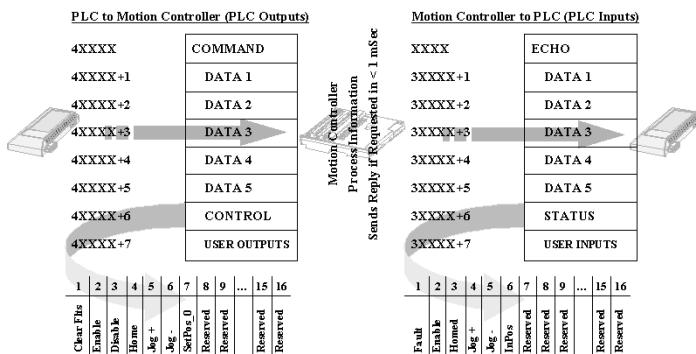


Momentum Resolver Based Servo Control Module – IFC 210R

The IFC 210R is cost-effective, easy-to-use, single-axis intelligent feedback and control module that controls the position and speed of a servo, flux vector, variable frequency, or DC drive and motor. With a rich instruction set, this full-featured motion controller, when coupled with any Schneider PLC top hat, provides a cost-effective, truly-distributed automation system. The CPU I/O bus can tie multiple units together resulting in the coordination of many distributed axis. With the full-line of Schneider communication top hats, you can seamlessly integrate this motion controller into any automation system. Using Transparent Factory components, access to the motion control information over the web is possible. Requiring a PLC or communication top hat to function in an application, the IFC 210R Momentum Resolver Based controller communicates to the top hat using eight bi-directional I/O mapped registers (shown below).



Features & Benefits:

- One 16 bit resolution resolver *input channel*
- One $\pm 10V$ torque or velocity *output command* to motor amplifier
- Capable of interfacing to Schneider Electric’s legacy *Cyberline* Analog Servo Drive
- Five onboard *User Definable Inputs* controlled by the PLC logic
- *Predefined Inputs* include CW, CCW, Home and Drive Fault
- *User Definable Outputs* (8 Sourcing and 8 Sinking)

- Drive Enable *Predefined Output*
- Point-to-point *moves* with linear or s-curve acceleration
- Onboard *Sixteen-point move table* with configurable positions, speeds, accel/decel parameters. Execute moves individually or blend groups using linear or s-curve accels/decels. Modify points on-the-fly from the PLC, excluding the point being executed.
- *Registration function* with phase advance and retard
- *Profiling* from a Virtual Axis (Enhanced Firmware Option)
- Automatic *Resolver Reference Signal* adjustment for optimal feedback performance.
- *Multi-mode function blocks* allow the user to execute motion from Modsoft, ProWorx Plus, ProWorx NxT, and the 984LL editor of Concept
- Concept EFB Motion *Tool Kit* (optional) for Concept Version 2.2 SR2
- *Windows Setup Software* for Windows 95, 98, NT and 2000 for simplified module configuration, motion profile definition, system testing/monitoring. Complete with *Graphical Tool Package* for Axis Tuning and Motion Profile Development (Q2-01).

Module Applications:

- *Servo Controller* - Position Control of Servo, Flux Vector or DC Motor and Drive. Capable of controlling the Velocity Loop and Torque Loop in some applications.
- *Intelligent Feedback Device* - Monitoring of Resolver Position, Speed and Status
- *Programmable Limit Switch* - Setting Outputs based on Speed or Position (functions as a PLS)

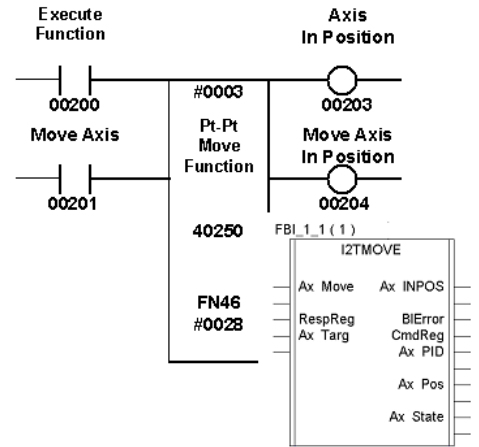
IFC 210R – Momentum Resolver Based Servo Control Module

Function Blocks (FN46):

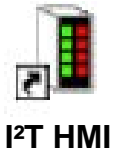
Using the FN46, PLC users can execute motion from ladder logic or from the IEC programming environment of Concept. Programmers can select one of multiple modes, which define function block operation. The FN46 coordinates the transfer of low-level commands to the module in the appropriate sequence to execute the desired movements, activate/deactivate the onboard functions, and change function parameters.

