



HEIDENHAIN



Product Information

PWM 20 ATS Software

January 2011

Adjusting and Testing Package

HEIDENHAIN offers an adjusting and testing package for diagnostics and adjustment of HEIDENHAIN encoders with absolute and incremental interfaces. It consists of the following components:

- **PWM 20:** Phase angle measuring unit for connection to a PC via the USB interface
- **ATS:** Adjusting and Testing Software with integrated local encoder database for automatic encoder identification.

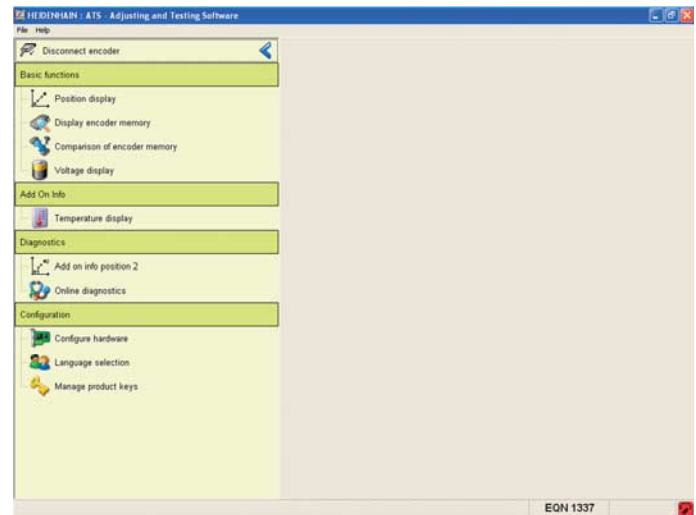
The functions supported by the ATS software vary depending on the encoder and the encoder interface. The EnDat interface makes it possible not only to display the position value, but also to read out the online diagnostics, to read or write parameters, shift datums, set write-protection and use further inspection functions, etc.

The features described in this document apply to ATS software version V2.4. Incremental interfaces will be supported by ATS software version V2.6 and higher. The PWM 20 replaces the previously available IK 215.

We recommend returning the PWM 20 to the HEIDENHAIN calibration service in Traunreut every two years in order to ensure traceable, accurate and error-free operation as test equipment.



PWM 20



ATS software

PWM 20 Phase Angle Measuring Unit

	PWM 20
Area of application	<ul style="list-style-type: none"> • Testing the correct operation of absolute and incremental HEIDENHAIN encoders • Mounting wizard for ExI, LIP 200, LIC 4000
Encoder input	<ul style="list-style-type: none"> • EnDat 2.1 or EnDat 2.2 (absolute value with/without incremental signals) • DRIVE-CLiQ • Fanuc Serial Interface • Mitsubishi High Speed Serial Interface • SSI • 1 V_{PP} 11 μA_{PP} (as of ATS V2.6) • TTL (as of ATS V2.6)
Encoder output	Feed-through mode for certain interfaces (in preparation)
Interface	USB 2.0
Power supply	AC 100 V to 240 V (± 10 %), 50 Hz to 60 Hz (± 2 Hz), DC 24 V (± 10 %); Power consumption approx. 20 W
Operating temperature	0 °C to 45 °C
Dimensions	Approx. 258 mm × 154 mm × 55 mm

ATS Adjusting and Testing Software

	ATS software
System requirements	<ul style="list-style-type: none"> • PC with dual-core processor • Clock frequency (recommended) > 2 GHz • RAM > 1 GB • Windows XP, Vista, Windows 7 (32 bits) operating system • Approx. 100 MB free space on the hard disk
Product key	Management of product keys for optional functions
Languages	Choice between English or German

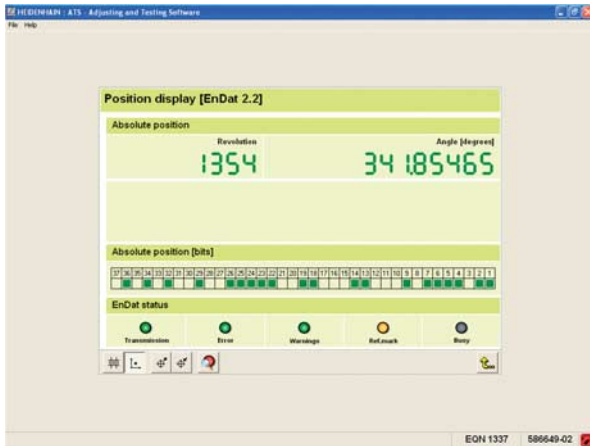
PWM 20 and ATS V2.4—Available functions	EnDat	Fanuc	Mitsu- bishi	SSI	DRIVE- CLiQ	1 V _{pp} 11 μA _{pp}	TTL
Position display							
Display of the absolute position	✓	✓	✓	✓	✓	–	–
Display of the incremental position (if available)	✓	–	–	✓	–	✓ ²⁾	✓ ²⁾
Display and resetting of error messages	✓	✓	✓	–	✓	–	–
Display and resetting of warnings	✓	–	–	✓	✓	–	–
Display of transmission status	✓	✓	✓	(✓)	✓	–	–
Connection dialog							
Automatic connection using ID number	✓	✓	✓	✓	✓	✓ ²⁾	✓ ²⁾
Connection by indicating the supply voltage and interface	✓	✓	✓	✓	✓	✓ ²⁾	✓ ²⁾
Diagnostics							
Display of online diagnostics (open loop)	✓	✓	✓	–	✓	–	–
Display of online diagnostics (closed loop) ¹⁾	✓	✓	✓	–	–	–	–
Circular diagram of incremental signals (if available)	✓	–	–	✓	–	✓ ²⁾	✓ ²⁾
Display of supply voltage and supply current	✓	✓	✓	✓	✓	✓ ²⁾	✓ ²⁾
Mounting wizards							
Mounting support for inductive ECI/EQI encoders	✓	–	–	–	–	–	–
Mounting support for LIP 200	–	–	–	–	–	✓	–
Mounting support for LIC 4000	✓	–	–	–	–	–	–
Additional functions (if supported by the encoder)							
Comparison of absolute position with incremental position	✓	–	–	✓	–	–	–
Datum shift ("electrical zeroing of position")	✓	–	–	–	–	–	–
Display of additional information: Temperature	✓	–	–	–	✓	–	–
Display of additional information : Position value 2	✓	–	–	–	✓	–	–
Display of additional information: Additional sensors	✓	–	–	–	–	–	–
Display of additional information: Limit position signals	✓	–	–	–	–	–	–
Display of additional information: Operating status error sources	✓	–	–	–	–	–	–
Memory contents							
Display of memory contents	✓	–	–	–	✓	–	–
Modification to memory contents	✓	–	–	–	–	–	–
Saving the memory allocation	✓	–	–	–	–	–	–
Comparison of current memory contents with saved memory contents	✓	–	–	–	–	–	–

