

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 | | 200W | 91 | PDF | Wire Leads (200mm length) |
| | GS-BR-200W360 | | | 360 | PDF | |
| | GS-BR-300W070 | | 300W | 70 | PDF | Wire Leads (150mm length) |
| | GS-BR-300W250 | | | 250 | PDF | |
| | GS-BR-300W400 | | | 400 | PDF | |
| | GS-BR-400W040 | | 400W | 40 | PDF | |
| | GS-BR-400W150 | | | 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) | Drawing Link | Connection Terminal Type |
| Enclosed NEMA1 with Temperature switch  | GS-2010-BR-ENC | | 1.0 | 20 | 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 | GS-BR-1K0W075 |