

AutomationDirect – GS Series Brake Resistors for AC Drives

GS Series: 80W–9.6 kW Brake Resistors Overview

Automation Direct GS series brake resistors are designed for use with any AC drive up to 600V. See the specifications section of your Automation Direct AC drive manual for the drive-to-resistor cross reference.

Open:

Encapsulated offerings from 80W to 5.0 kW.

Panel mount coil offerings from 750W to 1.5 kW.

Enclosed NEMA1:

Offerings from 1.0 kW to 9.6 kW.

Drive Usage Cross References

Refer to the online technical specifications below for a list of compatibility between brake resistors and VFDs sold by AutomationDirect.

- For GS4 series drives, see [GS4 Drive Braking Components](#).
- For GS10 series drives, see [GS10 Drive Braking Components](#).
- For GS20(X) series drives, see [GS20\(X\) Drive Braking Components](#).
- For GS30 series drives, see [GS30 Drive Braking Components](#).
- For Ironhorse ACG series drives, see [ACG Drive Braking Components](#).
- For Ironhorse ACN series drives, see [ACN Drive Braking Components](#).
- For WEG CFW500 series drives, see [CFW500 Drive Braking Components](#).



GS-2020-BR-ENC



GS-BR-400W150
(Open Encapsulated)





GS-2020-BR-ENC
(cover removed for display)



GS-BR-1K0W020
(Open Panel Coil)

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GS Series Specifications


Open Type Braking Resistor Specifications							
Type	Part Number	Price	Power	Resistance (Ω)	Drawing Link	Connection Terminal Type	
Open- Encapsulated Flat Mount 	GS-BR-080W200		80W	200	PDF	Wire Leads (150mm length)	
	GS-BR-080W750			750	PDF		
	GS-BR-200W091	GS-BR-200W360		200W	91	PDF	Wire Leads (200mm length)
					360	PDF	
	GS-BR-300W070	GS-BR-300W250		300W	70	PDF	Wire Leads (150mm length)
					250	PDF	
					400	PDF	
	GS-BR-400W040	GS-BR-400W150		400W	40	PDF	Blade connector
					150	PDF	
	GS-BR-500W100			500W	100	PDF	Blade connector
Open- Panel Mount Coil 	GS-BR-750W140		750W	140	PDF	Blade connector	
	GS-BR-1K0W4P3		1kW	4.3	PDF		
	GS-BR-1K0W5P1			5.1	PDF		
	GS-BR-1K0W016			16	PDF		
	GS-BR-1K0W020			20	PDF		
	GS-BR-1K0W075			75	PDF		
	GS-BR-1K2W3P9		1.2 kW	3.9	PDF		
	GS-BR-1K2W015			15	PDF		
	GS-BR-1K5W3P3		1.5 kW	3.3	PDF		
	GS-BR-1K5W012			12	PDF		
	GS-BR-1K5W013			13	PDF		
	GS-BR-1K5W040			40	PDF		
	GS-BR-1K5W043			43	PDF		

Open Type Brake Resistor General Specifications		
	Test Condition	Specification
Operating Temperature	-	<ul style="list-style-type: none"> Open Encapsulated Flat Mount: -55 to 250 °C (when temp > 200°C use forced cooling with airspeed 3–10m/s) Open Panel Mount Coil: -55 to 600°C (when temp > 350°C, use forced cooling with airspeed 3–10m/s)
Tolerance	@25°C	±5%
Temperature Coefficient	-	±260ppm/°C
Housing Material	-	<ul style="list-style-type: none"> Open Encapsulated Flat Mount: Oxidized aluminum Open Panel Mount Coil: Ceramic coating
Isolation Resistance	Between terminals (terminal wire) and housing or mounting bracket	100M Ω @ 500VDC for 1 minute
Dielectric Strength	Between terminals (terminal wire) and housing or mounting bracket	1500VAC for 1 minute
Overload	Cycle 10s on ~90s off	10 x rated power
Lead Pull Strength	-	2.5 kg for 10 seconds (not applicable when resistor has no leads)
Vibration	10–55–10 Hz sweep in 1 minute, amplitude 0.75 mm	2 hours per direction

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GS Series Specifications, *continued*

Enclosed Type Braking Resistor Specifications							
Type	Part Number	Price	Power (kW)	Resistance (Ω)	Thermal Switch Temperature	Drawing Link	Connection Terminal Type
Enclosed NEMA1 with Temperature switch 	GS-2010-BR-ENC		1.0	20	Open=250 °F Close=215 °F	PDF	Terminal block
	GS-2015-BR-ENC		2.4	13.6		PDF	
	GS-2020-BR-ENC		3.0	10		PDF	
	GS-2025-BR-ENC		4.8	8		PDF	
	GS-2030-BR-ENC			6.8		PDF	
	GS-2040-BR-ENC		3.0	10		PDF	
	GS-2050-BR-ENC		4.8	8		PDF	
	GS-4015-BR-ENC		1.0	50		PDF	
	GS-4020-BR-ENC		1.5	40		PDF	
	GS-4025-BR-ENC		4.8	32		PDF	
	GS-4030-BR-ENC			27.2		PDF	
	GS-4040-BR-ENC		6.0	20		PDF	
	GS-4050-BR-ENC		9.6	16		PDF	
	GS-4060-BR-ENC			13.6		PDF	
	GS-4075-BR-ENC		6.0	20		PDF	
GS-4100-BR-ENC		9.6	13.6	PDF			

Legacy Braking Resistor Specifications						
Type	Legacy Part Number	Price	Power (W)	Resistance (Ω)	Drawing Link	Replacement Part Number
Open 	GS-20P5-BR		80	200	PDF	GS-BR-080W200
	GS-21P0-BR		80	200	PDF	GS-BR-080W200
	GS-22P0-BR		300	100	PDF	n/a
	GS-23P0-BR		300	70	PDF	GS-BR-300W070
	GS-25P0-BR		400	40	PDF	GS-BR-400W040
	GS-27P5-BR		500	30	PDF	n/a
	GS-41P0-BR		80	750	PDF	GS-BR-080W750
	GS-42P0-BR		300	400	PDF	GS-BR-300W400
	GS-43P0-BR		300	250	PDF	GS-BR-300W250
	GS-45P0-BR		400	150	PDF	GS-BR-400W150
	GS-47P5-BR		500	100	PDF	GS-BR-500W100
	GS-4010-BR			1.0 kW	75	PDF