¹⁾ possible with a signal adapter, e.g. SA 100

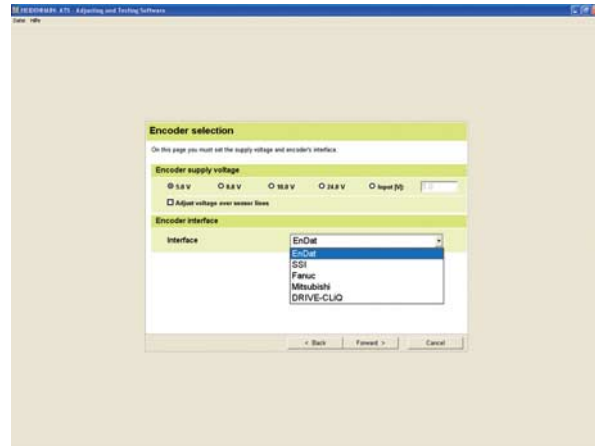
²⁾ in preparation for ATS V2.6 (available approx. early 2012)

ATS Software

Some of the ATS Software Functions



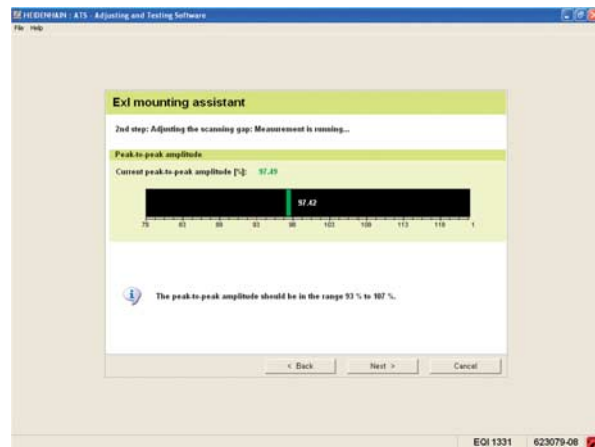
Position display



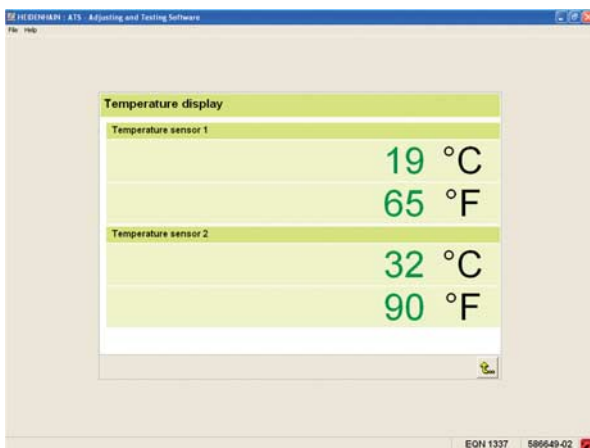
Connection dialog



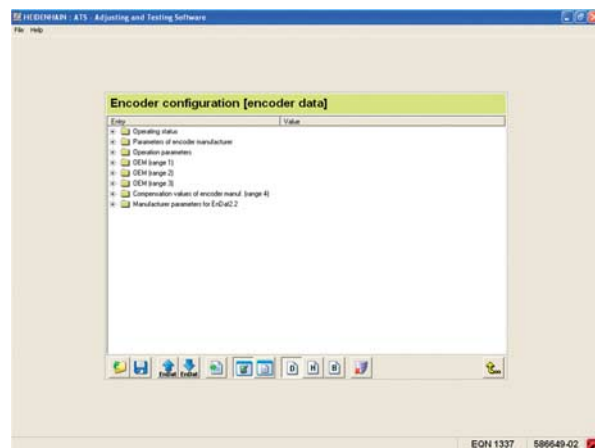
Online diagnostics



Mounting wizard



Additional function: Temperature display



Display of memory contents

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