CompAir

COMPRESSED AIR MANAGEMENT SYSTEM

➔ SmartAir *Master*

INTELLIGENT AIR TECHNOLOGY

▲ CompAir ⇨ SmartAir *Master* –

⇨ FLEXIBLE   ⇨ EASY TO USE   ⇨ COST EFFICIENT

Modern compressed air stations are required to be more energy efficient, reliable and meet higher standards of safety. To achieve this, demand responsive intelligent sequencers are becoming increasingly important.

The SmartAir *Master* can intelligently control up to 12 compressors of any combination, fixed or variable speed, and will reduce energy consumption by tightening the network pressure to the smallest possible band, keeping off load running to the absolute minimum.

Demand responsive operation ensures that where varying capacity compressors are installed only the correct combinations of compressors are selected to meet the system demand, resulting in maximum energy savings.

Where compressors of the same capacity are installed the sequencer will equalise the running hours, offering even greater savings by optimising the service intervals.

Alternative compressors can be connected via two modules

Compressor module (VSD) for alternative compressors with speed control

Compressor module (STD) for alternative compressors with fixed speed and/or half-/full-load control

⇨ SYSTEM COMPONENTS

Direct connection of CompAir compressors using simple data cable in a "bus structure".

Accessories such as dryers, filters and condensate drains are easily connected to the SmartAir *Master* directly or to an extension module.

System data can be transferred to and used by external controls such as building management systems via:
• ModBus-RTU
• PROFIBUS

⇨ COMMISSIONING

Commissioning is quick and easy using the innovative "commissioning wizard", which guides you every step of the way. The help functions give you quick access to connection diagrams and controller settings, which can be viewed on the SmartAir *Master* screen.

➜ FUNCTIONS

Profile Programming

Up to 12 system profiles can be programmed. An energy efficient profile is created by inputting the compressor priority, pressure band, and air receiver capacity. Profiles can then be selected by the integrated timer or via digital inputs.
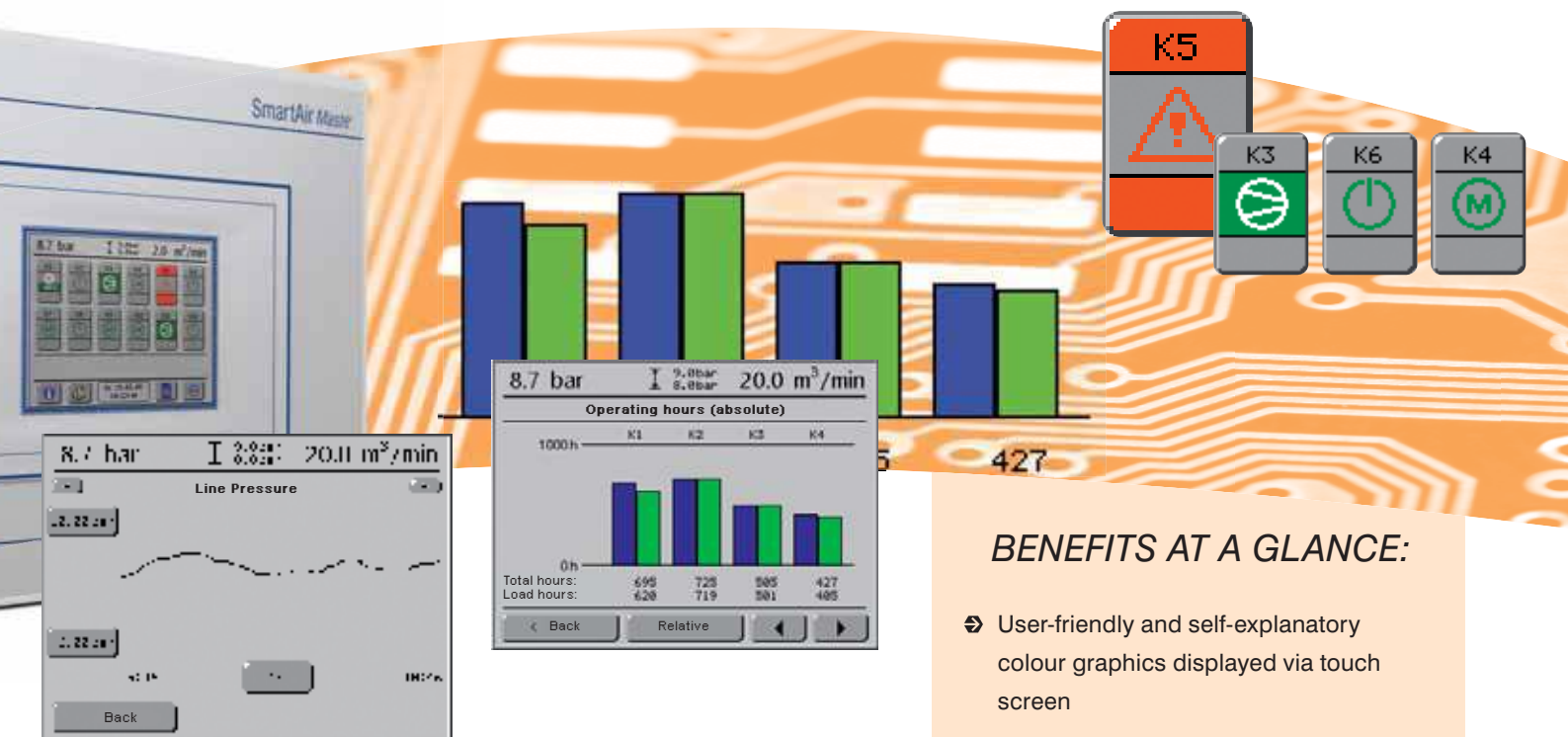
System Demand Control

