

Allen-Bradley 1305-KBA09

Dynamic Brake Assembly

Allen-Bradley 1305-KBA09 is a dynamic brake assembly for 5 HP, 460 V AC Bulletin 1305 drives, restricted to Series B or later.

MOTOR / LOAD

Regenerated energy

DRIVE DC BUS

Voltage rises

BRAKE RESISTOR

Energy becomes heat

SERIES B OR LATER ONLY

A Series A 1305 drive is not an acceptable KBA09 host.

BRAKING IS INTERMITTENT

100% torque for 20 seconds is typical; the maximum duty cycle is 20%.

The brake resistor connects to the drive DC bus when regenerated energy raises the bus voltage. Application selection depends on braking torque, deceleration time, load inertia and duty cycle.

Do not use 1305-KBA09 with a Series A 1305 drive. Keep the braking cycle within the 20% maximum duty rating and provide auxiliary stopping where loss of braking could endanger personnel.

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Electrical / environmental specification map

Product type	Dynamic brake assembly	Enclosure	IP20
Host drive	Bulletin 1305, Series B or later	Certifications listed	UL, cUL
Host-drive rating	5 HP / 4 kW, 460 V AC	Internal fuse	F1, Gould Shawmut A60Q10-2
Peak brake assembly power	3.4 kW	Fuse rating	10 A, 460 V
Brake power supply	Drive DC bus	Terminal wire range	0.75 to 4 mm2 / 18 to 10 AWG
Braking torque	100% for 20 seconds, typical	Maximum terminal torque	1.81 N m / 16 lb-in
Maximum duty cycle	20%	Required parameter	P.011 DB Enable = Enable
Operating temperature	0 to 50 C	Mounting orientation	Vertical
Relative humidity	0 to 95%, non-condensing	Thermal protection	Thermostat disables brake on overtemperature
Altitude without derating	0 to 1000 m		

POWER / CONTROL DISTINCTION

The assembly receives DC-bus energy. P.011 DB Enable is a drive setting; it does not turn the brake into an independently supplied AC component.

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Dynamic Brake Assembly

Sizing decisions before energization

Controlled deceleration

Absorbs regenerated energy while a compatible 5 HP 1305 drive ramps its load down.

Intermittent braking cycles

Supports braking cycles selected against torque, peak power and the 20% maximum duty limit.

Inertial-load evaluation

Uses motor speed, reflected inertia and stopping time to assess brake demand before installation.

Exact brake replacement

Restores a 1305-KBA09 position after matching the drive series, DC-bus wiring and DB Enable setting.

Wire the DC-bus interface	BRK (-DC), GND and +DC; retain the installation-diagram correspondence.
Configure the drive	P.011 DB Enable must be Enable.
Assess the braking cycle	Peak power <=3.4 kW; duty <=20%; torque/duration are not continuous ratings.

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Dynamic Brake Assembly

Eight distinct brake-specific decisions

Can 1305-KBA09 be connected to a Series A 1305 drive?

No. This brake is restricted to Series B or later. Connecting it to Series A can damage components or cause drive failure.

When does 1305-KBA09 begin dissipating motor energy?

Regeneration raises the drive DC-bus voltage during deceleration. The brake circuit then connects its resistor across the bus and releases that connection as voltage falls.

Does the 20% duty rating make 1305-KBA09 suitable for continuous braking?

It does not. The maximum duty cycle is 20%; the 100% torque rating is a typical 20-second braking interval, not a continuous operating rating.

What should be reviewed if a 1305-KBA09 application trips on overvoltage while slowing?

Compare calculated peak braking power with the 3.4 kW assembly limit. Increasing deceleration time or reducing reflected inertia can lower the required peak power.

Which 1305 setting activates an installed 1305-KBA09?

Set P.011, DB Enable, to Enable and retain the change in the drive configuration record.

How should repeated F1 fuse failures in 1305-KBA09 be handled?

F1 is specified as Gould Shawmut A60Q10-2, 10 A at 460 V. Repeated failures require brake replacement; the brake assembly is not repairable.

What happens when the 1305-KBA09 thermostat trips?

The brake is disabled to prevent overheating. The machine design needs an auxiliary stopping method if reduced braking torque could create a personnel hazard.

Why must 1305-KBA09 be mounted vertically with unrestricted airflow?

Regenerated energy becomes resistor heat. Mount the brake outside other cabinets in a vertical position, with the clearances required by its installation drawing.

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Return-to-service sequence / evidence record

- 01** Confirm the 5 HP, 460 V AC 1305 drive is Series B or later; reject a Series A pairing.
- 02** Place the machine in its approved maintenance state and retain an independent stopping method where required.
- 03** Remove all power and allow at least 60 seconds for the DC bus to discharge before work.
- 04** Mount the brake vertically outside other cabinets with unrestricted cooling airflow.
- 05** Connect BRK, GND and +DC to the corresponding drive terminals using the installation wiring diagram.
- 06** Keep terminal conductors within 0.75 to 4 mm² and do not exceed 1.81 N m terminal torque.
- 07** Set P.011 DB Enable to Enable and check the planned braking cycle against torque and duty limits.
- 08** Investigate thermostat trips or repeated fuse failures before releasing the machine to operation.

1305 Dynamic Brake Installation Instructions

1305-5.11, May 1999 / the unchanged manual is the installation download.

Related 1305 series / navigation only

The following drive page is a series reference, not a compatible KBA09 host or an interchangeable brake.

[View Allen-Bradley 1305-BA01A-HA2 page](#)

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