

3.8 Multimotor applications

If the drive is feeding multimotor application, check where the connection terminal for the motor cables is located. Is there a separate connection cabinet for the terminals or are they located close to inverter unit output?

Space requirement of multimotor terminals must be observed when planning Retrofit for the drive.

In the case new multimotor applications planned, over 100 kW motors are not recommended in multimotor drive configuration, if motor shafts are not tightly connected via mechanics or if each motor does not have an additional inertia (fan, pump etc.)

3.9 Application of existing drive, dimensioning

What is the application: paper mill, steel mill, pump or fan, crane, marine etc.? Is there any need for overrating, cyclic load, warm ambient condition etc.?

- Load point, rating of the current drive
- Constant or cyclic load
- Heavy duty capacity needed?

Check the power ratings of the current drive sections.

[Link to DriveSize tool](#)

(needs ABB account Log In)

Link to ABB Library -> [ACV 700 Hardware manual](#) (see Chapter 4 - Drive sections)

Link to ABB Library -> [ACS 600 MultiDrive \(ACA 6xx Sections\) Safety and Product Information](#)

Ratings of the ACS880-104 units can be found from ACS880-104 Hardware Manual.

Link to ABB Library -> [ACS880-104 inverter modules hardware manual, 3AUA0000104271](#)

3.10 SAFUB capacitor bank units (SAMI STAR / ACV700)

The Capacitor Bank Unit, SAFUB includes 3.3 mF/350V or 4.7 mF/350V electrolytic capacitors connected in series and in parallel, balancing resistors and a supervision card SAFT 132 CBS. At ratings over 400 kVA, capacitors have specific fuses. SAFUB is designed to smooth the DC voltage after rectification and inversion of the motor voltage.

If the drive sections are of the GTR-type (SAMI STAR) or IGBT-type (ACV700) (the DC capacitors included in the inverter unit), the SAFUB capacitor bank unit is not needed in the supply section.

In SAMI STAR drive sections, power range up to 125kVA 400-500V are based on the GTR power stage. In ACV700 drive sections, power range 9 - 400 kVA (400 V) and 10 - 500 kVA (500 V) the inverters are based on IGBT power stage.

The thumb rule is to remove all capacitor bank units (SAFUB) after all SAMI STAR or ACV700 GTO type of inverters are replaced with ACS880 inverters.

If the inverter replacement is performed step by step then the capacitor bank units are recommended to be removed step by step, also. It is recommended that the total capacitance remains average at original level when inverter replacement is performed step by step.

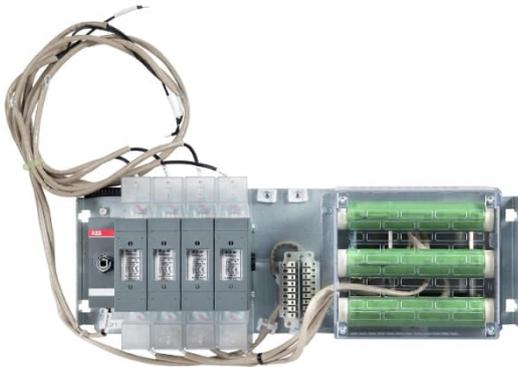
Please note, the pulse amplifier boards (SNAT 63X PAC) of ACV700 GTO inverters must be the newest revision, if the replacement is done step by step, to avoid the risk of the interference problems to ACV700 inverters caused by ACS880 inverters.

The functioning of resistor charging circuit of the line-up concerning the input diode bridge applications must be checked, if the SAFUB capacitor bank is not removed.

Note, the SAFUX, SAFUT thyristor bridge, must be upgraded to TSU when retrofitting the Inverters.

3.11 DC-link connection of the drive unit

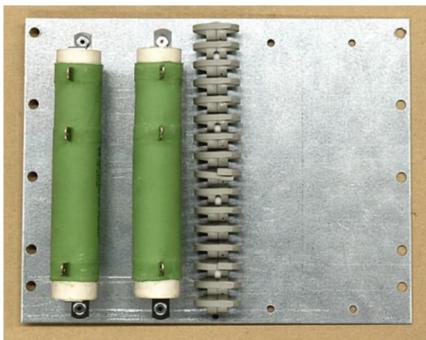
In multidrive sections retrofit kit standard delivery includes new DC switch (OT) for modules R2i – R8i and charging fuse switch (OS) for nxR8i modules when retrofitting to ACS880. In nxR8i frames delivery includes also charging resistors and fuse switch control board, BSFC-OX.



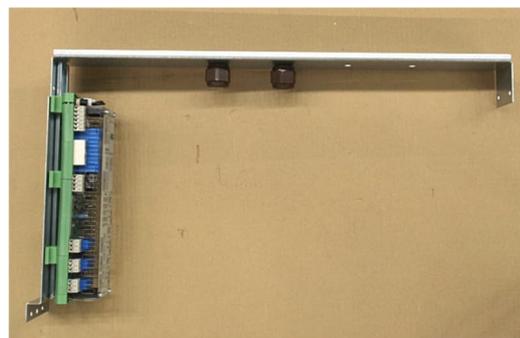
Pic 39. OS switch with charging resistors for R8i



Pic 40. OT Switch for R8i



Pic 41. Charging resistors /ACV700retrofit)



Pic 42. BSFC-OX board for R8i (for Samistar /ACV700retrofit)