

MANUFACTURER-SOURCE TECHNICAL REFERENCE

ABB NBRA-657C 59006410

Product Reference

ABB NBRA-657C Braking Chopper

DOCUMENT SCOPE

Independent Apter Power manual compiled only from the cited ABB manufacturer sources. No product photograph is included.

Product / lookup identity	ABB NBRA-657C 59006410
Reference number	59006410
Document basis	Published ABB product records, PDFs, and manuals listed on page 3



Product page

<https://www.apterpower.com/ABB/nbra-657c-c2-a059006410>
Apter Power contact

sales13@apterpower.com | +86 180 3023 5313

Product role and published parameters

WHAT IT IS, WHAT IT DOES, AND WHERE IT FITS

ABB NBRA-657C, product ID 59006410, is a braking chopper used in documented ACS510/ACS550 drive braking configurations; ABB's official product page names the exact item Braking chopper NBRA-657C. During motor regeneration, the chopper provides the switching path that connects the engineered brake resistor to the drive DC circuit so regenerated electrical energy can be converted to heat instead of allowing the DC-link voltage to rise without control. System context: ABB NBRA-657C Braking Chopper.

Published field	Manufacturer-published value or verified identity note
Product ID	59006410
Model	NBRA-657C
Product type	Braking chopper
Documented host family	ACS510-01 and ACS550-01, exact frame-R6 types in ABB braking tables
Host supply range represented by table	Three-phase 380-480 V drive class
180 A pairing	SAFUR125F500, 4 ohm, 3600 kJ, 9 kW continuous, catalog maximum braking power 135 kW
195 A pairing	SAFUR200F500, 2.7 ohm, 5400 kJ, 13.5 kW continuous, catalog maximum braking power 165 kW

System function and signal path

01	Power Path: Switches regenerated DC-link energy into the connected brake resistor during braking; it is a power-electronic braking component, not a field I/O or communication module.
02	Energy Conversion: The resistor converts regenerated electrical energy to heat. Resistor resistance, pulse energy, and continuous dissipation must match the exact ABB host-drive table.
03	Published Field Signals: The reviewed exact product page and selection tables do not publish user process-signal inputs, network protocols, or analog measurement channels for NBRA-657C.
04	Host Dependency: Braking capacity and resistor selection are system values determined by the complete drive type, supply, resistor, ambient, installation, and duty cycle, not by the chopper model alone.

Applications, answers, and official sources

1 High-inertia deceleration: Dissipates regenerative energy through the correctly selected resistor when a compatible ACS510/ACS550-driven load must decelerate faster than natural coast-down.

2 Cyclic machine braking: Supports repeated braking cycles only when calculated energy per 400 seconds and continuous resistor dissipation remain within the ABB pairing limits.

3 Overhauling-load braking: Provides the engineered resistor-braking path for a compatible drive when the mechanical load returns energy to the DC link.

4 Controlled stop of process machinery: Used in compatible frame-R6 drive installations requiring resistor braking, with stopping time, duty, resistor temperature, and enclosure ventilation verified by design.

Frequently asked questions

What is ABB NBRA-657C 59006410?	It is an ABB braking chopper used in documented ACS510/ACS550 frame-R6 resistor-braking configurations.
Are NBRA-657C and 59006410 an exact pair?	Yes. ABB's global product page maps product ID 59006410 to Braking chopper NBRA-657C.
What does the chopper do?	It switches regenerated DC-link energy into an engineered braking resistor, where the energy is dissipated as heat.
Which drives use it?	ABB braking tables list it for specific ACS510-01 and ACS550-01 frame-R6 380-480 V drive types. The full drive type must be checked.
Which resistor is required?	It depends on the exact drive row: ABB shows SAFUR125F500 at 4 ohms for documented 180 A types and SAFUR200F500 at 2.7 ohms for documented 195 A types.
Can any resistor with similar power be used?	No. Minimum resistance, pulse energy, continuous dissipation, braking power, insulation, cabling, and installation must meet the exact ABB design.

Official ABB sources

ABB NBRA-657C product page	https://www.abb.com/global/en/products/59006410
ACS5X0-07 drives hardware manual	https://library.e.abb.com/public/d23e5fc2fb484b5784767a3214d144d3/ACS5X0-07%20EN.pdf
ABB ACS550-01 product catalog	https://library.e.abb.com/public/77c2e5d219914b1aacf5d7de473ec78b/ACS550_Catalogue_3ABD00012152_CN_RevO_20160923Final.pdf
ABB ACS510-01 product catalog	https://library.e.abb.com/public/08599d1676564859blef12f2250679ca/3ABD00017602_catalog_ZH_ACS510_H_A4.pdf