The technology used in FlashPROM memory is similar to that in EPROM memory. The main difference is that erasing the FlashPROM can be done in the processor module instead of with UV light as is the case with EPROM memory.

Application Data Memory

The FlashPROM memory has 52 KByte (FP128) or 308 KByte (FP384) data memory for the user. Programming this application memory is done from the application program, the same as erasing or comparing. The FP128 module has a memory block of 128 KByte. Areas in memory cannot be deleted. The entire chip is always erased. If the application data area should be deleted, then the application program and the system module must also be reprogrammed because they are all in the same block.

The FP384 module is equipped with three memory blocks, each with 128 KByte. You can erase a certain block without affecting the other two. The data in the second and third 128 KByte block can be deleted without affecting the application program or the system module. If the application data in the first 128 KByte block should be deleted, then the application program and the system module must be reprogrammed because they are in the same block.

Uninterrupted Application Program Transferal

An application program can be downloaded into the internal RAM of the processor module with the programming command "XFER" and without any influence on the program running in the FlashPROM module. The program in RAM and the one in the FlashPROM can be switched between with a command on the programming device. The switch is made synchronous to the program cycle.

Loading Application Programs from the FlashPROM Module

Application programs can be loaded back into the programming device from the FlashPROM. This can also be done when an application program is running. A program that is loaded back into the programming device from the FlashPROM module can be run again but no longer has any comments, ladder diagram pictures or symbol assignments.

Power-On Behavior

Since type B processor modules have internal RAM, no PROM module is required. If no FlashPROM is in the processor module when the system is powered on, then the program is tested and started in internal RAM.

If there is a FlashPROM module in the processor module, then it must contain a valid program. If the FlashPROM module is blank or if the program that is stored on it has an error, the processor module remains in HALT state and the status LED lights. CPUs with a status display also show an error number.