



## Terms of use of motors with frequency inverter.

The use of a frequency inverter with asynchronous low-voltage 230/400/690V motors requires an adapted setting of the inverter.



### Terms of use for a motor with a tension of 400V

For use with frequency inverter drive without load reactor, please ensure to comply with the following :

Maximum switching frequency of 5kHz

Maximum voltage peak on motor terminals :  $\leq 1600V$

dV/dt on motor terminals max  $\leq 5200V/\mu\text{sec}$ .

Minimum rise time of the inverter :  $t_r > 0.1\mu\text{s}$  (informed by the inverter manufacturer)

Minimum time between consecutive pulses :  $t_{eq} > 6\mu\text{s}$  (informed by the inverter manufacturer)

In case of the use of motors with frequency inverter, with a high tension of 690V, it is imperative to reinforce the winding to moderate the flow peaks.

### Terms of use for a motor with a tension of 690V

For use with frequency inverter drive without load reactor, please ensure to comply with the following :

Maximum switching frequency of 5kHz

Maximum voltage peak on motor terminals :  $\leq 2400V$

dV/dt on motor terminals max  $\leq 7800V/\mu\text{sec}$ .

Minimum rise time of the inverter :  $t_r > 0.1\mu\text{s}$  (informed by the inverter manufacturer)

Minimum time between consecutive pulses :  $t_{eq} > 6\mu\text{s}$  (informed by the inverter manufacturer)

The informed values are valid for the WEG motors and can be different depending on the supplier of the motor.

In any quotation request, and certainly at the order, of an AIRVISION fan-motor equipped with an inverter, it is important to inform us the supply voltage of the inverter to verify with the motor manufacturer, that the motor will suite for this type of operation.

Kind regards,

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