



## Product Information

### PWT 101

Testing Device for  
HEIDENHAIN Encoders

# PWT 101

## Testing device for HEIDENHAIN encoders

The PWT 101 is a testing device for the functional testing and adjustment of incremental and absolute HEIDENHAIN encoders. Thanks to its compact dimensions and sturdy design, the PWT 101 is ideal for portable use. Operation and visual display are performed on a 4.3-inch color flat-panel touchscreen.

The PWT 101 supports a variety of functions depending on the encoder and the interface. With encoders featuring the EnDat interface, for example, you can display the position value, export online diagnostic data, shift datums, and perform further inspection functions.

### Inspection and testing devices from HEIDENHAIN

HEIDENHAIN encoders provide all of the information needed for commissioning, monitoring, and diagnostics. For the analysis of these encoders, HEIDENHAIN offers the appropriate PWM inspection devices and PWT testing devices. The PWM inspection devices, which are universally deployable, feature calibration capability and low measuring tolerances. Testing devices such as the PWT 101 provide fewer functions, have wider tolerances, and cannot be calibrated.

### Available functions

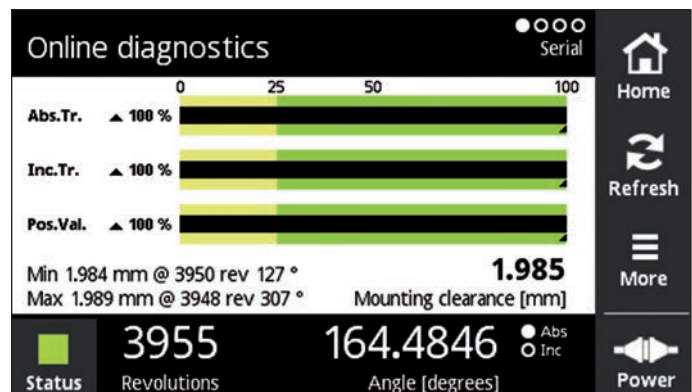
The performance range of the PWT 101 can be expanded through a firmware update. Appropriate firmware files are available at [www.heidenhain.de](http://www.heidenhain.de) and can be uploaded into the PWT 101 via a memory card (not included in delivery).

Successor to the PWT 100:

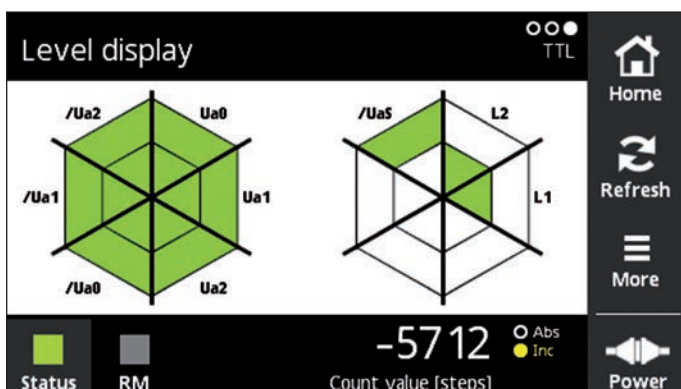
The PWT 100 is succeeded by the PWT 101, which incorporates the functionality of the PWT 100 but also supports special firmware modules (e.g., for block commutation encoders). The module management function differentiates between firmware (basic functions) and firmware modules (special functions). The PWT 100 will still be supported by future firmware versions but will not permit the use of firmware modules. The PWT 101 is supported by firmware V2.2.1 or later.

### Mounting wizard

The PWM 21 is recommended as a mounting tool for the adjustment of HEIDENHAIN encoders that require a special mounting wizard (e.g., the LIP 2xx, ERO 2xxx).



Online diagnostics



Level display



PWT display

# Available functions

Performance range of the PWT 101 with V2.4.0	EnDat	Fanuc	Mitsubishi	Panasonic	Yaskawa <sup>2)</sup>	1 V <sub>pp</sub> / 11 μApp	TTL
<b>Position display</b>							
Display of the absolute position	✓	✓	✓	✓	✓	-	-
Display of the incremental position <sup>1)</sup>	✓	✓	✓	-	-	-	-
Display and resetting of error messages	✓	✓	✓	✓	✓	-	-
Display and resetting of warnings	✓	✓	✓	✓	✓	-	-
Display of transmission status	✓	✓	✓	✓	✓	-	-
Datum shift ("electrical zeroing of position") <sup>1)</sup>	✓	-	-	-	-	-	-
Display of the reference mark status	-	-	-	-	-	✓	✓
Display of count values between reference marks	-	-	-	-	-	✓	✓
Incremental counter with adjustable counting function	-	-	-	-	-	✓	✓
<b>Diagnostics</b>							
Display of online diagnostics <sup>1)</sup>	✓	✓	✓	✓	✓	-	-
PWT display of incremental signals	(✓)	-	-	-	-	✓	✓ <sup>1)</sup>
Display of signal level (quality)	-	-	-	-	-	-	✓
Deviation between Z1 and incremental tracks	-	-	-	-	-	✓ <sup>3)</sup>	-
Display of supply voltage and supply current	✓	✓	✓	✓	✓	✓	✓
<b>Memory contents</b>							
Display of encoder information <sup>1)</sup>	✓	✓	✓	✓	✓	✓	✓
<b>Additional functions</b>							
Adjustable voltage supply to encoder	✓	✓	✓	✓	✓	✓	✓
Display of homing and limit	-	-	-	-	-	✓	✓

Expansion of the supported interfaces or functions through future firmware versions.

<sup>1)</sup> If supported by the encoder

<sup>2)</sup> EIB 3391Y is not supported

<sup>3)</sup> For encoders with additional sinusoidal commutation signals C and D (Z1 track)

(✓) Please refer to the operating instructions

# PWT 101 testing device

Testing device	PWT 101
Area of application	<ul style="list-style-type: none"><li>• The functional testing of absolute and incremental HEIDENHAIN encoders</li></ul>
Encoder input only for HEIDENHAIN encoders	<ul style="list-style-type: none"><li>• EnDat</li><li>• Fanuc Serial Interface</li><li>• Mitsubishi high speed interface</li><li>• Panasonic Serial Interface</li><li>• Yaskawa Serial Interface</li><li>• 1 V<sub>PP</sub> with Z1 track</li><li>• 1 V<sub>PP</sub></li><li>• 11 μA<sub>PP</sub></li><li>• TTL</li></ul>
Display	4.3-inch touchscreen
Supply voltage	DC 24 V Power consumption: max. 15 W
Operating temperature	0 °C to 40 °C
Protection EN 60529	IP20
Dimensions	≈ 145 mm × 85 mm × 35 mm
Languages	German, English, French, Italian, Spanish, Japanese, Korean, Chinese (simplified), Chinese (traditional)

## Items supplied

- PWT 101
- Documentation

## Accessories

- Service case
- Plug-in power supply (including exchangeable adapters for Europe, USA, UK, and Australia)



There may be country-specific restrictions on plug-in power supplies with regard to the test standards to be complied with. Consult your contact person at HEIDENHAIN if required.

## HEIDENHAIN

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This Product Information document supersedes all previous editions, which thereby become invalid. The basis for ordering from HEIDENHAIN is always the Product Information document edition valid when the order is made.



### More information:

Information on the correct and intended operation of the PWT is provided in the following documents:

- Brochure: *Interfaces of HEIDENHAIN Encoders* 1078628-xx
- Brochure: *Cables and Connectors* 1206103-xx