

KSI ECOCONTROL

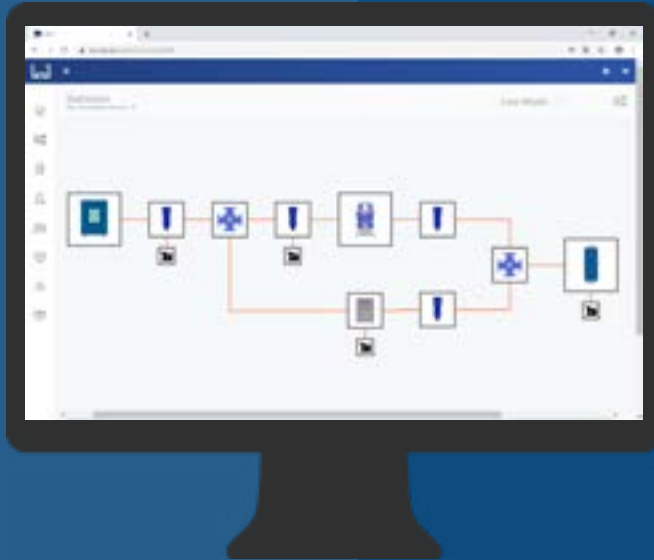
Online system monitoring

KSI ECOCONTROL

KSI

Rev 01_0421

Coordinated hardware and software solution for the operation and monitoring of compressed air installations



INDUSTRY
4.0



With KSI into the age of „Industry 4.0“

The online system management **ECOCONTROL** provides access to the age of „Industry 4.0“: The specialist dealer is in a position to monitor small to large plant concepts online, to carry out prevention by analysing the information displayed, to receive critical values signalled at any time and anywhere and finally to plan the service of all components in a strategically sensible manner.

Monitoring and visualization

- predictive maintenance
- unlimited data logging
- visualization and monitoring of compressed air analysis
- adding of components of all manufacturers possible
- encrypted connections

The ECOCONTROL Plus-Effects +++

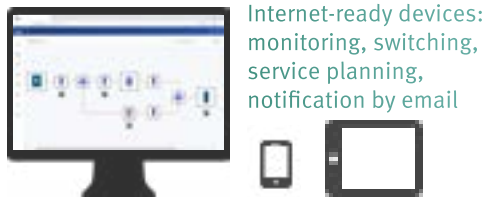
- + prevention through optimized service and deployment planning
- + detect critical situations online at any time
- + no unnecessary trips to the plant
- + no access to end customer data by KSI
- + data logging and visualization of current and past values (without limitation of data volume)
- + warnings and fault messages by email
- + service parts (also for third-party products) for all system components with maintenance interval pre-defined or storable
- + private label version for end customer presentation (optional)
- + additional data boxes allow the connection and definition of a variety of sensors
- + switching of electrical components over defined conditions
- + software as web app: no installation on end devices necessary ▶ access with any internet-enabled end device
- + databases and servers at German locations, encrypted connection between server and user device
- + individual system configuration as PID representation

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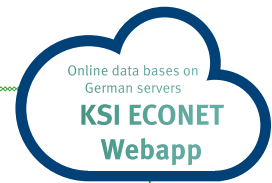
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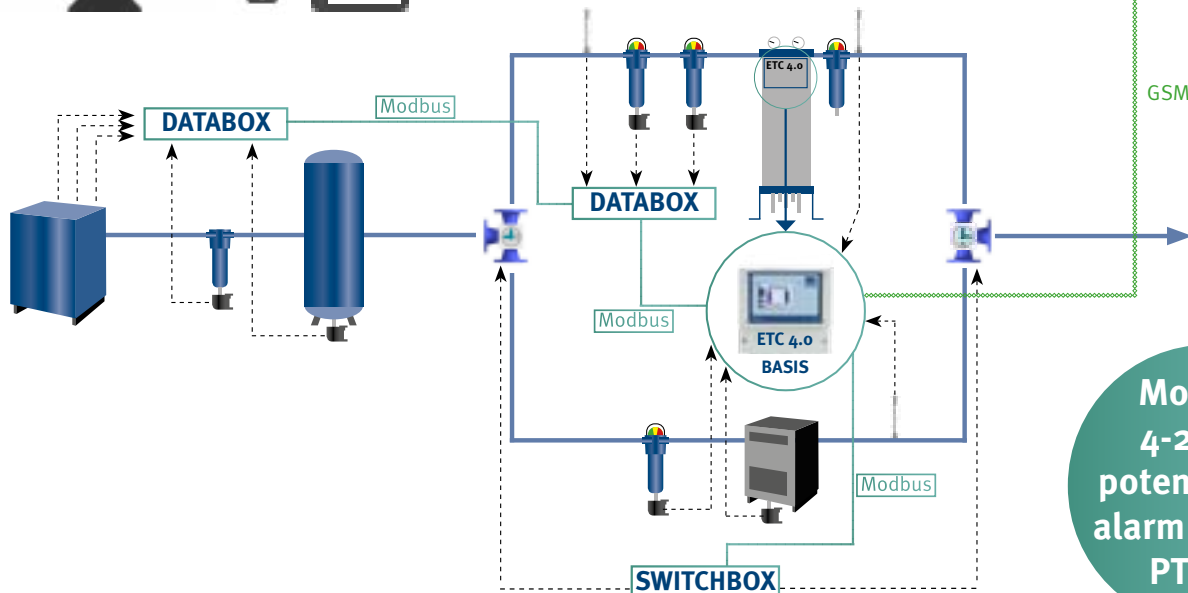
Internet-ready devices:
monitoring, switching,
service planning,
notification by email



