

Abstract

Overcurrent and midpoint voltage detection

Inverter with a half-bridge circuit, has: two
switches (1, 2) connected in series and supplied
5 with d.c. voltage (3), at the midpoint (4) of which,
with counter-clocking of the switches (1, 2), an
a.c. voltage is made available and a control unit
(6), which clocks the switches (1, 2) and evaluates
a measurement signal tapped off at the midpoint (4)
10 in different temporal phases of the clocking of the
switches (1, 2) for detection of the current through
the half-bridge (5) and of the voltage at the
midpoint (4). Thereby the control unit (6) evaluates
the midpoint signal as current through the half-
15 bridge (5), when only the switch (1) lying at lower
potential is closed. On the other hand, the control
unit (6) evaluates the midpoint signal as voltage
value of the midpoint(4) in a phase in which at
least the switch (2) lying at lower potential is
20 open.

Fig. 1b