

FX Range of Fixed Duty Flameproof Enclosure / Cabinet Heaters

EXHEAT Industrial's extended range of FX enclosure / cabinet heaters provides an array of enclosure / cabinet heating solutions, and are available in both fixed duty and self-regulating variants. EXHEAT Industrial can also manufacture bespoke self-regulating designs to suit any space restraint or duty requirement. Please enquire about the FXS range for more information.

The FX range also includes the FXT control thermostats, available in both inline or remote designs. These thermostats provide frost protection, condensation prevention and temperature maintenance, and both heaters and thermostats are certified for use in hazardous areas where the atmosphere is classified as Zone 1 or 2 (Gas groups IIA, IIB, IIC) and Zone 21 or 22 (Dust groups IIIA, IIIB, IIIC).

Certification	ATEX/IECEX/UKEX Ⓢ II 2 G D Ex db IIC T4 to T2 Gb Ex tb IIIC T135°C to T300°C Db CCC Ex d IIC T4 to T2 Gb Ex tD A21 IP66 T135°C to T300°C CU TR (EAC) CU-TR.012/2011 CERTIFIED 1 Ex db IIC T4...T2 Gb X Ex tb IIIC T135°C...T300°C Db X CSA: Class I Div 2, Groups A, B, C, D T4...T2 Class II Div 2, Groups E, F, G T4...T2 Class I Zone 1, AEx db IIC T4...T2 Gb Zone 21, AEx tb IIIC T135°C...T300°C Db
Ambient	-50°C with options up to +80°C Minimum of -60°C without the FXT thermostat
Cabling	3m standard (up to 10m available on request)
IP Rating	IP66
Mounting	FXB-FD: Wall or rail mounted vertically using the supplied mounting kit FXH-FD: Directly bolted to the enclosure or a bracket (not supplied)
Output	45 to 500W
Protection	Heater: Flameproof Thermostat: Encapsulated as standard, with flameproof options available
T Class	T4 (135°C) and T3 (200°C)
Voltage	110 to 277VAC



FXB-FD AND FXH-FD FIXED DUTY FLAMEPROOF ENCLOSURE / CABINET HEATERS

The fixed duty range of FX enclosure / cabinet heaters utilise a hard anodised, extruded aluminium profile, making them suitable for offshore applications, and include a fixed duty, cartridge type heating element in order to provide a powerful heating solution for small and medium sized enclosures/cabinets.

Fixed duty heating elements produce a constant power output regardless of the ambient temperature, giving a specific temperature rise above the ambient. EXHEAT Industrial's FX fixed duty enclosure / cabinet heaters have been certified to operate in an ambient temperature range of -60°C to +40°C for T4 and T3 heaters, and -60°C to +80°C for some T3 heaters (see the tables on page 2).

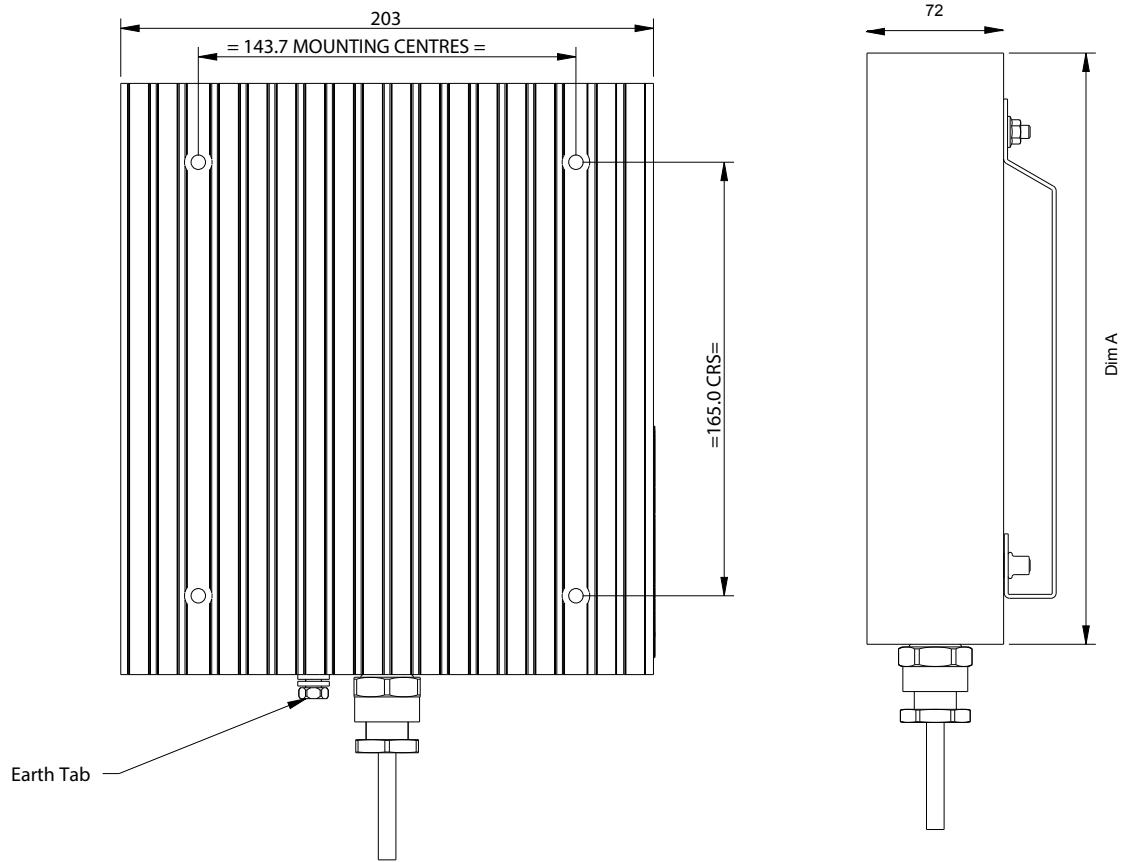
The FXB-FD heaters are designed with a double-sided finned profile which may only be installed vertically to provide the greatest power output within the range. These heaters are supplied with a single mounting solution that can be used to affix the heater either directly to an enclosure or to a rail within one. The FXH-FD heaters have one flat side which can allow flexibility, they can be mounted horizontally or vertically to suit possible space constraints.