Online data bases on
German servers

**KSI ECONET
Webapp**

GSM | WLAN



**Modbus,
4-20mA,
potential-free
alarm contact,
PT1000**

The functional principle

Setting up the basis

The new ETC 4.0 dew point control is also the central element of the entire **KSI ECOCONTROL** system. This has several advantages:

With the installation of an adsorption dryer with ETC 4.0, everything is already available to connect the entire system to the Internet immediately or at a later point in time. No additional devices are required as „gateways“.

The ETC 4.0 in „connection box“ mode is used to monitor a compressed air station without an adsorption dryer. With the ETC 4.0, everything is already available for the start. The required „IoT-SIM“ card is supplied already installed at the customer's request.

Without additional hardware, 6 sensors can already be connected to the base unit. It also provides two outputs (more information on page 3).

The control is operated via a coloured touch panel. For a more comfortable setup, the control can be accessed via browser and Wifi, for example from a tablet or notebook. Of course, the setup is password-protected in each case.

Integration of additional hardware

The ETC 4.0 offers the possibility to connect different boxes via Modbus. You can choose between two different data boxes – in sizes „S“ and „L“ – with a different number of inputs as well as our switchbox, which transmits current signals as a relay box.

The Software

Our self-developed software **KSI ECONET** is operated as a webapp. It is therefore accessible via any Internet-enabled device. Of course the representation adapts itself to the respective terminal (mobile phone, tablet, computer, ...). **KSI ECONET** is accessed via an encrypted connection. Data traffic between the database on German servers and the ETC 4.0 controller is also exclusively encrypted.

Further options

All system values such as differential pressure, volume flow, pressure dew point, system pressure and much more can be transmitted. The unlimited data logging allows far-reaching analyses. The predictive maintenance as one of the core approaches of Industry 4.0 is completely implemented by the maintenance displays.

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The hardware:

ETC 4.0 – „the onsite centerpiece“

- + sends the data to the cloud
- + sends fault reports via email
- + attractive colour display with touch operation
- + setup and configuration possible from tablet (via hotspot)
- + 6 inputs for sensors: 5 x 4 - 20 mA, 1 x PT1000

also available as **ETP 4.0 (Premium)**;

functions like ETC 4.0, plus:

- + pressure measurement at the dryer inlet and indication on the control display
- + temperature measurement at the dryer inlet and indicator in the control display
- + safety shutdown in case of divergence from specified values is possible



Notice:

If the dryer with ETC 4.0 has already been ordered, the heart for the construction of a networked plant is already present!!!

Also suitable for the refurbishment of competitor plants

Databox S – „the small extension“

- + connection to ETC 4.0 via system Modbus (max. 5 databoxes in sequence)
- + 1 x PT1000
- + 3 x 4 - 20 mA (optional for potential-free interference contacts)
- + 2 x Modbus

Databox L – „the large extension“

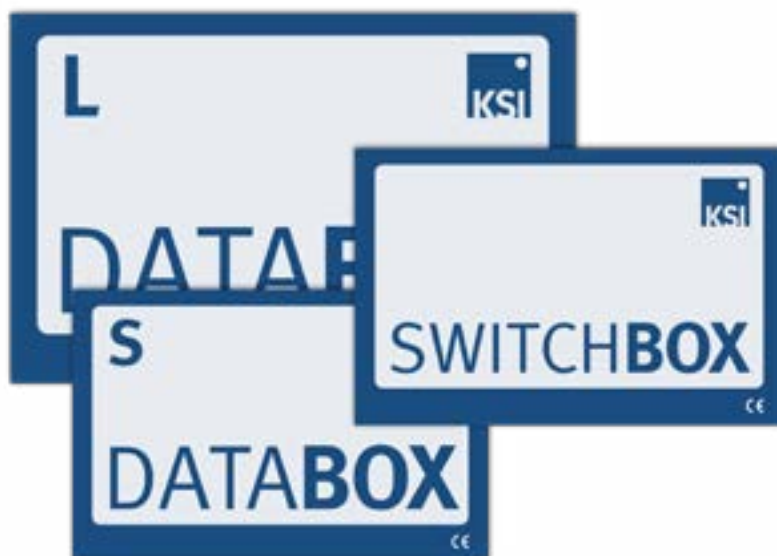
- + connection to ETC 4.0 via system Modbus (max. 5 databoxes in sequence)
- + 3 x PT1000
- + 9 x 4 - 20 mA (optional for potential-free interference contacts)
- + 7 x Modbus

Switchbox – „onsite execution“

- + 5 x potential-free change-over contact (relay output)
- + execution of interlinked conditions, e.g. for automated summer-winter switching or pressure maintenance systems

„IoT-Flex-SIM“-card

- + wide-ranging coverage in 30 countries
- + 10 years, 500 MB
- + Third party IoT cards can also be used.



