

Date of production: 2007-12-03

## **News in 10\_054**

### **Hardware**

- 1) New thyristor module DASD 145, 600 V - 500 A
- 2) Improved speed control with incremental encoder at very low speed with new firmware PU\_APP12 in DAPU 100 board (from May 2007) and PU\_APP13 in DAPU 100 board (from December 2007)
- 3) Systems with and without analog output have different order codes.
- 4) Remote I/O available as before as Cabin I/O (plastic version), and from now also for extended temperature (metal version).
- 5) Start of replacement of semiconductor fuses from higher voltage to 690 V with higher current rating in DASD 146, 147, 156, 157 based on the technical development.
- 6) Control sequence for output relays and safety brake lifter contactor for DARA 2000 supervision system.

### **Software functions**

- 7) Display of DAPC 100 shows "54" when there is no Fault. **"54"** indicates 10\_05, revision **4**.
- 8) A large number of parameters are fixed to constants for quicker parameterisation.
- 9) Acceleration control of travel motions as alternative to speed control developed, tested and included.
- 10) Torque control with DARA 1001 is removed as acceleration control is better. SW release 10\_053 shall be asked for when ordering spare part board DAPC 100.
- 11) Positioning "Soft limit switch" is removed as positioning on incremental encoder no more is recommended due to the development of absolute encoders. SW release 10\_053 shall be asked for when ordering spare part board DAPC 100.
- 12) Firing angle can be modified in regenerative mode. Extremely loaded motors with high CosFi that else can operate in two-phase mode with heavy mechanical vibrations.
- 13) Correction of execution time to prevent a 10 ms long brake opening when trying to lift a load with load above the mechanical overload level.
- 14) Supervision time of MF-link and Remote I/O-link set to 500 ms time.
- 15) Fast stop function included; an active or passive signal can force the motion controller to stop also in healthy mode with master switch in driving position.
- 16) Speed dependent gain improved by separate break points for stand still (0% reference) in addition to existing 10%, 25%, 50% and 100% speed reference.
- 17) A step reference can be optimised for light motions (travel or hoist) by setting 08.01 to 5. With value 5 over-shooting is prevented as the integral part of the speed regulator is set to zero each time the ramp output value coincides with the step reference. By setting 08.01 to 6 the integral part is not reset, which minimises load droop for hoists and is more suitable for fine positioning of heavy travel motions.
- 18) Standard value for switch to super synchronous speed changed from 85% to 95% speed.
- 19) Better function to enter in open control with light load. Full motor voltage is no longer required.
- 20) Contactor K3 will always close in super synchronous mode, if installed.

- 21) Function "Adoption to low line voltage with longer ramp times" is fixed, and cannot be deselected.
- 22) DO 6 can be used off-delayed to control, as example, lubrication pumps or rail cleaning blowers.
- 23) DI 15 can be used to switch between parameter sets 1 and 2 in installations without any remote I/O.

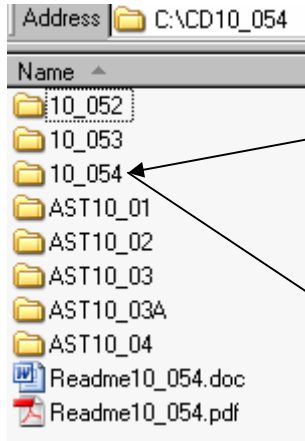
**Tool program**

- 24) Common start meny for Motion Control System and Gearbox Supervision System
- 25) Better guiding for user than using the Tool program for an older release.

**Important**

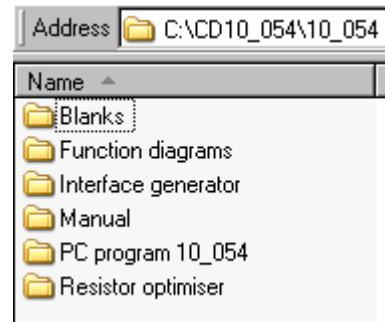
All documentation about the ASTAT releases 10\_054 and 10\_055 is found in the directory **10\_054**.

Information and support programs for the previous releases are found in the directories AST10\_01, AST10\_02, AST10\_03, AST10\_03A, AST10\_04, 10\_052 and 10\_053.

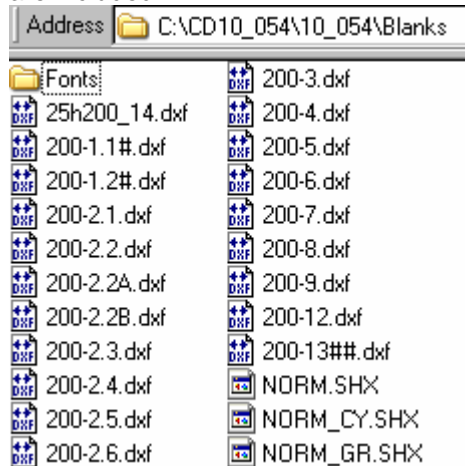


This document Readme10\_054.pdf will describe the contents of the directory 10\_054.

