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Product Data Sheet Heated Bat Box (Code B1BBH)

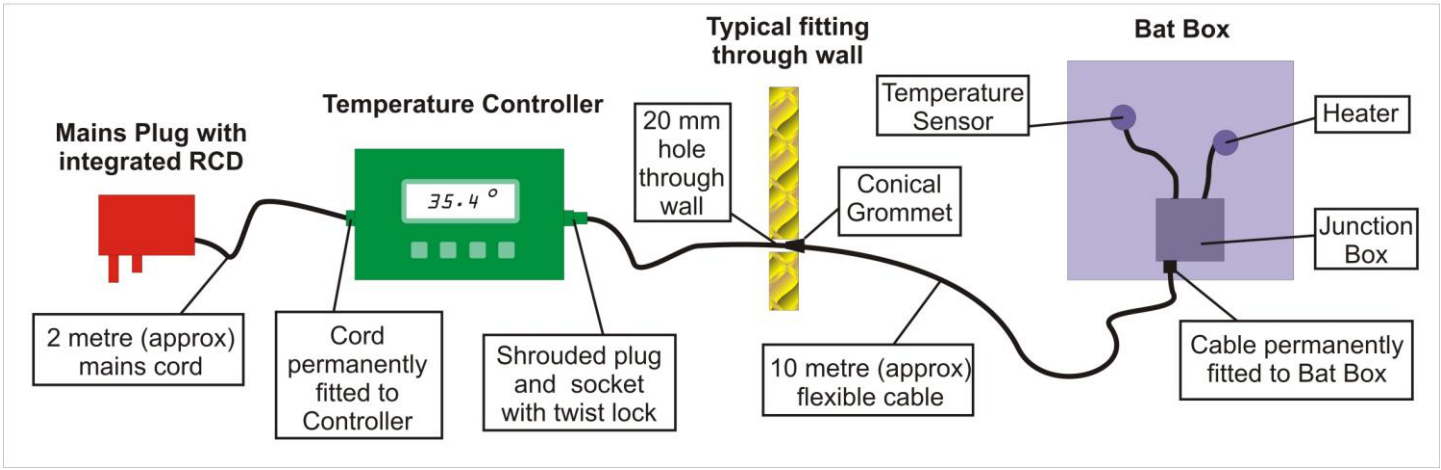
General	
Appearance	
Summary	A UK made heated wooden box designed for small crevice dwelling bats such as Common Pipistrelle and Soprano Pipistrelle. Flat Backplane ideal for fitting on walls or cladding of buildings. Made from external grade FSC® Certified European birch plywood with ceramic inserts and thermostatically controlled waterproof ceramic insulated heater. Easy to install with no wiring required. Remote temperature controller connected by 10 metre power/monitoring cord. Operates on mains voltage 220V to 240V AC. Specifications include simplified fitting (no electrician required), enhanced thermal properties and features designed to facilitate inspections by licenced bat workers.
Recommended Use	Use on buildings, trees, poles etc to enhance environmental aspects or as part of a bat habitat mitigation scheme. May be used as part of a BREEAM or CSH assessment. Particularly suitable for replacing bat habitat where a roost enjoys artificial heating such as hot water pipes.
Key Product Features	• Economic solution for replacement of heated bat roosts • Plug and Play: simple installation with no wiring or electrician needed • Temperature inside bat box adjustable and controlled from inside building by microprocessor controller • 10 metre power cord suitable for most buildings; Extension cables available • Safe: integrated RCD protects against shock; heater intrinsically safe; wiring protected to IP66 • Retains proven features from **Improved** range of bat boxes

Product Data Sheet Heated Bat Box (Code B1BBHZZZZ) (Page 2)

