Systems that have a PLC typically control the drive by serial fieldbus. DCS800 supports a variety of fieldbus interfaces, including Profibus, ControlNet, DeviceNet, CANbus, and ABB DDCS.

**Optimal operational safety mechanical brake control**
DCS800’s superior brake control provides smooth crane operation and is the base for all other crane functions. The brake control operates as a handshake between the speed controller and the motor shaft. All mechanical brake delay times and brake fault monitor functions can be easily set up and adjusted by the user through crane drive software.

**Torque proving**
The torque proving function applies torque against the closed brake to verify that the converter is functioning. This is done each time before the brake is released. If no motor current is detected, the brake will not release. This function prevents dropping the driven machinery when brake is released.

**Torque memory**
The torque memory is preloading the speed controller before opening the brakes. This function provide accurate stand still in speed control during brake opening. The reference can be given manual (analog or PLC) or automatic called memory of last load.

**Torque monitor**
The torque monitor verifies that the actual motor speed is within preset limits. Together with the overspeed monitor and the zero speed interlocks, a very precise monitoring of motor torque is provided.

**Shared motion**
Classic installation of big container cranes are built on shared motion, which means trolley and boom share one armature converter, and hoist and gantry share another one. The switching is handled by contactors in the DC circuit. Even with this arrangement, each motor still has its own field exciter, thus one armature converter is equipped to control two field exciters.
The converter firmware includes a complete set of parameters for each motor. Changing between motors is done very quickly by switching a single control bit.

**Power optimization**

This function optimizes the hoist speed based on the weight of the load. Without load, the drive operates deep into field weakening. When load is added, the maximum speed is automatically reduced, always ensuring that there is available torque to stop the load at any point if necessary. With this function, the operator will be able to utilize the highest physical operating speed of the machine under any load condition.

**Master follower macro**

The master-follower macro will configure the communication channel between two or more drives when using master follower configuration. Two different structures can be configured:

1. peer to peer between two drives working on one drum using DCSLINK
2. broadcast communication of SDCS-COM-8 MF channel

**Additional DCC800 hardware inputs**

- Limit switch supervision
- Acceleration with Max torque (bypass ramp)
- Slow down input
- Fast stop (three different modes are available)
- Watchdog output

**Customer benefits CraneDrive**

- Wide power range
- Ready-to-use with proven modular crane functionality
- Easy installation and start-up reduces total project costs
- Smooth crane operation reduces damage
- Rapid torque response increases operational productivity
- Compact and lightweight converter modules
- Small size and weight of the DC motor
- Low inertia of the DC motor
- Cost effective refurbishment of existing DC-based installations

**Ready programmed SDCS-MEM-8 DCC800**

Order code:

- Id code 3ADT200007R03 (separate memory module) or
- ready programmed drive pluscode (+S204, +S205)

The DCC800 function is handled by the additional parameter groups 60-69 and DriveWindow standard PC-tool (SDCS-COM-8 required for commissioning). The DCC800 manual, publication no. 3AST004539, provides information about DCC800 function and commissioning information. Small functions can be added by adaptive program.

**Requirements**

- DCS800 training
- DCC800 training
- Drive Window PC tool + DWL assistant

**DCC800 drive parameters**

- 60 Digital Inputs
- 61 Pos Measure
- 62 Torque Monitor
- 63 Fast Stop
- 64 Crane
- 65 Logic Handler
- 66 Torque Proving
- 68 Power Optimize
- 69 ReferenceHandler
- 72 Master Follower
- 80 Shared Motion2
- 81 Events

**STS container crane**