



# HEIDENHAIN



Product Information

## PWT 100

Testing Device for  
HEIDENHAIN Encoders

February 2017

# PWT 100

## Testing device for HEIDENHAIN encoders

The PWT 100 is a testing device for checking the function and adjustment of incremental and absolute HEIDENHAIN encoders. Thanks to its compact dimensions and robust design, the PWT 100 is ideal for mobile use. A 4.3-inch touchscreen provides for display and operation.

The PWT 100 supports a variety of functions depending on the encoder or the interface. For example, for encoders with EnDat interface you can not only display the position value but also export the online diagnosis, shift datums, and perform further inspection functions.

### Inspection and testing devices from HEIDENHAIN

HEIDENHAIN encoders are provided with all information necessary for commissioning, monitoring and diagnostics. HEIDENHAIN offers the appropriate PWM inspection devices and PWT testing devices for encoder analysis. The PWM inspection devices can be used universally. They have low measuring tolerances and can be calibrated. Testing devices, like the PWT 100, have a simpler performance range and larger measuring tolerances. They cannot be calibrated.

### Available functions

The performance range of the PWT 100 can be expanded by firmware update. Appropriate firmware files that can be imported to the PWT 100 through a memory card (not included in delivery) are available at [www.heidenhain.de](http://www.heidenhain.de).

Important innovations with firmware V2.0.0:

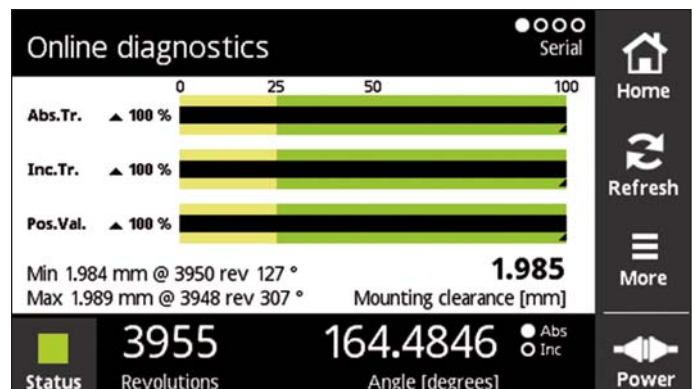
- Support for encoders with 1 V<sub>PP</sub>, 11 µA<sub>PP</sub> and TTL interface including HSP capability.
- Support for Yaskawa interface
- Adjustability of the encoder supply voltage
- Managing firmware modules

### Mounting wizard

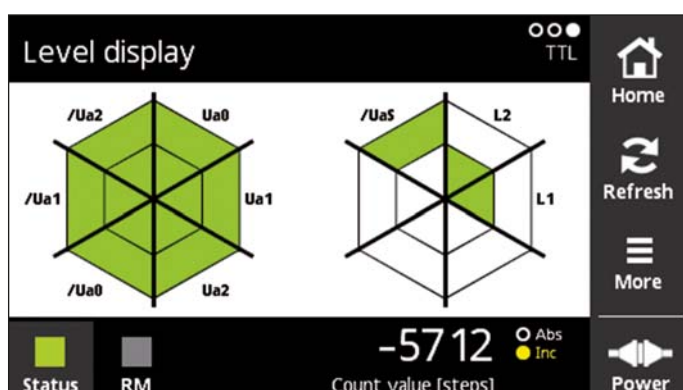
The PWM 20 is recommended as a mounting tool for the adjustment of HEIDENHAIN encoders that require a special mounting wizard (for example LIP 2xx, ERO 2xxx).

### Replacement of PWT 10, 17, 18

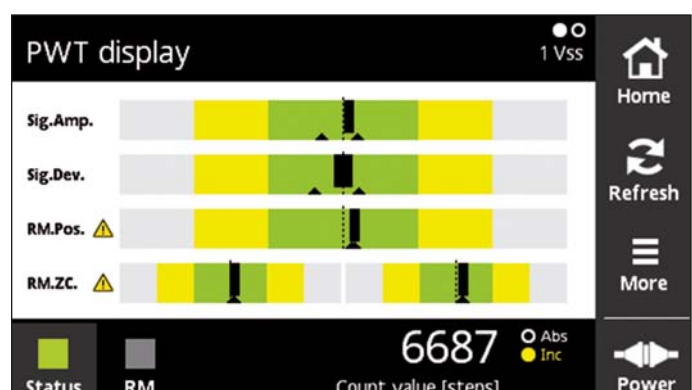
With firmware V2.0.0, the PWT 100 supports all functions of the PWT 10, 17, and 18. In addition, the PWT 100 features an incremental counter and further functions. The PWT 100 therefore replaces the PWT 10, 17, and 18 series.



