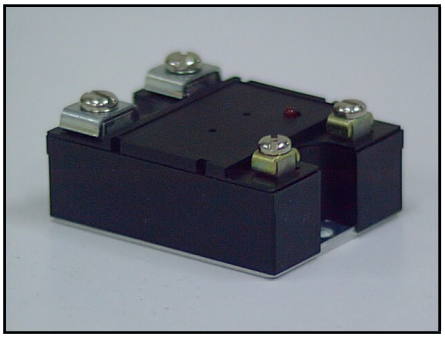
Solid State Relays

Datasheet WG A5 6D/8Dxxx – LD

Comus International Bvba
Overhaamlaan 40
3700 Tongeren, Belgium
Phone: +32 12390400
Fax: +32 12235754
Email: info@comus.be
www.comus.be



Features

Switching	Zero cross and random
Output	Triac with internal snubber
Input	DC with constant current control
	Status-indicating LED (red)
Applications	resistive and inductive loads with cosϕ > 0,85 (Z-Type) inductive load with cosϕ > 0,65 (R-Type)

Technical data

WG A5 6Dxxx–LD	10 Z	10 R	25 Z	25 R	40 Z	40 R
Input circuit						
Control voltage range	3...32 VDC					
Control current max.	22mA					
Turn-off voltage min.	1 VDC					
Input resistance	Constant current					
Output circuit						
Load voltage range	24...280 VAC					
Peak-off-state voltage	600 V_{drm}					
Off-state leakage current	6 mA eff.		12 mA eff.			
Load current range	0,1...10 A		0,1...25 A		0,2...40 A	
Surge current 1 half wave	110 A_{peak}		230 A_{peak}		400 A_{peak}	
I^2t for fusing	60 A^2s		260 A^2s		880 A^2s	
On-state voltage	1,85 V_{peak}					
Off-state (static) dv/dt	500 V/µs					
Snubber	47 Ω / 47 nF		47 Ω / 100 nF			
General data						
Turn-on time max.	11 ms	0,1 ms	11 ms	0,1 ms	11 ms	0,1 ms
Turn-off time max.	11 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 MΩ					
Operation temperature	-20...+80 ℃					
Recommended varistor	SIOV-S20 K230					

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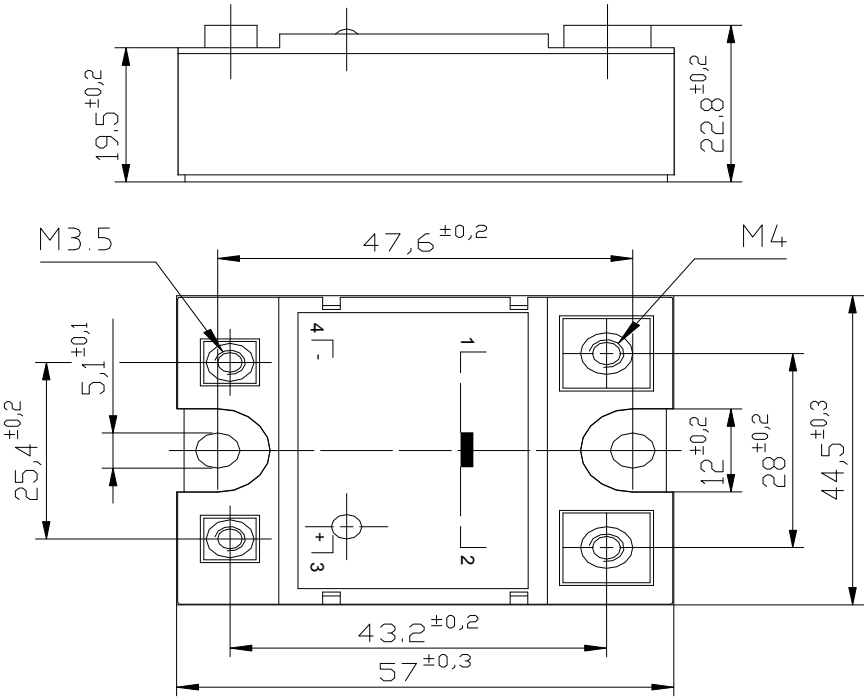
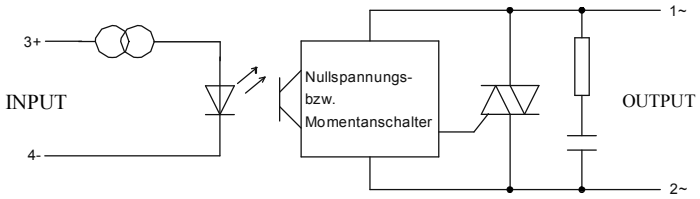
Dimensions in mm & circuit diagram





