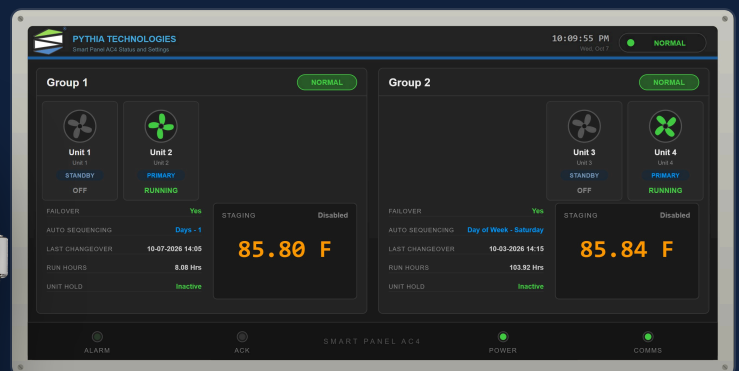




SMART PANEL AC4 · SPAC4 AND SPAC4-LED

Automatic changeover for the equipment that can't stop.

The Smart Panel AC4 runs up to four CRAC units, rooftop units, pumps or other redundant equipment as one system. It rotates lead and standby to share the wear, starts a standby the moment a running unit alarms, and brings more units online as the temperature climbs. Every state is visible at the panel, in a browser and in your BMS.



The panel's live status page: two groups, each unit's role and run state, changeover schedule, run hours and the staging sensor

4 units

in one group, or split across two independent groups

4 stages

of temperature staging per group, cooling or heating

3 protocols

BACnet/IP, Modbus/TCP and SNMP to your BMS and NMS

SPAC4

Smart Panel AC4

An iPad display in the door shows live status and lets you configure the panel on the spot.

SPAC4-LED

Smart Panel AC4-LED

A unit LED and a write-on label for each unit. Configured and monitored over the network.

Failover

A standby starts the moment a running unit alarms.

Auto changeover

Lead and standby rotate on a schedule to share runtime.

Temperature staging

More units come online as the load rises.

Standby exercise

Backup units run on a schedule so they're ready.

WHAT THE SPAC4 DOES

Shares the load across redundant units, and covers the moment one fails.

Running the same unit all the time wears it out years before its twin, and a failed unit at 2 a.m. shouldn't wait for someone to notice. The SPAC4 watches each unit's summary alarm, switches units on and off through its own relays, and reports everything it does.

FAILOVER

Standby takes over

When a running unit alarms, the panel starts a standby and stops the faulted unit. When the alarm clears, roles return to normal, or stay put until someone acknowledges.

AUTO CHANGEOVER

Runtime is shared

Lead and standby roles rotate every 12 hours, every set number of days, or on a chosen day of the week or month, at the time you set.

STAGING

Capacity follows load

Up to four temperature setpoints add units as the space heats up (cooling) or cools down (heating), with a range that stops short-cycling.

EXERCISE

Backups stay ready

A standby unit can run on a schedule, for up to an hour, so a seized fan or stale coil shows up before you need the unit.

Latched failover

Optionally latch the primary alarm, or keep the primary running while in alarm. A latched alarm holds until it is acknowledged.

Maintenance mode

Force any unit On or Off for service. The panel holds that state until the mode is changed back.

One panel, two systems

Split the four units into two groups, each with its own failover, changeover schedule, staging and sensor.

Unit hold time

After a unit starts, its alarms are ignored for a set time so it can come up to normal operation. An alarm delay filters brief faults.

Staging during a fault

If staging needs more units than are healthy, the panel still calls on units to bring the temperature back.

Alarms you can hear and see

Alarm and power indicators, an audible alarm and a hold-to-acknowledge button, plus a common alarm relay for your BMS or annunciator.

WHAT CONNECTS TO IT

YOUR EQUIPMENT

Units 1–4

CRAC, RTU, condenser, pump ...

