© Siemens AG 2007

SINUMERIK 840D sl
NCU 710.1/NCU 720.1/NCU 730.1/NCU 730.2 PN

Overview



NCU 710.1

The NCU 710.1 represents the first performance stage of the SINUMERIK 840D sl range. Up to 6 axes are available in up to 2 machining channels which can be executed in up to 2 mode groups. Up to 6 axes/spindles are supported per channel. Interpolation is possible for a maximum of 5 axes with the NCU system software (multi-axis interpolation option).

The basic version of the CNC user memory is 3 MB, and can be optionally expanded up to 9 MB.

NCU 720.1

The NCU 720.1 represents the mid-performance stage within the SINUMERIK 840D sl range. Up to 31 axes are available in up to 10 machining channels which can be executed in up to 10 mode groups. Up to 12 axes/spindles are supported per channel. Interpolation is possible for a maximum of 12 axes with the NCU system software (multi-axis interpolation option).

The basic version of the CNC user memory is 3 MB, and can be optionally expanded up to 15 MB.

NCU 730.1

The NCU 730.1 is the flagship of the SINUMERIK 840D sl, representing the highest configuration within the SINUMERIK 840D sl range. Up to 31 axes are available in up to 10 machining channels which can be executed in up to 10 mode groups. Up to 12 axes/spindles are supported per channel. Interpolation is possible for a maximum of 12 axes with the NCU system software (multi-axis interpolation option).

The basic version of the CNC user memory is 3 MB, and can be optionally expanded up to 15 MB.

NCU 730.2 PN

The NCU 730.2 PN is the new flagship of the SINUMERIK 840D sl and, with a significantly higher PLC capacity than an NCU 730.1, represents the most advanced configuration within the SINUMERIK 840D sl range. The NCU 730.2 PN is the first NCU to offer integrated PROFINET interfaces with PROFINET IO and PROFINET CBA.

Up to 31 axes are available in up to 10 machining channels which can be executed in up to 10 mode groups. Up to 12 axes/spindles are supported per channel. Interpolation is possible for a maximum of 12 axes with the NCU system software (multi-axis interpolation option).

The basic version of the CNC user memory is 3 MB, and can be optionally expanded up to 15 MB.

© Siemens AG 2007

Technical specifications

Order No.	6FC5371-0AA10-0AA0	6FC5372-0AA00-0AA0	6FC5373-0AA00-0AA0	6FC5373-0AA01-0AA1
Product name	SINUMERIK 840D sl; NCU 710.1 with PLC 317-2DP	SINUMERIK 840D sl; NCU 720.1 with PLC 317-2DP	SINUMERIK 840D sl; NCU 730.1 with PLC 317-2DP	SINUMERIK 840D sl; NCU 730.2 PN with PLC 319-3PN/DP
Processor	Intel Celeron D	Intel Pentium 4M	Intel Pentium M	
• Clock frequency	1.2 GHz	1.7 GHz	2 GHz	
RAM	512 MB DRAM; 0.5 MB SRAM		512 MB DRAM; 1 MB SRAM	512 MB DRAM; 1 MB SRAM
SIMATIC S7 - integrated	PLC 317-2DP			PLC 319-3PN/DP
Input voltage	24 V			
Degree of protection to EN 60529 (IEC 60529)	IP20			
Humidity rating in accordance with EN 60721-3-3	Class 3K5 condensation and icing excluded. Low air temperature 0 °C (32 °F).			
Relative humidity				
• Storage	10 ... 95%			
• Transport	10 ... 95%			
• Operation	≤ 85% for max. 2 months			
Ambient temperature				
• Storage	-25 ... +55 °C (-13 ... +131 °F)			
• Transport	-40 ... +70 °C (-40 ... +158 °F)			
• Operation	0 ... 55 °C (32 ... 131 °F)			
Dimensions				
• Width	50 mm (1.97 in)			
• Height	418 mm (16.5 in)			
• Depth	272 mm (10.7 in)			
Weight, approx.	3.6 kg (7.94 lb)			

Selection and Ordering Data

Designation	Order No.
Hardware	
NCU 710.1 With PLC 317-2DP	**6FC5371-0AA10-0AA0**
NCU 720.1 With PLC 317-2DP	**6FC5372-0AA00-0AA0**
NCU 730.1 With PLC 317-2DP	**6FC5373-0AA00-0AA0**
NCU 730.2 PN With PLC 319-3PN/DP[1)]	**6FC5373-0AA01-0AA1**
Seal for external heat dissipation (1 pack = 10 units) for NCU 710.1/NCU 720.1/ NCU 730.1/NCU 730.2 PN	**6FC5348-0AA07-0AA0**
Numeric Control Extension NX10	**6SL3040-0NC00-0AA0**
Numeric Control Extension NX15	**6SL3040-0NB00-0AA0**
CNC user memory Expanded by 2 MB each	**6FC5800-0AD00-0YB0**
PLC user memory Expanded by 128 KB each	**6FC5800-0AD10-0YB0**

Designation	Order No.
Software	
HMI user memory Additional 256 MB on CF card of NCU Software option • Single license without data carrier	**6FC5800-0AP12-0YB0**
Spare and wear parts	
Spacers For NCU 710.1/NCU 720.1/ NCU 730.1/NCU 730.2 PN	**6FC5348-0AA06-0AA0**
Battery	**6FC5247-0AA18-0AA0**
Dual fan/battery module	**6FC5348-0AA02-0AA0**
Blanking cover For Control Unit CU320/ NCU 710.1/NCU 720.1/ NCU 730.1/NCU 730.2 PN	**6SL3064-3BB00-0AA0**
CompactFlash card 512 MB Empty	**6FC5313-4AG00-0AA2**

For ordering examples, see Overview of functions.

