



BACS Compliance Checklist (Based on EN 15232 / EPBD)

This checklist is designed for HVAC engineers, facility managers, and ESCOs to evaluate whether a building’s automation and control system meets Class A or B energy efficiency standards.

Part 1: Terminal Control Capabilities

- ☐ Demand-Led Control
Can radiators in each room be adjusted independently based on actual occupancy?
- ☐ Real-Time Data Feedback
Can terminal devices (e.g., TRVs) report valve position and room temperature to the central system in real-time?
- ☐ Setpoint Limitation & Locking
Can the system remotely limit min/max temperatures to prevent energy waste in public areas?
- ☐ Adaptive Control
Does the system feature learning algorithms to start/stop heating based on the building’s thermal inertia?

Part 2: Communication & Integration

- ☐ Bidirectional Communication
Can the controller receive device status alerts (e.g., low battery, valve blockage) in addition to sending commands?
- ☐ BMS Interoperability
Do devices use open protocols (e.g., LoRaWAN, BACnet) to integrate seamlessly into a Building Management System?
- ☐ Centralized Monitoring
Can managers view the entire building’s HVAC status through a single centralized dashboard?

Part 3: Advanced Functions (Class A Requirements)

- ☐ Open Window Detection
Does the valve automatically close when a sudden temperature drop (open window) is detected?
- ☐ Anti-Seizing & Frost Protection
Does the valve perform periodic self-maintenance runs during the off-season to prevent sticking?
- ☐ Inter-System Linking
Is HVAC control integrated with lighting or shading to maximize natural heat gains?

Part 4: Hardware Reliability

- ☐ Physical Security & Anti-Tamper
In public venues like schools or hospitals, are devices equipped with anti-theft and tamper-proof locks?
- ☐ Power Sustainability
Do battery-powered devices offer a maintenance cycle of over 3 years with low-power alerts?

How to use this checklist?

- Self-Audit: If your project scores less than 60%, the building is likely at Class C or D, facing risks of high energy penalties.
- Upgrade Path: By deploying SEA889 LoRaWAN TRVs, you can elevate a system from Class D to Class A/B instantly without rewiring.

BACS Energy Class Quick Reference

BACS Class	BACS Class	Key Technical Features	Recommended Hardware
Class A	High Performance	Predictive control & real-time IoT integration	SEA889 LoRaWAN TRV
Class B	Advanced	Individual room control & remote data feedback	SEA889 LoRaWAN TRV
Class C	Standard	Basic automated thermostatic control(No remote)	Standard Mechanical TRV
Class D	Non-Compliant	Manual valves; no automation	Needs Immediate Upgrade