

6.3 Loading of the diskettes

6.3.1 Start-up

When the start-up program is initiated, it performs certain checks. As a result of these checks, the red FAILED LED can illuminate and an error code is presented on the numerical indicator. The following table explains the different error codes.

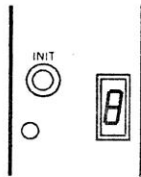


Figure 6:3 Numerical indicator on the DSPC 171

Status code	Fault	Action
1	Error at initiation of diskette control unit DSMC 112.	Check that the board is correctly inserted and strapped.
2	Faulty diskette control unit installed in the system.	Replace with DSMC 112.
3,4	Strapping of DSPC 171 is incorrect.	Check the strapping.

Table 6:1 Error codes

6.3.2 Resetting of memory to zero

The resetting is performed in two steps:

1. Press **MEMORY RESET**. The window shows "r" for 'ready to continue'.
2. Press **MEMORY RESET** again. The resetting to zero starts. The green **ACTIVE** LED illuminates while the resetting is in progress (approx. 15 secs.).

See the table below for the different faults which can occur during the resetting of the memory.

Status code	Fault	Action
8	Memory error.	Replace memory board DSMB 175.
3	Bus error (hardware fault).	Check that the instructions have been followed. Otherwise contact ABB Automation AB.

Table 6:2 Error codes

6.3.3 Loading

If a step is unsuccessful during the loading of a system, a status code is obtained on the numerical indicator and the FAILED LED illuminates. See the following table.

Status code	Fault	Action
1	Error when accessing the diskette control unit DSMC 112.	Check that the board is correctly inserted and strapped.
2	Memory error.	Check the address straps on DSMB 175.
3	Bus error (hardware fault).	Check that the installation instructions have been followed. Otherwise contact ABB Automation AB.
4	Diskette inserted is not no 1.	Insert diskette 1 and repeat the operation.
5	Incorrect start and stop addresses on diskette 1.	Contact ABB Automation AB.
6	Error when reading latest diskette.	Reinsert diskette and repeat loading.
7	Diskette entered is not the expected.	Press LOAD and insert the diskette specified and repeat the loading.
8	Error in the writing to the memory.	Repeat the loading. If this is again unsuccessful check the straps on the DSMB 175. If these are correct, contact ABB Automation AB.

Table 6:3 Error codes

6.4 Initiation

A normal start-up after loading is described in section 3.1.

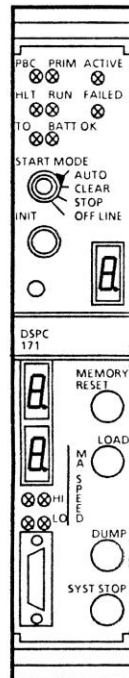


Figure 6:4 The front of DSPC 171

The indications on the processor board DSPC 171 have the following significances:

- The PBC LED (yellow) illuminates to indicate that the processor board is the master over the process data bus.
- The PRIM LED (yellow) is not relevant in the MV 850/1 system. The diode is used in systems with a redundant central unit.
- The HLT LED (red) illuminates when the system has stopped. The HALT code can be read on the two numerical indicators.
- The RUN LED (green) illuminates to indicate that the central unit is operating.
- The TO LED (yellow) is not used in MV 850/1 systems. Check that input/output units exist.
- The BATT OK LED (green) illuminates to indicate active battery backup of the memory.

The four LED's under the numerical indicators indicates the status of the communication with the MA 200 and MA 111, The upper pair of LED's (HI) indicate that the DSPC 171 sends or receives information via the fast aid communication channel. The lower pair of diode LED's (LO) indicate communication over the slow aid communication channel.

With normal operation, the RUN (green) and PRIM (yellow) on DSPC 171 are active and DCOK on DSBC 172 is illuminated. No red LED's on any board in the system is to illuminate. If such is the case, the unit is to be replaced (see next page).

EXCEPTIONS

A red LED on DSMC 112 (control unit for the mass memory) illuminates if there is no diskette inserted when the system starts. The same applies to MAM_01, which illuminates in red on the system status display.

