POSITIP 8000

Digital readout for milling machines, drilling machines and lathes with up to six axes

POSITIP 8000 digital readouts are suitable for manually operated milling machines, drilling machines and lathes with up to six axes. Integrated switching inputs and outputs permit interaction with the machine and enable the implementation of simple automated tasks.

With the POSITIP 8016 ACTIVE, up to three NC axes plus a spindle can be configured and controlled. The simultaneous movement of multiple axes and functions for machine safety are not supported.

Design
The POSITIP 8000 digital readouts are designed for harsh shop environments. They feature a sturdy aluminum housing with touchscreen operation.

Thanks to the intuitive, user-friendly graphical user interface, the POSITIP digital readouts are particularly easy to operate. Everything you need to know for machining your workpiece is displayed on an easy to read 12-inch screen.

The low-profile aluminum housing, featuring an integrated power supply unit and fanless passive cooling system, is extremely rugged and durable. Its intuitive touchscreen made of specially hardened glass can even be operated with gloves.

Functions
The POSITIP 8000 digital readouts offer many useful functions for machining with manually operated machine tools. Self-explanatory operating elements and language-sensitive information in plain language permit context-sensitive operation.

Distance-to-go mode comes to your aid during positioning tasks. With it, you can easily and reliably arrive at the next position by simply moving the axes until the display reads zero. This feature is particularly useful during the execution of programs.

Of course, the POSITIP 8000 digital readouts also offer special functions for milling and turning operations, such as:
- Hole patterns (linear, circular)
- Radius/diameter switching
- Sum display for the top slide

Presets can be found fast and accurately with an edge finder. The POSITIP digital readouts support you with special probing functions.

You can individually configure the POSITIP 8000 digital readouts and save your settings in the user administration.

Data interface
A USB port allows you to import and export configuration files and programs. The Ethernet interface allows programs to be saved or imported over a network.

Software options
Software options allow you to adapt the capabilities of the POSITIP 8000 digital readouts to the given requirements. These software options can be activated by entering a license key. Please contact HEIDENHAIN for more information.

	POSITIP 8016	POSITIP 8016 ACTIVE
Axes	Up to 6 axes (4 axes in the standard version; 2 additional axes available as a software option)	
Encoder inputs	∿ 1 V_{PP}, ∿ 11 μA_{PP}, EnDat 2.2	
Display step[1]	*Linear axis:* 1 mm to 0.00001 mm	
Display	12-inch screen for touch operation; resolution: 1280 x 800 pixels for position values, dialog boxes, data entry and graphical functions	
Functions	• Creation and execution of programs • User administration and file management • 100 presets, 100 tools • Reference mark evaluation for distance-coded and single reference marks • Distance-to-go mode with nominal position input in absolute or incremental values • Graphical positioning aid • Scaling factor	
For milling and drilling	• Calculation of positions for hole patterns (circular, linear) • Tool radius compensation • Cutting data calculator • Probing functions for preset finding (edge, centerline and circle) • Switching functions	
	–	Control of up to 3 NC axes and a spindle
For turning	• Measurement of tool dimensions • Sum display of axes in the top slide • Taper calculator • Switching functions	
	–	Control of up to 3 NC axes and a spindle; constant surface speed
Error compensation	Linear (LEC) and segmented linear (SLEC)	
Data interface	2 x Ethernet 100 Mbit/1 Gbit (RJ45), 4 x USB 2.0 (Type A)	
Accessories	Single-Pos/Duo-Pos/Multi-Pos stands, Multi-Pos holder, mounting frame, power cable and adapter connector	
Power connection	AC 100 V to 240 V (±10 %), 50 Hz to 60 Hz (±5 %) *POSITIP 8016 ACTIVE:* ≤ 79 W; *POSITIP 8016:* ≤ 38 W	
Operating temperature	0 °C to +45 °C (storage temperature: –20 °C to +70 °C)	
Protection EN 60529	IP65; back panel: IP40	
Mounting	Single-Pos stand, Duo-Pos stand, Multi-Pos stand, Multi-Pos holder, fastening systems compatible with VESA MIS-D 100	
Mass	≈ 3.50 kg	

[1] Depends on the signal period or line count of the connected encoder

Automation and Metrology | 1-888-354-2525 | auto-met.com

Connectivity comparison: POSITIP 8016 versus POSITIP 8016 ACTIVE

	POSITIP 8016	POSITIP 8016 ACTIVE
Encoder interfaces **(11 µA$_{PP}$, 1 V$_{PP}$, EnDat 2.2)**	4 2 additional ones as a software option	4 2 additional ones as a software option
Digital inputs		
TTL 0 V to 5 V	8	8
High: DC 11 V to 30 V, 2.1 mA to 6.0 mA Low: DC 3 V to 2.2 V, 0.43 mA	–	24
Digital outputs		
TTL 0 V to +5 V, maximum load = 1 kΩ	16	16
DC 24 V (20.4 V to 28.8 V); max. 150 mA per channel	–	8
Relay outputs Max. switching voltage: AC/DC 30 V; max.: 0.5 A; max. 15 W; max. continuous current: 0.5 A	–	2
Analog inputs Voltage range: DC 0 V to 5 V Resistance range: 100 Ω ≤ R ≤ 50 kΩ	–	4
Analog outputs Voltage range: DC –10 V to +10 V Maximum load: 1 kΩ	–	4
5 V voltage outputs Voltage tolerance: ±5 %; maximum current: 100 mA	1	2

Further information:

