

Issued by	NMi Certin B.V.
In accordance with	WELMEC 8.8 Issue 2, Paragraph 8.1 of EN 45501:1992/AC:1993, OIML R76:2006, OIML D11:2004.
Producer	Hottinger Baldwin Messtechnik GmbH Im Tiefen See 45 D-64293 Darmstadt Germany
Measuring instrument	An Analog Data Processing Device , tested as a part of a weighing instrument. Brand : Hottinger Baldwin Messtechnik Designation : AD-series with AED-series Accuracy class : $\textcircled{\text{III}}$ and $\textcircled{\text{III}}$ Environment class : E2 Further properties are described in the annexes: Description TC2279 revision 7 Documentation folder TC2279-8 An overview of performed tests is given in the annex: Description TC2279 revision 7
Remarks	This revision replaces the earlier versions, including its documentation folder.

Issuing Authority **NMi Certin B.V.**
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C. Oosterman
Head Certification Board

NMi Certin B.V.
Hugo de Grootplein 1
3314 EG Dordrecht
The Netherlands
T +31 78 6332332
certin@nmi.nl
www.nmi.nl

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1 General information about the Analog Data Processing Device

All properties of the Analog Data Processing Device (ADPD), whether mentioned or not, shall not be in conflict with the standard mentioned in the test certificate.

This Parts Certificate is the positive result of the applied voluntary, modular approach, for a component of a measuring instrument, as described in WELMEC guide 8.8. The complete measuring system must be covered by an EC type-examination Certificate.

1.1 Essential parts

This certificate covers the models:

Amplifier board	Main board					
	AED 9001*	AED 9101*	AED 9201*	AED 9301*	AED 9401*	AED 9501*
AD 101	X					
AD 102		X				
AD 101 B / AD 103	X	X	X	X		
AD 103 B		X	X	X		
AD 103 C		X	X	X	X	X

* = for mechanical version like A, B, C, D

Main boards:

Number	Pages	Description	Remark
2279/7-01	3	Leiterpl. kpl. AED 9001	
2279/7-02	3	Leiterplatte kpl. AED 9101	
2279/7-03	8	Leiterpl. kpl. AED 9201	
2279/7-04	9	Leiterpl. kpl. AED 9301	
2279/7-05	10	Leiterplatte für AED9401	
2279/7-06	6	Leiterplatte für AED9501	

Amplifier boards:

Number	Pages	Description	Remark
2279/7-07	15	Leiterplatte kpl. AD101 / AD102	
2279/7-08	8	Leiterplatte für AD101B & AD103	
2279/7-09	6	Leiterplatte für AD101 / AD103B	
2279/7-10	6	Leiterplatte für AD103C	

Software:

Manufacturer	Type	Certificate number
Hottinger Baldwin Messtechnik	P6x or P7x	TC8123

1.2 Essential characteristics

The maximum number of verification scale intervals will be:

- $n \leq 10000$ for class $\textcircled{\text{III}}$ instruments (only for AD103B and AD103C)
- $n \leq 6000$ for class $\textcircled{\text{III}}$ instruments or
- $n \leq 1000$ for class $\textcircled{\text{III}}$ instruments.

Operation parameters are set in the Digital Data Processing Device (DDPD) and shall be in accordance with EN45501.

The output signal processing:

- A suitable Digital Data Processing Device (DDPD) should be connected to the ADPD;
- It shall be possible to display the software identification on the display of this DDPD.

Connections:

- Power supply:
 - Unit AED 9101, 6 – 30 VDC;
 - Unit AED 9001, 10 – 30 VDC;
 - Unit AED 9201, 18 - 30 VDC;
 - Unit AED 9301, 18 - 30 VDC;
 - Unit AED 9401, 18 - 30 VDC;
 - Unit AED 9501, 10 - 30 VDC;
 - Unit AD 102, 5 VDC ± 5 % (stabilized);
 - Unit AD 101, 7.8 – 15 VDC;
 - Unit AD 101B, 5 – 10 VDC;
 - Unit AD 103, 5 – 10 VDC;
 - Unit AD 103B, 5 VDC ± 5 % (stabilized);
 - Unit AD 103C, 5 VDC ± 5 % (stabilized);
 - Unit AD 103C, 5 VDC ± 5 % (stabilized);
- The minimum value allowed for the signal voltage per verification scale interval is:
 - 0.5 μ V (only for AD103B and AD103C);
 - 1 μ V (all other models).
- The applied error fraction p_i is 0.5;
- The excitation power supply for the load cell is:
 - 5 VDC for units AD101, AD102, AD103B and AD103C;
 - 5 – 10 VDC for units AD101B and AD103.
- The minimum input impedance for the load cell connection is:
 - For unit AD101: 350 Ω ;
 - For units AD102, AD101B, AD103, AD103B and AD103C: 42 Ω ;
- "Remote-sensing" is used;
- No special cable length has to be provided for the connection between the Analog Data Processing Device and the junction box or load cells.

1.3 Essential shapes

The Analog Data Processing Device is built according to the drawing:

- AED housing, drawing number 2279/7-11.

The data plate is secured against removal by sealing or will be destroyed when removed and contains the following information:

- This certificate number TC2279;
- The event counter value;
- Manufacturers name or mark.

1.4 Conditional parts

The Analog Data Processing Device may be equipped with the following protective interfaces that have not to be secured:

- RS232;
- RS422;
- RS485;
- Profibus-DP;
- CAN Open;
- Device net;
- Discrete digital I/O.



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2 Seals

To secure components that may not be dismantled or adjusted by the user, the Analog Data Processing Device has to be secured by either:

- a sticker over the aperture between the upper and the lower part of the case on at least two sides, or
- a sticker over at least two of the screws that fix the upper to the lower part of the case.

3 Test reports, evaluation reports and pattern evaluation reports

An overview of performed tests is given in the reports:

- No. 10119779 dated 21 December 2000 that includes 25 pages;
- No. 204989 dated 29 April 2002 that includes 15 pages;
- No. 307369 dated 24 September 2003 that includes 34 pages;
- No. 509624 dated 11 April 2006 that includes 42 pages;
- No. 524 dated 24 January 2012 that includes 9 + 72 pages.