2* We want to order a serie of megatrolleybus for an urban line. Trolleybus will have 4 axles, 2 motor axles and 2 guiding axles. Continuous power: 2×160 kW. Maximal power: 2×240 kW. (Leaflet 8.6.38 for example).

A Analyze two drives: induction motors and synchronous motors with permanent magnets. Study normal operations, but also disturbance cases: short-circuit on a converter phase, short circuit on a motor phase.

B Compare two mechanic drives: longitudinal motors with hypoid drive and wheelmotors (4×40/120 kW) without axle through the vehicle.