The numerical indicators indicate the current executing method of the central unit. The following codes are possible while the system is in operation i.e. the RUN LED is active. In the STOP status, the RUN LED is extinguished.

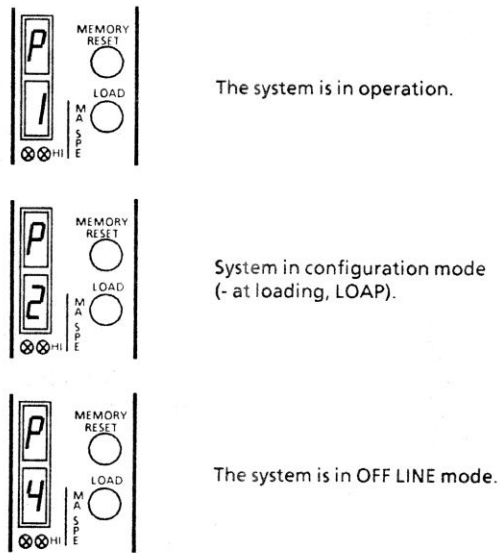


Figure 6:5 Numerical indicators on DSPC 171

Note! The number indicates the position of the *MODE* selector.

If the central unit stops, the RUN LED extinguishes and the HLT LED illuminates, the numerical indicator present the error code for the stop. The error codes are always followed by a point on the lower numerical indicator.

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Status code	Fault	Action
0, 1, 2, 3, 4, 16	These codes do not normally appear in an operational system. They are the result of disturbances, program error or, in particular hardware error.	Note the error code and the red LED's which illuminate. Contact ABB Automation AB!
5	Probably a fault in a communication board in the system or an incorrectly located board (interrupt chain broken).	If a red LED illuminates on a communication board, the board must be replaced. Check that all boards are correctly located. Replace the communication boards successively until the red LED remains inactive at a restart.
7, A	Memory error. The processor has detected an error in the RWM.	Replace the memory board DSMB 175.
9	Stall alarm. Overload.	Contact ABB Automation AB.
B	Memory error. Check sum error. The fault can be in the DSMB 175 or a diskette. In the latter case, the error code should have been generated at start-up.	Replace the DSMB 175. If this does not cancel the indication, try loading the system with new diskettes.
C, D, E, F	Auto test fault.	Replace the processor DSPC 171.
10	Faulty power supply, a brief voltage drop or faulty supply unit component.	Check the control unit DSSR 12X, The unregulated power supply unit DSSA 165 and supervision board DSBC 172. If battery backup is used, check the batteries and the d.c./d.c.-converter DSSB 145.

Table 6:4 Error codes (continued on next page)

Status code	Fault	Action
11	Mass memory fault. Can occur during loading/dumping of the system or when storing or reading in displays.	Replace the mass memory units DSMC 112 and DSMD 113 successively and attempt to repeat the fault. There can also be a fault on the diskette concerned.
21, 23	Program controlled system stop.	Contact ABB Automation AB.

Table 6:4 Error codes (continued from the preceding page)

If error codes which are not explained or shown in this chapter appear during operation or service, the codes and the circumstances under which they occurred are to be noted and ABB Automation AB is to be contacted.

6.7 Dumping

If the dumping of the system has been unsuccessful, a status code is obtained in the window and the red FAILED LED illuminates. See the following table.

Status code	Fault	Action
1	Fault when accessing the diskette control unit DSMC 112.	Check that the board is inserted and strapped correctly.
2, 3	Bus error (hardware error).	Check that the installation instructions have been followed. Otherwise contact ABB Automation AB.
6	Error when reading data from the diskette during verification.	Repeat the dumping. If the attempt is again unsuccessful, test with another diskette. If the fault persists with other diskettes, contact ABB Automation AB.
9, C	Error when writing to the diskette.	Repeat the dumping. If the attempt is again unsuccessful, test with another diskette. If the fault persists with other diskettes, contact ABB Automation AB.
A	Fault with formatting of diskette.	See status code 9.
B	Error in verification of memory dump.	See status code 9.

Table 6:5 Error codes