INTELLIGENT MESSEN!
MEASURE WITH INTELLIGENCE!

English

OPERATION MANUAL

ecom® AK

Version
ecom-AK

Status February 2023

Intended Use

The read-out head ecom-AK enables the recall of data made available by digital firings automats. Information like trouble sources, error history, flame signal and operation voltage are received by the ecom-AK as optical signal at the reset button of the firing automat and shown on the graphic display. The ecom-AK is able to identify the make and the model of the following firing automats:
Siemens-Landis & Staefa: LMG, LMO, LME
Honeywell-Satronic: Dxx, Dxx-N, SH, SH-N, SG, SG-N
(DKO 970, DKO 972, DKO 974, DKO 976, DKO 992, DKW 972, DKW 976, DMO 976, DIO 974, DIO 976, DKG 970, DKG 972, DLG 974, DLG 976, DMG 970, DMG 971, DMG 972, DMG 973, DMG 991, DVI 980, DVI 982, SH 11x, SH 21x, SH 12x, SH 23x, SG 11x, SG 51x, SG 13x, DKO 970-N, DKO 972-N, DKO 974-N, DKO 976-N, DKO 992-N, DKO 996-N, DKW 972-N, DKW 976-N, DMO 976-N, DIO 974-N, DIO 976-N, DKG 970-N, DKG 972-N, DLG 974-N, DLG 976-N, DMG 970-N, DMG 971-N, DMG 972-N, DMG 973-N, DMG 991-N, DVI 980-N, DVI 982-N, SH 11x-N, SH 21x-N, SH 12x-N, SH 23x-N, SG 11x-N, SG 51x-N, SG 13x-N)

Scope of Delivery

- ecom-AK
- Connection cable
- Protective bag
- 2x 1,5 V AA Batteries

General Safety Instructions

WARNING

Hazard of Injury

Improper work on incinerators can cause injuries.

Work on incinerators may only be done by qualified specialists.

CAUTION

Malfunction of the Readout Process

Exposure to strong light can disturb the readout process.

Protect ecom-AK from strong light.

Device Description

1	Photo Diode	3	Housing	5	Setting Key
2	Housing Head	4	Display		

Set Language

1. Hold down the setting key until Language: English on the display appears.
2. Use the setting key to select the required language.

NOTICE
ecom-AK starts after about 5 s in the selected language.

Initiation/Measurement

Set burner control units to diagnostic mode

NOTICE
Applies only to Siemens burner controls!

Burner control in operating position:
- Press reset button for at least 3 seconds.

Burner control in Lockout position:
- Press reset button for at least 3 seconds.
- Press reset button again for at least 3 seconds.

Read out burner control

1. Set ecom-AK to the interference suppression button.

2. Enable ecom-AK by pressing the setting key.

NOTICE
When using the Satronic or Siemens PC software, hold down the setting key until PC mode appears on the display. When using the AK PC software, the ecom-AK must not be started in PC mode.

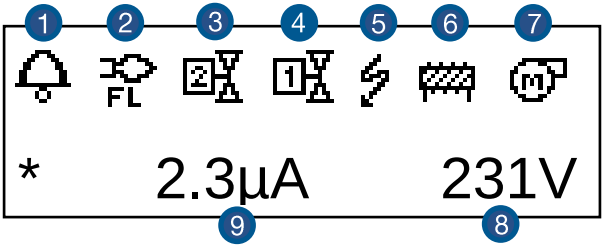
3. ecom-AK searches for automat information.

NOTICE
ecom-AK schaltet sich nach 2 min. ab, wenn es kein Signal erkennt.

Display

Use the setting key to recall the data step by step:

1. **Operating Status of the Burner**



1	Error	4	Valve 1	7	Engine
2	Flame identified	5	Ignition	8	Operating Voltage
3	Valve 2	6	Oil Preheater	9	Flame Signal

2. **Flame Signal**
   - current flame signal - minimum signal
3. **Reserve safety time**
   - Difference between flame detection and end of safety time – Satronic burner controls only
4. **Error**
   - Satronic:
     Display of the current and the last 2 errors - fault description, flame signal with operation-voltage at fault, time of fault shut-down are displayed in 3-second intervals.
   - Siemens:
     Display of the current and last 5 faults - with number of burner starts when the fault occurred.
5. **Statistics**
   - Satronic:
     Display Total number of faults, number of „extraneous light“ faults, number of „no flame after safety time“ faults, number of „flame failure“ faults, total number of burner starts, number of burner starts since resetting the service counter.
   - Siemens:
     Total number of burner starts, number of burner starts since resetting the service counter.
6. **Control Times of the burner control**

NOTICE

The type and scope of the data vary according to the type and software version of the burner control.

