

queries regarding ALTIVAR 58

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From: dhananjay (*bandyagroup_at_yahoo.co.in*)

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Hello,

Our chemical plant is having a crane (40/5 Te) with MH, CT, LT motion and was operated by slip ring motor (for two speeds 100% & 10%) with rotor resistance control (may be and mechanical gear boxes) by our electrical and mechanical operators etc, i am an electronic engineer and been called to take the job 'now', as the installation is changed to an induction motor with ALTIVAR 58 drive (flux vector control sensorless)for MH and ALTIVAR 28 drive for CT, LT.

The queries are as following regarding this

1) the literature says that the 58 drive is a sensorless flux vector control but has an encoder card option for speed control? also it says that there is a series called ALTIVAR 58F which is flux vector control with or without sensor and is recommended for material handling operations, vertical and horizontal where high dynamics and precision etc is required, i have learnt while searching the postings that, for crane applications it is good to have a FVC drive in close loop etc, so now i dont understand that after putting the encoder card to altivar 58, will it become a close loop FVC? Also the term "sensor" in the literature i guess, does not refer to the speed sensor, is it so?(the 58F drive which is titled as flux vector control with sensor is also having an option card for speed feedback), so what is this sensor and how the drive can function with or without this sensor?

2)i am also not sure which type of control this drive uses in its algorithms, how can i understand is it indirect or direct torque control?

3)also the literature of ALTIVAR 58F suggests that DC injection braking is not compatible with FVC close loop and suggests dynamic braking, since we have ALTIVAR58 and there is no such incompatibility shown for DC injection braking i have a doubt regarding this as follows: for crane application which is good combination "DC injection braking, dynamic braking resistor and openloop FVC drive (our installation)" OR "FVC close loop drive (like altivar 58f) AND no DC injection braking (dynamic resistor braking in its place)" considering the safety?
also why is it incompatible, please explain?

D'jay
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