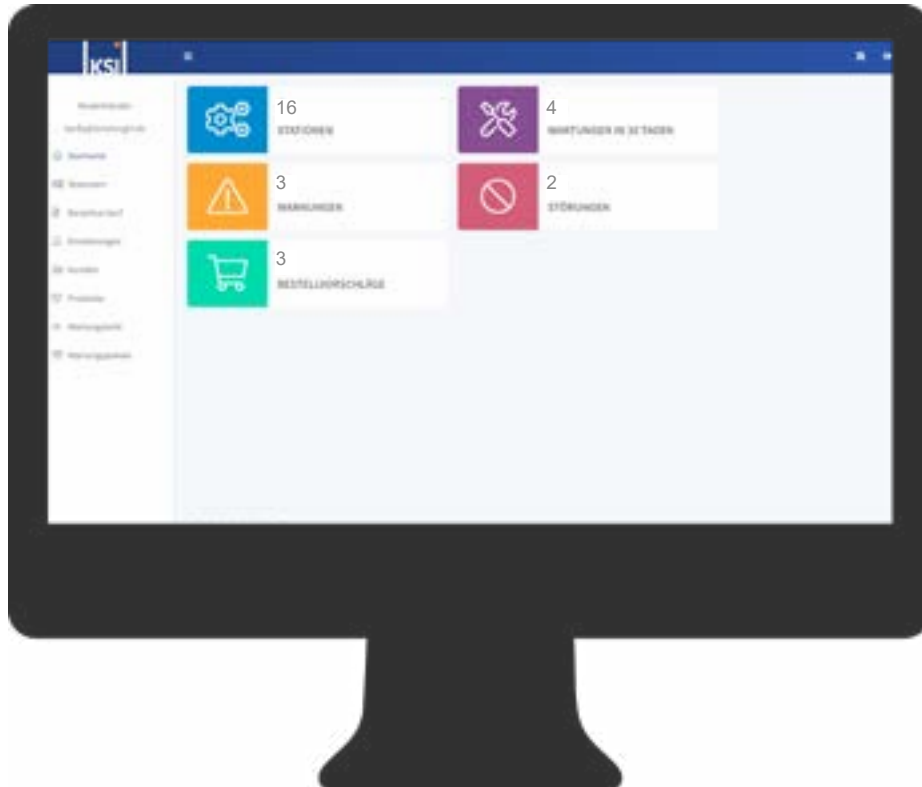
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The software: KSI ECONET – „the webapp in the cloud“

+ overview and status information for each station / all stations



+ access with every internet-ready device



+ Individual system configuration as PID representation and administration of all maintenance components (maintenance after time or motor running signal)



+ data logging without any memory limitation for each sensor value



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KSI ECONET: the software of the KSI ECOCONTROL systems

	Software version	
	Comfort	Premium
Industry 4.0		
foresighted maintenance: prevention through optimised service and deployment coordination, detect imminent malfunctions in advance (maintenance after time or engine running signal)		X
service parts (also for third-party products) predefined for all system components; manually adaptable, can be stored for non-declared products		X
automatic order proposals for service parts (including external products) from the system		X
maintenance intervals freely configurable		X
monitoring and reporting of component mergers (via basic arithmetic operations)		X
data logging and graphical visualization of current values and all historical values (no data volume restriction)	X	X
system representation in the R&I diagram	X	X
insight on situations (values) online at any time; avoidance of unnecessary journeys	X	X
no access to end customer data by KSI	X	X
complete system can be fitted for adsorption dryers of other manufacturers	X	X
error messages by email	X	X
connectivity via GSM or WLAN	X	X
ETC 4.0 dew point control can be easily configured with any mobile device via WLAN connection	X	X
Visualization		
dashboard shows a summary of all stations, all messages and faults	X	X
component with warning or fault is highlighted in color	X	X
free description options for each system component (e.g. location)	X	X
up to 5 values per system are displayed with current values at every position	X	X
access restrictions for end customers by specialist dealers possible	X	X
Further features		
encrypted connection from terminal to server	X	X
server located in Germany	X	X
access to data for KSI only possible by authorization of the customer (support purposes)	X	X
data update adjustable	X	X
two different software versions available (Comfort and Premium)	X	X
Databox S and L for the connection of sensors available	X	X
Switchbox for the control of electrical components available		X
Demo mode of a system can be set up to test alarms and warnings	X	X
Private Label (at extra charge)		
own logo, both in the control display and in the configuration display and in the app KSI ECONET	X	X
own colours for the online user interface	X	X

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Sensors from the following manufacturers are preconfigured and can also be obtained from KSI:

- + KSI
- + PROair
- + CS Messtechnik
- + Suto iTEC

You can simply request a current price list from our sales office or from your sales representative.