

Standard panel mount package, 1-phase

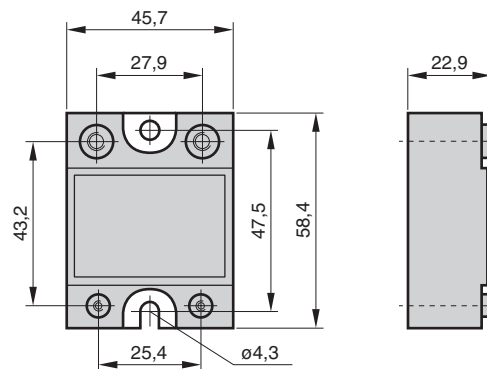
Solid-state relay HRS



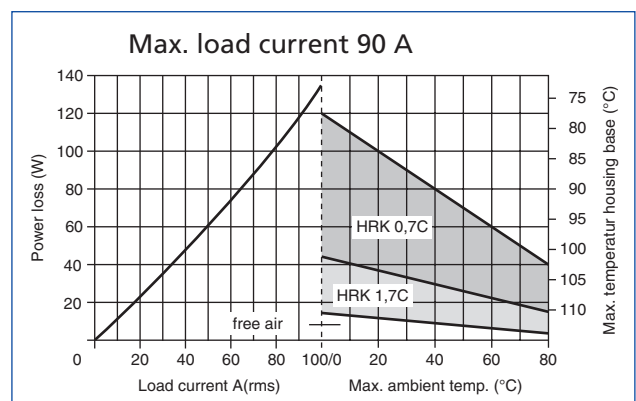
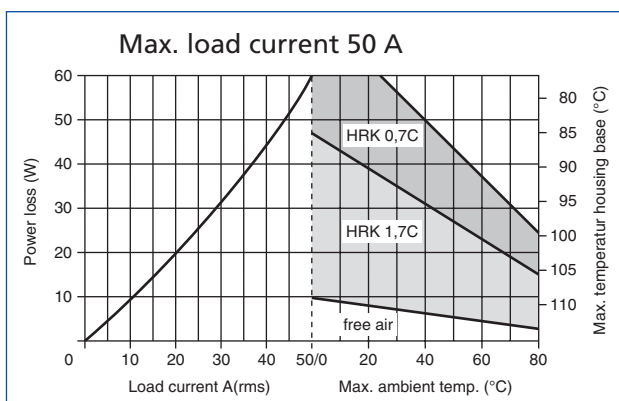
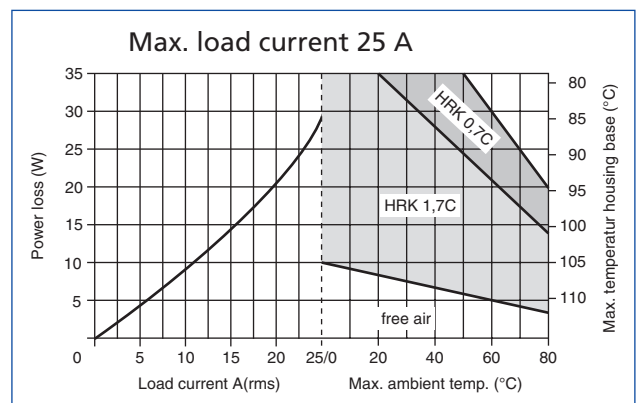
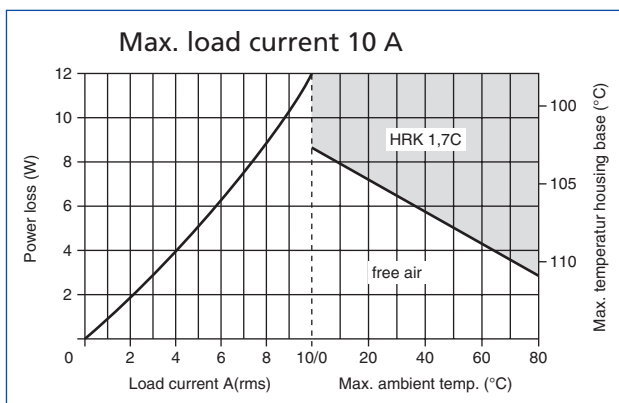
Construction S

