

SIEMENS

SINUMERIK

SINUMERIK 840D sl Handheld Terminal HT 8

Manual

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Valid for:
Control system
SINUMERIK 840D sl/840DE sl

Description

The HT 8 mobile handheld terminal combines the functions of an operator panel and a machine control panel in one device, permitting complete operator control and monitoring of machines. It can be used according to the principle of a thin client (also see "Operator panels", Chapter: "Thin client unit") as a supplementary main operator panel or as a secondary control panel.

The optional touch pen with a holding loop permits easy operation of the touch screen, even when operators are wearing gloves. Its safety concept permits working in the hazardous area of the machine, which is necessary, for example, when teaching in.

Note

Siemens declares that this device complies with the requirements and other regulations of the directives 2006/42/EC (machinery directive) and 2004/108/EC (EMC guideline).

The full declaration can be found on the Internet (<https://support.industry.siemens.com/cs/document/109476859?dti=0&lc=en-WW>).

Features

- Operator control via touch screen and membrane keys
- Fully graphic 7.5" TFT color display
- Emergency Stop button and two enabling buttons for left-handed and right-handed operators
- Easy hot swapping during operation (hot plug and play), without triggering the emergency stop in combination with the PN Plus connection box and without an additional, manual actuating element / keyswitch

The HT 8 can be safely kept and operated in a stationary manner in the wall holder (accessory).

Validity

The following description applies to the following components:

Designation	Features	Article number
HT 8	Enabling button, emergency stop button, override rotary switch	6FC5403-0AA20-0AA1
HT 8	Enabling button, emergency stop button, override rotary switch, handwheel	6FC5403-0AA20-1AA1

The safety-related accessories are marked in the "Accessories" section with a *).

Function blocks

In the unit:

- PCB with CPU, memory
- Ethernet controller

Device front:

- LC display as touch screen
 - 640 x 480 (VGA) Color TFT
 - Inverter on board
- 52-key membrane keyboard
 - 24 machine control keys
 - 28 control keys (number pad, cursor pad, function keys)
- Emergency Stop button, 2-channel
- Rotary override switch (19 positions)
- Handwheel (optional)

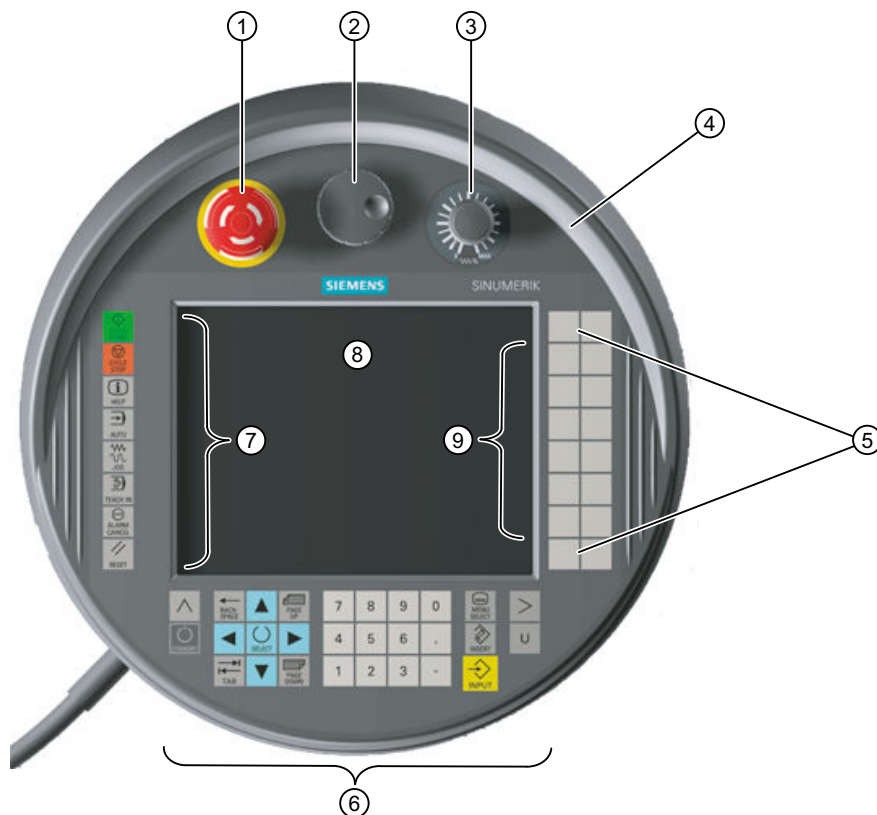
Device rear:

- 2 enabling buttons (2-channel, 3-stage)
- Serial interfaces:
 - HT 8 connection cable to terminal box / connection module
 - USB interface (with dummy plugs)
- Power supply (+24 V)

Operator control and display elements

3.1 View

Front



- ① Emergency Stop button
- ② Handwheel
- ③ Rotary override switch
- ④ Protective collar
- ⑤ Customer keys (user-defined)
- ⑥ HMI control keys
- ⑦ Function keys machine control panel
- ⑧ Display / touch screen
- ⑨ Traversing keys

