

### Features

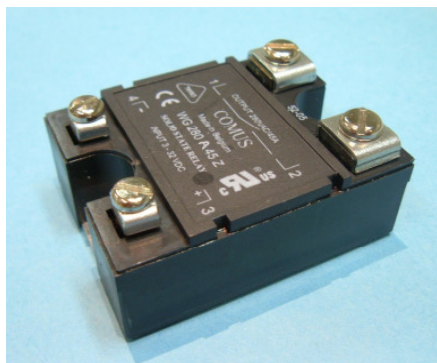
<b>Switching</b>	Zero cross
<b>Output</b>	Back to back SCR with internal snubber
<b>Input</b>	AC (Input resistance of 3,6 K $\Omega$ )
<b>Applications</b>	Resistive and inductive loads with $\cos\phi > 0.85$

### Technical data

WG 280 B	10 Z	25 Z	45 Z	50 Z
<b>Input circuit</b>				
Control voltage range	18...36 VAC			
Control current max.	10 mA			
Turn-off voltage min.	2 VAC			
Input resistance	3,6 K $\Omega$			
<b>Output circuit</b>				
Load voltage range	24...280 VAC			
Peak-off state voltage	600 V <sub>drm</sub>			
Off-state leakage current	6 mA eff.		12 mA eff.	
Load current range	0,1...10 A	0,2...25 A	0,4...45 A	0,4...50 A
Surge current 1 half wave	110 A <sub>peak</sub>	230 A <sub>peak</sub>	500 A <sub>peak</sub>	570 A <sub>peak</sub>
I <sup>2</sup> t for fusing	60 A <sup>2</sup> s	260 A <sup>2</sup> s	1250 A <sup>2</sup> s	1620 A <sup>2</sup> s
On-state voltage	1,6 V <sub>peak</sub>			
Off-state (static) dV/dt	1000 V/ $\mu$ s			
Snubber	47 $\Omega$ / 47 nF		47 $\Omega$ / 100 nF	
<b>General data</b>				
Turn-on time max.	33 ms			
Turn-off time max.	33 ms			
Line frequency range	47...63 Hz			
Isolation volt. between input/output	4.000 V			
Isolation volt. between input-output/base	2.500 V			
Isolation resistance	50 M $\Omega$			
Operation temperature	-20...+80 $^{\circ}$ C			
Recommended varistor	SIOV-S20 K230			
Approvals	pending			

### Technical data

WG 280 B	75 Z	90 Z	110 Z	125 Z
<b>Input circuit</b>				
Control voltage range	18...36 VAC			
Control current max.	10 mA			
Turn-off voltage min.	2 VAC			
Input resistance	3,6 K $\Omega$			
<b>Output circuit</b>				
Load voltage range	24...280 VAC			
Peak-off state voltage	600 V <sub>drm</sub>			
Off-state leakage current	12 mA eff.			
Load current range	0,4...75 A	0,4...90 A	0,4...110 A	0,4...125 A
Surge current 1 half wave	910 A <sub>peak</sub>	1090 A <sub>peak</sub>	1350 A <sub>peak</sub>	1590 A <sub>peak</sub>
I <sup>2</sup> t for fusing	4150 A <sup>2</sup> s	5980 A <sup>2</sup> s	9100 A <sup>2</sup> s	12650 A <sup>2</sup> s
On-state voltage	1,6 V <sub>peak</sub>			
Off-state (static) dV/dt	1000 V/ $\mu$ s			
Snubber	47 $\Omega$ / 100 nF			
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Turn-on time max.	33 ms			
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Operation temperature	-20...+80 $^{\circ}$ C			
Recommended varistor	SIOV-S20 K230			
Approvals	pending			



### Features

<b>Switching</b>	Random
<b>Output</b>	Back to back SCR with internal snubber
<b>Input</b>	AC (Input resistance of 3,6 K $\Omega$ )
<b>Applications</b>	Inductive loads

