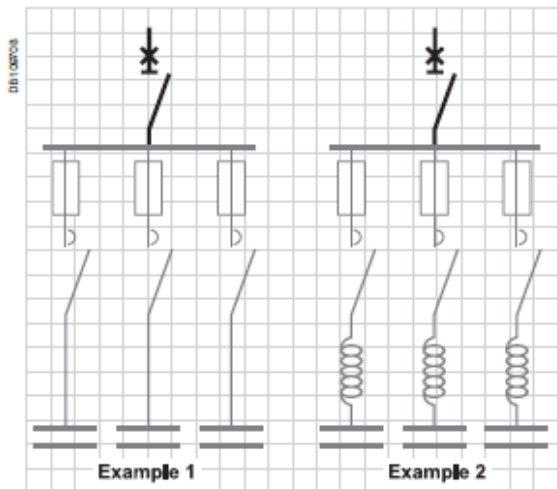


Capacitor bank protection by means of a circuit breaker



Their rating must be chosen to allow the thermal protection to be set to:

- 1.36 I_n for classic range
- 1.5 I_n for comfort range
- 1.12 I_n for harmony range: 2.7 tuning
- 1.19 I_n for harmony range: 3.8 tuning
- 1.31 I_n for harmony range: 4.3 tuning

The short-circuit (magnetic) protection setting thresholds must allow the energising transients to pass through:

10 x I_n for classic, comfort and harmony ranges.

$I_n = Q_c / (1.732 \times U_n)$

Example 1

150 kvar / 400 V - 50 Hz - classic range

$$I_n = \frac{150000}{400 \times \sqrt{3}} = 216 \text{ A}$$

Thermal protection: 1.36 x 216 = 294 A

Magnetic protection > 10 I_n = 2160 A.

Example 2

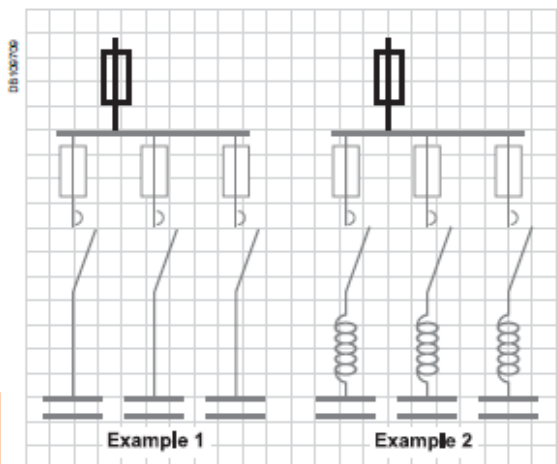
150 kvar / 400 V - 50 Hz - harmony range (4.3 tuning)

I_n = 216 A

Thermal protection: 1.31 x 216 = 283 A

Magnetic protection > 10 I_n = 2160 A.

Capacitor bank protection by means of fuses



Type Gg HBC fuses must be used with the following ratings:

- classic range: 1.4 I_n
- comfort range: 1.6 I_n
- harmony range: 1.4 I_n .

Example 1

150 kvar / 400 V - 50 Hz – comfort range

I_n = 216 A

Fuse rating $\geq 1.6 \times 216 \geq 346$ A

Example 2

150 kvar / 400 V - 50 Hz - harmony range

I_n = 216 A

Fuse rating $\geq 1.4 \times 216 \geq 302$ A

The fuse rating immediately above the calculated value must be used.