



SabroeControl



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# UniSAB 4

The new UniSAB controller generation for industrial refrigeration compressors, heat pumps and chillers. It's Sabroe, naturally

After many years in service, the time has come to say thank you to UniSAB III and pass on its legacy to UniSAB 4.

Sabroe UniSABs are cutting edge and industry-leading on asset protection and the ability to limit the total cost of equipment ownership. The UniSAB offers proven reliability for the compressor as well as the controller itself, and wins indisputably on all the parameters most important to owners of industrial refrigeration (IR) equipment – highest possible plant uptime, yield accuracy, lowest possible total cost of equipment ownership and, not least, cost effectiveness.

UniSAB 4 is 125 years of expertise packaged in new powerful hardware, with IoT connectivity capabilities and a 10" colour touchscreen for quick, intuitive on-screen navigation. It's novel yet already reputable with its acknowledged compact design inherited from its distinguished predecessor, the UniSAB III.

### Selected UniSAB 4 highlights

- New powerful hardware with more inputs and outputs
- Same footprint and cable-wire plug configuration as UniSAB III
- 10" colour touchscreen
- Embedded web browser
- User screens as mobile-friendly responsive web pages
- Secure internet connection
- Flexible and user configurable Multisab++ sequencing system
- Industrial communication protocols
- Available for retrofit
- UniSAB 4 is fully integrated with Johnson Controls OpenBlue services

**UniSAB 4. More capable. More flexible. More efficient.**



## Technical data

Enclosure:	IP55 box version, IP55 panel version
Ambient temperature:	0-55°C box version
Ambient humidity:	10-90% non-condensing
Power supply:	100-240 VAC, 50-60 Hz
Dimensions (H x W x D):	380*300*210 mm
Max. own consumption:	20 VA
Max. supply fuse:	10 A
Weight:	6.5 kg
Cable entry:	Flanges included
Compliance:	CE
Approvals:	Marine DNV/GL UL, cUL

## System information

Operating system:	Linux
Graphical user interface:	10.1" colour touchscreen. Web server, embedded web browser, cyber secure IoT connectivity.
Communication protocols:	Modbus TCP via on-board Ethernet interface. Profibus DP via optional serial interface card. Profinet (future).
Inputs/outputs:	18 digital in, 25 digital out, 25 analogue in, 5 analogue out.

## Application support

Compressors supported:	Fixed and variable speed reciprocating compressors, with or without solenoid activated unloading system.  Fixed and variable speed screw compressors, with or without automatic capacity slide and VI-slide system.
Applications supported:	Industrial chiller applications.  Industrial heat pump applications.  Pump circulation and self-circulation refrigerant systems.  DX systems.
Refrigerants:	12 preloaded refrigerant tables, e.g. R717, R600, R290, R744 and a universal.
Languages:	19 preloaded languages, e.g. English, Danish, French, German, Spanish.
Main features:	Advanced compressor protection and limiter system.  Dynamic service interval computations.  Smart, efficient capacity regulation systems for automatic control of capacity steps, capacity slide, VI-ratio and motor speed, curbing the wear of parts, securing the yield accuracy and optimising performance of the single package.  Special heat pump compressor protective features.  Built-in Multisab++ sequencing system for effective load distribution among multiple UniSAB 4s and UniSAB IIIs on compressors in a refrigerant pressure system or water temperature system, curbing wear, optimising performance, securing maximum plant uptime and yield accuracy of the total machine room compressor base.  Remote control of capacity, remote setpoint, remote process sensor, outdoor compensation sensor.  Automatic switching of parameter sets via digital inputs or communication interface (e.g. for seasonal switching between cold and hot side control of chillers/heat pumps) (future function).  Condenser capacity control signal (future function).  Control of pumps and valves on hot and cold side of heat pumps (for control of source/sink water energy and temperatures) (future function).

All information is subject to change without notice.

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