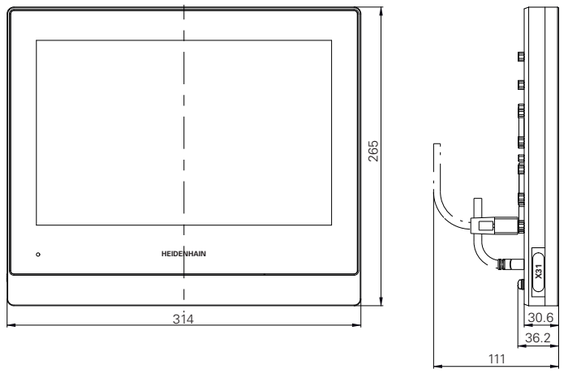
Operating instructions
POSITIP 8000 – Milling ID 1317302-xx
POSITIP 8000 – Turning ID 1317303-xx
Or on the Internet under
www.heidenhain.com/service/downloads/documentation

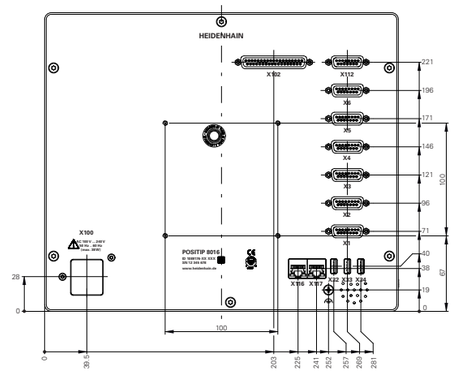
User-controlled functions

Type	Function	PT 8016	PT 8016 ACTIVE
Logo	Call-up of operating instructions or OEM service information	✓	✓
Programming	–	✓	✓
Spindle speed	Pre-assignment of spindle speeds (radio buttons)	–	✓
M function	Freely definable functions	✓	✓
	Direction of spindle rotation	–	✓
	Coolant during spindle operation	–	✓
	Clamping of axes	–	Only with NC software option
	Coolant	–	✓
	Zeroing of the tool axis	✓	✓
Document	Display of tables (e.g., thread tables, cutting speeds)	✓	✓

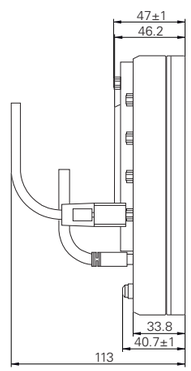
Mounting and accessories

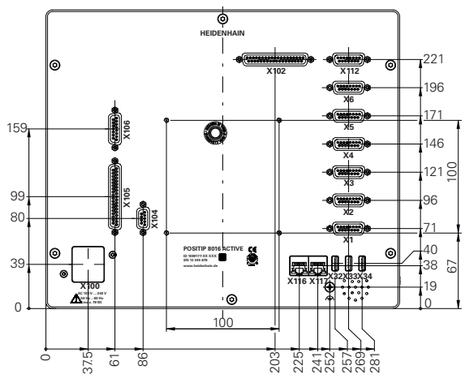
POSITIP 8000 dimensions





POSITIP 8016



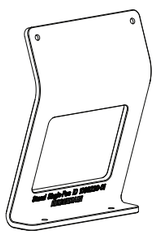


POSITIP 8016 ACTIVE

POSITIP 8000 accessories

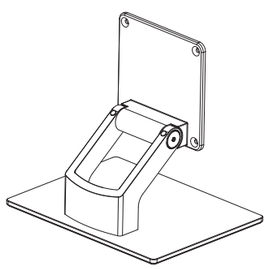
Single-Pos stand
Included in delivery. For setup on and fastening to a surface (20° tilt).

ID 1089230-01



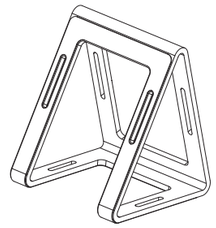
Multi-Pos stand
For setup on and fastening to a horizontal surface (90° continuous tilt range).

ID 1089230-03



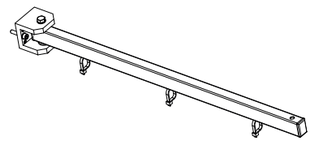
Duo-Pos stand
For setup on and fastening to a horizontal surface (20° or 45° tilt).

ID 1089230-02



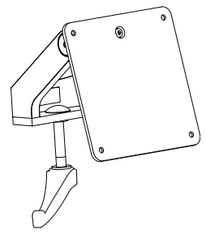
Mounting arm, straight
For fastening to a machine.

ID 1089207-01



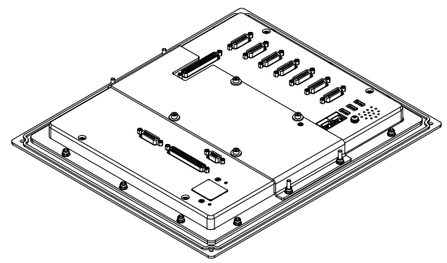
Multi-Pos holder
For fastening to an arm (90° continuous tilt range).

ID 1089230-04



Mounting frame
For integration into a panel.

ID 1089208-02



Adapter connector
For pin layout conversion after a replacement (e.g., from PT 880 to POSITIP 8000).

ID 1089214-01

PC demo software under
www.heidenhain.com/software
▸ *Digital Readouts* ▸ *POSITIP 8000* ▸ *Software DEMO*

Automation and Metrology | 1-888-354-2525 | auto-met.com
POSITIP 8016 / POSITIP 8016 ACTIVE | Digital Readouts catalog 208864-2K | September 2023