

The Pulsed Power Converters of the Beam Transfer Line at DAPHNE, C. SANELLI, S. VESCOVI, INFN-LNF; F. VÖLKER, CERN - DAPHNE, the 510 MeV e^\pm collider phi-factory at LNF (Laboratory Nazionali di Frascati), is an accelerator complex consisting of a full energy linac, a damping/accumulator ring (DR) and two storage rings (Srs). The same transfer line (TL) is used to convey the beams from the linac to the damping ring and here from to the storage rings. The TL includes three pulsed magnets. One of them is excited by a special hybrid ± 650 A, 55 kW power supply with fast current polarity inversion within 30 ms. The other two are fed by capacitor discharge power supplies, performing half-sinusoidal current pulses of respectively ± 650 A - 30 ms and ± 230 A - 20 ms duration. Following a brief description of the TL operation within the accelerator complex and of the pulsed magnets, the design, topology and construction of these unconventional power supplies are presented. Some test results illustrate the operating mode of this already installed and fully operational equipment.