

SAH24 Series

Build-In Heatsink



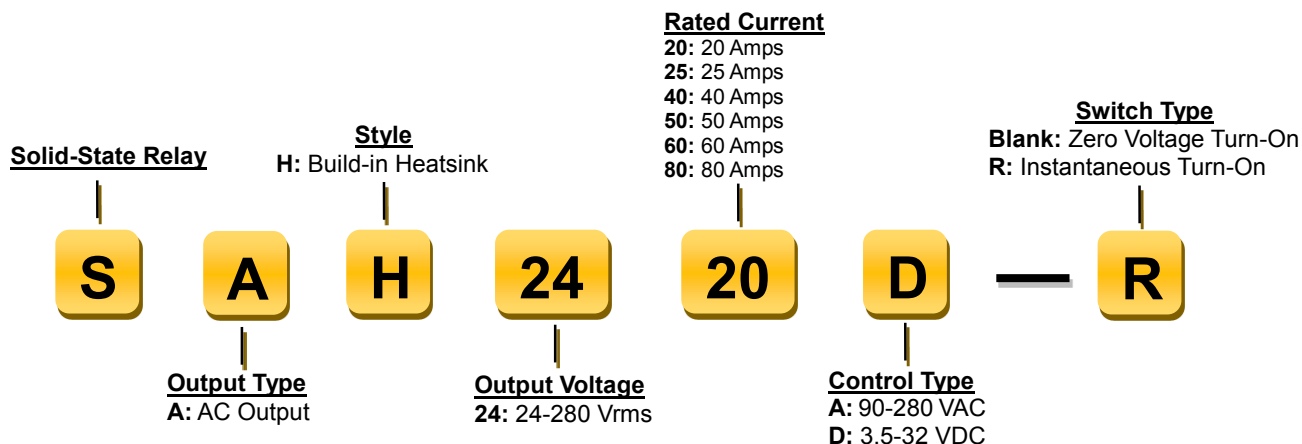
Picture is SAH2440D

- Ratings from 20A to 80A @ 24-280 VAC
- 800 Volts transient overvoltage
- LED input status indicator
- Strengthened output design specifically for temperature control.
- CE approved, RoHS/EMC compliant.
- All-in-one SSR with build-in Heatsink
- Designed in according with the requirements of IEC 62314
- Zero-crossing (resistive loads) output

PRODUCT SELECTION

Control Voltage	20A	25A	40A	50A	60A	80A
90-280 VAC	SAH2420A	SAH2425A	SAH2440A	SAH2450A	SAH2460A	SAH2480A
4-32 VDC	SAH2420D	SAH2425D	SAH2440D	SAH2450D	SAH2460D	SAH2480D

MODEL NAME DEFINITIONS



OUTPUT SPECIFICATIONS ⁽¹⁾

Description	20A	25A	40A	50A	60A	80A
Operating Voltage (47-63Hz) [Vrms]	24-280	24-280	24-280	24-280	24-280	24-280
Transient Overvoltage [Vpk]	800	800	800	800	800	800
Maximum Off-State Leakage Current @ Rated Voltage [mA _{rms}]	5	5	5	5	5	5
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec]	300	300	300	500	500	500
Maximum Load Current ⁽²⁾ [Arms]	20	25	40	50	60	80
Minimum Load Current [Arms]	0.15	0.15	0.15	0.15	0.15	0.15
Maximum 1 Cycle Surge Current (50/60Hz) [A _{pk}]	248/260	392/410	477/500	573/600	764/800	859/900
Maximum On-State Voltage Drop @ Rated Current [Vrms]	1.15	1.15	1.15	1.2	1.2	1.2
Thermal Resistance Junction to Case (R _{jc}) [°C/W]	1.62	1.12	0.71	0.59	0.57	0.49
Maximum 1/2 Cycle I ² t for Fusing (50/60 Hz) [A ² sec]	234/222	285/259	1770/1629	2124/1954	2442/2247	3230/2971
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5	0.5	0.5	0.5
Weight (typical)	175	177	433	680	680	980

