

MPS Open Motion Control

High precision position and speed control with standard motors

ABB is the world's leading supplier of variable speed drives. ABB's Business Unit Printing is the leading supplier of automation, control and drives systems for newspaper printing and was the pioneer of shaftless newspaper presses. In the past, the very high accuracy requirements of printing on shaftless presses could only be met using servo motors. ABB now heralds a new era of high precision control of standard motors with the introduction of its MPS Open Motion Control, a major step in drives technology that brings cost savings not only to the printing industry but also to all other industries where the accurate control and synchronization of motors is a must.

What is MPS Open Motion Control?

MPS Open Motion Control is a digital, state-of-the-art drive controller that can be used with any drive that has a SERCOS interface, but this does not restrict users to servo motors. When used with ABB's ACS800 series of drives, standard motors can be used.

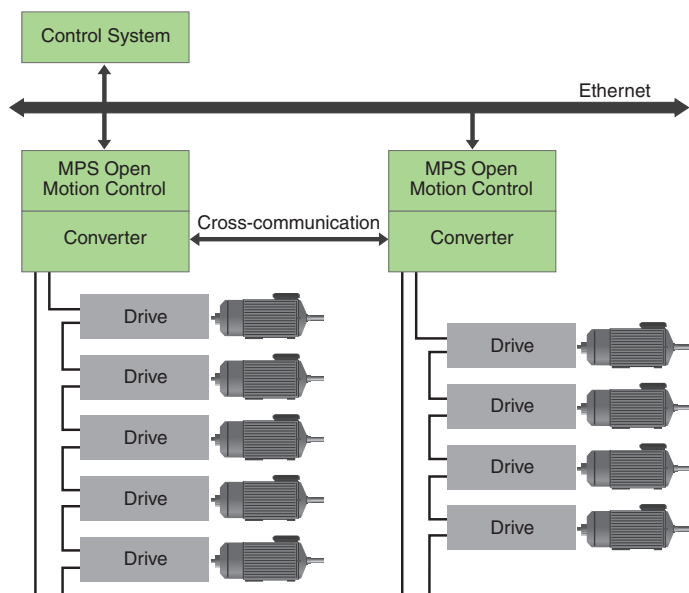
MPS Open Motion Control provides position or speed control, or a combination when running with multiple drives. Over 30 MPS Open Motion Control units can be connected with each other and each can control up to about 30 drives on the SERCOS ring. MPS Open Motion Control can therefore be used for the synchronized control of several hundred drives.



MPS Open Motion Control

Typical configuration

The diagram overleaf shows a typical configuration using MPS Open Motion Control. In this example the control system communicates with the two MPS Open Motion Control units via Ethernet. An electrical/optical converter allows each MPS Open Motion Control unit to manage a SERCOS ring connecting a group of drives and motors. It also provides the cross-communication between the MPS Open Motion Control units, so that the different groups of drives and motors can be synchronized.



Typical configuration

Programming and Maintenance

Programming and software maintenance are particularly clear and simple thanks to the combination of the IEC61131 standards together with a comprehensive library of function blocks that can be extended by the user.

Why MPS Open Motion Control?

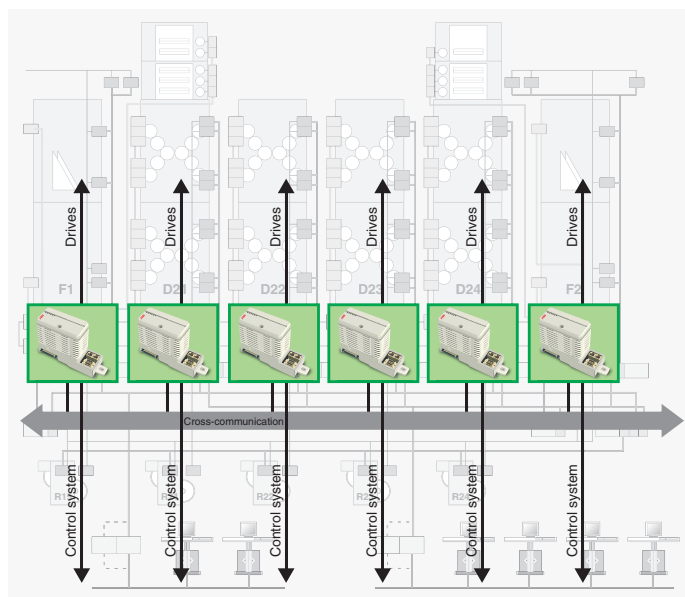
Using MPS Open Motion Control gives you the following advantages:

- Independence from drive and motor supplier
 - Simple programming and maintenance
 - When used with ABB's ACS800: use of standard motors
- The advantages of using standard motors instead of servo motors are:
- Lower investment costs
 - Investment protection – possibility to reuse existing motors
 - Higher reliability and less maintenance due to fewer components
 - More effective motors can be used – significantly reducing electricity costs
 - Wide range of motors with powers ranging from 3 kW to 3 MW

Application examples

MPS Open Motion Control is ideal for all applications where drives need to be synchronized accurately with each other, for example:

- Shaftless printing presses – MPS Open Motion Control is already in use at a number of different sites
- Paper making
- Rolling mills



Application example – typical shaftless newspaper printing press

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