COOLING, HEATING, VENTILATING: WE MANAGE IT ALL!
The requirements of tomorrow lie in the intelligent networking of HVAC components in buses – this we realised at an early stage and have consciously invested in the expansion of our competence in the electronics sector.

A whole range of innovative products have emerged in the past few years. Our latest climate controls can already be employed cost-efficiently. Examples are the LIN bus-based hatch control, likewise the CAN-based diagnosis for the Thermo S heater. The air conditioning systems are equipped with sensors and speed-controlled fans which are developed to our specifications.

Our design and development processes are oriented to the recognized SPICE model.

**OUR CONTROL UNITS**

The requirements of tomorrow lie in the intelligent networking of HVAC components in buses – this we realised at an early stage and have consciously invested in the expansion of our competence in the electronics sector.

Intelligence and thermal management are of crucial importance where the control of all components responsible for optimum bus climate is concerned.

Efficient, error-free management of the component hardware is backed up by intelligent software. Climate control of the future will incorporate an increasing number of extremely complex components for reading out and evaluating the vehicle’s operating status.

For us and our customers this sophisticated form of thermal management is the most important task of a state-of-the-art bus air condition system – today and in the future.

**INTELLIGENCE FOR THE BUS CLIMATE**

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By "synchronous load thermal management" we mean demand-oriented control. The aim of this thermal management is to synchronise all components required for regulating the climate in the vehicle’s interior. It should also integrate them communicatively into the bus’s overall drive system, so that they always deliver an optimum level of performance irrespective of the operational profile and available energy.

The conservation of energy is the primary objective for achieving an increased vehicle driving range whilst maintaining the highest level of efficiency. Valeo has been continuously stepping up its commitment in this sector and is resolutely positioning itself as a development and system partner for vehicle electronics and complete control in buses worldwide.

**SYNCHRONOUS LOAD THERMAL MANAGEMENT**

**SC 1000** – integral control unit at the driver’s seat – for worldwide use.

**VSC 1000**

Convenient control unit for all bus types
- Hardware, software and mechanical design by Valeo
- Durable membrane keyboard made of extremely robust and water resistant material (IP54)
- On-board diagnosis with error code in display
- Efficient controlling of EC fans and blowers
- Support up to 3 substations

**VSC 1000**

Complete climate control for higher standards
- Fully automatic control (heating/cooling)
- Separate controls for driver and passengers
- Integrated pre-selection timer for heating
- On-board diagnosis with error code in display
- Individual customization by parameterization using Valeo software
- CAN-bus-communication to up to 4 substations

**Body Interface Components**

Intuitive HMI for complex vehicle comfort systems
- Hardware, software and mechanical design by Valeo
- Modular concept
- Suitable for SC600, SC1000 and optional use for a 4,3” touch display
- Fully automatic HVAC control
- Integration into vehicle via separate CAN interface
- Connection of various Valeo system components possible
- Support up to 16 substations

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**Area of application**

12V / 24V
COOLING, HEATING, VENTILATING: WE MANAGE IT ALL!

► CLIMATE MANAGEMENT COMPETENCE CENTRES

Our global development and competence teams are the creative workshops when it comes to optimum solutions in the field of control synthesis. Many years ago we realised that the future of bus air conditioning – even more than in the manufacture of individual instruments – lies in conducting the entire ‘orchestra’. Take us at our word and see for yourself!

Digital Hatch Control
- Operating unit controlling up to 4 hatches
- Professional design for intuitive operation
- Fully digital
- Memory function
- LIN bus-communication between operating unit and control module
- Multiplex controllable
- Compatible with all existing Spheros Parabus hatches
- Simple assembly
- Simple wiring
- Indicator lamp for the driver
- Automatic closing

Valeo Control Preheater
- Full-digital control unit
- Pre-selection timer for heaters
- Modern design, easily to read even under difficult lighting conditions
- Digital 7-day pre-selection timer
- Programming of different automatic starting times
- Real time clock
- Durable membrane keyboard made of extremely robust and water resistant material (IP54)
- Power failure bypass 72 hours
- 12h/24h modus
12V / 24V