AHU handover consistency review

Connect points, operator graphics, control intent and operating records.

28 REGISTERED POINTS · 3 SCOPED FUNCTIONS · 4 FOLLOW-UPS

CLIENT REQUEST

“Review the registered AHU points, operator graphics and handover records for inconsistencies and omissions.”

Review all 28 registered points and three selected functions/settings in the supplied records. Trace three point-related findings and one function-related finding.

Delivery: full-point review, source register and evidence-linked action log.

Client corrections and test records are reconciled by remote review.

Fictional request and synthetic records. AHU graphic: p.2. Sources and review scope: p.9.

DELIVERED

01 **Wrong binding identified; correction verified**

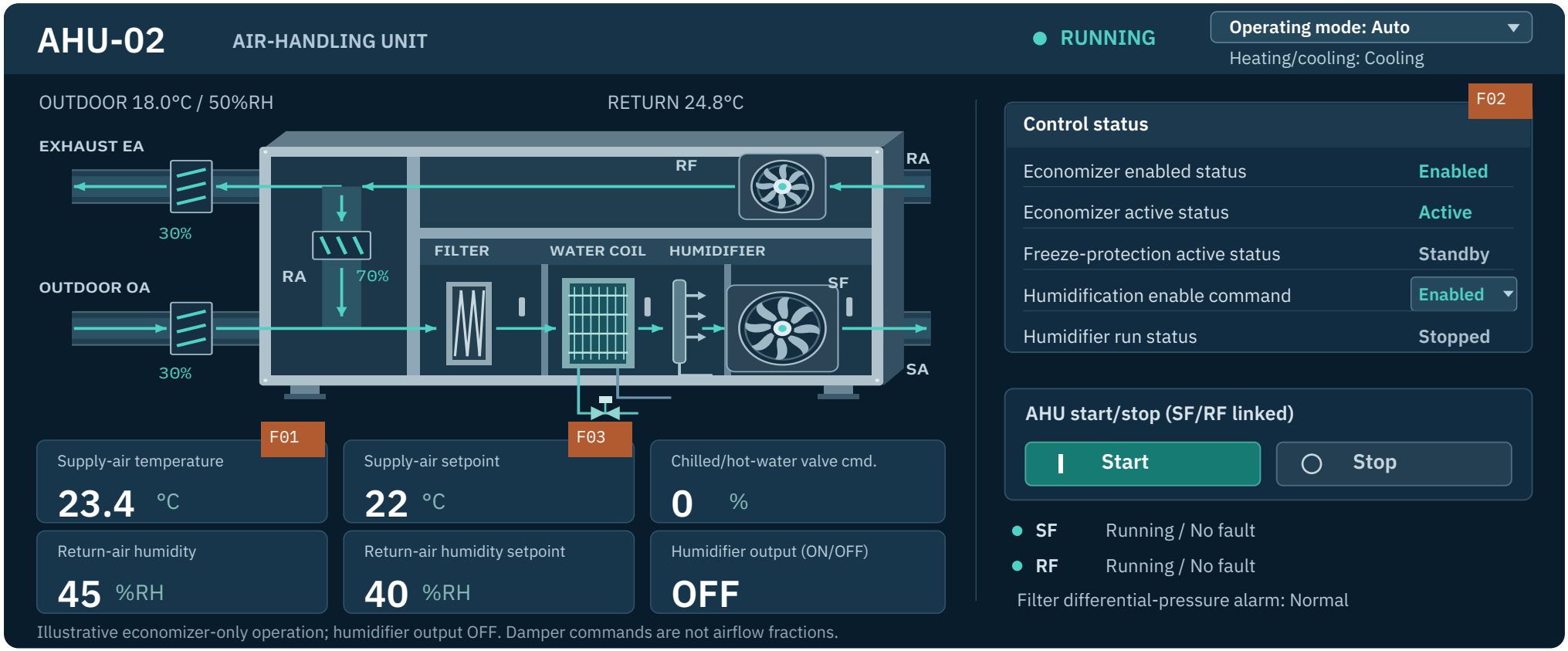
02 **Read-only freeze enable display verified**

03 **Approved 22°C reconciled with records**

04 **60-second mismatch onset verified in records**

The AHU operator graphic under review

A reconstructed excerpt of the initial graphic. Compare it with the point list, configuration and sequence.