1) The NCU 730.2 PN requires the NCU system software with HMI sl 6FC5850-...

© Siemens AG 2007

Selection and Ordering Data (continued)

Designation	Order No.
Software	
NCU system software Up to 6 axes with HMI-Embedded	
6 languages (Chinese Simplified, English, French, German, Italian, Spanish) On CF Card Single license	
Export 840DE sl	
• Current software version	**6FC5840-1YG00-0YA0**
• Specific software version	**6FC5840-1YG ■■ - ■YA0**
Standard 840D sl	
• Current software version	**6FC5840-1XG00-0YA0**
• Specific software version	**6FC5840-1XG ■■ - ■YA0**
NCU system software Up to 31 axes with HMI-Embedded	
6 languages (Chinese Simplified, English, French, German, Italian, Spanish) On CF Card Single license	
Export 840DE sl	
• Current software version	**6FC5840-3YG00-0YA0**
• Specific software version	**6FC5840-3YG ■■ - ■YA0**
Standard 840D sl	
• Current software version	**6FC5840-3XG00-0YA0**
• Specific software version	**6FC5840-3XG ■■ - ■YA0**
NCU system software Up to 6/31 axes with HMI-Embedded	
6 languages (Chinese Simplified, English, French, German, Italian, Spanish)	
Export 840DE sl	
• Current software version on DVD, without single license	**6FC5840-3YC00-0YA8**
• Specific software version on DVD, without single license	**6FC5840-3YC ■■ - ■YA8**
• Software update service, without single license	**6FC5840-3YP00-0YL8**
• 6 axes, single license	**6FC5840-1YF00-0YB0**
• 31 axes, single license	**6FC5840-3YF00-0YB0**
Standard 840D sl	
• Current software version without single license	**6FC5840-3XC00-0YA8**
• Specific software version without single license	**6FC5840-3XC ■■ - ■YA8**
• Software update service without single license	**6FC5840-3XP00-0YL8**
• 6 axes, single license	**6FC5840-1XF00-0YB0**
• 31 axes, single license	**6FC5840-3XF00-0YB0**

Designation	Order No.
Software	
NCU system software Up to 6 axes and ShopMill HMI	
6 languages (Chinese Simplified, English, French, German, Italian, Spanish) On CF Card Single license	
Export 840DE sl	
• Current software version	**6FC5841-1YG00-0YA0**
• Specific software version	**6FC5841-1YG ■■ - ■YA0**
Standard 840D sl	
• Current software version	**6FC5841-1XG00-0YA0**
• Specific software version	**6FC5841-1XG ■■ - ■YA0**
NCU system software Up to 31 axes and ShopMill HMI	
6 languages (Chinese Simplified, English, French, German, Italian, Spanish) On CF Card Single license	
Export 840DE sl	
• Current software version	**6FC5841-3YG00-0YA0**
• Specific software version	**6FC5841-3YG ■■ - ■YA0**
Standard 840D sl	
• Current software version	**6FC5841-3XG00-0YA0**
• Specific software version	**6FC5841-3XG ■■ - ■YA0**
NCU system software Up to 6/31 axes and ShopMill HMI	
6 languages (Chinese Simplified, English, French, German, Italian, Spanish)	
Export 840DE sl	
• Current software version on DVD, without single license	**6FC5841-3YC00-0YA8**
• Specific software version on DVD, without single license	**6FC5841-3YC ■■ - ■YA8**
• Software update service, without single license	**6FC5841-3YP00-0YL8**
• 6 axes, single license	**6FC5841-1YF00-0YB0**
• 31 axes, single license	**6FC5841-3YF00-0YB0**
Standard 840D sl	
• Current software version without single license	**6FC5841-3XC00-0YA8**
• Specific software version without single license	**6FC5841-3XC ■■ - ■YA8**
• Software update service without single license	**6FC5841-3XP00-0YL8**
• 6 axes, single license	**6FC5841-1XF00-0YB0**
• 31 axes, single license	**6FC5841-3XF00-0YB0**

© Siemens AG 2007

Selection and Ordering Data (continued)