Mode 6 copies the entire memory configuration from the IFC 210R module and stores it in a predefined group of PLC holding registers. With this function block mode, I²T can provide the PLC customer with a virtually maintenance-free motion system when using the I²T BA Series analog amplifier, which requires no software configuration.

Mode 8 allows PLC users to write any low-level command to the module. Low-level commands exist for configuring or executing every feature available on the IFC 210R module.

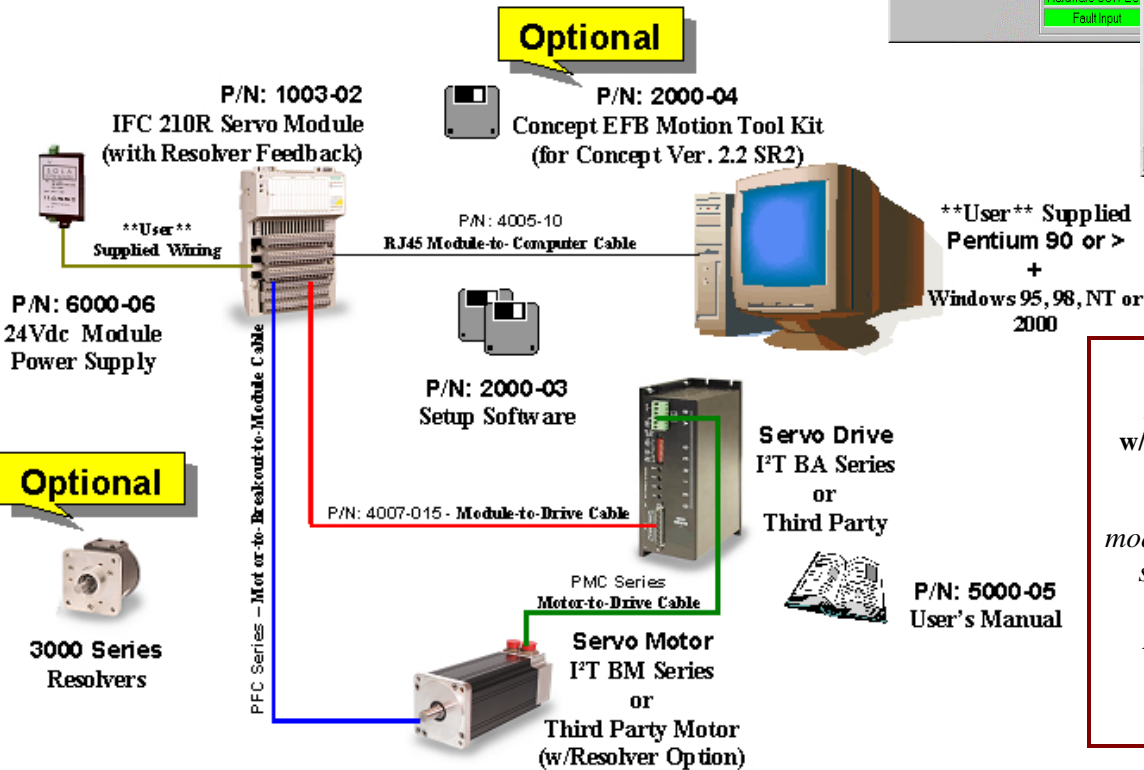


Windows Setup Software:



I²T HMI

Typical Configuration:



Options:

3000 Series Resolvers w/25, 50, or 100 ft. cables.

For use when using module to monitor resolver speed and position or when using it as a Programmable Limit Switch.

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