HITACHI
Inspire the Next

Hitachi America, Ltd.

AC VARIABLE FREQUENCY INVERTER ENGINEERING NOTE

TYPE	Product Advisory
SUBJECT	Contact Hitachi Tech Support if RCU Series Regenerative Converter Units Are to be Connected in Parallel
AFFECTED MODELS	RCU – All Models, when parallel connecting 2 or more

RCU regenerative converter units can be connected in parallel when necessary to achieve higher capacities than single units can provide. However under certain circumstances, multiple units may not trigger simultaneously and this can cause nuisance inverter tripping. For example, with a rapidly rising DC bus voltage, the unit with the lowest threshold will turn on first, but the unit(s) with slightly higher thresholds may not turn on soon enough to avert an OV trip.

One of the best attributes of the RCU series is their ease of setup. There are no adjustments or parameter settings to deal with. Everything is preset at the factory. However those factory settings are optimized for individual RCU configurations.

As with all electronic equipment, there are always minor component tolerances. These variances result in RCU units having slightly different trigger voltage levels, even though their setup is identical. Thus two (or more) units connected to the same inverter DC bus may not turn on together. Depending on the DC bus voltage profile, this may or may not be an issue. Whether or not it will be an issue depends on the application, type of load, inertia, AC line voltage where the units are to be installed, accel/decel times, cycle profile, etc.

Countermeasure

Hitachi requests that all multiple-RCU applications be reviewed with Hitachi Tech Support in Tarrytown at the time of quotation. Please provide as much application detail as possible to aid in this evaluation. The special requirement must also be flagged at order placement so that we know to **modify** the factory-default settings of the RCU **prior** to shipment (if necessary). This fine tuning **must** be done prior to shipment and installation at the customer location.