

- Designed for all types of loads up to 400 VAC
- Zero-cross output switching
- Up to 275 VAC operating voltage
- 10-16-25 A switching RMS current
- Three input ranges
- 4000 V input/output insulation
- Heatsinks available optionally

### DESCRIPTION

BSSRQ Solid State Relays, are zero-cross operating electronic modules designed to switch single-phase AC power loads. The BSSRQ modules are non-contact and convenient substitutes of power contact relays thanks to their higher switching frequency and practically complete absence of electromagnetic interference. The life and reliability of the BSSRQ modules, compared to these of the contact relays, are much higher because there are no moving parts, noise, shocks, and vibration during the operation. Thanks to their snubberless™ triacs, the BSSRQ electronic relays can switch either active or inductive loads from 10 to 25 A at power voltage up to 400 VAC. The control input is optically isolated from the output and accepts AC or DC voltage signals. An operating LED indicates ON/OFF device status. Heatsinks are available as an option.

### TECHNICAL SPECIFICATIONS

<b>Construction</b>	: Panel design to standard DIN
<b>Casing</b>	: Glass-filled plastic
<b>Base plate (heatsink) material</b>	: Aluminum
<b>Isolation</b>	: Input to output 4000V, output to casing 2500V
<b>Max. operating AC voltage</b>	: 280, 400Vrms
<b>Min. operating AC voltage</b>	: 24Vrms
<b>Rep. off-state peak voltage</b>	: 600Vp
<b>Non rep. off-state peak voltage</b>	: 700Vp
<b>Power factor</b>	: > 0.6
<b>Ambient temp</b>	: -20 to +65°C
<b>Protection class</b>	: IP00
<b>Connection</b>	: M4 screws
<b>Mounting</b>	: Heatsink rail clamp (ABS)
<b>Indication</b>	: 3mm LED
<b>Weight</b>	: 100g

### INPUT

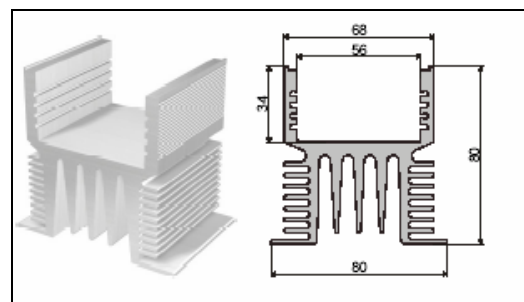
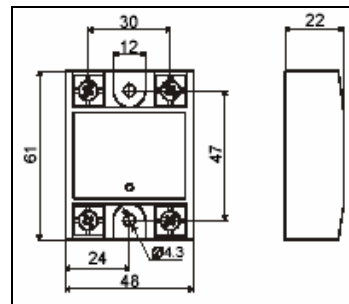
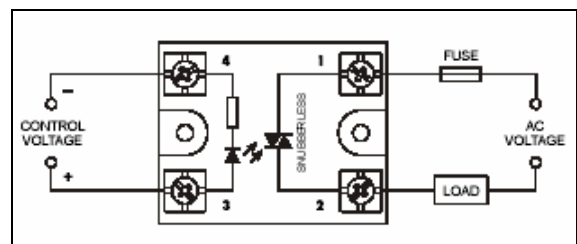
<b>Control voltage</b>	: 4-36VDC, 6-26VAC/DC, 100-240VAC
<b>Input current</b>	: 5-12mA, 6-12mA, 6-12mA
<b>Turn on/off voltage</b>	: 3VDC, 4VAC/5VDC, 90VAC
<b>Reverse voltage protection</b>	: -32VDC

### OUTPUT

<b>On-state current at proper heatsink</b>	: <10, 16, 25 Arms
<b>Minimum holding current</b>	: 50, 50, 75mA
<b>None rep. surge current at t=20mS</b>	: 100, 160, 250A
<b>Maximum leakage current</b>	: 1, 2, 3mA
<b>Critical rate of current rise di/dt</b>	: 50A/uS
<b>I<sup>2</sup>t value for fusing at t=10ms</b>	: 78A <sup>2</sup> S
<b>On-state voltage at rated current</b>	: 1,6Vrms
<b>Critical off-state voltage rise dV/dt</b>	: 1000V/uS
<b>Operational frequency</b>	: 45-65 Hz
<b>Thermal resistance (junction-case)</b>	: 2,3, 2,1, 1,1 °C/W

We highly recommend using SSRQ at no more than 80% of maximum on-state current!

**EMC** : EN 50081-1, EN 50082-2, EN 61010-1  
73/23/EEC & 89/336/EEC



### ORDER INFORMATION

#### BSSRQ

TYPE	INPUT	HEATSINK	RAIL MOUNTING
1 10A(280V)	C 100-240VAC	X None	X None
2 16A(280V)	D 4-36VDC	HS Heatsink	R ABS-clamp
3 25A(280V)	P 6-26VAC/DC	(Specify)	
4 10A(400V)			
5 16A(400V)			
6 25A(400V)			



## Heatsink specifications

Variant	10	16		25		
Current →	10 A	10 A	16 A	15 A	20 A	25 A
Ambient temperature ↓						
20 °C	72 / 62	60 / 62	214 / 62	134 / 62	287 / 62	499 / 62
40 °C	150 / 62	124 / 62	445 / 62	278 / 62	601 / 62	1041 / 100
60 °C	485 / 62	400 / 62	1435 / 135	907 / 85	1924 / 180	

\* Heatsink surface [cm<sup>2</sup>] /BASI model length [mm] (at 85 °C heatsink temperature)



BASI Instrument AB  
P.O. Box 53

Tel: +46 40-880 09  
SE-270 33 VOLLSJÖ...SWEDEN

Fax: +46 40-92 98 77  
E-mail: [info@basi.se](mailto:info@basi.se)

Single-phase AC Solid State Relays

BSSRQ

No. DS 92:1-E Issue: 3 11/03/08