- Control voltage range: 3 ... 32 Vdc, 90 ... 280 Vac
- Load voltage range: 24 ... 280 Vac rms
- Load current range: 0,04 ... 90 Arms

Dimensions



Thermal diagrams



Standard panel mount package, 1-phase

Solid-state relay HRS

Technical specifications	HRS D 2410	HRS D 2425	HRS D 2450
Zero switching	Yes	Yes	Yes
Instantaneous switching-on	–	–	–
Control circuit	dc	dc	dc
Load circuit	ac	ac	ac
Load circuit			
Voltage range (47 ... 63 Hz)	24 ... 280 Vac rms	24 ... 280 Vac rms	24 ... 280 Vac rms
Transient overvoltage	600 Vpk	600 Vpk	600 Vpk
Load current range	0,04 ... 10 Arms	0,04 ... 25 Arms	0,04 ... 50 Arms
Max. surge current (8,3 ms/ac; 1 s/dc)	–	–	–
Max. surge current (16,6 ms/ac)	120 Apk	250 Apk	625 Apk
Max. off-state leakage current (rated voltage)	10 mArms	10 mArms	10 mArms
Min. off-state du/dt	500 V/μs	500 V/μs	500 V/μs
Max. on-state voltage drop	1,6 Vpk	1,6 Vpk	1,6 Vpk
Max. turn-on time	1/2 cycle	1/2 cycle	1/2 cycle
Max. turn-off time	1/2 cycle	1/2 cycle	1/2 cycle
Max. I _{2t} for fusing (8,3 ms)	60 A ² s	260 A ² s	1620 A ² s
Cos. φ	> 0,5	> 0,5	> 0,5
Thermal resistance to base	1,48 °C/W	1,02 °C/W	0,63 °C/W
Output switching device	Tyristor	Tyristor	Tyristor
Built-in snubber network	33 μF / 33 Ω	33 μF / 33 Ω	33 μF / 33 Ω
Control circuit			
Control voltage range	3 ... 32 Vdc	3 ... 32 Vdc	3 ... 32 Vdc
Must operate voltage	3,0 Vdc	3,0 Vdc	3,0 Vdc
Must release voltage	1,0 Vdc	1,0 Vdc	1,0 Vdc
Max. reverse voltage	-32 Vdc	-32 Vdc	-32 Vdc
Nominal input impedance	1500 Ohm	1500 Ohm	1500 Ohm
Typical input current at nominal voltage	3,4 mA / 5 Vdc	3,4 mA / 5 Vdc	3,4 mA / 5 Vdc
Generalities			
Insulation input/output/base	4000 Vrms	4000 Vrms	4000 Vrms
Insulation resistance	10 ⁹ Ohm / 500 Vdc	10 ⁹ Ohm / 500 Vdc	10 ⁹ Ohm / 500 Vdc
Max. capacitance input/output	8 pF	8 pF	8 pF
Ambient operating temperature range	-40 ... +80 °C	-40 ... +80 °C	-40 ... +80 °C
Ambient storage temperature range	-40 ... +125 °C	-40 ... +125 °C	-40 ... +125 °C
Weight (typical)	87 g	87 g	87 g
Approvals	UL, VDE, CSA	UL, VDE, CSA	UL, VDE, CSA
Screw torque requirements:			
6-32 screws (Control circuit)	≤ 0,5 Nm	≤ 0,5 Nm	≤ 0,5 Nm
8-32 screws (Load circuit)	≤ 1,5 Nm	≤ 1,5 Nm	≤ 1,5 Nm
Article number	42310101	42310102	42310103
(Order data see chapter 1)			