The intelligent SmartAir *Master* calculates the system demand and then selects the compressors best suited to meet the profile, eliminating running oversized compressors and wasting energy.

Data logging

The integrated SD card drive allows the system to be data logged. (MS Excel compatible)

Visualisation

Using the optional web server module the SmartAir *Master* can be visualised externally on a PC module using a standard browser (e. g. Internet Explorer) or via local network (LAN).

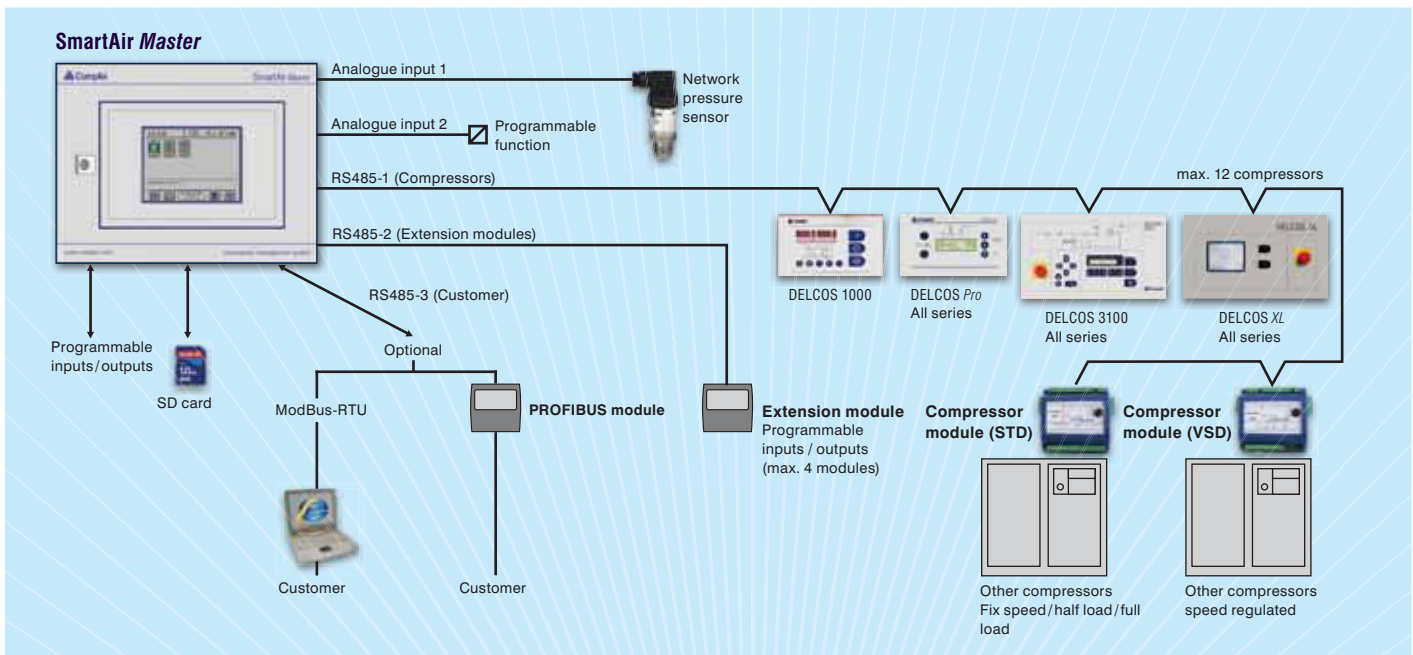## ➜ OPERATION AND PROGRAMMING VIA FULL COLOUR TOUCH SCREEN

The extremely user-friendly and fully self-explanatory large colour graphics display with touch screen gives you a quick overview of the compressed air supply and connected compressors at any time: Displaying useful information such as:

- Network pressure, pressure range and compressed air consumption
- Individual status display of each compressor connected
- Fault and warning messages for each compressor are listed along with the exact time and date in plain text in the fault memory
- Network pressure and volumetric flow diagrams can be accessed
- Bar charts of operating and load hours for every individual compressor
- Up to 17 different language settings are available

BENEFITS AT A GLANCE:

- ➜ User-friendly and self-explanatory colour graphics displayed via touch screen

- ➜ Maximum energy and cost savings by reducing off-load times to a minimum and operating all the system compressors to the narrowest pressure band

- ➜ Service technicians can immediately analyse the cause of any maintenance required

- ➜ Simple installation with low cabling costs using a data cable with a "bus structure"

- ➜ Complete overview of the status of the entire compressed air station

- ➜ The DELCOS *XL,* DELCOS 3100, DELCOS *Pro* and DELCOS 1000 controllers can be connected without any additional hardware

SmartAir *Master*

Analogue input 1 ────────── Network pressure sensor

Analogue input 2 ─── ☑ Programmable function