Switch-off

- Keep setting key pressed for 4 seconds.
- If no key is pressed during operation, the display lighting is switched off after 10 minutes.
- The device switches off after 60 minutes.

Change Batteries

NOTICE

The two 1.5 V AA batteries must be replaced when the battery capacity indicator flashes.

1. Press locking latches on the housing head inwards.
2. Pull off housing head to the front.
3. Remove circuit board.
4. Change batteries.
5. Reassemble ecom-AK in reverse order.

PC Software AKPC

NOTICE

A special cable is required for the connection to the PC:

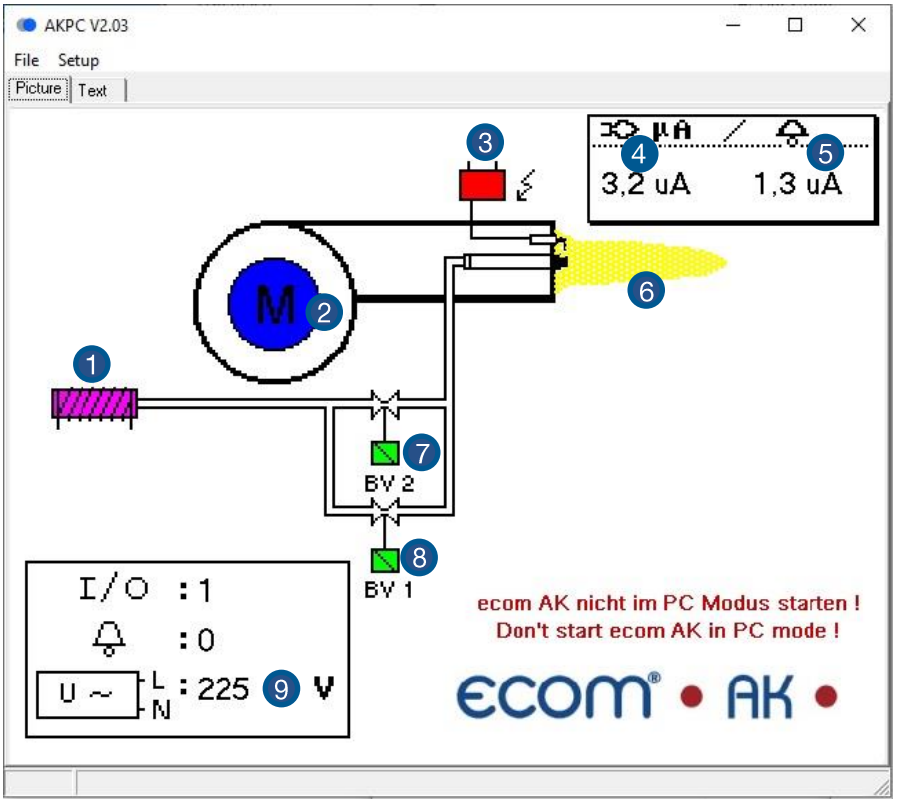
- PC interface RS232: data cable AK-PC or
- PC interface USB: Data cable AK-PC + adapter cable RS232-USB

1. Start programme with „Start“ / „Programmes“ / „AKPC“.
2. Select COM port from „Setup“ menu.
3. Select COM Port.
4. Confirm with „OK“.

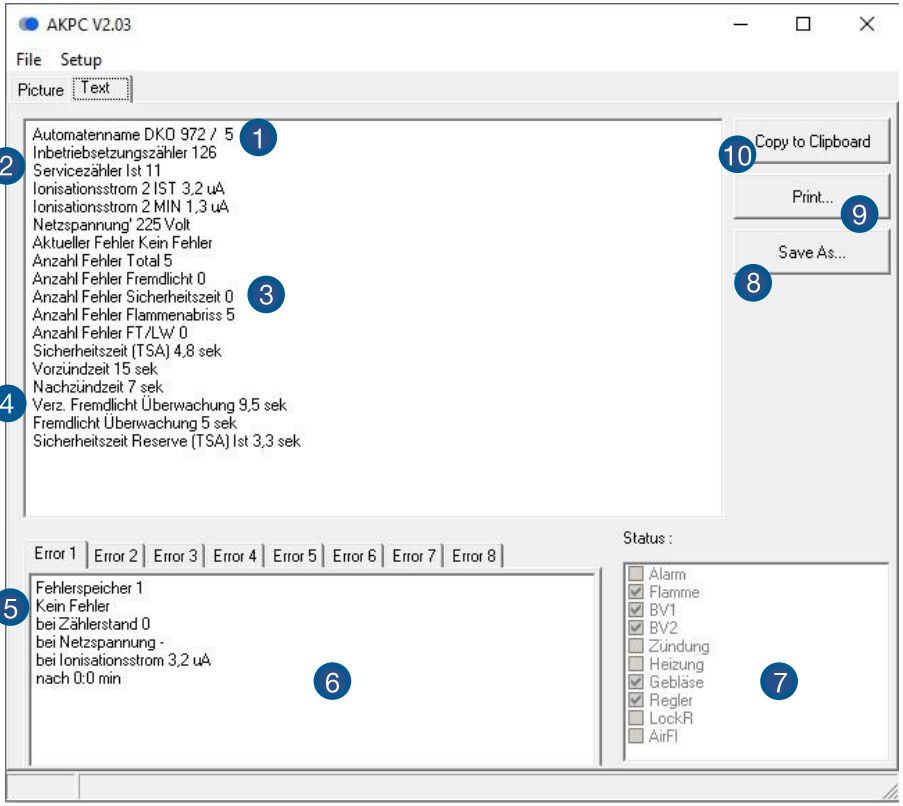
5. Connect ecom-AK to PC via the connection cable.
6. Connect ecom-AK to burner control.
7. Switch on ecom-AK.