Specification and Features		
Bat Box		
External Height (mm)	490	
External Width (mm)	260 (Body), 282 (Including Cable Gland)	
External Depth (mm)	130	
Mounting Holes	4 x 4mm Diameter	
Weight	8.0 kg	
Colour	Black	
Fitting	Screw or nail to wall or flat surface; fit by nails, screws, cable or strap to tree or other uneven surface	
Entrance Configuration	Slot at base running from left wall to right wall of box; Bat landing ladder extends below entrance and internally up to top of box	
Entrance slot width (mm)	17	
No of Internal Crevices	3	
Construction Material (body)	12mm external grade European birch plywood Certified FSC® MIX and Rainforest Alliance Certified™ ***Rainforest Alliance Certified™*** **The Mark of Responsible Forestry**	
Fabrication	Plywood panels precision cut using computer controlled equipment; Panels assembled with surface sunk galvanised staples	
Access for Monitoring etc (Requires Bat Licence)	Removable Roof with 2 stage opening: Stage 1:Remove external roof (secured with 1 stainless steel screw) Stage 2: Lift off roof insulation (no tools required) (interior not exposed until after Stage 2)	
Thermal Characteristics	**Natural Heat Gain**	Increased by black surface coating, convection into box from landing ladder
	Thermal Inertia	Birch ply outer enhanced with ceramic inserts designed to increase heat retention
	Number of Ceramic Inserts	3
	Total Thermal Capacity of Box including Ceramic Inserts and Plywood Outer (estimated)	11.0 kJ/K
	Insulation	Provided by 12 mm plywood walls and foam insulation above crevices.
	Air Movement	Close fitting panels and roof (precision cut by CNC routers), with insulation above crevices, and single slot entrance at base restrict airflow and reduce air changes, resulting in improved heat retention and different temperatures in each crevice
	Internal Heater	50W waterproof heater with ceramic core and insulation, sheathed in stainless steel, operating at 240V AC, with metal "fireguard" mounted via heat insulating pad
	Internal Temperature	Controlled by separate remote microprocessor controller
Temperature Sensor	NTC resistance type, nominal value 10,000Ω	
Junction Box	Mounted on base of bat box with permanently connected cable to Temperature Controller, and connections to heater and temperature sensor inside Bat Box; Wiring joints enclosed within glass fibre reinforced polypropylene junction box with thermoplastic elastomere sealing and cable gland. Protected to IP66.	
Power/Sensor Cable From Bat Box to Temperature Controller	Approx 10 metres long flexible cable rated 500V / 6A; A end: Permanently fitted through cable gland to Junction Box; B end: Shrouded male connector to temperature controller; Fitted protective flexible conical grommet manufactured from Z-PVC for securing/weatherproofing wall hole.	
Wall Hole Size	When installing Cable through wall, 20mm Diameter hole required to clear connector	
Principle Conformances	EN 60529 (IP66); EN 60335-1 (ClassII)	

Temperature Controller		
Housing		ABS with rubber feet
External Height (mm)		54
External Width (mm)		95 (Body), 122 (Including Cable Gland and Socket)
External Depth (mm)		160
Colour		Black
Measuring Range		-50ºC to 99ºC
Controller Operating Conditions		0ºC to 60ºC 20% to 85% RH (non-condensing)
Controller Type		Microprocessor; 5 character display (when in operation displays temperature in Bat Box) 4 buttons for function setting
Memory		Non-volatile memory stores parameter settings on power down
Power Consumption		Less than 3W average
Controller Functionality		On/Off Set temperature Set difference temperature Normal operation Alarm with sounder and display when measured temperature less than -50ºC or greater than 99ºC or malfunction of sensor Display shows temperature in bat box and whether heater is on Power/Sensor cable to bat box with fitted protective conical grommet manufactured in Z-PVC for use when installed through circular wall hole. Power cord to UK-style mains plug with integrated RCD
Principle Conformances		EN 61010-1; EN 61326-1; EN 60529 (IP40)
Mains Plug with Integrated RCD		
Designed to Protect		Entire system and all users (bats and humans)
Power Cord to Temperature Controller		Approx 2 metres
Rated Voltage		240V AC
RCD Type		Double Pole RCD Contact Breaker Non-Latching - Requires reset each use
Rated Trip Current		30mA
Typical Trip Speed		40mS
Fuse Rating		3A
Principle Conformances		BS 7071; EN 60309-2; BS 1362
Product		
Environmental	**Certifications**	Certified Forest Stewardship Council® MIX C007915; Rainforest Alliance Certified™; RoHS Certified; CE Marked
	Surface Finish	External wooden surfaces treated with water-based non-toxic non-volatile wood treatment, with active constituent natural borate mineral salt. Tested to EN71-3: no traces found of Antimony, Arsenic, Barium, Cadmium, Chromium, Lead, Mercury or Selenium. Ecotoxicity: Finish not classified as dangerous to the environment
	Electrical	WEEE Producer Registration Number: WEEE/HB0002ZR Battery Producer Registration Number: BPRN03345

Schematic Diagram of System



Key Features of Bat Box