RS485-1 (Compressors)

RS485-2 (Extension modules)

RS485-3 (Customer)

Programmable inputs / outputs

SD card

max. 12 compressors

DELCOS 1000

DELCOS *Pro* All series

DELCOS 3100 All series

DELCOS *XL* All series

Optional

ModBus-RTU

PROFIBUS module

Extension module Programmable inputs / outputs (max. 4 modules)

Compressor module (STD)

Compressor module (VSD)

Customer

Customer

Other compressors Fix speed / half load / full load

Other compressors speed regulated

➔ *TECHNICAL DATA*

Electrical connection	
System	1~/N/PE
Voltage	110/230 V +/-10 % 50/60 Hz
Display	
Type	Colour graphics display with touch function
Screen size	5.7"
Interfaces	
Analogue inputs	2
Digital inputs	3
Relay outputs	2
Memory card	
Type	SD card
Connection for compressors	
Quantity	max. 12 Compressors
Interface	RS485
Distance from SmartAir *Master*	max. 1200 m
Customer interface	
Interface	RS485
Distance from SmartAir *Master*	max. 1200 m
Protocol	ModBus-RTU or PROFIBUS (optional)
Permissible ambient temperatures	
Operations	0 to 55 °C
Storage	−25 to 75 °C

EMC conformity	
Emissions	DIN EN 61000-6-3
Interference suppression	DIN EN 61000-6-2
Housing	
Dimensions (W x H x D)	380 x 300 x 155 mm
Design	Steel plate housing
Type of protection	IP54
Weight	11 kg

Scope of supply
– SmartAir *Master*, including cable glands
– Network pressure sensor
– Set of plugs for connecting to compressor controllers
– SD card
– Documentation

Options	
Compressor module (STD)	For connecting standard external compressors
Compressor module (VSD)	For connecting speed-controlled external compressors
Extension module	For extending the programmable inputs / outputs
PROFIBUS module	For connection to a PROFIBUS network

CompAir policy is one of continuous improvement and we therefore reserve the right to alter specifications and prices without prior notice. All products are sold subject to the Company's conditions of sale.

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TÜV CERT DIN ISO 9001/ EN 29001 Zertifikat: 5168