

NCU Operator System — Basic CNC

SINUMERIK ONE PPU 1740 + MACHINE CONTROL PANEL, HOUSED AND WIRED

NCU-OPS-BASIC-15 / -19

Datasheet Rev A · 2026-09-13

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NCU-OPS-BASIC-19: PPU 1740-1900 over the MCP 1900 in a Rittal AX 600 x 600 rear-access operating housing. PPU shown as a placeholder block.

A complete SINUMERIK ONE operator station for a basic milling or turning machine: the PPU 1740 panel processing unit (NCU, S7-1500F PLC and multitouch display in one unit) sits above a width-matched SINUMERIK ONE machine control panel with E-Stop, integral handwheels and override switches. Both are mounted in a 3 mm aluminum front plate on a Type 12 operating housing, pre-wired for 24 V DC and PROFINET, and shipped ready to hang on a support arm or pedestal.

Two sizes, one housing

	NCU-OPS-BASIC-15	NCU-OPS-BASIC-19
Panel processing unit	PPU 1740-1500, 15.6" 1366 x 768 multitouch (6FC5317-4AA00-1CA0)	PPU 1740-1900, 19" 1920 x 1080 multitouch (6FC5317-4AA00-1DA0)
Machine control panel	MCP 1500, 398 x 225, 2 handwheels, 8 tension jacks (6FC5303-0AP01-0AA0)	MCP 1900, 464 x 165, 1 handwheel, 12 M5 studs (6FC5303-0AP02-0AA0)
Stack height on plate	507 mm of 550 usable	484 mm of 550 usable
Housing	Rittal AX 6320.650 operating housing with handle strips, 600 x 600 x 210 mm, sheet steel RAL 7035, 3 mm aluminum front plate, rear service door, Type 12 / IP55	
Mounting	Ø130 support-arm connection (CP 60/120/180 systems) or pedestal; rear-access housing, not wall-mount	
Weight, approx.	26 kg	28 kg

WHAT SHIPS

- Housing with machined front plate, door-to-body ground strap and nameplate
- PPU 1740 fitted with the Siemens fixing clamps; SINUMERIK ONE terminal kit (24 V, I/O and handwheel connectors, DRIVE-CLiQ dust plugs) bagged inside
- MCP mounted and sealed, PROFINET patch to PPU X120 P1
- 24 V DC and PE landed on push-in field terminals on the interior bracket; PPU X130 free for the machine network
- Gland plate with 2x RJ45 bulkheads and cable gland at the arm connection (external cable routing) on request
- Datasheet, wiring diagram in the door pocket, STEP model and drawing package on request

NOT INCLUDED

SINUMERIK ONE system software and licenses (the PPU ships without software), the CF card, drives, motors, the support arm or pedestal, and the machine PLC program. Think-PLC engineering can load and commission the system as a service.

Thermal: the PPU 1740 is passively cooled and rated 40 °C at the front; with the MCP the housing carries up to about 105 W. A filter-fan option is recommended above 30 °C ambient. Confirm with a 30-minute closed-door heat run at commissioning.

