

Installation Manual

MiniTouch MTHP4



Version 1.9

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1 Safety instructions



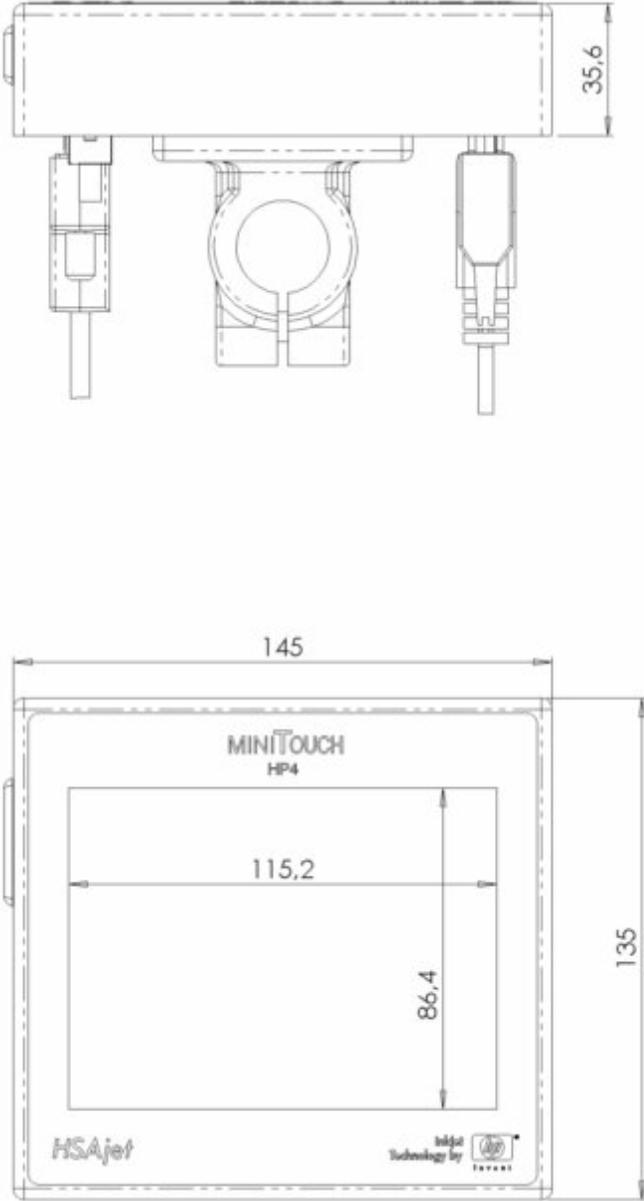
- The MTHP4 is a controller unit for inkjet printing. Only use this device for the intended use.
- Do not subject the controller to strong shocks or vibrations.
- Install the MTHP4 in the recommended installation environment only.
- Only use the MTHP4 with f-type print heads from HP. If the controller is used with a different type of print head, the print head will be destroyed.
- Only use the MTHP4 with the original power supply. Wrong voltage level will destroy the controller or cause it to malfunction.
- Connect power supply to input voltage 85-265 VAC.
- Follow the wiring instructions in the installation manual carefully. Wrong wiring could destroy the controller unit.
- To avoid electric shock, please do not change pen/cartridge with power on if the pen auto switch in the print head has been disabled.
- Shut down MTHP4 properly before turning off the power supply. Power loss during normal operation may result in memory card write failure and data loss.
- Do not clean controller with strong solvents.
- Do not let liquids get in touch with any electrical parts.
- The MTHP4 is only to be repaired by trained personnel.
- Turn off and disconnect the power before disassembling the controller.

2 Installation environment

Environment	Condition
Installation Area	Indoors
Ambient Temperature	10 - 40 degrees C
Humidity	95 % RH or less and free of condensation
Surrounding Area	Install in an area free from: <ul style="list-style-type: none">• oil mist and dust• metal shavings, oil, water or other foreign materials• radioactive materials• combustible materials• harmful gases and liquids• excessive vibration• chlorides• direct sunlight• Open flames

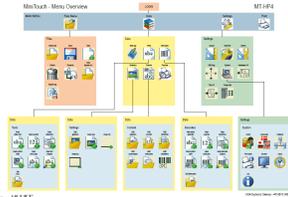
3 Dimensions

Below are the dimensions of the controller. All measurements are in mm.



4 Unpack the equipment

If you have ordered a MiniTouch MT-HP4, you will receive the following parts.

	Controller unit
	Cable (15 pin sub-d m-m)
	Power supply
	2 pcs 9 pin subd connectors
	CD
	Menu overview
	Touch screen pen
	USB key

If you also ordered head(s), you will receive the following parts.

