



Operating Instructions

Intrinsically Safe Data Loggers for Temperature
and Relative Humidity

Ex 171-0 [°C]

Ex 171-3 [°C; %rF]

Ex 171-0 [°C]

Ex 171-3 [°C; % rH]



List of Contents

	Page
1. Safety advice	14
2. Faults and damage	14
3. Safety regulations	14
4. Technical safety advice	14
5. Data transmission	15
6. Battery change	15
7. Regular inspection and maintenance	15
8. Repair	16
9. Guarantee	16
10. Liability	16
11. Applications in Ex areas	16
12. Ex-Data	17
13. Technical data	18

For further information on Software and operation, please refer to the Software module operating instructions.

1. Safety Advice

The following operating instructions contain information and precautionary advice which for the described conditions, must be taken into consideration to guarantee safe operation.

2. Faults and Damage

If there is any reason to suspect that the safety of the equipment has been affected then it must be immediately withdrawn from use and precautionary measures taken in order to prevent any further use of the equipment in the hazardous area until such time that all necessary checks and repairs have been carried out.

The safety of the equipment can be compromised by, for example:

- External damage to the housing
- Incorrect loads
- Measuring is no longer possible
- Incorrect storage of equipment
- Equipment has suffered damage whilst in transit

Measures have been taken to ensure that this equipment operates safely, accurately and reliably. In all circumstances the equipment should be handled with great care. If irregularities do occur, it is recommended that the equipment be returned to the manufacturer for testing.

3. Safety Regulations

The use of these data loggers requires the user to comply with the usual safety regulations in order to avoid incorrect operation of the equipment.

4. Technical Safety Advice

Before use, please read the operating instructions and ensure that the maximum limitations are not exceeded in hazardous areas.

Only use the indicated working conditions given for the equipment.

THE CASING MUST NOT BE OPENED WITHIN THE HAZARDOUS AREA.

THE BATTERY MUST NOT BE CHANGED WITHIN THE HAZARDOUS AREA.

5. Data Transmission

The interface connection and the data transmission can only be carried out with an accompanying interface.

The fundamental requirements are valid for the SELV-Circuit with max. 60V DC.

6. Battery Change

When the battery needs changing and while there is still a usable charge remaining, the battery should be changed in order to ensure a safe and optimum operation.

The exchange of this maintenance element may only be carried out outside of the hazardous area.

Take care and ensure that when changing the battery, that only those in the listed operating instructions are used.

The use of any other type of battery is strictly forbidden in that it will invalidate the Ex-data certification.

For the changing of batteries please follow the advice in the Software module operating instructions as detailed in the section titled „Changing the battery“.

7. Regular Inspection, Maintenance

Testing and calibration of the apparatus should be at regular intervals – usually every two years.

WARNING!

DO NOT USE SOLVENTS TO CLEAN THE CASING

THE EQUIPMENT MUST NOT BE IMMERSSED IN WATER

HUMIDITY SENSORS MUST NOT BE PUT IN DIRECT CONTACT WITH AGGRESSIVE MATERIALS AND MUST NOT BE CLEANED

8. Repairs

The general terms and conditions of ELEX V apply to repair work. We recommend that the manufacturer carry out all repair work in order to check for the safe working of the equipment.

9. Guarantee

The instrument parts and functions are guaranteed for two years from the date of delivery. This guarantee remains valid if defective components are submitted. We reserve the right to exchange, modify or repair the equipment.

10. Liability

The company ECOM R. Nied GmbH is responsible for the granting of the guarantee. It takes no responsibility for damages, expenses or losses resulting from the use or purchase of equipment. Neither is ECOM liable for damages, expenses or losses arising from any special or subsequent damages.



11. Applications in Ex-Areas

The data loggers Ex 171-0 and Ex 171-3 measure and store up to 55,000 measurements and have a battery life of up to four years. Applications in hazardous areas of - for example - the chemical and pharmaceutical industry, are in the monitoring of the atmosphere, especially the documentation of atmospheric facts, temperature [°C] and relative humidity [%rH]. With in the hazardous area the use of the equipment is only permitted if used under the specified conditions. The battery must only be change outside of the hazardous areas. The data loggers can be programmed individually with the optional obtainable software COMSOFT Light and the accompanying interface on the respective operation point outside of the hazardous area. The programming, especially the measuring can be confirmed at any time by an activating signal. The compact size of the equipment with its integral fastening loop allows ease of siting in the areas to be monitored. Initiation can be carried out either by use of a special magnet or automatically. During data collection no further maintenance measures other than those listed are to be carried out. After recording and then only outside of the hazardous area, the data can, by means of software and the software interface, be selected and exported to other programmes.

The only batteries permitted are those, whose manufacturers and types are listed in the technical data.

The use of any other type of battery is strictly forbidden
The Ex-data must be considered at all times

12. Ex-Data

Certificate of conformity	:	TÜV 00 ATEX 1586
Certification	:	 II 2 G EEx ia IIC T4
CE number	:	 0102

13. Technical Data:

	Ex 171-0	Ex 171-3
Measurement	Temp. [°C]	Temp. [°C] & Relative humidity [%rH]
Temperature Range	-35°C ... +70°C	-10°C ... +50°C
Resolution	0,1°C	0,1°C
Accuracy (± 1 digit)	±0,5°C ≤ -40°C ±0,6°C > +40°C	±0,4°C
Humidity	---	0 ... 100%rH
Range		
Resolution	---	0,1%rH
Accuracy (± 1 digit)	---	±2%rH between 2 ... 98%rH

IP Protection Level	IP68	IP65
Measuring Interval	2 sec ... 24h	
Memory	20.000	
Power Supply	Lithium Battery size AA U= 3,6V Testo Order Code: 0515.0018C	
Casing Material	Anodised Aluminium	
Dimensions	131 x 68 x 26 mm	131 x 68 x 84 mm
Storage Temperature	-40°C ... +85°C	
Ambient Operating Temperature	-35°C ... +70°C	-10°C ... +50°C
Standard Contents	Data logger incl. Battery, starting magnet, operating instructions, calibration protocols	
Optional Accessories	Software module COMSOFT Light with Interface. Software for Microsoft Windows operating system V3.1 ISO-Certificate for inquiries.	



ECOM Rolf Nied GmbH

Industriestr.2

D-97959 Assamstadt

Tel.: +49 (0) 62 94/42 24 0

Fax: +49 (0) 62 94/42 24 90

E-Mail: sales@ecom-ex.com

Internet: www.ecom-ex.com