Information about the previous releases 10\_01, 10\_02, 10\_03, 10\_03A, 10\_04 and 10\_052 is found in the directories AST10\_01, AST10\_02, AST10\_03, AST10\_03A, AST10\_04 and 10\_053

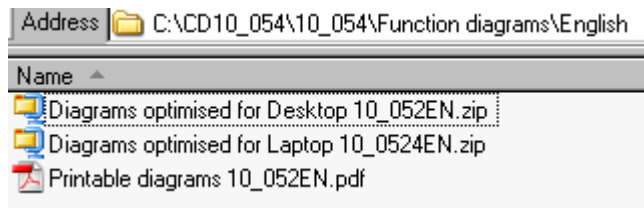


Folder: **Blanks**. The guide drawings of the Technical Manual. File format is dxf. The font files are included.



Folder: **Function diagrams**. zip-files and pdf-files. The functional diagrams for ASTAT are available in English and Swedish versions.

### English version



The diagrams create a visual picture of the functions, signals and parameters. The diagrams are made to navigate through by a browser. You can follow the signal paths by clicking the references boxes instead of traditional page references.

The two zip-files are optimised for small (laptop) or large screen (desktop).  
Select one of these.

Use the WinZip "Extract to folder..." option to the Folder you wish.

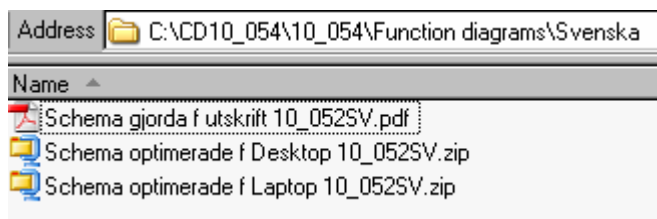
You will get a folder structure like following:



Click the htm-file, and the diagrams will open. You find detailed instructions for navigation in its first page.

The pdf-file can be used to create a better quality printout.

### Svensk version



Schemorna ger en bild av funktionerna, signalerna och parametrarna. Schemorna är gjorda så att man kan navigera i dem med hjälp av Internet Explorer. Man följer signalvägarna genom att klicka på referensboxarna i stället för att leta efter sidhänvisningar.

De två zip-filerna är optimerade för liten skärm (laptop) eller stor skärm (desktop).

Välj en av dessa..

Använd WinZip "Packa upp till katalog..." till den katalog som önskas.

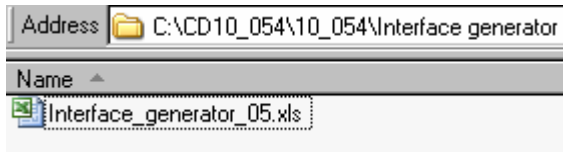
Man får en katalogstruktur som denna:



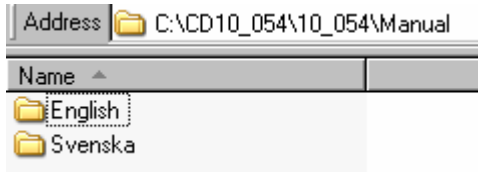
Klicka på htm-filen, och schemorna kommer att öppnas. I schemornas första sida finns noggrannare instruktioner för hur navigationen går till.

Pdf-filen kan användas för att få en utskrift av bättre kvalitet.

Folder: **Interface generator**. EXCEL-file. Help to get the signal list out from the configuration parameters. Instructions: See Technical Manual. Do always use this tool at design.

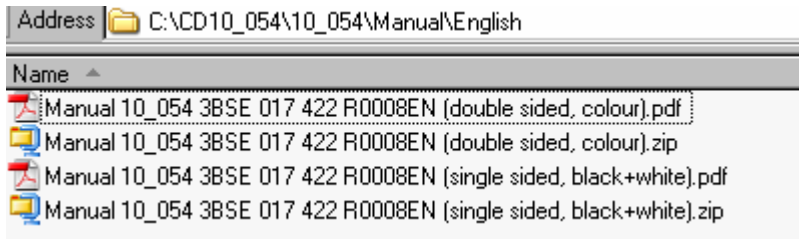


Folder: **Manual**. The technical Manual for 10\_054 and 10\_055 is fully available in English and Swedish version.



