Can high frequency inverters perform rotational sensing

In this paper, we propose discrete-time operations based on a rotating voltage injection at frequencies up to one third of the sampling frequency used by the digital controller.

A wide variety of line and frequency filters, including an anti-aliasing filter, allows high-accuracy measurement of harmonic components with a motor rotational speed as the fundamental frequency ...

Miniature rotational energy harvesters can provide a self-sustained energy source for wireless sensors by converting rotational energy sources in the local environment into electricity.

Amidst the swift advancement of new power systems and electric vehicles, inverter-fed machines have progressively materialized as a pivotal apparatus for efficient energy conversion. ...

Our experimental results demonstrate the ability to resolve both the angular velocity and direction of infrared rotating particles using silicon-based visible-light detectors. This method provides ...

This section reveals the high-frequency oscillation mechanism from the perspective of the system resistance exhibiting negative characteristics during circuit series resonance, based on the ...

C. Anisotropic Machine Model D. Thez-Transform Of The Anisotropic Machine ModelA. Principle and AssumptionsY-(ej!Ts) > > : =B. Disturbance SourcesThe principle is illustrated in Fig. 3. It consists in the injection of a high-frequency voltage ~v i computed by the self-sensing operations in addition to the low-frequency voltage v ~ c c computed by the rotation-drive operations: v ~ = v ~ + ~v i. As a consequence, a high-frequency current response i is added to the low-frequency current respon...See more on backoffice.biblio.ugent yokogawa [PDF]Power and Efficiency Measurement of Motors and InvertersA wide variety of line and frequency filters, including an anti-aliasing filter, allows high-accuracy measurement of harmonic components with a motor rotational speed as the fundamental frequency ...

Recently, inductive sensing designs are a new trend for position sensing with PCB coils fixed on stator and a metal target spinning with the rotor, which can remove the expensive resolver, significantly ...

In order to improve the performance of motor drive systems, this paper introduces a sensorless control method for interior permanent magnet synchronous motors (IPMSM) based on the ...

This section describes the experimental work performed to determine the appropriate frequency-temperature profile as data under which the inverter operates in resonant mode taking into ...

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