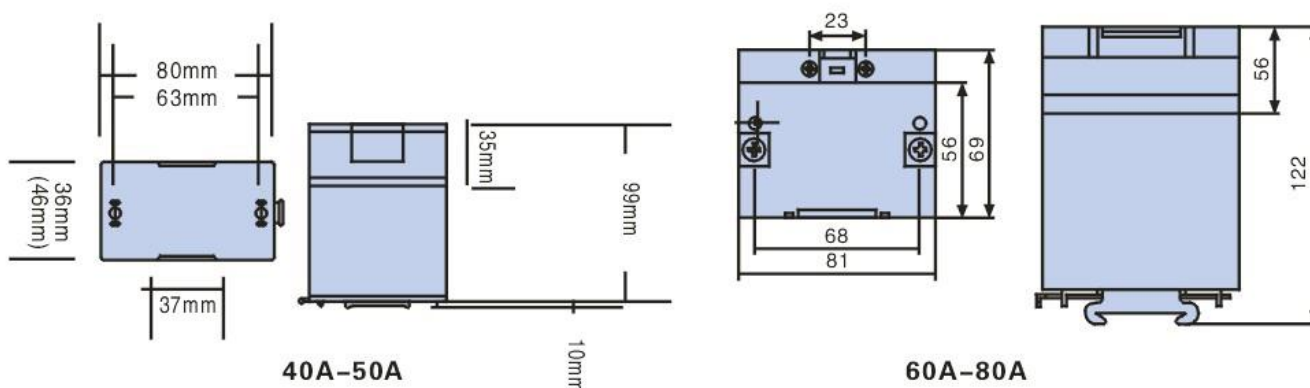
INPUT SPECIFICATIONS ⁽¹⁾

Description	SAH24xxA	SAH24xxD
Control Voltage Range	90-280 Vrms	3-32 VDC
Maximum Reverse Voltage	-	-32
Minimum Turn-On Voltage	90 Vrms	3.0 VDC
Minimum Turn-Off Voltage	10 Vrms	1.0 VDC
Minimum Input Current [mA]	5	7
Maximum Input Current [mA]	15	12
Nominal Input Impedance	Current Regulated	Current Regulated
Maximum Turn-On Time ⁽³⁾ [msec]	20	1/2 cycle
Maximum Turn-Off Time [msec]	20	1/2 cycle

GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125 °C
Housing Material	UL E211125: 94 V-0
Terminal Material	Gilded
Humidity	85% non-condensing
LED Input Status Indicator	Red

MECHANICAL SPECIFICATIONS



RECOMMENDED MODEL & HEATSINK

Choosing compatible current is critical in selecting a right model of solid state relay. Our engineers recommend SSR models according to actual applications and internal components of relay. For example, when solid state relay is used for electric heating, because of the cold resistance effect (the resistance value is 60% of heating wire value when it is in cold state), the SSR's current should be 1.67 times bigger than actual working current in order to prevent the over-current of solid state relay.

Application to Electric Heating

Actual Load Current	0.15A-12A	0.15A-18A	0.15A-22A	0.15A-27A	0.15A-31A	0.15A-40A
Recommended Model ⁽⁴⁾	SAH2420D	SAH2425D	SAH2440D	SAH2450D	SAH2460D	SAH2480D

Application to Single-Phase Motors

Actual Load Current	0.15A-2A	0.15A-5A	0.15A-7A	0.15A-8A	0.15A-10A	0.15A-12A
Recommended Model ⁽⁴⁾	SAH2420D-R	SAH2425D-R	SAH2440D-R	SAH2450D-R	SAH2460D-R	SAH2480D-R

Application to Transformer Loads

Actual Load Current	0.15A-4A	0.15A-10A	0.15A-12A	0.15A-15A	0.15A-17A	0.15A-22A
Recommended Model ⁽⁴⁾	SAH2420D-R	SAH2425D-R	SAH2440D-R	SAH2450D-R	SAH2460D-R	SAH2480D-R

Application to Solenoid Valves

Actual Load Current	0.15A-1.4A	0.15A-3.7A	0.15A-4.5A	0.15A-5.4A	0.15A-6.3A	0.15A-8.18A
Recommended Model ⁽⁴⁾	SAH2420D-R	SAH2425D-R	SAH2440D-R	SAH2450D-R	SAH2460D-R	SAH2480D-R

GENERAL NOTES

- (1) All parameters at 25°C and per section unless otherwise specified.
- (2) Heat sinking required, for derating curves see next page.
- (3) Turn-on time for random turn-on (-R) version is 0.1 msec.
- (4) It is DC control as a default in the recommendation table, but it can be changed to AC control according to demand.

AGENCY APPROVALS

Designed in accordance with the requirements of IEC 62314