Image 3-1 User interface of the HT 8 with handwheel

3.1 View

Rear

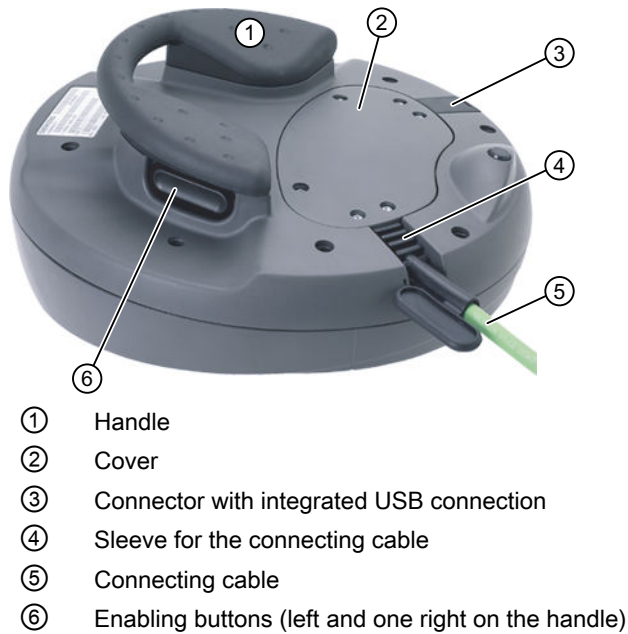


Image 3-2 Connections and operator controls at the rear of the HT 8

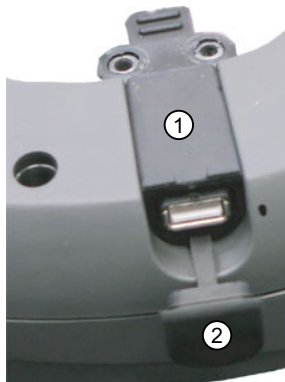


Image 3-3 USB connection of the HT 8

Holes



The HT 8 consists of a double-walled housing with upper shell ① and lower shell ③

On the lower shell, the HT 8 has three small holes ②. These drill-holes are attached for the purpose of diverting the liquid that can penetrate into the space between the double-walled housing if the malleable protective shroud on the upper shell is pushed through.

3.2 Description

Display / touch screen

The display has LED background lighting.

All the application-specific functions are displayed on the touch-sensitive display. The particular function is initiated by your finger or an optional touch pen at the appropriate location in the display.

NOTICE
Damage to the display by pointed or hard objects
Do not touch the operating elements of the display with pointed or hard objects, as this can damage it, sometimes beyond repair.

In order to achieve precise assignment by pixels, the touch-sensor must be calibrated and adjusted to the touch screen.

3.2 Description

Information for calibrating the touch screen of the HT 8 can be found in:
"General information and networking", Chapter: "Networking"

Note

Calibration of the touch sensor may also become necessary during operation, because the resistance values of the touch membrane change when there is a temperature change.

Membrane keyboard

On the front of the HT8, 52 keys are arranged in several key blocks (see View (Page 91)).

NOTICE

Damage to the keys when using pointed or hard objects

Only use your fingers to touch the membrane keyboard and **not** sharp or hard objects, which can damage or even destroy the keys. Further, please note that the touch pen is also **not** suitable for using the membrane keyboard.

Function keys machine control panel

- Left: START, STOP, RESET, AUTO, JOG, TEACH, ALARM CANCEL
- Bottom: U (User button)
- Right: 2 x 6 traversing keys, 4 user keys (can be freely assigned)

HMI control keys

- The number pad contains the numbers 1-9, the decimal point and the minus sign
- The cursor pad is used to navigate on the screen.
- Seven keys for
 - Input
 - Menu change
 - Switch-over of the softkey bars
 - Help function

Emergency Stop button

The red mushroom-shaped head of the Emergency Stop button is provided with a yellow ring. Directly under the mushroom-shaped head, there is also a black ring which identifies the position status of the Emergency Stop button.

	State	
Ring (black)	Visible	Not visible
Emergency Stop button	Not pressed	Pressed

Technical specifications

8.1 Handheld Terminal HT 8

HT 8 handheld terminal

Safety		
Safety class	III according to EN 61131-2 / EN 50178	
Degree of protection according to EN 60529	IP65	
Approvals	CE / cULus	
Electrical data		
Input voltage	24 V DC	
Current carrying capacity	Enabling button:	10 - 250 mA / 2-channel, 3-stage
	Emergency Stop button:	10 - 1000 mA / 2-channel
Max. current carrying capacity	USB interface:	100 mA
Power consumption, max.	Approx. 13 W	
Mechanical data		
Dimensions	Diameter: Approx. 290 mm	Height: Approx. 126 mm
Weight	Approx. 1730 g	
Fall height, max.	1.20 m	
Display		
Size	7.5" TFT	
Resolution	640 x 480 pixels	
Service life	At ambient temperatures of > 40° C and long periods of non-use, it is advisable to activate the screen saver function.	

Note

Information about the climatic and mechanical environmental conditions is contained in the associated section under:

"General notes and interconnection" → "Operational planning".

Emergency Stop button

Rated voltage	24 V DC
Current rating, max.	1 A
Current rating, min.	10 mA
Switching capacity	DC 13 according to EN 60947-5-1