Online Diagnostics



Level display



PWT display

# Available functions

| Performance range of PWT 100 with V2.0.0                                                                                                                                                                                                                                                                                                                                                              | EnDat                                | Fanuc                                | Mitsubishi                           | Panasonic                            | Yaskawa <sup>2)</sup>                | 1V <sub>pp</sub> /<br>11 μApp        | TTL                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| <b>Position display</b><br>Display of the absolute position<br>Display of the incremental position <sup>1)</sup><br>Display and resetting of error messages<br>Display and resetting of warnings<br>Display of transmission status<br>Datum shift ("electric zeroing of the position") <sup>1)</sup><br>Display of the reference mark status<br>Incremental counter with adjustable counting function | ✓<br>✓<br>✓<br>✓<br>✓<br>✓<br>-<br>- | ✓<br>✓<br>✓<br>✓<br>✓<br>-<br>-<br>- | ✓<br>✓<br>✓<br>✓<br>✓<br>-<br>-<br>- | ✓<br>-<br>✓<br>✓<br>✓<br>-<br>-<br>- | ✓<br>-<br>✓<br>✓<br>✓<br>-<br>-<br>- | -<br>-<br>-<br>-<br>-<br>-<br>✓<br>✓ | -<br>-<br>-<br>-<br>-<br>-<br>✓<br>✓ |
| <b>Diagnostics</b><br>Display of online diagnostics <sup>1)</sup><br>PWT display of incremental signals<br>Display of signal level (qualitative)<br>Display of supply voltage and supply current                                                                                                                                                                                                      | ✓<br>(✓)<br>-<br>✓                   | ✓<br>-<br>-<br>✓                     | ✓<br>-<br>-<br>✓                     | ✓<br>-<br>-<br>✓                     | ✓<br>-<br>-<br>✓                     | -<br>✓<br>-<br>✓                     | -<br>✓ <sup>1)</sup><br>✓<br>✓       |
| <b>Memory contents</b><br>Display of encoder information <sup>1)</sup>                                                                                                                                                                                                                                                                                                                                | ✓                                    | ✓                                    | ✓                                    | ✓                                    | ✓                                    | ✓                                    | ✓                                    |
| <b>Additional functions</b><br>Adjustable voltage supply to encoder                                                                                                                                                                                                                                                                                                                                   | ✓                                    | ✓                                    | ✓                                    | ✓                                    | ✓                                    | ✓                                    | ✓                                    |

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

(✓) See Operating Instructions

# PWT 100 testing device

| Testing device                                | PWT 100                                                                                                                                                                                                                                                                          |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Area of application                           | <ul style="list-style-type: none"><li>• Testing the correct operation of absolute and incremental HEIDENHAIN encoders</li></ul>                                                                                                                                                  |
| Encoder input<br>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></li><li>• 11 μA<sub>PP</sub></li><li>• TTL</li></ul> |
| Display                                       | 4.3" color flat-panel display (touch screen)                                                                                                                                                                                                                                     |
| Voltage supply                                | 24 V DC<br>Power consumption: max. 15 W                                                                                                                                                                                                                                          |
| Operating temperature                         | 0 °C to 40 °C                                                                                                                                                                                                                                                                    |
| Protection EN 60529                           | IP20                                                                                                                                                                                                                                                                             |
| Dimensions                                    | ≈ 145 mm x 85 mm x 35 mm                                                                                                                                                                                                                                                         |
| Languages                                     | English, German, French, Italian, Spanish, Japanese, Korean, Chinese (Simplified), Chinese (Traditional)                                                                                                                                                                         |

## Items supplied

- PWT 100
- Documentation

## Accessories

- Service case
- Wall adapter power supply (including exchangeable adapter for Europe, USA, UK and Australia)



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

# HEIDENHAIN

## DR. JOHANNES HEIDENHAIN GmbH

Dr.-Johannes-Heidenhain-Straße 5

83301 Traunreut, Germany

☎ +49 8669 31-0

FAX +49 8669 32-5061

E-mail: [info@heidenhain.de](mailto:info@heidenhain.de)

[www.heidenhain.de](http://www.heidenhain.de)