~480VAC	24:24~280VAC 44:40~480VAC	24:24~280VAC 44:40~480VAC
Rated load current	10A	15A	20A	25A	30A	40A
Transient peak withstand voltage	24:600VAC 44:900VAC	24:600VAC 44:900VAC	24:600VAC 44:900VAC	24:600VAC 44:900VAC	24:600VAC 44:900VAC	24:600VAC 44:900VAC
Off-state leakage current	AC ≤10mA	AC ≤10mA	AC ≤10mA	AC ≤10mA	AC ≤10mA	AC ≤10mA
On-state pressure drop	AC ≤1.5V	AC ≤1.5V	AC ≤1.5V	AC ≤1.5V	AC ≤1.5V	AC ≤1.5V
On-off time	AC ≤10mA	AC ≤10mA	AC ≤10mA	AC ≤10mA	AC ≤10mA	AC ≤10mA
Input voltage range	DC 3-32VDC	DC 3-32VDC	DC 3-32VDC	DC 3-32VDC	DC 3-32VDC	DC 3-32VDC
Control current	DC 4-25mA	DC 4-25mA	DC 4-25mA	DC 4-25mA	DC 4-25mA	DC 4-25mA
Power-off time	≤10ms	≤10ms	≤10ms	≤10ms	≤10ms	≤10ms

Output parameters	60A	80A	100A	120A
Rated load voltage	24:24~280VAC 44:40~480VAC	24:24~280VAC 44:40~480VAC	24:24~280VAC 44:40~480VAC	24:24~280VAC 44:40~480VAC
Rated load current	60A	80A	100A	120A
Transient peak withstand voltage	24:600VAC 44:900VAC	24:600VAC 44:900VAC	24:600VAC 44:900VAC	24:600VAC 44:900VAC
Off-state leakage current	AC ≤10mA	AC ≤10mA	AC ≤10mA	AC ≤10mA
On-state pressure drop	AC ≤1.5V	AC ≤1.5V	AC ≤1.5V	AC ≤1.5V
On-off time	AC ≤10mA	AC ≤10mA	AC ≤10mA	AC ≤10mA
Input voltage range	DC 3-32VDC	DC 3-32VDC	DC 3-32VDC	DC 3-32VDC
Control current	DC 4-25mA	DC 4-25mA	DC 4-25mA	DC 4-25mA
Power-off time	≤10ms	≤10ms	≤10ms	≤10ms

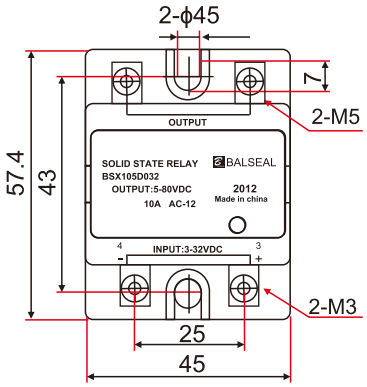
Other parameters

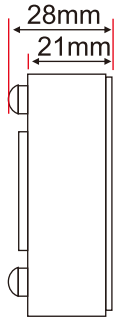
Medium pressure resistance	⩾2500VAC
Insulation voltage	4000V
Safety regulations for casing materials	UL94-V0
Substrate material	aluminum
working temperature	-20℃~70℃
storage temperature	-30℃~125℃
Maximum working humidity	85% No condensation
Installation method	Panel mounting
sizeL-W-H(mm)	43*12*27
Certification	CE

