



Professional Trouble Diagnostic

The manufacturers of firing automates Honeywell-Satronic and Siemens-Landis & Staefa increasingly invest in digital technique. Step by step analogue firing automates of firing plants are replaced by digital firing automates. The automates have an information system monitored by a microprocessor which shows the most important operations in the burner as blink codes at the trouble-shooting button. Information like operation state, trouble source, error history, flame signal and operation voltage consulted.

With the read-out head ecom-AK, this information can be called up and indicated on the integral display. A huge advantage is that the ecom-AK does not need any additional instrument hereto. For a quick trouble-shooting, the ecom-AK can be used fully independently.

The **user's work** is significantly eased because:

1. Once the firing automate type is identified, the **operation state** of the burner is **graphically displayed**. This way the operation process of the burner can be easily controlled.
2. The **flame signal** can be **measured** and **compared to the minimal value**. A complicated wiring at the monitor socle for measuring is herewith superfluous.
3. The **difference** between **flame recognition** and **end of the safety time** is measured. This value enables to ascertain if the flame immediately burns or with delay (trouble risk).
4. The **current trouble source** as well as 2 (resp. by Siemens 5) **previous troubles** are shown as text. The error source can consequently be trapped and a time-consuming error search is herewith superfluous.
5. The trouble sources are statistically recorded and grouped. Not only the **total sum of all troubles** but also the **frequency of trouble sources** like i.e. „No flame end TSA“ are listed. This enabling a focused narrowing down of critical parts or adjustments.
6. The **number of burner starts** informs about the load of the firing plant. Too frequent starts per heating period being i.e. a sign of oversize.
7. All relevant **monitoring times** of the firing automate can be called up.

Automat
DKO 972 / 22

Automatic identification of the firing automate

FL 1X ⚡ (M)
* 2.3µA 231V

Graphic illustration of operation stand

* 2.2µA FL IST
* 1.2µA FL MIN

Measurement of flame signal
- Comparison with minimal value

Reserve TSA (Ist)
3.9 sek

Determination of difference between flame identification and end of safety time

Aktueller Fehler
Fremdlicht in der
Vorlüftphase

Indication of current trouble source

Fehler (1) 1
Keine Flamme
Ende TSA !

Indication of last 2 (resp. 5 by Siemens) trouble sources

Total
Anzahl Fehler 39

Indication of trouble statistics with total number of disturbances...

Sicherheitszeit
Anzahl Fehler 7

... and indication of frequency of each trouble source

Inbetriebsetz. Zähler
664

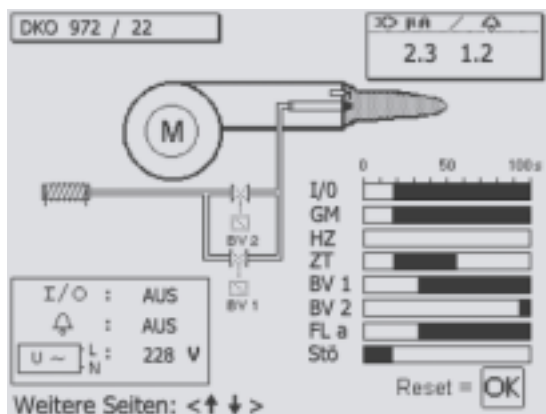
Number of burner starts

Sicherheitszeit (TSA)
4.9 sek.

Indication of all monitoring times of the firing automate

Burner Diagnostic with ecom-J2KN and ecom-AK

A professional burner diagnostic is possible using the ecom-J2KN. Hereto the data sampled by the ecom-AK are sent via radio to the control module of the ecom-J2KN and displayed in 3 clearly arranged screen pages. The first page shows a graphic illustration of the **burner's operation stands**. A **progression indication** enables the recording of the operation stands over a period of 100 seconds. The second page indicates the **error history of the burner**, listing the most frequent errors. And the third page shows all important **monitoring times** of the firing automate. On corresponding key order, the ecom-J2KN prints out a diagnostic protocol which can be used for documentation.



Operation stands of the burner with illustration of progression indication

Störungshistorie		
Inbetriebsetzungs Zähler		677
Servicezähler Ist		142
Kein Fehler !		
Keine Flamme	004	9:23 min
Ende TSA	0.0 μ A	227 V
Fremdlicht in der Vorspülphase	001	12 sek
	2.2 μ A	225 V
Total	:	46
Fremdlicht	:	22
Sicherheitszeit	:	9
Flammenabriss	:	17
FT/LW	:	0

Error history of the burner

Zeiten	
Sicherheitszeit (TSA)	4.9 sek
Verzögerungszeit BV2	40 sek
Vorzündzeit	17 sek
Nachzündzeit	20 sek
Verz. Fremdlicht Überw.	11.5 sek
Fremdlicht Überwachung	5 sek
Reserve TSA (Ist)	4.1 sek

Monitoring times of firing automate

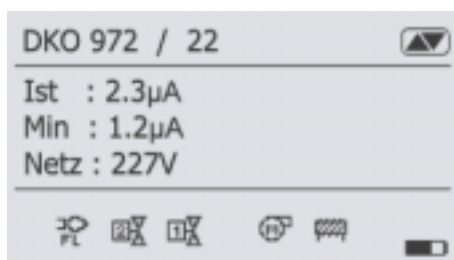
Burner Diagnostic with ecom-EN and ecom-AK

A simple burner diagnostic is possible using the ecom-EN. Hereto the data sampled by the ecom-AK are sent via cable to the ecom-EN and illustrated in a clear arrangement on the display. The first page shows a graphic illustration of the **operation stands of the burner**. The next pages contain a recording of the all important **monitoring times of the firing automate**. On corresponding key order the ecom-EN prints out a diagnostic protocol which can be used for documentation.



Fehlerhistorie		1
Fremdlicht in der Vorlüftphase !		
2.2 μ A 224V		12sek
Inb. Zähler		001
Weitere Infos mit		

Error history of the burner



Operation stands of the burner

Zeiten		
Sicherheitszeit (TSA)	4.9 sek	
Verzögerungszeit BV2	40.0 sek	
Weitere Infos mit		

Monitoring times of the firing automate