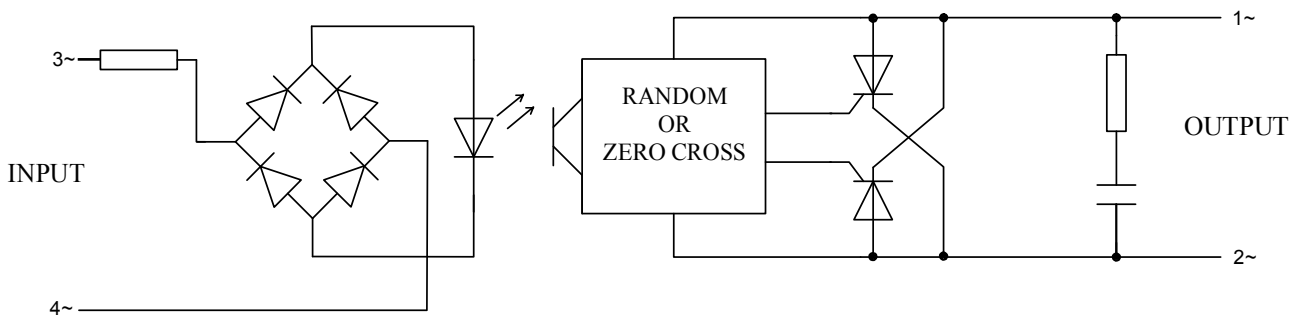
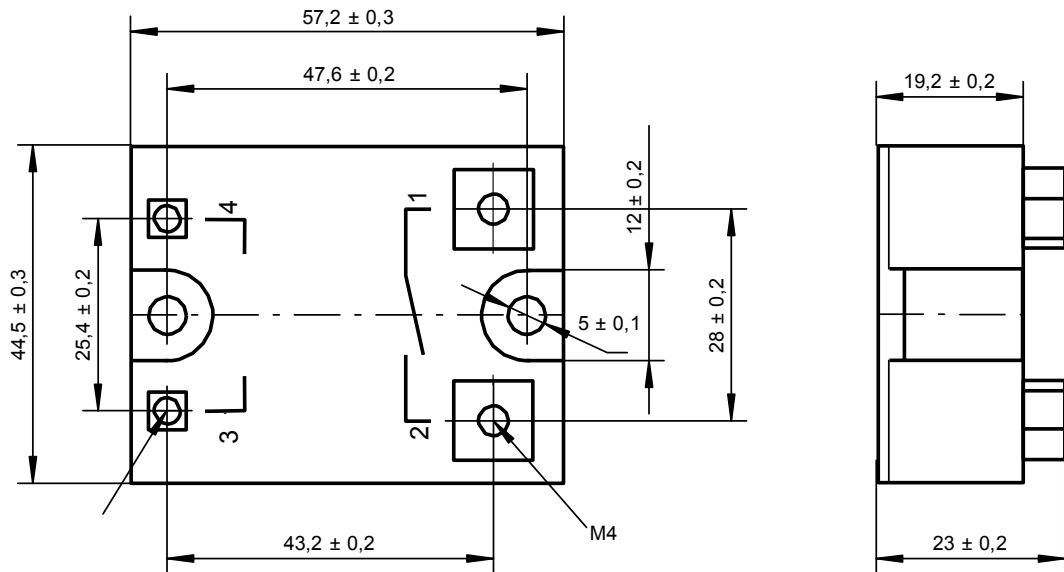
### Technical data

WG 280 B	10 R	25 R	40 R	50 R
<b>Input circuit</b>				
Control voltage range	18...36 VAC			
Control current max.	10 mA			
Turn-off voltage min.	2 VAC			
Input resistance	3,6 K $\Omega$			
<b>Output circuit</b>				
Load voltage range	24...280 VAC			
Peak-off state voltage	600 V <sub>drm</sub>			
Off-state leakage current	6 mA eff.		12 mA eff	
Load current range	0,1...10 A	0,2...25 A	0,4...40 A	0,4...50 A
Surge current 1 half wave	110 A <sub>peak</sub>	230 A <sub>peak</sub>	500 A <sub>peak</sub>	570 A <sub>peak</sub>
I <sup>2</sup> t for fusing	60 A <sup>2</sup> s	260 A <sup>2</sup> s	1250 A <sup>2</sup> s	1620 A <sup>2</sup> s
On-state voltage	1,6 V <sub>peak</sub>			
Off-state (static) dV/dt	1000 V/ $\mu$ s			
Snubber	47 $\Omega$ / 47 nF		47 $\Omega$ / 100 nF	
<b>General data</b>				
Turn-on time max.	0,1 ms			
Turn-off time max.	33 ms			
Line frequency range	47...63 Hz			
Isolation volt. between input/output	4.000 V			
Isolation volt. between input-output/base	2.500 V			
Isolation resistance	50 M $\Omega$			
Operation temperature	-20...+80 $^{\circ}$ C			
Recommended varistor	SIOV-S20 K230			
Approvals	pending			