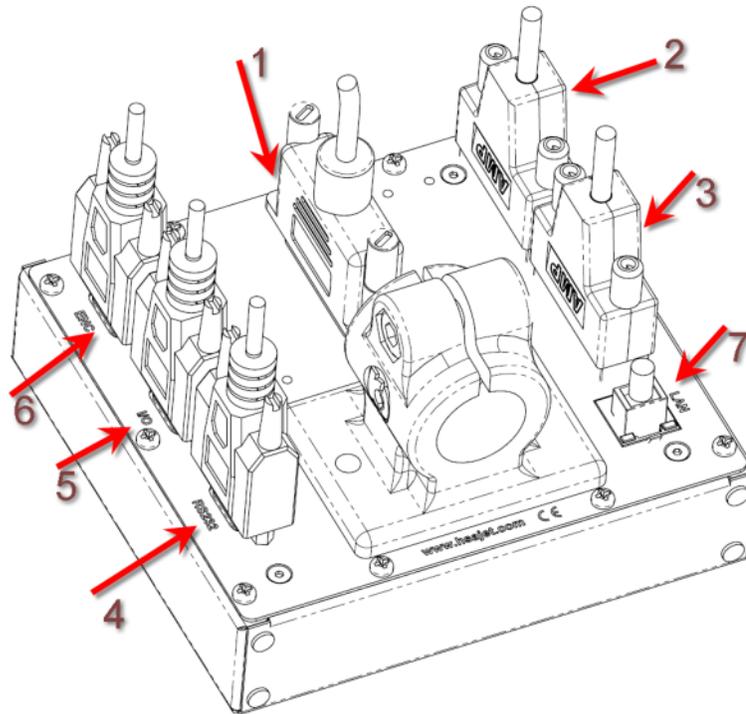
	<p>Print heads up to 4 pens</p> <ul style="list-style-type: none"> • 1+1+1+1 pens • 2+1+1 pens • 2+2 pens • 3+1 pens
	<p>Cable (25 pin sub-d m-f)</p>

The following parts are optional

	<p>Distributor box for HSAJet F-type printheads (hp)</p>
	<p>MT-HP4 bracket kit for F-type print heads (side low)</p>
	<p>Bridge for Hp-printheads w/2 slides</p>
	<p>Head mount for HP-print head (for bridge)</p>
	<p>Sensor mount for bridge</p>

	Encoder mount for bridge and encoder bracket
	Telescope unit
	Encoder
	Encoder wheel
	Photo Sensor, fibre optic and transmitter
	Sensor mount for base
	Ink Cartridge
	R + K Mount

5 Connect the MiniTouch



Insert pen into stall and lock it

- 1. Connect the stall to printer.**
- 3. Connect the controller to the power supply.**
- 5. Connect the start sensor to I/O.**

Optional equipment

- 6. Connect the encoder to enc.**
- 7. Connects to local area network.**
- 4. Rs232. Use for serial connections.**
- 2. Unused.**

