



HEIDENHAIN



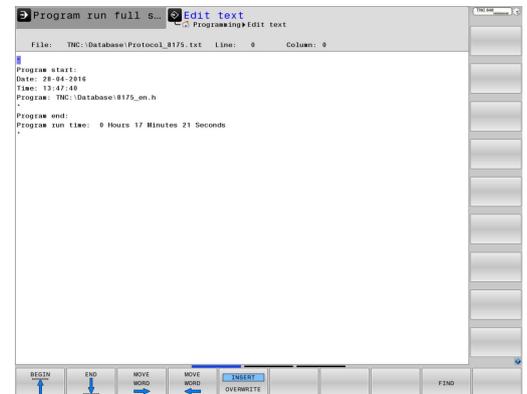
NC Solutions

Description of NC Program 8175

English (en)
02/2020

1 Description of NC program 8175_en.h

NC program for creating a log file from the program.



```
Program run full s... Edit text
Programming>Edit text
File: TNC:\Database\Protocol_8175.txt Line: 0 Column: 0
Program start:
Date: 28-04-2016
Time: 13:47:48
Program: TNC:\Database\8175_en.h
Program end:
Program run time: 0 Hours 17 Minutes 23 Seconds
```

Requirement

The control should automatically create a log file for the NC program. This log must contain the date and time of the program start, the directory path of the NC program, and the program run-time of the NC program.

Solution

The requirement was met with two mask files. With the first mask file, the control writes the required data into a text file at program start. With the second mask file, the control adds the program run-time to the log at program end. The control calculates the program run-time from the time between program start and program end.

NC program 8175_en.h

The NC program begins with automatically reading out the current system time. This is done using the **FN 18: SYSREAD Q10 = ID320 NR1 IDX0** command. This command saves the seconds that have elapsed since 00:00:00 UTC on January 1, 1970, in parameter Q10.

Then the control uses the FN16 command to write the content of the mask file 81751_en.a into the log. With the syntax in the mask file, the control automatically enters the current date, the current time, and the path of the NC program into the log. If the mask file is not saved in the same directory as the NC program, you need to adapt the path of the file in the FN16 function. Furthermore, you need to enter the name of the log file to be created.

Then the workpiece is machined. In this example program, this machining process is displayed through dwell time. After the machining process, the control calls a subprogram.

In this subprogram, the control calculates the run time of the NC program. This calculation is done in the following steps:

- ▶ The control reads out the current system time and saves the result in parameter Q11
- ▶ Calculation of the time that has passed in seconds from the program start until the program end
- ▶ Calculation of how many hours this corresponds to
- ▶ Truncate decimal places of the hours
- > Parameter Q20 contains the value of the hours that the NC program ran
- ▶ Calculation of how many seconds these hours correspond to
- ▶ Calculation of how many seconds remain for the minutes and seconds
- ▶ Calculation of how many minutes the seconds correspond to
- ▶ Truncate decimal places of the minutes
- > Parameter Q21 contains the value of minutes that the NC program ran
- ▶ Calculation of how many second correspond to the minutes
- ▶ Calculation of the remaining seconds
- > Parameter Q22 contains the value of seconds that the NC program ran

Then the subprogram ends and the control returns to the main program. In the next step, the control uses the FN16 command to write the content of the mask file 81752_en.a into the log file. While doing so it enters the calculated hours, minutes, and seconds of the program run-time into the log by means of the syntax used. Also in this FN16 command, you must adapt the path of the mask file and the name of the log file if required.

The control ends the NC program.



If you run the NC program more than once, the control adds the new entries to the already existing log. If this is not desired, you must delete or rename the log after running the NC program.



The control also enters the program runs that are saved in the Test Run operating mode into the log!
The dwell time used in the example program has no effect on the Test Run operating mode. This means that this time is not taken into account in the calculated program run-time.

Mask 81751_en.a

With this mask file, the control writes the date, the time, and the path of the active NC program into the log at program start.

```

"***";
"Program start:";
"Date: %02D-%02D-%4D", DAY, MONTH, YEAR4;
"Time: %2D:%2.2D:%02.2D", HOUR, MIN, SEC;
"Program: %S", CALL_PATH;
"***";
M_Close;

```

Mask file 81752_en.a

With this mask file, the control writes the calculated program run-time into the log at program end.

```

"Program end:";
"Program run time: %2.0LF Hours %2.0LF Minutes %2.0LF
Seconds", Q20, Q21, Q22;
"***";

```