

SoftPLC Redundancy Solution

Controller redundancy can reduce downtime and product losses. The SoftPLC Redundancy System (SRS) provides an increased level of reliability to reduce the possibility of single points of failure in critical control systems.

SRS is a hardware redundancy system which consists of two independent CPU's, which automatically switch I/O control to a secondary CPU in the unlikely event the primary CPU fails. The two CPU's are connected via a dedicated high-speed ethernet connection. The primary CPU continuously updates the secondary with user-specified I/O statuses. If the primary fails, control switches to the secondary automatically, with a 'bumpless transfer.'

Primary/secondary status is available to any connected monitoring software such as SCADA/HMI or TOPDOC, as well as to I/O or other SoftPLC's. Not only can status be monitored, manual switch-over can be made.

The SRS performs the following functions:

- ◆ Maintains the primary/secondary status of each CPU
- ◆ Manages synchronization of data
- ◆ Sends heartbeat requests between both CPUs at regular intervals to determine/communicate status of each

Configuration of the SRS is easy. No special software or hardware is needed. Either CPU can be primary or secondary at any time, and the roles can be switched manually or as the result of a fault. The developer simply needs to load the SRS system into standard

SoftPLC controllers and identify the specific I/O points that are to be redundant.

Most SoftPLC controller models can be equipped with the SRS as a factory installed option. Contact SoftPLC for details.

Features

- ◆ Bumpless transfer in the event of active controller failure
- ◆ Controller based firmware solution - no special controllers or additional hardware is required
- ◆ Active/Backup status of redundant controllers is available over networks to SCADA/HMI, I/O points, other controllers, and TOPDOC configuration/monitoring software
- ◆ Data transfer between active/backup controllers on dedicated high-speed ethernet connection

When to Consider Using Redundancy

- If you need to maintain the system without stopping the controller
- If you have a continuous process where downtime can result in equipment damage or expensive start-up procedures
- If your application deals with high volumes of product, or costly product, where downtime would result in significant losses due to downtime or damage to the product
- If your application is a high-visibility process where downtime could cause great public inconvenience