Summary alarm, per unit

Voltage-free dry contact

Unit on/off control

Relay per unit, NO or NC

Temperature sensors

One per group, Type II 10K

Smart Panel AC4

SPAC4 · SPAC4-LED

- Failover and latching
- Scheduled changeover
- Temperature staging, 4 stages
- Standby exercise schedule
- Alarms, history and trends
- Up to 4 units in 1 or 2 groups

AT THE PANEL AND ON THE NETWORK

At the panel

iPad display or unit LEDs, indicators, buzzer, hold-to-acknowledge

Web browser

Live status page and configuration console, on every model

BMS and NMS

BACnet/IP · Modbus/TCP · SNMP
Email, text and SNMP trap alerts

Common alarm relay, NO or NC

Inputs: up to 1,000 ft of voltage-free wiring per unit. Relays: 6 A at 250 VAC or 30 VDC, Class 2 circuits only.
Power: 120 VAC standard, 24 VAC or 48 VDC optional.

CONFIGURATIONS

From a lead/lag pair to a four-stage capacity bank.

Each unit is set to Primary or Standby within a group, and the group decides how they fail over, rotate and stage. Roles physically swap at each changeover, so today's primary is tomorrow's standby. These are the arrangements we see most often.

P Primary, runs normally **S** Standby **P** Group 2

Lead/lag CRAC pair

Server room with two identical CRAC units



Changeover Weekly, Sunday 10:00 a.m.
Staging Cooling: 75 °F, 85 °F
Failover On, not latched

One unit runs and the roles swap every week. Past 85 °F the standby joins in. If the running unit alarms, the standby takes over and hands back when the alarm clears.

Critical pair, latched failover

Same pair, cooling a critical IT load

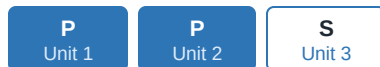


Changeover Weekly, Sunday 10:00 a.m.
Staging Cooling: 75 °F, 85 °F
Failover On, primary alarm latched

A fault that clears itself is never trusted silently. The standby keeps running until a technician acknowledges the alarm at the panel or in the browser.

Three rooftop units, N+1

Two units hold comfort, the third is a rotating spare

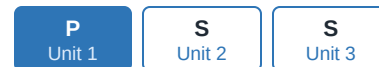


Changeover Weekly, Sunday 10:00 a.m.
Staging Cooling: 75, 80, 85 °F
Failover On, latched

Roles rotate one position each week, so every unit takes a turn as the rested spare. The third unit starts past 85 °F or when either running unit faults.

One lead, two rotating standbys

Maximum rest for each of three identical units



Changeover Monthly, the 27th at 1:00 a.m.
Staging Off
Failover On, not latched

Only one unit runs. The lead advances once a month, and a fault hands off to the next unit in sequence, so the site always has two backups in reserve.

Two systems on one panel

A CRAC pair and a pump pair, managed separately



Group 1 Every 15 days, failover not latched
Group 2 Weekly, Friday 5:30 p.m., latched

Each group has its own schedule, failover rules, staging and sensor. A fault or rotation in one group has no effect on the other.

Four-stage capacity bank

A process area whose load swings with production



Changeover Off
Staging Cooling: 75, 80, 85, 90 °F
Failover Off

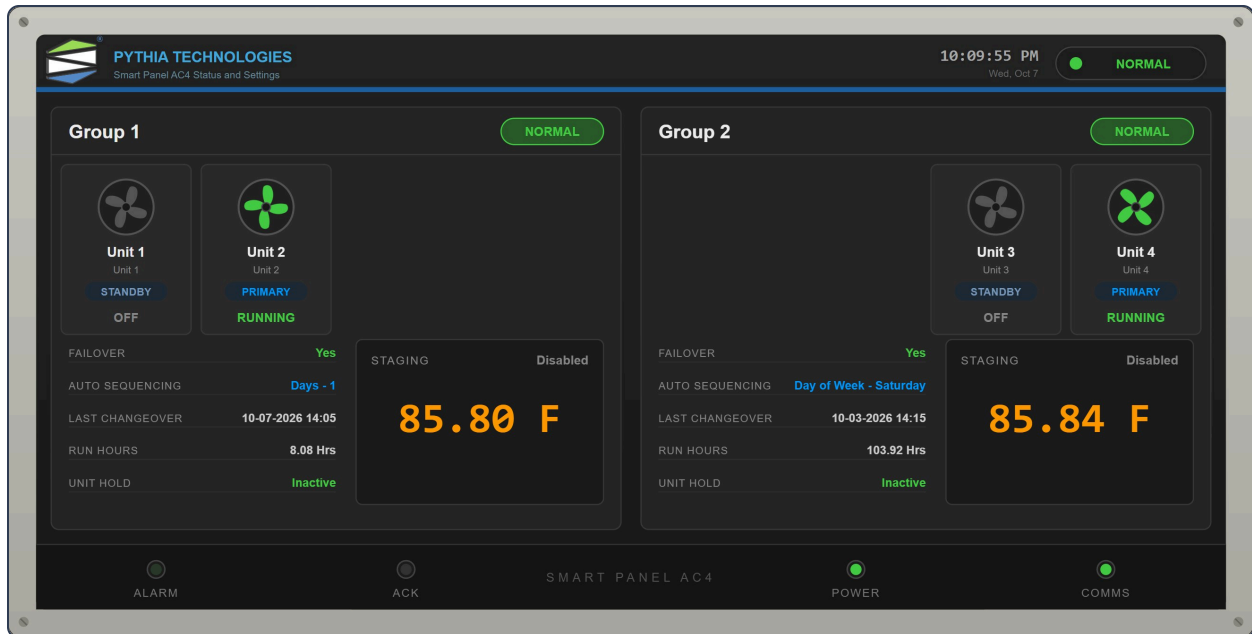
All units start off. One unit comes on at each setpoint and drops out as the space cools, giving a clean four-step capacity curve.

