



T r a n s l a t i o n

**Physikalisch-Technische Bundesanstalt**  
(Federal Institute of Physics and Metrology)

- (1) **CERTIFICATE OF CONFORMITY**
- (2) **PTB No. Ex-92.C.2116**
- (3) This document has been awarded to the electrical apparatus  
**Function Calibrator Type FCX 2000**
- (4) of the company **ECOM Rolf Nied GmbH**  
**D-6971 Assamstadt**
- (5) The design of this electrical apparatus as well as its different permissible variations are stipulated in the appendix to this certificate of conformity.
- (6) The Physikalisch-Technische Bundesanstalt (Federal Institute of Physics and Metrology) certifies as qualified authority according to article 14 of the directive of the European Council dated 18th December 1975 (76/117/EEC) that this electrical apparatus meets the harmonized European standards
- Electrical equipment for potentially explosive atmospheres**
- EN 50 014:1977 + A1...A5 (VDE 0170/0171 Section 1/1.87) General Terms  
EN 50 020:1977 + A1...A2 (VDE 0170/0171 Section 7/1.87) Inherent Safety "i"
- after the apparatus has successfully passed inspections and testings. The results of the tests are described in the confidential test records.
- (7) The apparatus must be equipped with the following marking:
- EEx ia IIC T6**
- (8) The manufacturing company is responsible for the fact that the design of each apparatus labelled as per above complies with test records mentioned in the appendix to this certificate and that the prescribed routine check tests have successfully been executed.
- (9) The electrical apparatus may bear the common distinctive mark (stated in this certificate) according to appendix II of the directive of the European Council dated 6th February 1979 (79/196/EEC).

By Order

Braunschweig, 8th September 1992

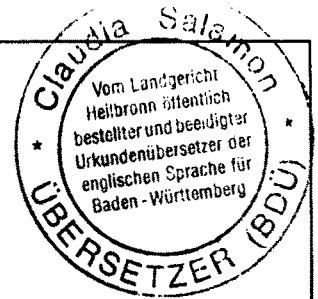
(Signature)

(Stamp)

Dr.-Ing. Schebsdat  
Regierungsdirektor

Test documents without signature and official stamp are invalid.  
Certificates must be reproduced in full.  
Excerpts or alterations must officially be approved by the Physikalisch-Technische Bundesanstalt (Federal Institute of Physics and Metrology), Bundesallee 100,  
P.O. Box 33 45, D-3300 Braunschweig.

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A P P E N D I X

to the Certificate of Conformity PTB No. Ex-92.C.2116

The uni-function generator type FCX 2000 serves the generation and measurement of frequency, period, speed (r.p.m.) and pulses. Furthermore, Namur-initiators can be simulated and checked.

Electrical data

Supply ..... internal set of battery  
6 pieces Ni-cd storage battery type 501 RS VARTA

Signal circuitry ... type of protection inherent safety EEx ia IIC  
resp. EEx ib IIC

Maximum values:

$U_o = 10.5 \text{ V}$   
 $I_k = 14.1 \text{ mA}$   
 $P = 74 \text{ mW}$

Inner capacitance and inductance are negligibly small.

Maximum permissible outer capacitance and outer inductance are as follows:

	EEx ia IIC	EEx ib IIC
Ca	780 nF	3 $\mu$ F
La	10 mH	155 mH

or for connection with certified intrinsically safe circuitries with following maximum values:

$U_o = 55 \text{ V}$   
 $I_k = 485 \text{ mA}$

The individual limits of the intrinsically safe circuitries for  $L_a$  and  $C_a$  are to be taken into account.

Batteries are to be replaced only outside potentially explosive atmospheres (information sign).

Test records

signed on

- |    |                        |                |
|----|------------------------|----------------|
| 1. | Description (32 pages) | 18 August 1992 |
| 2. | Drawing no. FCX-ZUS-0  | 18 August 1992 |
|    | FCX-ZUS-1              | 20 July 1992   |
|    | FCX-ZUS-2              | 03 July 1992   |
|    | FCX-ZUS-5              | 03 July 1992   |
|    | FCX 2000-0             | 10 June 1992   |

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**Appendix to the Certificate of Conformity PTB No. Ex-92.C.2116**

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Drawing no. FCX 2000-1	03 July 1992
FCX 2000-2	10 June 1992
FCX 2000-5	10 June 1992
FCX-Mech 001 (4 pages)	10 June/3 July 1992
FCX-Mech 002	10 June 1992
FCX-Mech 003	10 June 1992
FCX-Mech 004	03 July 1992
FCX-Mech 005 (2 pages)	03 July/18 August 1992
Tachomod1	18 August 1992
Tachomod4	18 August 1992
Tachomod5	18 August 1992
Tachomod5 TM 10	03 July 1992
Tachomod20	10 June 1992

By Order  
(Signature)

(Stamp)

Braunschweig, 8 September 1992

Dr.-Ing. Schebsdat  
Regierungsdirektor

Certified English Translation

The translation of the official document issued in German language is TRUE, CORRECT and COMPLETE to the best of my knowledge.

Sersheim, 25th September 1992

Claudia Salamon  
( Signature )

Claudia Salamon, Translator (BDÜ)  
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