NOTICE

The data of the automatic burner control are displayed on 2 pages in the software.



1	Oil preheater / Air pressure switch	4	Actual flame signal	7	Valve 2
2	Engine is running	5	Flame signal min	8	Valve 1
3	Ignition is active	6	Flame is detected	9	Operating voltage



1	Model designation	5	Current error	9	Print data
2	Total number of burner starts	6	Error history	10	Copy data to clip-board
3	Error statistics	7	Active burner com-ponents		
4	Control times burner control	8	Save data to text file		

FAQ

FAQ	
Connection to ecom-devices	Connection to the devices: • ecom-D • ecom-EN3 • ecom-J2KNpro is possible with included connection cable
Data reading does not work	1. Burner control cannot be read out (see list) 2. Burner control is not set to diagnostic mode (only Siemens burner controls)

Technical Data

Technical Data	
Power Supply	2x Rechargeable Battery Type AA; 1.2 V 2x Battery Type AA; 1.5 V
Power Consumption	ca. 100mA
Storage Temperature	-20 °C - +50 °C
Operating Temperature	-20 °C - +50 °C
Size	88 mm x 41 mm x 32 mm

NOTICE
Subject to technical changes! (Status 02.2023)

Maintenance

To ensure the accuracy of your measuring device, we recommend an annual inspection by an authorised ecom partner. In case of heavy use, shorter inspection intervals should be chosen – please contact your ecom partner.

Disposal

- Dispose of used batteries at the designated collection points.
- Dispose of packaging material in an environmentally friendly manner.
- Old devices must be disposed of in an environmentally friendly manner by an authorised centre.

NOTICE

On request we take back old appliances and dispose of them in an environmentally friendly way.

EG-Konformitätserklärung | EC Declaration of Conformity

Hiermit erklärt der Hersteller
The manufacturer

ecom GmbH
Am Großen Teich 2
D-58640 Iserlohn, Germany

in alleiniger Verantwortung für die Ausstellung dieser Erklärung, dass die nachfolgend aufgeführten Produkte:
hereby declares under its sole responsibility, that the products

Störungsdiagnose / fault diagnostics

Type: ecom-AK

allen einschlägigen Bestimmungen der folgenden EU-Richtlinien entsprechen:
comply with the following European Directives:

2014/30/EU	**EMV-Richtlinie / *EMC Directive***
2011/65/EU	**RoHS**

Folgende Normen wurden angewendet:
The following standard/s were used:

EN 61000-6-2:2005/AC:2005	EMV – Störfestigkeit für Industriebereiche *EMC – Immunity for industrial environments*
EN 61000-6-3:2007/A1:2011	EMV – Störaussendung für Wohnbereich, Geschäfts- und Gewerbebereiche sowie Kleinbetriebe *EMC - Emission standard for residential, commercial and lightindustrial environments*
EN IEC 63000:2018	Technische Dokumentation zur Beurteilung von Elektro- und Elektronikgeräten hinsichtlich der Beschränkung gefährlicher Stoffe *Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*

Iserlohn, 25.07.2022

Matthias Platte (Geschäftsführer / *Managing Director*)

Declaration of Conformity

The manufacturer

ecom GmbH
Am Großen Teich 2
D-58640 Iserlohn, Germany

hereby declares under its sole responsibility, that the products

Fault diagnosis

Type: ecom-AK

are in conformity with the relevant statutory requirements of the following enactments:

Electromagnetic Compatibility Regulations 2016
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS)

The following designated standards were used:

EN 61000-6-2:2005/AC:2005	EMC – Immunity for industrial environments
EN 61000-6-3:2007/A1:2011	EMC - Emission standard for residential, commercial and light industrial environments
EN IEC 63000:2018	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Iserlohn, 12.10.2022

Matthias Platte (Geschäftsführer / *Managing Director*)

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