



RE: Startco MPS Motor Protection System Power Measurement Errors

To Whom It May Concern:

Startco Engineering Ltd. MPS Motor Protection Systems sold before June 15, 2008 exhibit a small phase-voltage phase-angle error that results in power-measurement accuracies outside of specification.

Units shipped after June 15, 2008 are built with hardware revision 01E (or newer) and are exempt. All MPS's correctly measure phase currents and phase voltages, but in units with hardware revisions 01 through 01D, the relationship between current and voltage is skewed by 2.6 degrees leading. The result is an error in power calculations that varies depending upon power factor magnitude.

An induction motor running with unity power factor would have an MPS power factor reading of 1.00. A motor with a lagging power factor of 0.9 would have an MPS power factor reading of -0.92. A motor with a lagging power factor of 0.7 would have an MPS power factor reading of -0.73. Real-, reactive-, and apparent-power and energy readings are similarly affected.

Correcting MPS power measurements requires a 01E hardware upgrade which is best accomplished by qualified technicians with appropriate tools at the Startco factory. This upgrade is offered free of charge to all MPS users, regardless of MPS age. An MPS-CTU returned to the factory for any upgrade or repair will receive the power-measurement-correction upgrade at no charge.

The MPS-CTU hardware-revision number is noted on the serial-number label.

We sincerely apologize for any inconvenience this may cause.

Startco Engineering Ltd.