

METHOD FOR CONTROLLING POWER FACTOR OF THREE-PHASE CONVERTER,
METHOD FOR CONTROLLING REACTIVE POWER OF THREE-PHASE CONVERTER,
AND CONTROLLER OF THREE-PHASE CONVERTER

5 **Abstract**

 In a three-phase converter, a power factor is controlled
to be an arbitrary set value for controlling reactive power.
In power conversion according to the three-phase converter which
subjects three-phase AC to PWM conversion for outputting DC,
10 symmetrical component voltage values of a balanced system are
calculated from wye-phase voltages on the three-phase AC input
side of the three-phase converter. On the DC output side of
the three-phase converter, the power factor is set, an average
active power value is calculated from an output voltage value
15 and an output current value, and an average reactive power is
calculated from the set power factor. On the basis of the
symmetrical component voltage values, the average active power,
and the active reactive power, a compensation signal for
compensating for unbalanced voltages of the three-phase AC
20 voltages and a control signal for controlling the power factor
are generated, and according to the compensation signal and the
control signal, a PWM control signal for subjecting the
three-phase AC to the PWM conversion for outputting DC is
generated.

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Figure 1