F01 **Check the SAT source binding**

23.4°C is from the wrong AHU → p.5

F03 **Compare 22°C with the 24°C sequence**

Verify the change intent and approval → p.3–4

F02 **Freeze enable indication is absent**

Compare with the display requirement → p.6

F-labels are review overlays. Required displays: 28 points (26 main + 2 maintenance). This is an excerpt; the full register is on p.10.

Setpoint difference 1/2 | Discovery

F03 / P07 SAT setpoint: 24°C in documents, 22°C in implementation. Approval and outcome continue on the next page.

BASELINE EVIDENCE / RELEVANT EXTRACTS

Control sequence Rev.C

24°C

SAT setpoint / §2.1

BMS configuration Rev.1

22°C

Implemented SAT setpoint

O&M manual Rev.B

24°C

Operating setpoint / §3.2

REVIEW REASON

A temporary override, or a new operating baseline?

Ask for the reason, scope, approval and duration. The initial package contains no change record, so verify the basis before directing a reset.

CONCLUSION / ACTION & RECHECK

Classification: change intent requires confirmation.

Additional input: an approved operating-change record. The next page shows the decision and controlled-document updates.

Reference: operating-change record CR-01

Sources: sequence Rev.C, SAT setpoint; configuration Rev.1, same point; O&M Rev.B, temperature settings.

Setpoint difference 2/2 | Decision

Continuation of F03. Approval establishes a new operating baseline: retain 22°C and update the controlled records.

APPROVED CHANGE / OPERATING-CHANGE RECORD CR-01

Reason	Occupants reported that the space was too warm.
Scope	AHU-02 SAT setpoint only: 24°C to 22°C
Decision	Adopt 22°C as the current baseline; update controlled records
Authority	Facility manager approval / implementation by BMS engineer

REVIEW REASON

Link the setpoint to its approval.

05 Oct 08:00 - approved
05 Oct 10:00 - implemented
08 Oct 11:00 - received by reviewer

Approval existed before implementation but was missing from the initial review package.

CONCLUSION / ACTION & RECHECK

Keep 22°C. Reconcile the controlled records.

Sequence Rev.D and O&M Rev.C now record 22°C. Configuration Rev.2 confirms that 22°C was retained.

Original sequence Rev.C retained in change history

Conclusion: consistency with the approved change. This review does not establish 22°C as the optimal comfort or energy setting.

The SAT display reads the wrong AHU.

Point: P06 supply-air temperature. Check the operator graphic and trend bindings separately.

SOURCE RECORDS / RELEVANT EXTRACTS

Approved point list Rev.C Supply-air temperature / P06	AHU02.SAT
BMS configuration Rev.1 Graphic binding	AHU01.SAT
BMS configuration Rev.1 Trend binding	AHU02.SAT

REVIEW REASON

Graphic and trend bindings are separate.

The graphic reads AHU01.SAT; the trend reads AHU02.SAT. Separate comparisons with the point list isolate the correction to the graphic.

CONCLUSION / ACTION & RECHECK

Correct the graphic source to AHU02.SAT.

Revised binding and display record reviewed together. At 10:15:00 the graphic and target point both record 21.8°C.

Configuration Rev.2 / graphic Rev.2 / recheck T02

Graphic means the AHU operator view, such as on a central workstation. Review the binding and displayed value together.

Make unintended disabling visible.

Show whether freeze protection is enabled, so operators can spot unintended disabling after updates or changes.

REVIEW REASON / A POTENTIAL RISK THAT JUSTIFIES THE DISPLAY

01 Updates or configuration changes

A configuration error could disable freeze protection unintentionally.

02 Disabling goes unnoticed

A “Standby” active-status indication alone does not establish whether protection is enabled.