Line diagram BSS ACoutput Series

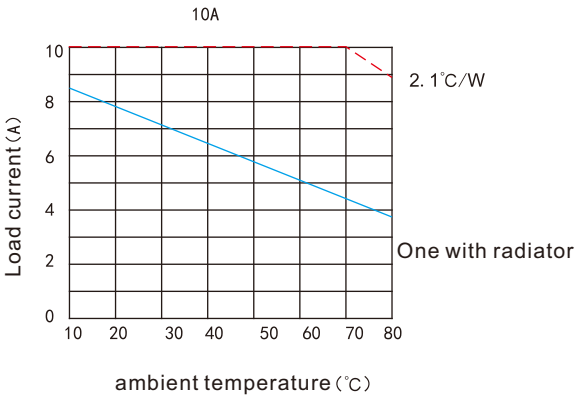


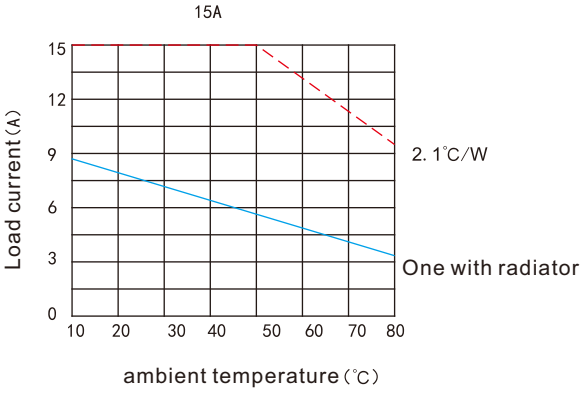
Appearance size BSS ACoutput Series

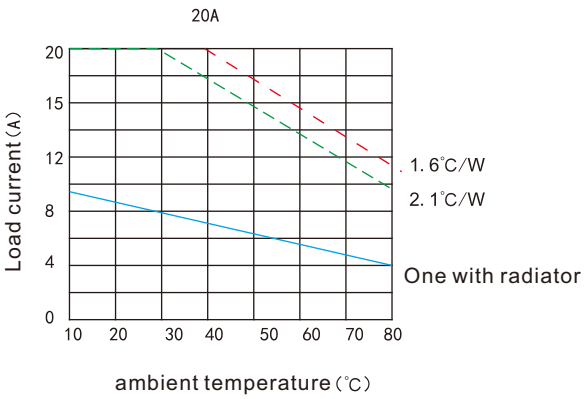


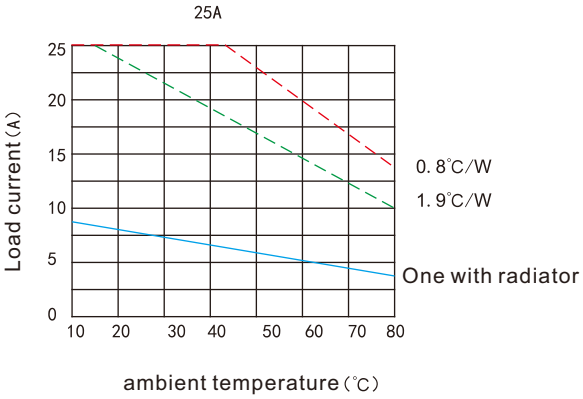


BSS AC temperature curve



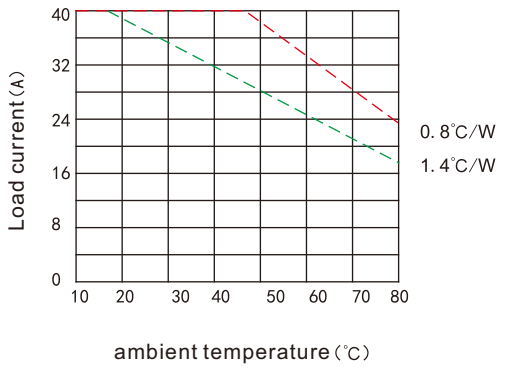




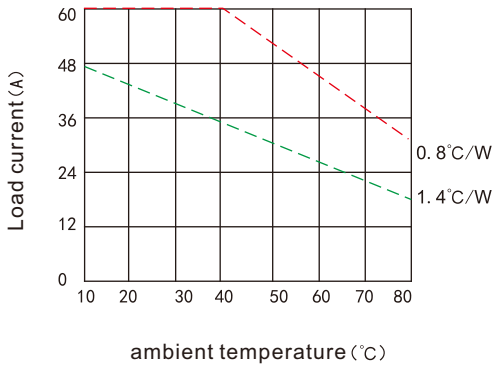


BSS **AC temperature curve**

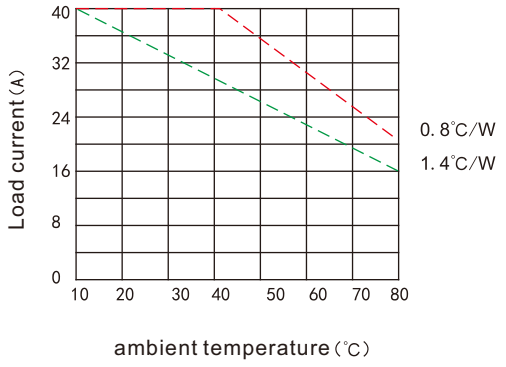
40A



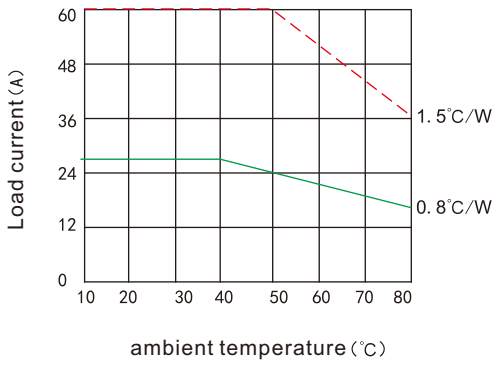
60A



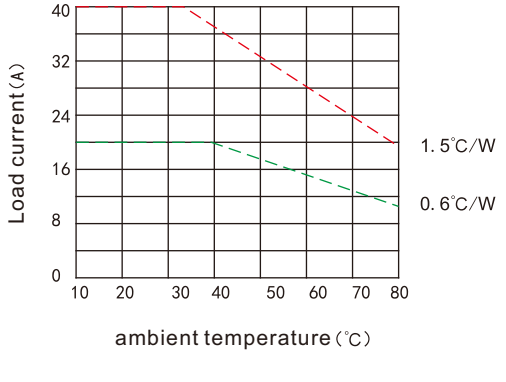
80A



100A



120A



Precautions:

(A) All parameters are valid at 25°C unless otherwise specified.
(B) Loads of 10A-25A require a heatsink; loads above 40A require fan cooling or water cooling.
(C) Loads above 80°C require fan cooling or water cooling.
(D) When using inductive loads, be sure to connect a varistor in parallel at the output terminal, with a value of 1.6-1.9 times the load voltage.

For more information, please refer to the datasheet.

Operation Notice

(A) Resistive loads must not exceed 60% of the rated current.

(B) Inductive or capacitive loads must not exceed 40% of the rated current.

(C) Motor loads must not exceed 20% of the rated current.

(D) Solid-state relays must be equipped with heat sinks suitable for their operating requirements. When the load heat dissipation conditions are poor, the allowance should be appropriately increased. Short circuits must be avoided.

(E) Overcurrent protection measures: Overcurrent and load short circuits are the main causes of permanent damage to the internal output thyristor of SSRs. Fast-acting fuses and air switches are one method of overcurrent protection. For small capacity relays, fuses can also be used.

(F) Overvoltage protection measures: Overvoltage protection can be achieved by parallel connection of varistor (MOV). The size of the MOV area determines the power absorbed, and the thickness of the MOV determines the protection voltage value. Generally, 471/10D varistors can be selected for 220V series SSRs, 681/10D varistors for 380V series SSRs, and 821/10D varistors for 480V series SSRs.

Related certifications

RoHS

CE