Ordering Information

WG A5 6D 10 Z — LD

CURRENT
10 : 10A
25 : 25A
40 : 40A

SWITCHING
R : Random
Z : Zero cross

Options: Suffix – P, 100% potted

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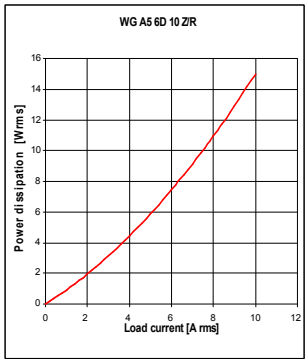
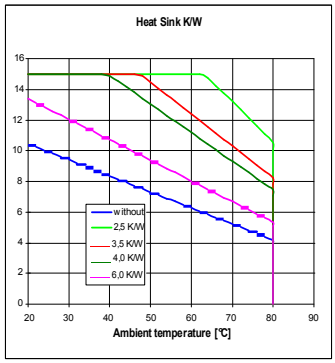
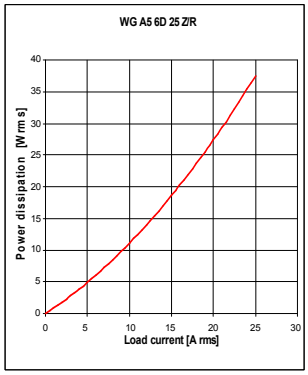
Derating diagrams

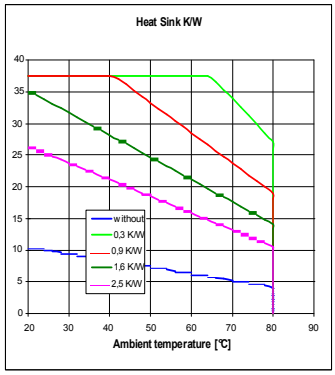




	Number of SSR per Heatsink/ Load current per SSR		
Heat sink	1 SSR	2 SSR	3 SSR
WG K1/100	10 A	8 A	
WG K2/100	10 A	10 A	
WG K3/160	10 A	10 A	10 A
WG K4/160L	10 A	10 A	10 A
WG K5/80	10 A		

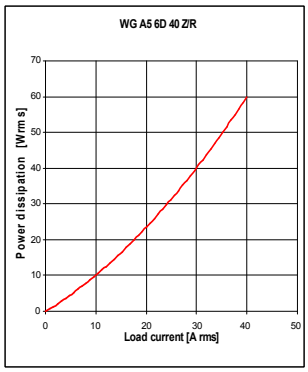
Values for 40°C enclosure-temperature and mounted with conducting paste between the SSR and the heat sink

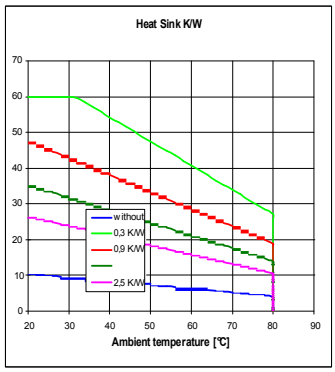




	Number of SSR per Heatsink/ Load current per SSR		
Heat sink	1 SSR	2 SSR	3 SSR
WG K1/100	14 A	10 A	
WG K2/100	17 A	14 A	
WG K3/160	25 A	21 A	18 A
WG K4/160L	25 A	25 A	25 A
WG K5/80	24 A		

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	16 A	11 A	
WG K2/100	20 A	15 A	
WG K3/160	31 A	24 A	20 A
WG K4/160L	40 A	36 A	32 A
WG K5/80	27 A		

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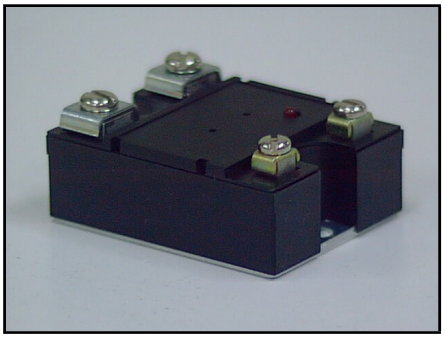

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Technical data

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Input circuit						
Control voltage range	3...32 VDC					
Control current max.	22mA					
Turn-off voltage min.	1 VDC					
Input resistance	Constant current					
Output circuit						
Load voltage range	24...420 VAC					
Peak-off-state voltage	800 V_{drm}					
Off-state leakage current	12 mA eff.					
Load current range	0,1...10 A		0,1...25 A		0,2...40 A	
Surge current 1 half wave	110 A_{peak}		230 A_{peak}		400 A_{peak}	
I^2t for fusing	60 A^2s		260 A^2s		880 A^2s	
On-state voltage	1,85 V_{peak}					
Off-state (static) dv/dt	500 V/µs					
Snubber	47 Ω / 22 nF					
Genral data						
Turn-on time max.	11 ms	0,1 ms	11 ms	0,1 ms	11 ms	0,1 ms
Turn-off time max.	11 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 MΩ					
Operation temperature	-20...+80 °C					
Recommended varistor	SIOV-S20 K420					