03 Protection unavailable when needed

If left disabled, the control may be unavailable when needed, risking freeze damage.

BEFORE / NO ENABLED-STATUS INDICATION

Control status (relevant excerpt)	
Economizer enabled status	Enabled
Economizer active status	Active
Freeze-protection active status	Standby

“Standby” alone does not show whether protection is enabled.

AFTER / LIVE, READ-ONLY ENABLED STATUS

Control status (relevant excerpt)	
Economizer enabled status	Enabled
Economizer active status	Active
Freeze-protection active status	Standby
Freeze-protection enabled status	Enabled

The operator can check the current enabled/disabled state.

Purpose: give operators a way to detect unintended disabling.

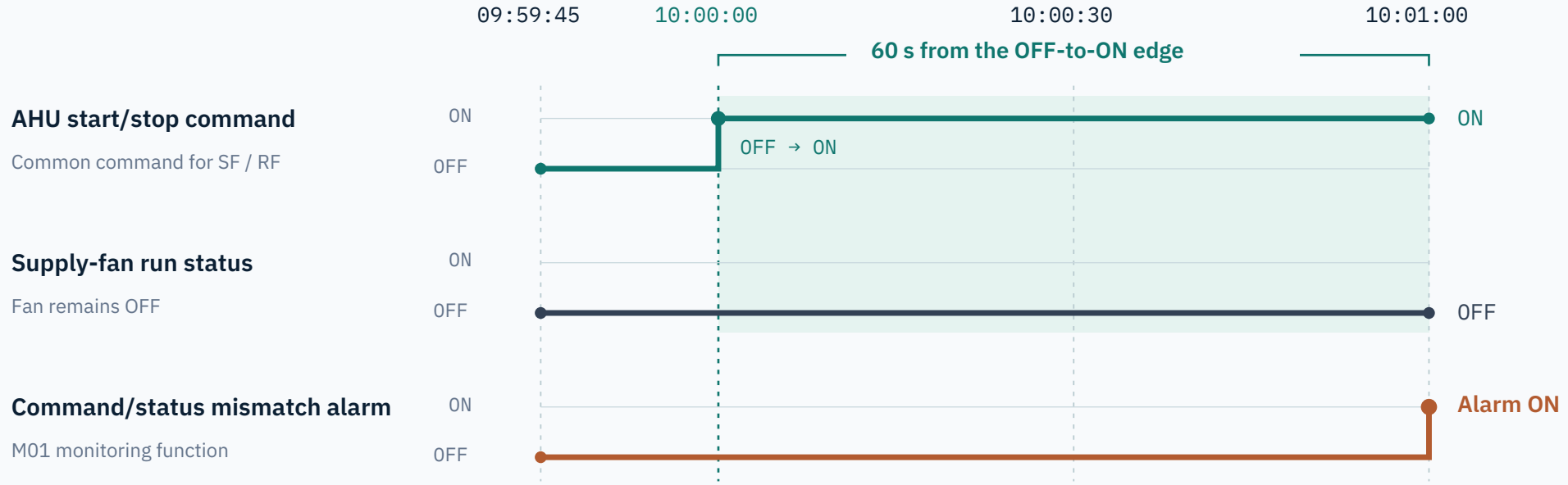
Sources: point list C, config./graphic 2, T03/T04. Binding and read-only access checked; Enabled/Disabled/Unknown verified in a test environment.

Count 60 seconds from the start command.

At 10:00:00 the command changes from OFF to ON. The supply fan stays OFF, and the mismatch alarm starts 60 seconds later.

Initial record: “alarm displayed,” with no times. → Timed records received, including the command OFF-to-ON event.

RETEST / 10 OCT 2026 · MANUAL TEST, SCHEDULE NOT APPLIED · RECHECK RECORD Rev.2, T01



Alarm starts at 10:01:00, 60 s after the command changes from OFF to ON.

Supply-fan run status remains OFF throughout. The recorded onset matches sequence Rev.C / Rev.D §4.1.

Plotted interval: 09:59:45 to 10:01:00. All three signals are OFF before start. Reverse mismatch, clearing, reset and RF tests are outside scope.