### Technical data

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<b>Input circuit</b>				
Control voltage range	18...36 VAC			
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Peak-off state voltage	600 V <sub>drm</sub>			
Off-state leakage current	12 mA eff.			
Load current range	0,4...75 A	0,4...90 A	0,4...110 A	0,4...125 A
Surge current 1 half wave	910 A <sub>peak</sub>	1090 A <sub>peak</sub>	1350 A <sub>peak</sub>	1590 A <sub>peak</sub>
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Isolation resistance	50 M $\Omega$			
Operation temperature	-20...+80 $^{\circ}$ C			
Recommended varistor	SIOV-S20 K230			
Approvals	pending			

### Dimensions in mm & circuit diagram

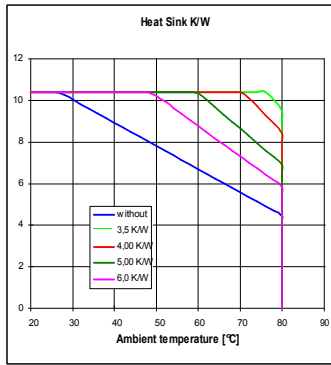
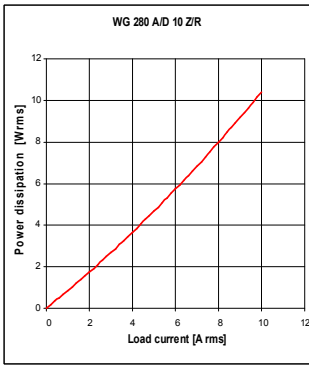


### Housing specification

Weight	Approx. 100 gr )
Housing material	Glass filled polyester
Potting compound	UL recognized Epoxy
Base plate	10 ... 45 A : Aluminium 50 ... 125A : Aluminium , nickel plated
Terminals	Input : M4-screws Output : M3,5-screws

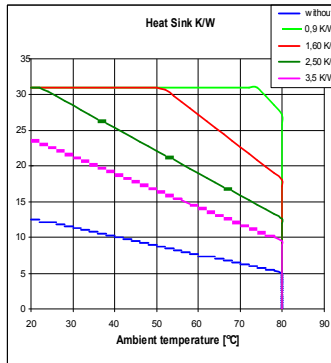
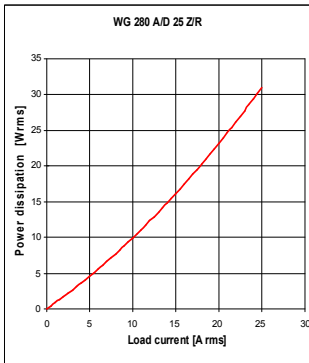
### Derating-diagrams

UL recognised components: suitable for a max. surrounding air temperature of 40°C.  
 For use at other ambient temperatures, check the derating diagrams.



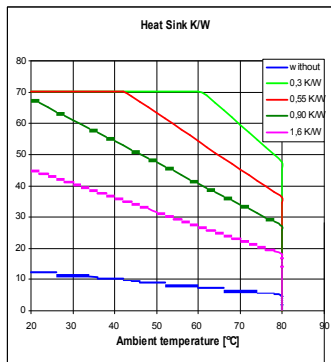
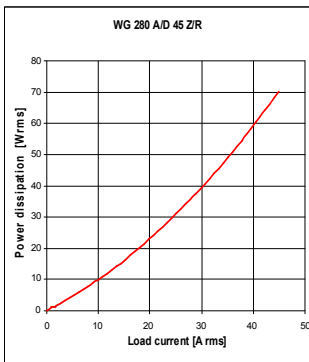
Heat sink	Number of SSR per heatsink/ load current per SSR		
	1 SSR	2 SSR	3 SSR
WG K1/100	10 A	10 A	
WG K2/100	10 A	10 A	
WG K3/160	10 A	10 A	10 A
WG K4/160L	10 A	10 A	10 A
WG K5/80	10 A		

Values for 40°C enclosure-temperature and mounted with conduction paste between the SSR and the heat sink