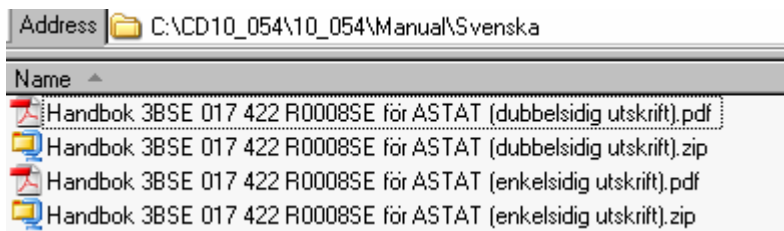
English version

The complete Manual is included as pdf-files and as zip-files. The Black and White version can be used for transfer to mailboxes with limited capacity, or when a printer with two side printing function is not available.

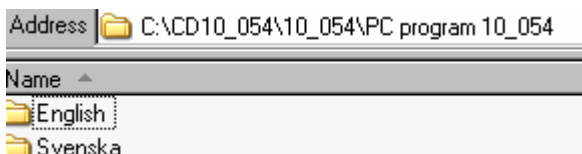


Svensk version

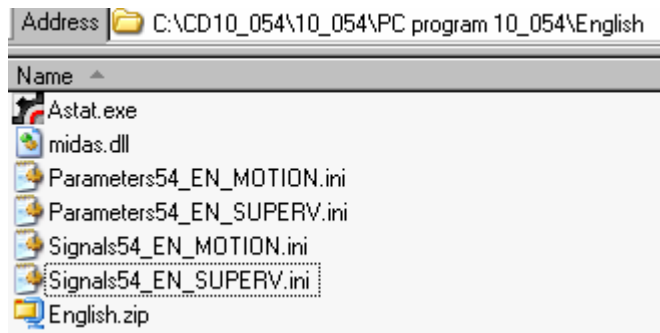
Komplett användarhandbok finns som pdf-filer och som zip-filer. Den svart-vita versionen kan användas att sändas som bilaga till mail där mottagaren har begränsningen 10 MB, eller där inte två-sidig färgskrivare finnes.



Folder: **PC program 10\_054**. The Tool for 10\_054 and 10\_055 is available in English and Swedish versions.



If you use Swedish Tool, the Country Setting of the Control Panel in Windows must be Swedish.

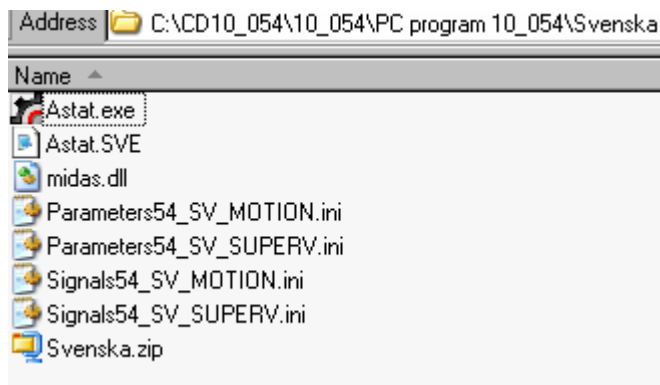
English version

10\_054 manages release 10\_054, 10\_055 and older releases. If older CMT-versions are installed, these can be removed.

Create a folder C:\ASTAT\CMT10\_054 in your PC.

Copy all the files from the CD-folder of the language you wish to use to the folder C:\ASTAT\CMT10\_054. Change attribute of all files **from** Read only if needed.

zip-version is used if you have to send the Tool program as email.

Svensk version

10\_054 klarar av att hantera 10\_054, 10\_055 och tidigare utgåvor. Eventuella tidigare versioner av CMT-programmet kan därför tas bort.

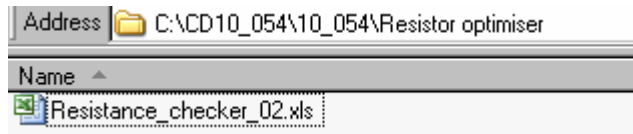
Ändra landsinställningen i Kontrollpanelen till Svenska.

Gör en katalog C:\ASTAT\CMT10\_054 i Er PC.

Kopiera alla filer från katalogen Svenska på CD:n till katalogen C:\ASTAT\CMT10\_054. Om nödvändigt ändra egenskaper på alla filer i katalogen **från** Skrivskyddad.

zip-version finns med i de fall programmet måste sändas per email.

Folder: **Resistor optimiser**. EXCEL-file. Help to get the best performance out of an ASTAT system by choosing the right resistors and current limit vs. the worst line conditions.  
Instructions: See Technical Manual.



How to handle the Tool, the Resistoroptimiser and the Interface-list is found in section 3 of the Technical Manual.

### **Updates**

Updates and improvements are communicated in our website.

### **Final words**

For all included documents, kindly give feed back as soon as possible to:  
cranes.sales@se.abb.com  
end