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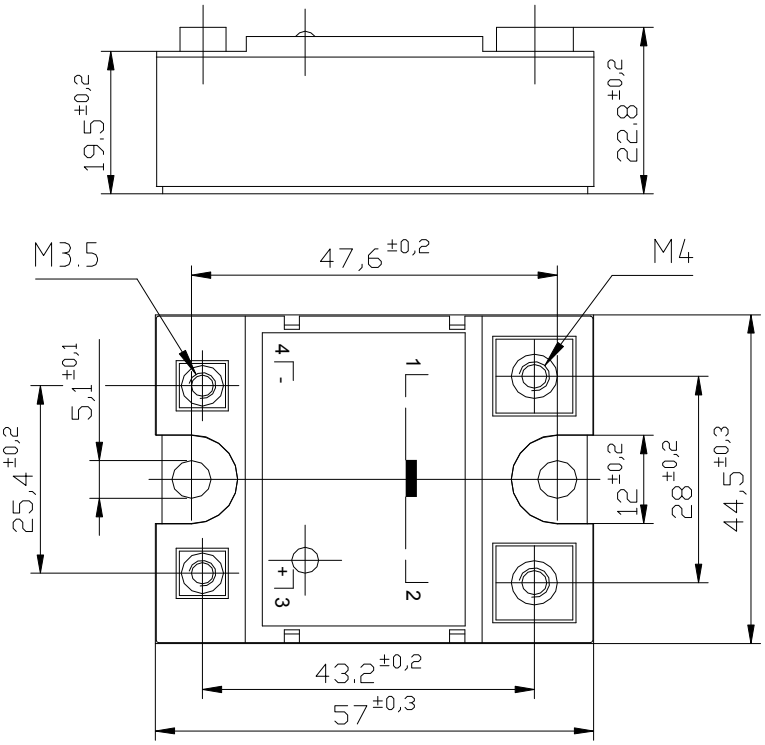

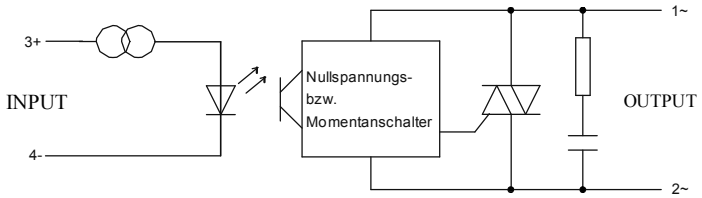

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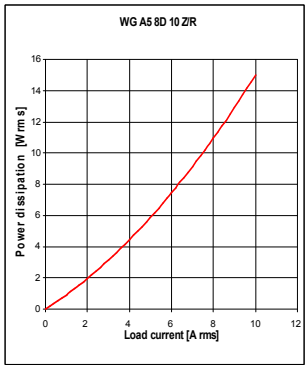

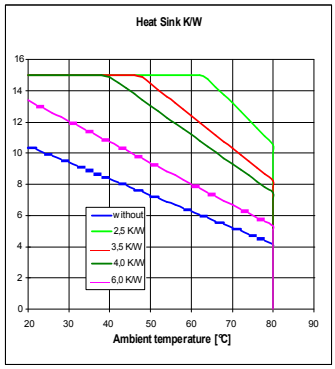

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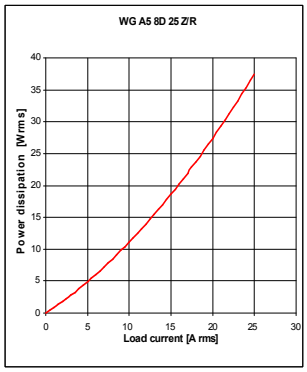

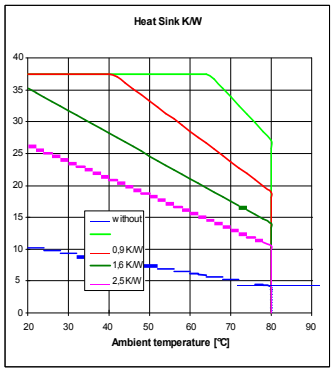

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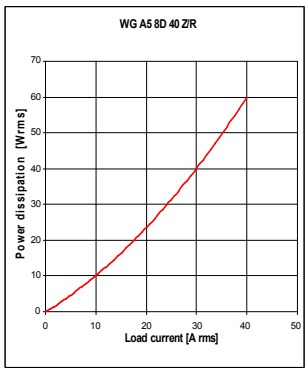

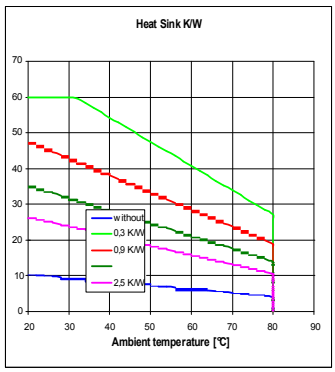

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