



Compressor and energy management system - BAFA eligible -

The manufacturer-neutral energy-saving reference for compressors for 25 years

Right from the start, the AIRLEADER controls the compressors based on demand. Only the compressors that are necessary run, unnecessary idling is avoided, the station works with maximum possible efficiency and maintenance costs are minimal.

Depending on the network volume and the compressor dynamics, a pressure range of just ± 0.15 bar can be achieved with minimal switching frequencies at the same time - this is the highest level of energy efficiency while using the compressor gently.

Airleader EASY is the little brother of the Airleader MASTER and is fully compatible – both in terms of the compressor connection and the visualization! All functions of the proven Airleader MASTER are also available to the EASY.



As an inexpensive variant, it is used in smaller compressor stations where there is a desire to increase efficiency, but the “large” air management systems do not pay off quickly enough.

Technical data:

Number of compressors, up to 4 pieces

Of these, frequency regulated, up to 2 pieces

Pressure range 0 – 16 bar

Digital inputs for messages (operation/fault), up to 6

Analog inputs for sensors (pressure, dew point, flow, temp. etc.), up to 6 pieces

Long-term data storage (operating data, sensor messages) >10 years

Number of precision measuring transducers 0-16 bar: 1 piece

Power supply 90-250 VAC

Mass of sheet-steel control cabinet with 3 key switches: 7.5 kg

Dimensions (W x H x D) 300 x 300 x 120 mm

WiFi module (airleader hotspot) included for easy configuration

Compressed air visualization with remote programming (web server) included



Metal control cabinet with

- Compressor management for 1 - 4 compressors – Connection of the compressors via RS485 modules for all makes – 32-bit processor technology – 2 USB ports – Programming via WiFi via smartphone, tablet or notebook – RJ45 network connection – 2 RS-485 BUS interfaces – 2 analog inputs 4-20 mA – 8 GB memory for > 10 years of operating data acquisition – 3 key switches for:

Compressors ON / OFF Compressors
MANUAL / AUTOMATIC timer ON /
OFF

- Possibility of connecting 2 accessory RS485 modules for a total
6 analog sensors 6 digital inputs for fault or operating
messages from external devices
- Power supply 90-250 VAC – Dimensions
(W x H x D) 300 x 300 x 120 mm

3 1/2" color display

- Symbolic compressor status display on the display – LOAD, IDLE, FAULT, OPERATION and other displays on the display – Pressure, compressed air consumption, dew point and room temperature with connected

Sensor

Complete compressed air visualization via network connection (web server):

- Monthly energy data and compressed air key figures at a glance (EXCEL format) – Energy management (EMS) according to ISO 50001 – with remote programming and remote configuration

Compressor capacities
Pressure profiles
Priority levels and switching sequences
Timer switching points
Switch between programmed pressure profiles
Switch between programmed switching sequences

Delivery included as standard:

- Precision pressure transmitter 0-16 bar – 1
web server CD with visualization software



Special advantages of Airleader EASY are:

- The Airleader visualization shows very transparently how things are going with compressed air - whether good or bad: Defects and energy waste are exposed and you can take targeted action against those that damage the efficiency of the compressors!
- Real energy balancing (ISO 50001) through Amp->re/kW measurement and therefore eligible for BAFA funding according to the BAFA leaflet:

“Higher-level control for several compressors:

If there are several individual compressors supplying the same consumer network in parallel, a higher-level control system must take over the operation of the individual compressors in order to optimally cover the compressed air requirement in terms of energy (e.g. operation in a common pressure band).”

- Data on web server in-house (20 years of long-term data backup via IT) and redundantly in the Airleader (not on third-party servers for a monthly fee)
- Monitoring of auxiliary units such as dryers, filters, Bekomat, etc.

In addition to many unique features such as bearing vibration monitoring, real current/kW measurement (ISO 50001), temperature monitoring for every compressor, no matter how old and who made it, the Airleader is also a unique decision-making aid when purchasing new compressors!

The right compressor combinations can be found using the Airleader's operating data and our manufacturer-neutral simulation tool. Of course, taking efficiency and redundancy into account! This prevents bad investments in the wrong compressor sizes!

The energy consumption and reserves can be precisely calculated in advance for various concepts and clearly presented.

Airleader is brand-independent and works via signal exchange according to industry standards. All internal data, measurements and energy-relevant evaluations are openly available for further use by customers in various formats (e.g. EXCEL, OPC, XML).

More than 10,000 customers in Germany use Airleader to save energy. The controller continuously calculates compressed-air demand and selects the compressors required. Its main advantages are simple operation and automatic fallback to local control: if the bus, a component or the power supply fails, the compressors revert to local operation using their internal pressure switches.



OPTIONS for Airleader EASY

- With the alarm and service management (item no.: 9010), the Airleader automatically reports irregularities (e.g. dew point or temperature increases) and malfunctions (compressors, dryers, condensate drains, etc.) by email, fax or SMS upon request.

The operating and load hours are monitored and recorded separately for each compressor. Once the service interval has been reached, the Airleader will automatically contact you via email or SMS.

- Through the kW (item no.: 5220 ff) or amp->re measurements (item no.: 5200), on the one hand, the performance of the compressors is automatically calculated and made available for the energy report and, on the other hand, the visualization software carries out permanent belt breakage and intake controller defect monitoring.

An inlet regulator fault can have many causes: a broken return spring, a sticking actuator cylinder, a faulty unloading valve, a blocked unloading restrictor or a kinked pneumatic line.

The inlet valve then fails to open fully under load. At only 40% air delivery, for example, the compressor may still draw 85% of its full-load power.

- Differential pressure monitoring (item no.: DP-106) in compressed air systems saves energy and filter costs. From an energy perspective, filters are expensive resistors and should be avoided if possible. Necessary central filters must be monitored online, e.g. For example, a 2" filter with 0.25 bar too much differential pressure that is changed too late increases additional energy costs of approx. €1,000 per year! Larger filters exponentially more...

With the Airleader differential pressure transmitter you can achieve ΔP minimization through timely warning, e.g.. by email, and element change

- The OPC server (item no.: 4810) provides the Airleader's process data as OPC objects, accurate to the second. The OPC client accesses the data provided by the OPC server and displays it graphically in the control station (GLT). Today, OPC is the standard for manufacturer-independent communication in automation technology. Without OPC, two devices required precise knowledge of the other party's communication options to exchange data. With OPC it is sufficient to write an OPC-compliant driver exactly once for each device. The Airleader OPC driver can be integrated into any size control and monitoring system, such as: b. Sauter NovaPro, WinCC, Kieback&Peter, Wonderware, Web Factory, ACRON (BDA from Videc) etc. or energy management system software such as. E.g. MESSDAS, FRAKO, ECON Solutions, é.VISOR (Limón GmbH).

- Bearing vibration monitoring, oil temperature monitoring, heat recovery counter, and much more. m.
- Control cabinet variants, GSM modules for remote access, etc.
- Decentralized stations via ETHERNET network (TCP/IP) avoids long BUS cables