

## S200-DLS and MMC-DSA Frequently Asked Questions

**Number:** FAQ001

**Date:** 1 October, 2008

Danaher Motion has added two new products to the Digital MMC family, the S200 servo drive with a Digital Link interface and the digital MMC Stand-Alone control. These FAQ's provide answers to the most commonly asked questions about the G&L Digital Family of products:

- S200-DLS Servo Drive
- Digital MMC Smart Servo Drive
- MMC-DSA Stand-Alone Control
- PiCPro



**Question:** Why are we introducing the S200 with the Digital Link Option and the digital MMC Stand-Alone control?

**Answer:** To better position the G&L Controls Family for on-going growth and provide a competitive control and drive platform for Digital Link customers.

**Question:** Tell me more about the new digital MMC-DSA control?

**Answer:** The new stand-alone control is a re-packaged digital MMC Smart Drive, Drive Resident control that has all the same features and performance as the drive resident but with the added capability of expansion module support. It includes the MMC-DSA2, MMC-DSA4, MMC-DSA8, and MMC-DSA16 for 2-16 axes configurations.

**Question:** What's new about the S200 servo drive?

**Answer:** The S200-DLS servo drive with Digital Link option can interface to the digital MMC family of controls and offers a cost and size advantage with the same performance you expect from all other S200 servo drives.

**Question:** What exactly is the Digital Link?

**Answer:** It is a digital communication protocol between a digital MMC Control and S200-DLS or digital MMC Smart Drives in a daisy chained topology with shielded CAT5E plug-n-play cabling.

**Question:** Since the MMC Drive Resident card does not fit in an S200 drive, do I have to buy an MMC-D32, 32 axis or an MMC-D64, 64 axis control in order to use the S200-DLS drive?

**Answer:** No. Concurrent with the release of the S200-DLS is the MMC-DSA2, MMC-DSA4, MMC-DSA8, and MMC-DSA16 stand-alone versions of the respective drive resident controls.

- Question:** Can I add the S200-DLS drive to an existing application that employs a MMC Drive Resident Control and digital MMC Smart Drives?  
**Answer:** Yes. The S200-DLS and the digital MMC Smart Drive can share the same Digital Link network.
- Question:** So basically, is it true that the new digital MMC-DSA Stand-Alone Family of Controls and the digital MMC Drive Resident Family of Controls can be used interchangeably?  
**Answer:** Yes.
- Question:** Will I still need to use the S200 GUI tools to set up the S200-DLS drive?  
**Answer:** No. PiCPro is all that is needed for a seamless interface for drive tuning, etc.
- Question:** Which option modules can I use with the new digital MMC-DSA Stand-Alone controls?  
**Answer:** All of the option modules that are available for use with the MMC-D32 and 64 axis controllers can be used with the new MMC-DSA, 2-16 axis controls including the 32 I/O 24VDC module, Profibus module, DeviceNet module, and analog expansion module.
- Question:** Is there any limit to the number of optional expansion modules I can add to the MMC Stand-Alone controls?  
**Answer:** Yes. You can only use up to four modules total per control.
- Question:** When would I use an S200-DLS servo drive?  
**Answer:** In applications that use 3A-24A lower power range servo drives with 120/240VAC input voltage or where drive mounting space is a premium.
- Question:** When would I use a digital MMC-SD servo drive?  
**Answer:** In 230/460VAC applications that required a wide range of servo drive power, up to 65KW or if you need a broader offering of feedback types and configurations.
- Question:** Can I expect the same PiCPro programming tools that are available for the digital MMC-SD are also available for the S200-DLS?  
**Answer:** Over 99% of the PiCPro functionality is available. There are only a few drive variables that PiCPro can't access in the S200-DLS drive, like average current for example.
- Question:** I always had the impression that the Danaher Control, which was the former G&L Controls, was overkill for a simple one or two axis application. How can I justify the cost of this system?  
**Answer:** The new MMC-DSA2 stand-alone two axis control has a list price of \$858 which includes a TCP/IP Ethernet port, a user RS232/RS485 port and 8 inputs and 7 outputs included in the base unit. Combine this with the cost effective S200 drive and the Danaher system offers more functionality than most competitively priced products.
- Question:** Does that mean I can control analog drives in closed loop by using the analog expansion module?  
**Answer:** No not in the traditional sense as with the base MMC control closed loop servo PID control. However the analog expansion module does have all the I/O for controlling an analog drive with encoder feedback but you would need to use a servo task and program your own closed loop velocity and position PID control in it, which is not trivial. This module was primarily designed to perform velocity control and position verification on lower performance drives like Variable frequency and induction drives.

**Question:** Can I use PiCPro applications written for the digital MMC Drive Resident Control on the new digital MMC Stand-Alone Control?

**Answer:** Yes, but keep in mind that the stand-alone control has only 8 inputs and 7 outputs. As long as the eighth output is not required, then the software can be ported over seamlessly.

**Question:** Can I use the MMC Stand-Alone control in non-motion applications.

**Answer:** Yes. In fact together with the 32 I/O option module you get a high speed controller with a TCP/IP communications port, user serial port, and 40 inputs and 39 outputs for a list price of \$1999.

**Question:** What about stepper control? Is there a way to control both servos and steppers with the same control?

**Answer:** Yes. By adding one of the Stepper Block I/O modules, you can control output step and direction signals to standard stepper drives. The FASIM Block I/O module is a complete five axis stepper control/drive.

**Question:** What about other types of I/O?

**Answer:** The MMC Stand-Alone control can be connected to all of the same Block I/O used by the other controls in the Danaher Family.

**Question:** Is it required to set the hardware enable on the S200 (input 1) or can I set the hardware enable over Digital Link?

**Answer:** You must supply 24VDC to input 1 on the S200 base drive to enable the drive. This can not be done through PiCPro.

**Question:** Since the S200 doesn't have a brake output, can I use it in vertical applications?

**Answer:** Yes. By putting a 1A relay in series with the RUN output on the S200 base drive or in series with a user definable output on the Digital Link option card you can engage/disengage the brake on the motor.

**Question:** Can I read the analog input on the S200-DLS drive from PiCPro and use it in my program?

**Answer:** Yes. This input works just like it does on any Digital MMC Smart Drive.

**Questions, comments, suggestions or additions:**

Contact your Regional Controls Sales Manager or me.

Eastern Region CSM, [joe.rizzolo@danahermotion.com](mailto:joe.rizzolo@danahermotion.com)

Acting Central Region CSM, [matt.adams@danahermotion.com](mailto:matt.adams@danahermotion.com)

Western Region CSM, [bill.lackey@danahermotion.com](mailto:bill.lackey@danahermotion.com)

**Randy Bauer**

Product Line Manager

Danaher Motion, Fond du Lac

Office: 920.906.7593

Mobile: 920.539.9738

[randal.bauer@danahermotion.com](mailto:randal.bauer@danahermotion.com)

[www.danahermotion.com](http://www.danahermotion.com)