

Issued by NMI Certin B.V.
Hugo de Grootplein 1
3314 EG Dordrecht
The Netherlands

In accordance with The Metrologiewet (Stb. 2006, 137) as Dutch implementation of Directive 2004/22/EC on measuring instruments (MID).

Manufacturer Crypton Ltd.
Bristol Road, Bridgwater
Somerset TA6 4BX
United Kingdom

In respect of A model of an **Exhaust Gas Analyzer**.
Type : 680 xx (xx designates the language)

Characteristics Accuracy class 0
Electromagnetic environment class E2
Mechanical environment class M1
Temperature range +5 °C / +40 °C

In the description number T10116 revision 2 further characteristics are described.

Valid until 8 February 2018

Description and documentation The instrument is described in the description number T10116 revision 3 and documented in the documentation folder T10116-1, appertaining to this EC-type examination certificate.

Remarks This revision replaces the earlier versions, except for its documentation folder.

The Notified Body no. 0122
NMI Certin, 29 April 2009


C. Oosterman
Head Certification Board

1 General information about the exhaust gas analyzer

All properties of the exhaust gas analyzer, whether mentioned or not, may not be in conflict with the legislation.

1.1 Essential parts

Description	Drawing number	Rev.	Remarks
Block diagram	AS09121 sheet 2	A	diagram, 1 page
Controller board	AS09094 sheet 1	C	layout, 1 page
	AS09094 Processor Board .PARTS	-	part list, 3 pages
Crypton TRDU0134 gas bench	Automotive gas analyzer specifications	-	4 pages

Indication of measurements will be on a PC, carrying a CE-marking. The communication between the measuring unit 680DU1 and the indication device is by means of a USB-cable.

Oxygen sensor		
Manufacturer	Type	Remarks
Teledyne	R-22A	
City Technology	AO2	
EnviteC	Oxiplus A OOA101	

EMC protection measures:

- Power supply filter, manufacturer Bulgin, type PS00/A0620/6300;
- Ferrite ring around the power supply input cable, 1 turn;
- Ferrite ring around the lead of the oxygen sensor, 1 turn, on the inside near the connection to the gas bench;
- Ferrite ring around the flatcable to the gas bench, near the connection to the gas bench;
- Aluminium housing; the contacting edges of the upper and lower part of the housing are blank metal.

1.2 Essential characteristics

Measuring ranges:

Gas component	Display range	Resolution
CO	0 – 10% vol	0.01 % vol
CO ₂	0 – 20% vol	0.1 % vol
O ₂	0 – 25 % vol	0.01 % vol
HC	0 – 10000 ppm vol	1 ppm vol

Software:

Software specification			
Software item	Version number	Checksum	Indication
Gas bench firmware	01, 02 or 03	-	Info page
Gas analyser firmware	1.00 or 1.01 or 1.02 or 1.03	b541 4219 29C3 23DF	Info page
PC software:			
wgts3plugin.dll	1.0.0.10642 1.0.1.14263	ae62fa8f89cd17555d0c9ed86691f5c4 7a54681e5733e69c820acad26532eda4	Info page
d680server.exe	1.0.0.7 1.0.4.0	769ea1a2687693a88a0bfb6d39a878a2 283e57136e8c8a39599719ef707a9c7c	Info page
webapp80.exe	2.10.x.x	-	Info page
wwwser80.exe	2.11.x.x	-	Info page

The software version and identification number will be displayed on the PC display.

- Calibration period, 12 months, or shorter if required by national legislation;
- Functions:
 - Lambda calculation;
 - PEF in display;
 - Automatic zero setting;
 - Automatic calibration device;
 - Drift compensation;
 - Low flow signaling.

- Protections:
 - Warm-up check;
 - Control of automatic devices;
 - Detection of HC residue;
 - Leak-test;
 - Control of O₂ channel;
 - Detection of adjustments that are necessary;
 - Signaling for ending of the calibration period.
 - Software sealing (last calibration date) for the gas calibration.
- Parameters:
 - Warm-up time : 1 min
 - Temperature range : +5 °C / +40 °C
 - Minimal flow : 5 l/min
- Power supply voltage 100 – 240 Vac, 50 – 60 Hz.

1.3 Essential shapes

The exhaust gas analyzer is built according to the drawings:

- Front and rear view, drawing number AS09121 sheet 1 - Gas Analyser Assy;
- Front view, drawing number T10116-01A – Front view and sealing;
- Rear view, drawing number T10116-02A – Rear view.

Markings:

- The markings have to fulfill the requirements stated in the legislation.
- The data plate is fixed to the exhaust gas analyzer and secured against removal by sealing or will be destroyed when removed.

To secure components that may not be dismantled or adjusted by the user, the exhaust gas analyzer has to be secured in a suitable manner on the locations indicated in the drawing:

- Sealing, drawing number T10116-01A – Front view and sealing.

The securing component has to bear either:

- A mark of the manufacturer laid down in an approved quality system by a Notified Body, or;
- A mark of a Notified Body.

1.4 Conditional parts

- User manual exhaust gas analyzer version TES1514/A Issue 1, 30 pages;
- Pump, manufacturer, Charles Austen, type D5 DE or manufacturer ASF Thomas, type 70110454;
- Filters, manufacturer Mann & Hummel, type WK 32 or manufacturer Parker Finite, type SF0047 or SF0048;
- Power supply, manufacturer Sunpower, type PT65
- Gas probe, see drawing number AS07822 rev. D.

The exhaust gas analyzer may be equipped with one or more of the following protective interfaces that have not to be secured:

- USB (1x).

1.5 Non-essential parts

- Optional NO_x sensor.

The exhaust gas analyzer may be connected to non-essential devices, for example but not limited to external printers, second display's, etc. provided that:

- They do not present primary data;
- They do not lead to an instrument having other essential characteristics than those fixed by this type-examination document.

2 Approval conditions, seals and verification marks

See chapter 1.2, essential characteristics and 1.3, essential shapes.