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 its intuitive, user-friendly graphical user interface, the POSITIP digital readouts are particularly easy to operate. The 12-inch screen displays all of the information you need in a clear format for machining your workpiece.

The low-profile aluminum housing with an integrated power supply unit and fanless passive cooling system is extremely rugged and durable. The well laid-out 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.

	POSITIP 8016	POSITIP 8016 ACTIVE
Axes	Up to 6 axes (4 axes in the standard version; 2 additional axes available as an 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 messages, 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, mirror image, magnification	
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)	
	–	Control of up to 3 NC axes and a spindle; switching functions
For turning	• Measurement of tool dimensions • Sum display of axes in the top slide • Taper calculator	
	–	Control of up to 3 NC axes and a spindle; constant surface speed; switching functions
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, 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

Connectivity comparison: POSITIP 8016 versus POSITIP 8016 ACTIVE

	POSITIP 8016	POSITIP 8016 ACTIVE
Encoder interfaces **(11 μA_{PP}, 1 V_{PP}, EnDat 2.2-22)**	4 2 additional ones as option	4 2 additional ones as 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 (option)
5 V voltage outputs Voltage tolerance: ±5 %; maximum current: 100 mA	1	2

Further information:

POSITIP 8000
Installation instructions ID 1251619-xx

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 option
	Coolant	–	✓
	Zeroing of the tool axis	✓	✓
Document	Display of tables (e.g., thread tables, cutting speeds)	✓	✓