Heat sink	Number of SSR per heatsink/ load current per SSR		
	1 SSR	2 SSR	3 SSR
WG K1/100	18 A	12 A	
WG K2/100	23 A	17 A	
WG K3/160	25 A	25 A	23 A
WG K4/160L	25 A	25 A	25 A
WG K5/80	25 A		

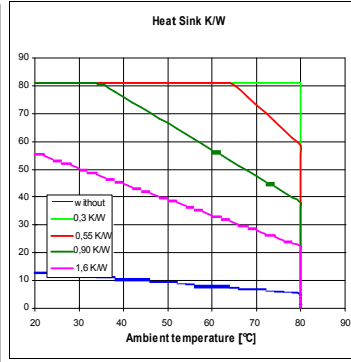
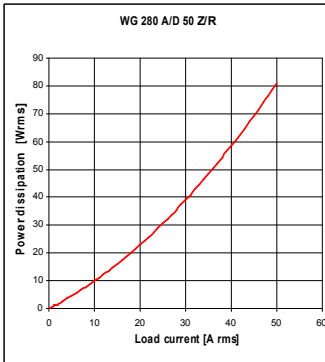
Values for 40°C enclosure-temperature and mounted with conduction paste between the SSR and the heat sink



Heat sink	Number of SSR per heatsink/ load current per SSR		
	1 SSR	2 SSR	3 SSR
WG K1/100	18 A	12 A	
WG K2/100	23 A	17 A	
WG K3/160	40 A	29 A	23 A
WG K4/160L	45 A	45 A	41 A
WG K5/80	34 A		

Values for 40°C enclosure-temperature and mounted with conduction paste between the SSR and the heat sink

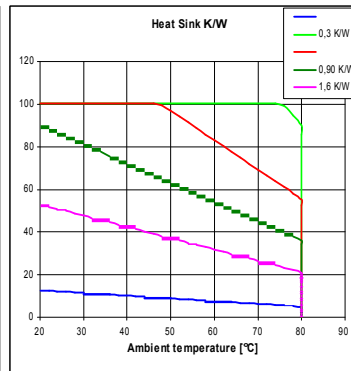
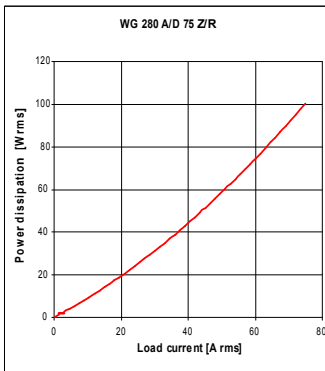
### Derating-diagrams



#### Number of SSR per heatsink/ load current per SSR

Heat sink	1 SSR	2 SSR	3 SSR
WG K1/100	20 A	13 A	
WG K2/100	26 A	18 A	
WG K3/160	50 A	34 A	26 A
WG K4/160L	50 A	50 A	50 A
WG K5/80	41 A		

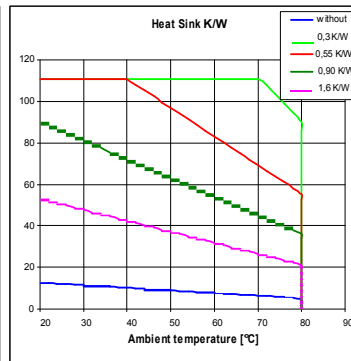
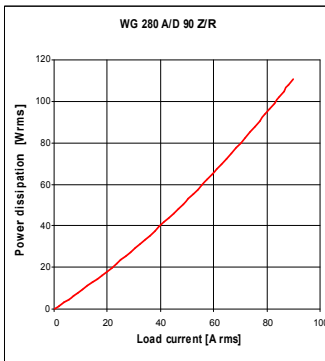
Values for 40°C enclosure-temperature and mounted with conduction paste between the SSR and the heat sink



