

# 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 ( $\Omega$ )	Drawing Link	Connection Terminal Type	
Open- Encapsulated Flat Mount 	<a href="#">GS-BR-080W200</a>	<--->	80W	200	<a href="#">PDF</a>	Wire Leads (150mm length)	
	<a href="#">GS-BR-080W750</a>	<--->		750	<a href="#">PDF</a>		
	<a href="#">GS-BR-200W091</a>	<--->	200W	91	<a href="#">PDF</a>	Wire Leads (200mm length)	
		<a href="#">GS-BR-200W360</a>		<--->	360		<a href="#">PDF</a>
	<a href="#">GS-BR-300W070</a>	<--->	300W	70	<a href="#">PDF</a>	Wire Leads (150mm length)	
		<a href="#">GS-BR-300W250</a>		<--->	250		<a href="#">PDF</a>
		<a href="#">GS-BR-300W400</a>		<--->	400		<a href="#">PDF</a>
	<a href="#">GS-BR-400W040</a>	<--->	400W	40	<a href="#">PDF</a>		
		<a href="#">GS-BR-400W150</a>		<--->	150		<a href="#">PDF</a>
	<a href="#">GS-BR-500W100</a>	<--->	500W	100	<a href="#">PDF</a>		Blade connector
Open- Panel Mount Coil 	<a href="#">GS-BR-750W140</a>	<--->	750W	140	<a href="#">PDF</a>	Blade connector	
	<a href="#">GS-BR-1K0W4P3</a>	<--->	1kW	4.3	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K0W5P1</a>	<--->		5.1	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K0W016</a>	<--->		16	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K0W020</a>	<--->		20	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K0W075</a>	<--->		75	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K2W3P9</a>	<--->	1.2 kW	3.9	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K2W015</a>	<--->		15	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K5W3P3</a>	<--->	1.5 kW	3.3	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K5W012</a>	<--->		12	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K5W013</a>	<--->		13	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K5W040</a>	<--->		40	<a href="#">PDF</a>		
	<a href="#">GS-BR-1K5W043</a>	<--->		43	<a href="#">PDF</a>		

Open Type Brake Resistor General Specifications		
	Test Condition	Specification
<b>Operating Temperature</b>	-	<ul style="list-style-type: none"> <li>Open Encapsulated Flat Mount: -55 to 250 °C (when temp &gt; 200°C use forced cooling with airspeed 3–10m/s)</li> <li>Open Panel Mount Coil: -55 to 600°C (when temp &gt; 350°C, use forced cooling with airspeed 3–10m/s)</li> </ul>
<b>Tolerance</b>	@25°C	±5%
<b>Temperature Coefficient</b>	-	±260ppm/°C
<b>Housing Material</b>	-	<ul style="list-style-type: none"> <li>Open Encapsulated Flat Mount: Oxidized aluminum</li> <li>Open Panel Mount Coil: Ceramic coating</li> </ul>
<b>Isolation Resistance</b>	Between terminals (terminal wire) and housing or mounting bracket	100M $\Omega$ @ 500VDC for 1 minute
<b>Dielectric Strength</b>	Between terminals (terminal wire) and housing or mounting bracket	1500VAC for 1 minute
<b>Overload</b>	Cycle 10s on ~90s off	10 x rated power
<b>Lead Pull Strength</b>	-	2.5 kg for 10 seconds (not applicable when resistor has no leads)
<b>Vibration</b>	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)	Drawing Link	Connection Terminal Type
Enclosed NEMA1 with Temperature switch  	<a href="#">GS-2010-BR-ENC</a>	<--->	1.0	20	<a href="#">PDF</a>	Terminal block
	<a href="#">GS-2015-BR-ENC</a>	<--->	2.4	13.6	<a href="#">PDF</a>	
	<a href="#">GS-2020-BR-ENC</a>	<--->	3.0	10	<a href="#">PDF</a>	
	<a href="#">GS-2025-BR-ENC</a>	<--->	4.8	8	<a href="#">PDF</a>	
	<a href="#">GS-2030-BR-ENC</a>	<--->		6.8	<a href="#">PDF</a>	
	<a href="#">GS-2040-BR-ENC</a>	<--->	3.0	10	<a href="#">PDF</a>	
	<a href="#">GS-2050-BR-ENC</a>	<--->	4.8	8	<a href="#">PDF</a>	
	<a href="#">GS-4015-BR-ENC</a>	<--->	1.0	50	<a href="#">PDF</a>	
	<a href="#">GS-4020-BR-ENC</a>	<--->	1.5	40	<a href="#">PDF</a>	
	<a href="#">GS-4025-BR-ENC</a>	<--->	4.8	32	<a href="#">PDF</a>	
	<a href="#">GS-4030-BR-ENC</a>	<--->		27.2	<a href="#">PDF</a>	
	<a href="#">GS-4040-BR-ENC</a>	<--->	6.0	20	<a href="#">PDF</a>	
	<a href="#">GS-4050-BR-ENC</a>	<--->	9.6	16	<a href="#">PDF</a>	
	<a href="#">GS-4060-BR-ENC</a>	<--->		13.6	<a href="#">PDF</a>	
	<a href="#">GS-4075-BR-ENC</a>	<--->	6.0	20	<a href="#">PDF</a>	
<a href="#">GS-4100-BR-ENC</a>	<--->	9.6	13.6	<a href="#">PDF</a>		

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