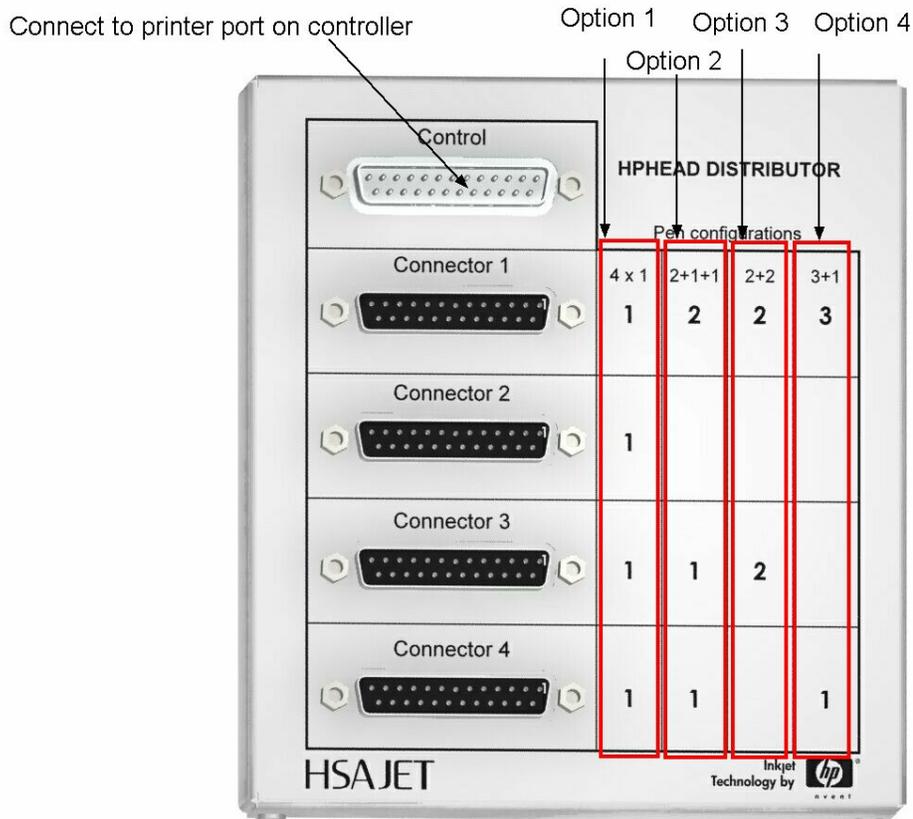
6 Multiple Heads

With the MiniTouch MT-HP4 you can print with more than one head but not with no more than 4 pens. This means you can print with the following combinations of heads:

1. 4 pcs 1-pen heads.
2. 1 pcs 2-pen heads and 2 pcs 1- pen heads.
3. 2 pcs 2-pen heads.
4. 1 pcs 3-pen heads and 1pcs 1-pen head.

Multiple heads are connected to the MiniTouch MT-HP4 using a Head distributor.

Please connect the heads as shown on the picture below.

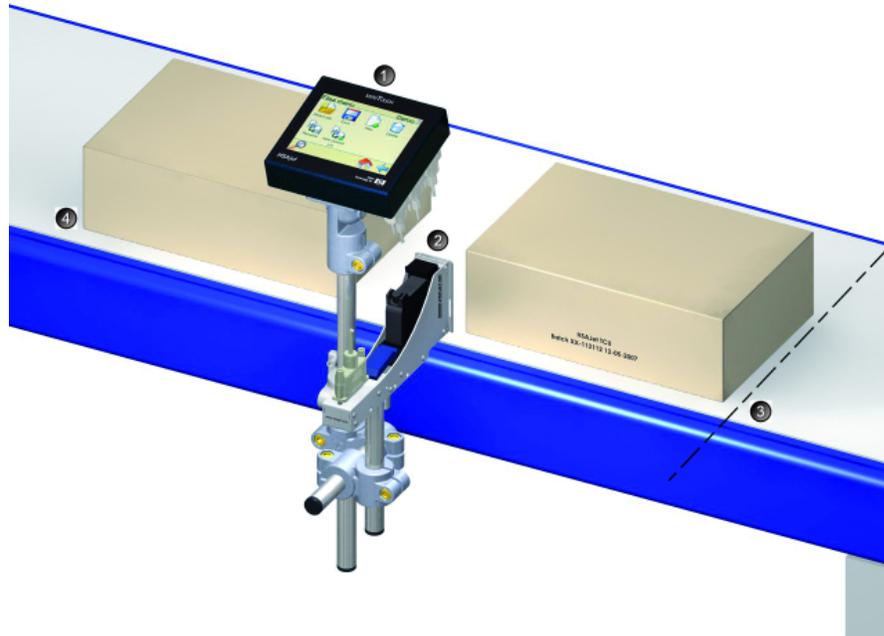


Example (option 4):

System: 1x3pen HEAD
 1x1pen HEAD

Connect the 3 pen head to connector 1
 Connect the 1 pen head to connector 4

7 Mechanical Setup



1 Install controller near conveyor

The controller must be installed at close proximity to the conveyor where it will be used. The controller and the stall must be connected with a cable no longer than 5 m.

2 Place Head on conveyor

Install the head on the conveyor so that the "sole" is as close to your media(box/paper) as possible. A distance of no more than 1mm is recommended. 0,5 mm is optimal. It is recommended to respect the following:

- The nozzles must be 90 degrees exactly in relation to the print direction. If the angle is not exactly 90 degrees, you will get slanted print and overlap 2, 3 or 4 pen heads.
- The head must be absolutely parallel to the media.

3 Setup sensor

Install the start sensor so it senses only the product start. You should have some distance from the sensor to the head, more distance if you run faster.

4 Connect encoder

The encoder is optional, but strongly recommended for accurate printing.

There are 2 types of encoder:

- a. Encoder with hollow shaft.

Position the wheel so it is completely parallel with the conveyor.
Make sure the wheel is perfectly round.
The standard is an encoder with 5000 PPR (Pulse per round) and a wheel circumference of 200mm.