Built in North Carolina

Assembled and tested at Think-PLC, Winston-Salem

Siemens SINUMERIK ONE

Digital-native CNC, TIA Portal engineered

Made to order

Lead time follows Siemens PPU availability

3-year warranty

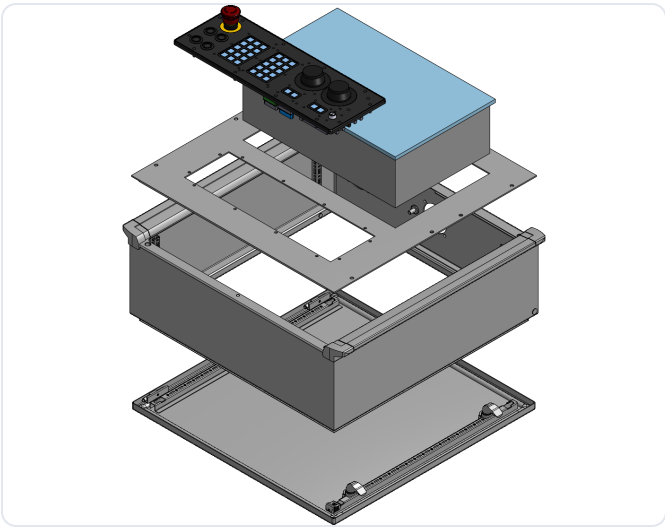
On the Think-PLC assembly

Build and front plate machining

HOW THE STATION GOES TOGETHER

NCU-OPS-BASIC-15 / -19

Datasheet Rev A

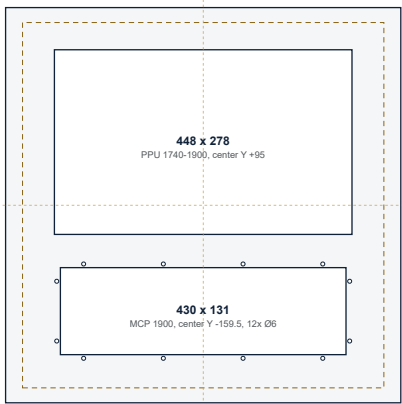


Exploded view, NCU-OPS-BASIC-19

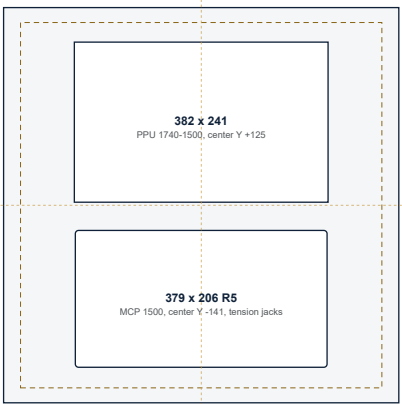
Top to bottom: machine control panel, PPU 1740 (placeholder block), machined 3 mm front plate, housing body with handle strips, rear service door with hinges and cam lock.

- 1 Front plate machining**
Cutouts and stud holes laser or CNC cut, deburred both faces, seal areas Rz 120.
- 2 Housing prep**
Ground strap, arm connection down for pedestal builds, gland plate if cables run externally.
- 3 Device mounting**
PPU from the front with spring retainers and clamps at 0.5 Nm; MCP studs 1.5 Nm or tension jacks 0.4 Nm. 25 mm bezel gap by design.
- 4 Wiring**
24 V DC to PPU X1 and MCP, PROFINET patch MCP to PPU X120 P1, field terminals labeled, 170 mm kept clear behind the PPU.
- 5 Load and test**
Software if supplied, MCP device name, E-Stop chain, handwheels, overrides, 30-minute heat run.
- 6 Clean, label, pack**
Nameplate on the rear door, screen protector left on, door latched, arm connection covered.

FRONT PLATE CUTOUTS



NCU-OPS-BASIC-19
595 x 595 x 3 plate, dashed = 544 x 550 window, origin = plate center



NCU-OPS-BASIC-15
595 x 595 x 3 plate, dashed = 544 x 550 window, origin = plate center

All cutouts +1/0 mm. MCP 1900 stud holes Ø6 (12x) on the 441 x 142 pattern. PPU cutouts take the Siemens fixing clamps; keep 10 mm clear left and right of each PPU cutout. Dimensions from Siemens equipment manuals A5E47615272B (PPU 1740), A5E52027171B (MCP 1500) and A5E54027167B (MCP 1900).

ORDERING

Part number	Description	Main components
NCU-OPS-BASIC-15	NCU Operator System, Basic CNC, 15.6"	6FC5317-4AA00-1CA0 + 6FC5303-0AP01-0AA0 + Rittal 6320.650
NCU-OPS-BASIC-19	NCU Operator System, Basic CNC, 19"	6FC5317-4AA00-1DA0 + 6FC5303-0AP02-0AA0 + Rittal 6320.650