

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