Four follow-ups. Evidence for each decision.

Delivered the full-point review, source register and action log, and checked the client's revised records.

ACTION LOG / FOLLOW-UPS AND EVIDENCE

ID	Follow-up	Client owner	Evidence reviewed
F03	Retain approved 22°C; update records	Facility manager / document owner	Change record CR-01; sequence Rev.D; O&M Rev.C; configuration Rev.2
F01	Correct the SAT graphic binding	BMS engineer	Configuration / graphic Rev.2; display recheck T02
F02	Add read-only freeze enable indication	BMS engineer	Configuration / graphic Rev.2; state/access checks T03/T04
F04	Supply timed mismatch-alarm evidence	Commissioning engineer	Recheck record Rev.2; alarm test T01

RECONCILED / DOCUMENT-REVIEW OUTCOME

28 / 28
Points and displays reviewed

3 / 3
Selected functions checked in records

4 / 4
Follow-ups reconciled

Bindings, locations, access, units and states also reviewed. Four findings: three point-related and one function-related. All 28 points appear on page 10.

Show the source and the extent of each check.

Document titles and item names lead; review IDs support traceability. Separate source roles from the limits of the review.

SOURCE ROLES

Approved sequence, points and schematic

Required control, displays and system definition

BMS configuration and graphic records

Captured implementation settings/bindings and the AHU operator view

Operations & maintenance manual

Current operating instructions for the operator

Approved changes and recheck records

Reason and authority for changes; evidence after correction

FUNCTIONS / THREE ITEMS IN SCOPE

M01 **Supply-fan command/status mismatch**

AHU command ON + supply-fan run OFF for 60 s. Alarm-onset times checked in records.

M02 **Schedule settings**

Mon–Fri: start 08:00, stop 18:00. Weekends off; no exceptions in review period. Auto mode only.

M03 **Normal economizer damper commands**

OA/EA same command; RA inverse. Compare sequence requirements with configuration records.

HUMIDIFICATION / POINT DEFINITIONS

Return-air humidity drives ON/OFF control. Enable, output and equipment run feedback are separate points; enabled does not mean output ON.

REVIEW LIMITS

Humidification performance, disable behavior and the fan-stop interlock were not tested. Engineering setting values were not assessed.

Excluded value assessments: freeze threshold, economizer OAT lower limit and SAT proportional band. M02/M03 are record checks. Revisions and dates are in Excel.

Every registered point in this AHU reviewed.

Required locations: Main = AHU main graphic, 26 points; Detail = maintenance view, 2 points. All 28 require a display.

ID	Registered point	Display
P01	AHU start/stop command	Main
P02	Supply-fan run status	Main
P03	Supply-fan fault alarm	Main
P04	Return-fan run status	Main
P05	Return-fan fault alarm	Main
P06	Supply-air temperature	Main
P07	Supply-air temperature setpoint	Main
P08	Chilled/hot-water valve command	Main
P09	Filter differential-pressure alarm	Main
P10	Shared outdoor-air temperature	Main
P11	Shared outdoor-air humidity	Main
P12	Economizer enabled status	Main
P13	Economizer active status	Main
P14	Freeze-protection enabled status	Main

ID	Registered point	Display
P15	Freeze-protection active status	Main
P16	Heating/cooling state	Main
P17	Return-air temperature	Main
P18	Outdoor-air damper command	Main
P19	Exhaust-air damper command	Main
P20	Return-air damper command	Main
P21	Operating mode (Off / Auto / Manual)	Main
P22	Supply-fan accumulated runtime	Detail
P23	Supply-fan start count	Detail
P24	Return-air relative humidity	Main
P25	Return-air relative-humidity setpoint	Main
P26	Humidifier output (ON/OFF)	Main
P27	Humidification enable command	Main
P28	Humidifier run status	Main

Point list, configuration and graphic records are compared point by point. Excel contains the detailed bindings and review decisions.

P-numbers are review IDs for this sample. Document titles and item names accompany them; the Excel source register traces each source.