#### Number of SSR per heatsink/ load current per SSR

Heat sink	1 SSR	2 SSR	3 SSR
WG K1/100	23 A	14 A	
WG K2/100	31 A	21 A	
WG K4/160L	75 A	75 A	68 A
WG K5/80	51 A		

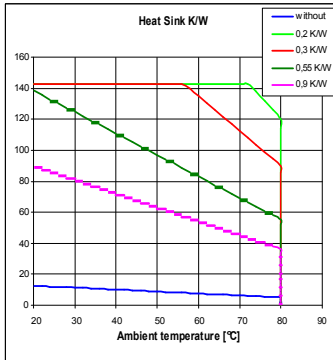
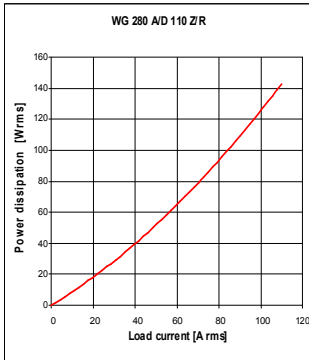
Values for 40°C enclosure-temperature and mounted with conduction paste between the SSR and the heat sink



#### Number of SSR per heatsink/ load current per SSR

Heat sink	1 SSR	2 SSR	3 SSR
WG K1/100	25 A	15 A	
WG K2/100	33 A	22 A	
WG K3/160	73 A	45 A	33 A
WG K4/160L	90 A	90 A	76 A
WG K5/80	56 A		

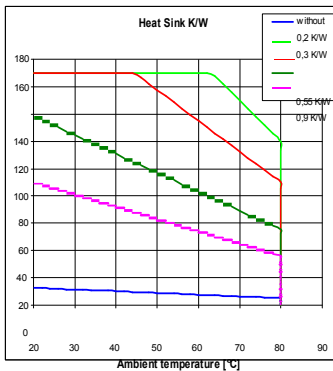
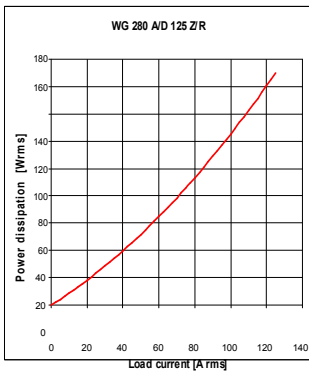
Values for 40°C enclosure-temperature and mounted with conduction paste between the SSR and the heat sink



### Number of SSR per Heatsink/ Load current per SSR

Heat sink	1 SSR	2 SSR	3 SSR
WG K1/100	25 A	15 A	
WG K2/100	33 A	22 A	
WG K3/160	74 A	46 A	33 A
WG K4/160L	110 A	103 A	77 A
WG K5/80	56 A		

Values for 40°C enclosure-temperature and mounted with conducting paste between the SSR and the heat sink

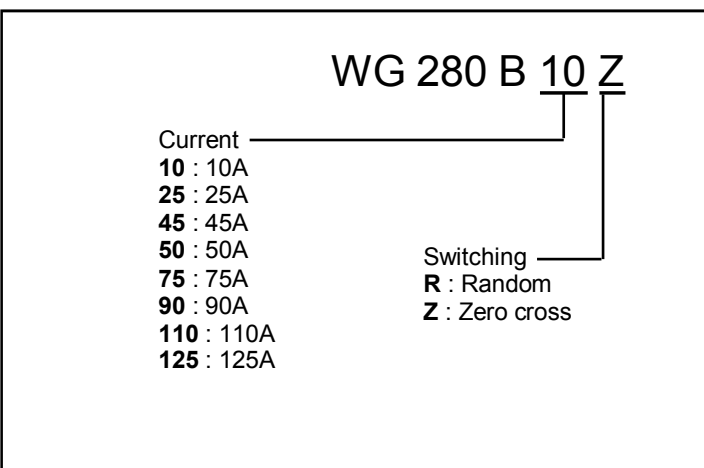


### Number of SSR per Heatsink/ Load current per SSR

Heat sink	1 SSR	2 SSR	3 SSR
WG K1/100	25 A	15 A	
WG K2/100	33 A	22 A	
WG K3/160	74 A	46 A	33 A
WG K4/160L	125 A	103 A	77 A
WG K5/80	57A		

Values for 40°C enclosure-temperature and mounted with conducting paste between the SSR and the heat sink

## Ordering



Description	Part Number
Protective case small	8440 5700 110
Thermal Conducting paste	8406 0180 020
Heat sink WG K1/100	5981 5701 100
Heat sink WG K2/100	5981 5701 110
Heat sink WG K3/160	5981 5701 370
Heat sink WG K4/160L	5981 5701 371
Heat sink WG K5/80	5981 5701 372
Mounting plate DIN rail	5981 5701 430