Replacing a Liebert AC4? The SPAC4 is a direct, modern replacement for the legacy Liebert AC4 changeover panel. It works with each unit's existing summary alarm contact and on/off control, and adds remote visibility and BMS integration the original never had.

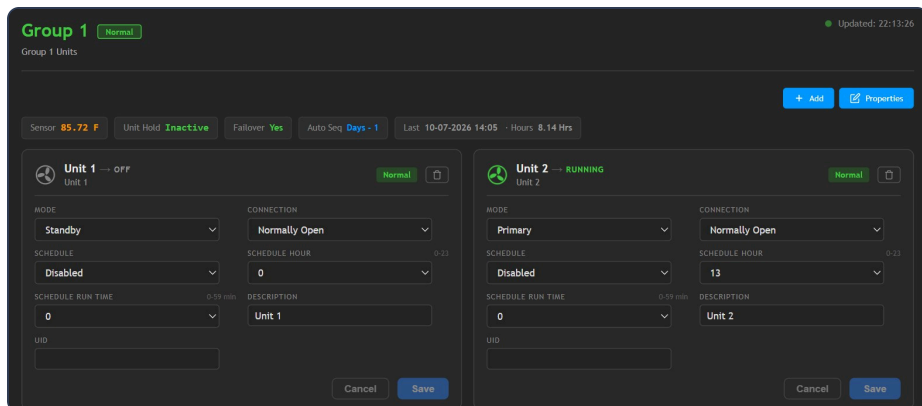
IN OPERATION

Every unit's state at the panel, in a browser and in your BMS.

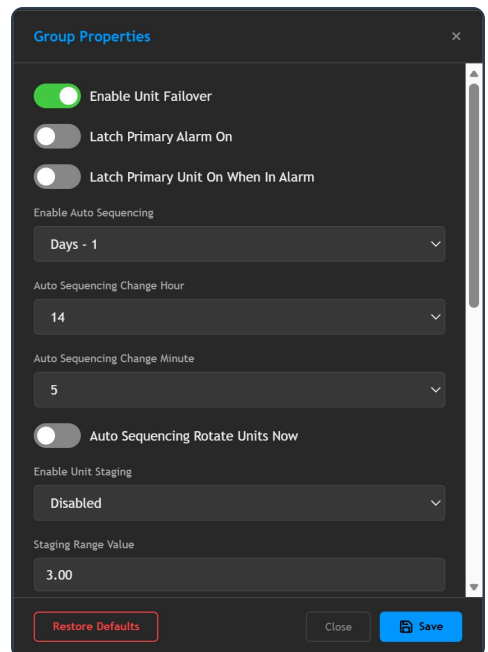
Each panel serves its own live status page and configuration console over the network, on both models. There is nothing to install on any PC, tablet or phone.



Live status page. Both groups at a glance: each unit's role and whether it is running, failover and changeover settings, the last changeover, run hours, unit hold and the staging sensor. It is the same view shown on the SPAC4's iPad display.



