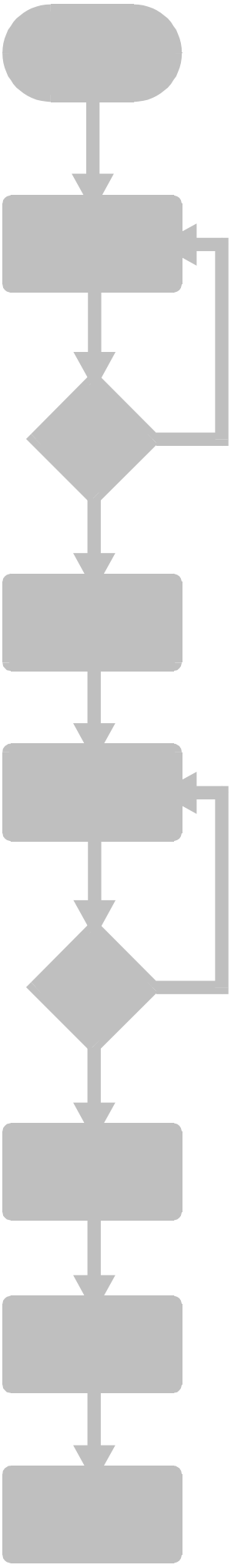


Technical Information
Version Update

September 05 2001

D-CON Changes
Version 2.801 through Version 2.804

1. Changes / New Functions 2
1.1 Axis Control 2
1.2 PID Controller / Analogue Value Processing 3
2. Bugfix 4
2.1 Axis Control 4

The numbers in parentheses indicate the version numbers.

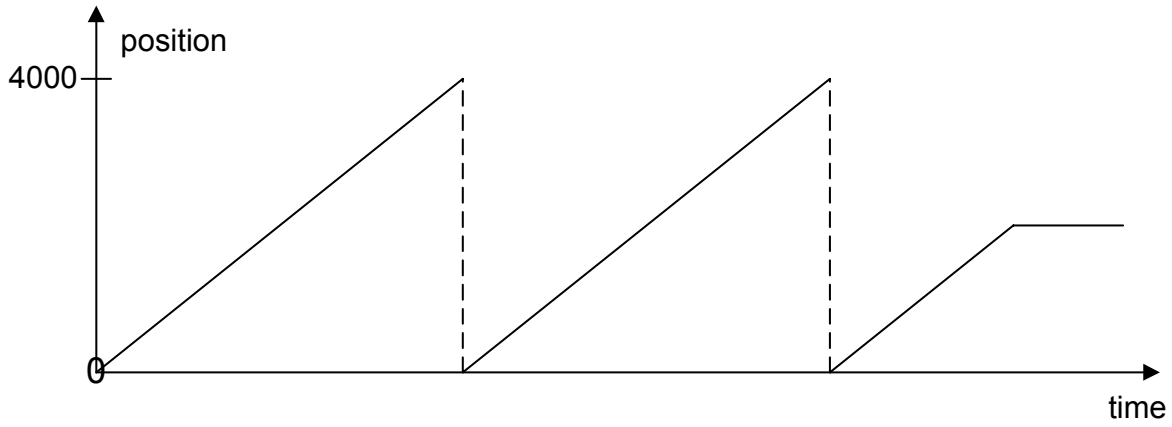
1. Changes / New Functions

1.1 Axis Control

- (2.804) The overflow mode can be activated by command 16:
  In this mode, the overflow register (1xy085) is taken into account for a positioning process and the actual position is set to zero if necessary. The set positions are given as absolute values. The mode is disabled by command 18.

  Example program:

```
        REGISTER_LOAD (121001, 1)
        REGISTER_LOAD (121085, 4000)
        REGISTER_LOAD (121001, 3)
        ;
        REGISTER_LOAD (121001, 16)
        POS (21, 10000, 500)
WHEN
        AXARR 21
THEN
        REGISTER_LOAD (121001, 18)
```



1.2 PID Controller / Analogue Value Processing

(2.802) From this version onwards, analogue submodules (in addition to the third submodule slot) can be used with the D-CON1. Any combinations of D-AD8 or D-DA4 modules can be plugged into all three submodule slots.

Analogue input module D-AD8:
The analogue actual values can be read out of registers 1xy051 through 1xy058. Both the configuring of the analogue input channels (1xy061 through 1xy068) and the mean value generation (1xy151 through 1xy158) remain valid without being changed. Further, the channels to be read in can be selected via register 1xy159. Register 1x3173 (sampling time per channel) will only be effective, if a D-AD8 has been plugged into the third submodule slot. If there is no PID controller active, one channel will be read in by each D-AD8 module once in a millisecond. This means, that if there are three D-AD8 being used, all 24 analogue inputs will have been read in after 8 milliseconds.

Analogue output module D-DA4:
In a combination with a PID controller (slot 1: D-AD8 and slot 2: D-DA4), the analogue outputs of the second submodule slot are addressed via controller registers 1x1017, 1x2017, 1x3017 and 1x4017.
In case of all other combinations or slots, the analogue outputs will be addressed via registers 1xy110 through 1xy113.

Conditions:
If there are more than one D-DA4 modules to be used, a 15 W converter must be connected to the D-CON.
In case of three D-DA4 modules being used, only 10 current outputs can be used altogether.

2. Bugfix

2.1 Axis Control

- (2.801) The overflow of the angle function using registers 1xy230 and 1xy231 did not function properly.
- (2.801) From version 2.770 onwards, speed correction (command 150) for linear interpolation with different encoder resolutions would be activated automatically at start-up of the controller. Unfortunately, a change of speed in combination with an interpolation did not function any more then.
  For this reason, the correction will not be activated automatically any more from this version onwards. Please mind further that, if correction has been activated, any changes of speed in combination with an interpolation will be carried out without a ramp.
- (2.803) When speed correction was active during linear interpolation (command 150), it sometimes occurred that an internal value became too great. Consequently the start ramp was ignored.
- (2.803) Starting from version 2.744, the end of the stop ramp was run with very rough behaviour. The same error occurred during very short positioning runs (interpolations).
- (2.803) The initial value of register 1xy063 (max. print mark correction) was changed to 65535.
- (2.804) Various error corrections with respect to machine referencing without stopping (command 23) for the axis types D-SV and D-DIMA3. In earlier versions, serious tracking errors and position jumps occurred. Machine referencing without taking into account the K0 signal did not run smoothly either.
- (2.804) Command 15 (disabling the search for reference) was extended for the axes D-SV and D-DIMA3.
- (2.804) Monitoring the temperature of the motor is now filtered more in the D-CON.
- (2.804) Initialization of the stepper motor axis was corrected. From now on, the initialization of registers 1xy008 and 1xy069 need not be forced anymore.