

CASE STUDY · INDUSTRIAL / AHU BMS INTEGRATION

How LMW Eliminated Manual Floor Walks and Centralised 3 AHUs with EnSmart BMS in Coimbatore

Before EnSmart, every on/off command meant an operator physically walking to each floor's programmable room thermostat. After EnSmart, one operator in one BMS room sees live values, graphics, and full control — for all three AHUs — without leaving the chair.

Client: LMW · Location: Coimbatore, Tamil Nadu · Platform: EnSmart DDC + Modbus · Year: 2024

At a Glance

3	1	100%	0
AHUs Integrated	EnSmart Controller	Remote Control Achieved	Manual Floor Visits Needed

The Problem: Think of It Like a Night Watchman With No Walkie-Talkie

Imagine a security guard who has to physically walk to each room on each floor just to switch on a light — there's no central panel, no intercom, no way to know if a room is too hot or too cold without standing in it. That's exactly what LMW's operators were doing with their Air Handling Units.

Three AHUs across multiple floors, each controlled by a two-pipe programmable room thermostat. Every on/off decision meant a physical trip to that floor. Temperature couldn't be monitored remotely. There was no way to know if an AHU had faulted unless someone went and checked. The building was breathing without anyone properly listening.

- **No remote control existed**

Operators had to physically walk to each floor to switch AHUs on or off via the room thermostat — every single time.

- **No centralised view**

No way to see temperature or AHU status across all three floors at once — each floor was a separate manual check.

- **Faults went undetected**

Issues and anomalies went unnoticed until someone happened to visit that floor on their next scheduled walk-round.

- **No historical data or trend logging**

Every decision was based on a moment-in-time manual reading — no trends, no records, no ability to spot patterns.

- **Wasted manpower on routine walk-rounds**

Skilled operators were spending time on physical checks that a BMS dashboard could replace entirely.

"Before EnSmart, the only way to know what an AHU was doing was to walk to it. After EnSmart, the operator sees all three AHUs — live temperatures, status, alarms — from one screen without leaving the BMS room."

What Made This Project Special — Simple Setup, Big Shift

- **One controller, three AHUs.**

A single EnSmart DDC controller connected to all three AHUs via Modbus through a Softpoint gateway — clean, minimal hardware footprint with no need to replace existing field equipment.

- **Modbus as the common language.**

Like a translator sitting between the AHUs and the BMS, Modbus allowed the existing channel partner module to feed real data to EnSmart without replacing any field equipment.

- **Live graphics on the BMS.**

Operators can now see a graphical representation of each AHU — supply air temp, return air temp, on/off status — all on a single screen in real time.

- **Total remote command.**

What once required a walk to a thermostat on each floor now happens with a click. AHUs can be started, stopped, and monitored entirely from the BMS operator room.

How It Came Together — A Focused One-Week Deployment

Day	Activity
Day 1–2	Site survey, Modbus address mapping for 3 AHUs, EnSmart controller installation and RS-485 wiring through Softpoint channel partner module.
Day 3–4	EnSmart BMS software configuration, point mapping, live data verification — all Modbus registers confirmed live on BMS.
Day 5	AHU graphics pages built in BMS — supply air temp, return air temp, on/off status, and alarm display for each AHU.
Day 6–7	Operator training, remote control testing, sign-off by LMW facility team — project handed over fully commissioned.

From Reactive to In Control — The Business Impact at LMW

- **Zero floor walks for AHU control.**

Operators no longer travel to each floor to start or stop AHUs — 100% of commands are now issued from the BMS room.

- **Real-time visibility across all floors.**

Live temperature values and AHU status for all three units visible simultaneously on one BMS graphics screen.

- **Faster fault response.**

Issues surface immediately on the BMS dashboard — no more discovering faults on the next scheduled walk-round.

- **Leaner operations.**

Manpower previously spent on manual checks is redirected to higher-value maintenance and monitoring tasks.

Results and Value Delivered

Area	Before EnSmart	After EnSmart
AHU Control	Walk to each floor thermostat for every on/off	100% remote control from BMS room
Visibility	No live view — floor walk required to check status	Live temp + status for all 3 AHUs on one screen
Fault Detection	Faults found only on next scheduled walk-round	Instant alarm on BMS dashboard
Data & Trends	No logging — moment-in-time manual readings only	Historical trending and data logging built in
Hardware	Existing room thermostats with no supervisory layer	Same thermostats + EnSmart BMS layer on top
Manpower	Skilled operators spending time on routine walk-rounds	Operators freed for higher-value tasks

Frequently Asked Questions

Q: Did the existing room thermostats need to be replaced?

A: No. The two-pipe programmable room thermostats remained in place. EnSmart's BMS adds a supervisory layer — operators can now issue commands from the BMS room, while the thermostats still function locally as a backup.

Q: How does one controller manage three separate AHUs?

A: The Softpoint channel partner module acts as an interpreter — it collects Modbus data from all three AHUs and sends it to the EnSmart DDC controller in one structured feed. The controller then passes everything to the BMS software.

Q: How long did the whole project take?

A: The project was completed in approximately one week — from initial site survey to full operator handover — including wiring, software configuration, graphics, and training.

Q: Can this setup scale if LMW adds more AHUs in the future?

A: Yes. The EnSmart architecture is designed to scale. Additional AHUs can be added to the same Modbus network and mapped into the existing BMS software without replacing the controller or the core infrastructure.

LMW's transformation took one week and one controller. If your facility is still relying on manual thermostat visits for AHU control, EnSmart's BMS can give your operators centralised visibility and command from day one.

Ready to stop walking floors and start watching screens?

EnSmart connects your existing AHUs over Modbus and delivers live graphics, remote control, and full BMS visibility — one controller, one week.

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