Group page. Set each unit's mode, relay connection, exercise schedule and description.



Group properties. Failover and latching, changeover schedule, staging mode, range and setpoints.

PUBLISHES TO YOUR BMS, SCADA AND NMS

BACnet/IP device

Modbus/TCP registers

SNMP agent, MIB available

Email and text alerts

SNMP traps

Common alarm relay

Panel, group and unit states and sensor values. Unit modes can be set over BACnet/IP or SNMP where writes are enabled.

MODELS

Two front panels. The same control.

Both models run the same changeover, failover and staging logic, publish the same data and serve the same web pages. Choose by what the people standing in front of the panel need to see.



SPAC4

Smart Panel AC4

- An iPad display mounted in the door shows the live status page.
- Configure groups and units at the panel, without a laptop.
- Tap a group or unit to see its detail.
- Alarm and power indicators, buzzer and hold-to-acknowledge button.
- Also configured and monitored over the network.



SPAC4-LED

Smart Panel AC4-LED

- An LED for each of the four units, with a write-on label beside it.
- A Unit Hold LED shows when a unit is in its start-up hold time.
- Alarm and power indicators, buzzer and hold-to-acknowledge button.
- Configured and monitored over the network from any browser.
- Suited to plant rooms where nobody needs a screen at the panel.

On both models

4 unit alarm inputs

4 unit control relays

2 temperature inputs

Common alarm relay

1 or 2 groups

Live status page

Configuration console

BACnet/IP · Modbus/TCP · SNMP

Email, text and trap alerts

IP67 ABS enclosure

AI Connector

DM AI CONNECTOR

Ask the panel what's running.

Connect Claude, ChatGPT or any assistant that speaks MCP. It answers from the panel's live data and can make changes only where you allow it.

Is anything in alarm on the AC4 panel?

No. Both groups are normal. Units 2 and 4 are running as primary, and Units 1 and 3 are on standby.

Illustrative example

SPECIFICATIONS

SPAC4 and SPAC4-LED.

CONTROL	
Units and groups	Up to 4 units, in 1 group or split across 2 independent groups
Unit modes	Primary, Standby, On (forced on) and Off (forced off)
Failover	Driven by each unit's summary alarm. Optional latching of the primary alarm, and of the primary unit on while in alarm
Auto changeover	Every 12 hours, every set number of days, or on a day of the week or month, at a set hour and minute. Rotate on demand
Temperature staging	Up (cooling) or down (heating), 4 setpoints per group, adjustable staging range, optional staging alarm
Standby exercise	Scheduled run for standby units, up to an hour, at a set start hour
Timers	Alarm delay time and unit hold (cycle) time
INPUTS AND OUTPUTS	
Unit alarm inputs	4, voltage-free dry contact only. Up to 1,000 ft with Belden 6300UE
Unit control relays	4, Normally Open or Normally Closed. 6 A at 250 VAC, 6 A at 30 VDC. Class 2 circuits only
Common alarm relay	1, Normally Open or Normally Closed, same rating
Temperature inputs	2, one per group. Type II 10K thermistor, °F or °C
At the panel	SPAC4: iPad display. SPAC4-LED: unit 1–4 and Unit Hold LEDs. Both: alarm and power indicators, buzzer, hold-to-acknowledge button
NETWORK AND INTEGRATION	
Web	Live status page and configuration console, served by the panel
Protocols	BACnet/IP, Modbus/TCP and SNMP (MIB available)
Notifications	Email, text and SNMP traps. Alarm history kept on the panel
PHYSICAL	
Enclosure	ABS, IP67 rated, UL94-V0. SPAC4: 16.25 × 13 × 7.5 in
Power	120 VAC standard. 24 VAC and 48 VDC optional. The processor module requires UPS and/or inverter protection
Environment	–30 to 45 °C (–22 to 113 °F) inside the enclosure. 5 to 95% RH, non-condensing
Recommended wiring	Belden 6300UE for dry contacts, Belden 6300FE for communications

Specifications are subject to change. Call for alternative assemblies and options.

WHERE IT'S USED

Data center and server room CRAC / CRAH

Rooftop units in N+1

Condensers and dry coolers

Process pumps

Liebert AC4 replacement

Put your redundant units on autopilot.

Tell us what equipment you need to rotate and protect, and we'll help you configure the panel for it.

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