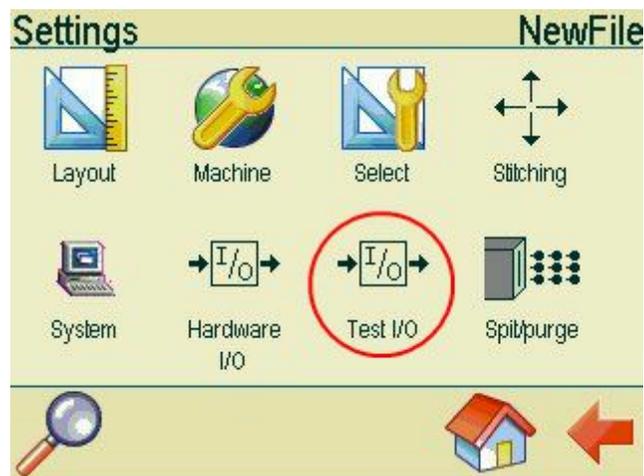
b. Encoder with shaft.

Encoder directly connected to the shaft of the conveyor.
The conveyors from HSA Systems have shaft encoders installed.

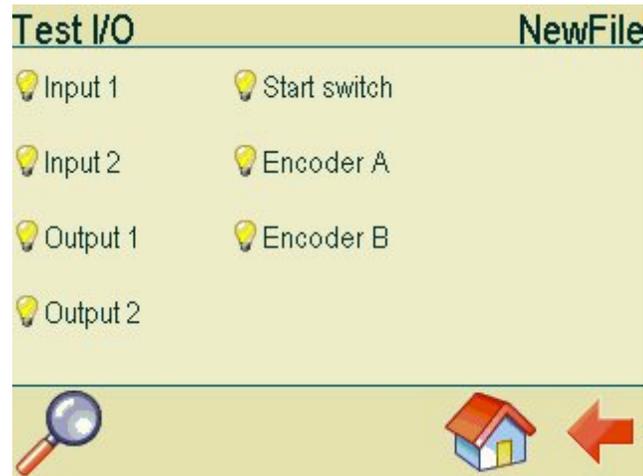
8 Test your hardware

Please test your hardware to ensure everything is properly connected.

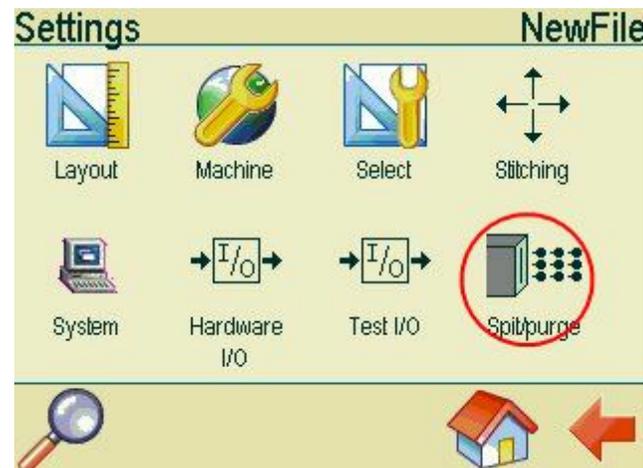
Choose Test I/O from settings menu.



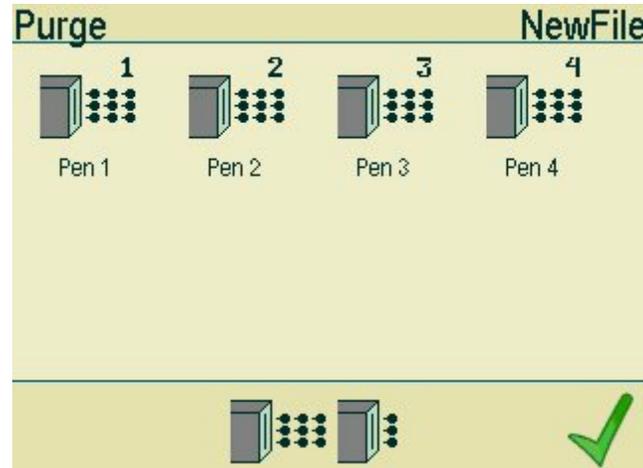
This screen displays the different types of hardware connected to the controller. If you use a negative sensor, the light bulb Start Switch will be on. Activate the sensor. If the light in the bulb goes off, the sensor is properly installed. If on the other hand the sensor is positive, the light bulb Start switch will light up, when you activate the sensor. Turn the encoder wheel (if used) and the light bulbs Encoder A and Encoder B will flash.



Select spit/purge in the settings menu.



This screen provides an overview of all the pens installed on your system. Hold a piece of paper under the head and press one of the pens in the menu. If each pen leaves an ink mark on your paper, the head is properly installed.



9 Support

For product support, please contact HSA SYSTEMS Customer Service department

HSA SYSTEMS CUSTOMER SERVICE DEPARTMENT

Phone: +45 6610 3401

Email: techsupport@hsasystems.com



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