Designation	Order No.
Software	
NCU system software Up to 6 axes and ShopTurn HMI	
6 languages (Chinese Simplified, English, French, German, Italian, Spanish) On CF Card Single license	
Export 840DE sl	
• Current software version	**6FC5842-1YG00-0YA0**
• Specific software version	**6FC5842-1YG ■■ - ■YA0**
Standard 840D sl	
• Current software version	**6FC5842-1XG00-0YA0**
• Specific software version	**6FC5842-1XG ■■ - ■YA0**
NCU system software Up to 31 axes and ShopTurn HMI	
6 languages (Chinese Simplified, English, French, German, Italian, Spanish) On CF Card Single license	
Export 840DE sl	
• Current software version	**6FC5842-3YG00-0YA0**
• Specific software version	**6FC5842-3YG ■■ - ■YA0**
Standard 840D sl	
• Current software version	**6FC5842-3XG00-0YA0**
• Specific software version	**6FC5842-3XG ■■ - ■YA0**
NCU system software Up to 6/31 axes and ShopTurn HMI	
6 languages (Chinese Simplified, English, French, German, Italian, Spanish)	
Export 840DE sl	
• Current software version on DVD, without single license	**6FC5842-3YC00-0YA8**
• Specific software version on DVD, without single license	**6FC5842-3YC ■■ - ■YA8**
• Software update service, without single license	**6FC5842-3YP00-0YL8**
• 6 axes, single license	**6FC5842-1YF00-0YB0**
• 31 axes, single license	**6FC5842-3YF00-0YB0**
Standard 840D sl	
• Current software version without single license	**6FC5842-3XC00-0YA8**
• Specific software version without single license	**6FC5842-3XC ■■ - ■YA8**
• Software update service without single license	**6FC5842-3XP00-0YL8**
• 6 axes, single license	**6FC5842-1XF00-0YB0**
• 31 axes, single license	**6FC5842-3XF00-0YB0**

Designation	Order No.
Software	
Additional languages[1] for the operating software HMI-Embedded, ShopMill HMI, ShopTurn HMI and HMI-Advanced[2] Languages: Chinese Traditional, Czech, Danish, Dutch, Finnish, Hungarian, Japanese, Korean, Polish, Portuguese/Brazilian, Russian, Swedish, Turkish	**6FC5253-7BX10- ■XG8**
• Specific software version on DVD, without single license	
Additional languages Software option for use of additional languages	**6FC5800-0AN00-0YB0**
• Single license without data carrier	

[1] Please inquire about available software versions.

[2] HMI-Advanced also available in: Romanian and Slovak.

© Siemens AG 2007

Selection and Ordering Data (continued)

Designation	Order No.
Software	
NCU system software **Up to 6 axes with HMI sl** 6 languages (Chinese Simplified, English, French, German, Italian, Spanish) On CF Card Single license	
Export 840DE sl	
• Current software version	**6FC5850-1YG00-0YA0**
• Specific software version	**6FC5850-1YG ■■ - ■YA0**
Standard 840D sl	
• Current software version	**6FC5850-1XG00-0YA0**
• Specific software version	**6FC5850-1XG ■■ - ■YA0**
NCU system software **Up to 31 axes with HMI sl** 6 languages (Chinese Simplified, English, French, German, Italian, Spanish) On CF Card Single license	
Export 840DE sl	
• Current software version	**6FC5850-3YG00-0YA0**
• Specific software version	**6FC5850-3YG ■■ - ■YA0**
Standard 840D sl	
• Current software version	**6FC5850-3XG00-0YA0**
• Specific software version	**6FC5850-3XG ■■ - ■YA0**

Designation	Order No.
Software	
NCU system software **Up to 6/31 axes with HMI sl** 6 languages (Chinese Simplified, English, French, German, Italian, Spanish)	
Export 840DE sl	
• Current software version on DVD, without single license	**6FC5850-3YC00-0YA8**
• Specific software version on DVD, without single license	**6FC5850-3YC ■■ - ■YA8**
• Software update service without single license	**6FC5850-3YP00-0YL8**
• 6 axes, single license	**6FC5850-1YF00-0YB0**
• 31 axes, single license	**6FC5850-3YF00-0YB0**
Standard 840D sl	
• Current software version on DVD, without single license	**6FC5850-3XC00-0YA8**
• Specific software version on DVD, without single license	**6FC5850-3XC ■■ - ■YA8**
• Software update service without single license	**6FC5850-3XP00-0YL8**
• 6 axes, single license	**6FC5850-1XF00-0YB0**
• 31 axes, single license	**6FC5850-3XF00-0YB0**
Additional languages for the HMI sl operating software[1)] Languages: Chinese Traditional, Czech, Danish, Dutch, Finnish, Hungarian, Japanese, Korean, Polish, Portuguese/Brazilian, Russian, Swedish, Turkish	**6FC5860-0YC ■■ - ■YA8**
• Specific software version on DVD, without single license	
SINUMERIK 840D sl/840Di sl Toolbox Languages: English, German	Supplied on the DVD containing the NCU system software.

Example of a specific software version, e.g., 1.4:
6FC5840-3XC**10-4**...
6FC5841-3XC**10-3**...

Example of a specific software version, e.g., 7.3:
6FC5253-**7**BX10-**3**XG8

Example of a specific software version, e.g., 2.4:
6FC5850-3XC**20-1**...
6FC5860-0YC**20-1**YA8

The possible software options are listed in the Overview of functions. Software options shown with an order code can be ordered in combination with the NCU system software.

For ordering examples, see Overview of functions.

[1)] Please inquire about available software versions.