Due to the nature of fixed duty heating solutions, these heaters must not be allowed to exceed their temperature limits. All FX Fixed Duty Heaters are supplied with an integral FXT-M Encapsulated Thermostat as standard, to safely de-energise the heater when a certain ambient temperature is reached.

Please speak to our EXHEAT Industrial representatives in order to review your requirements and calculate the correct duty necessary for your installation.

TYPICAL APPLICATIONS

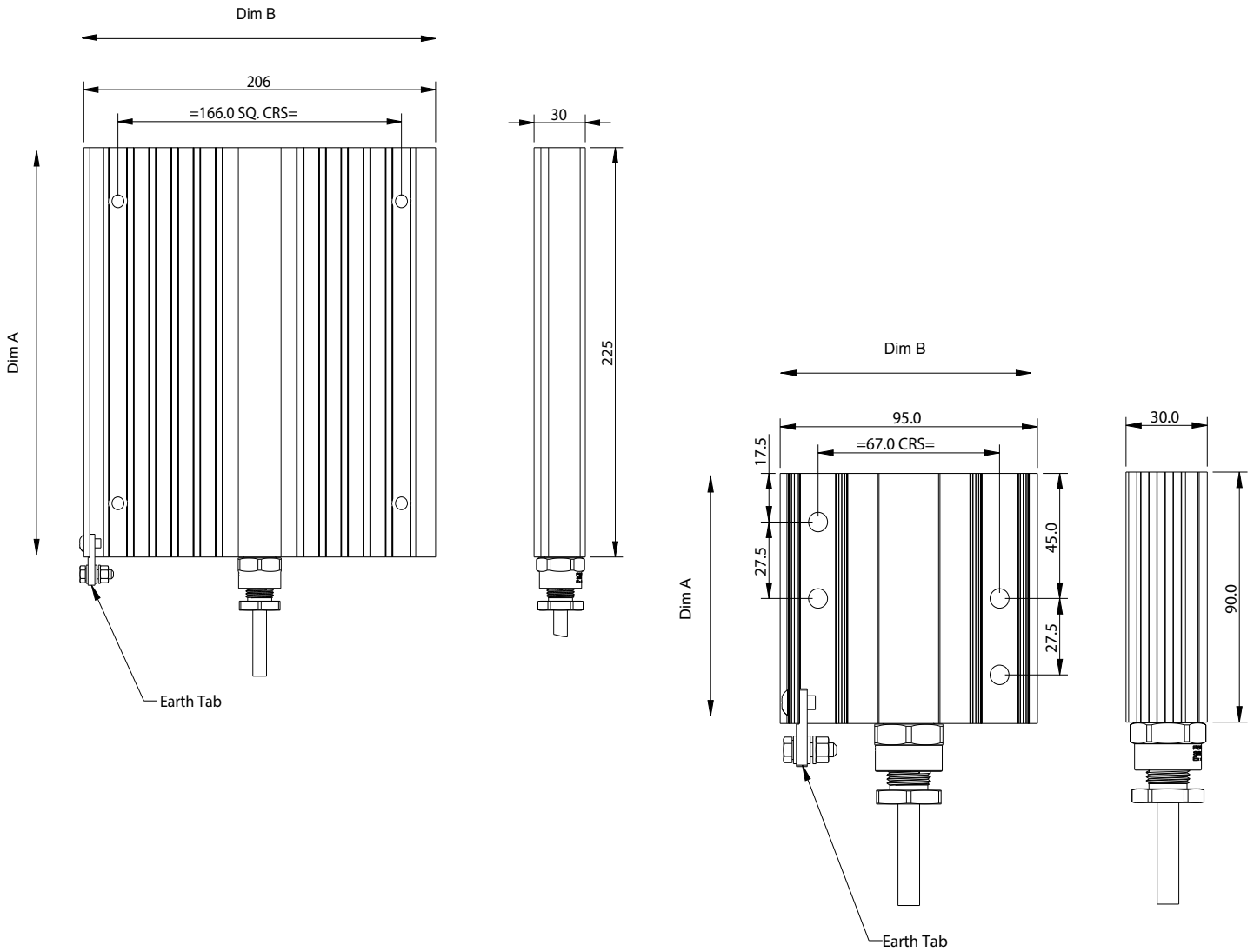
- Acoustic enclosures
- Condensation prevention
- Control / monitoring panels
- Control valve housings
- Fire hose cabinets
- Frost protection
- Generators
- Instrumentation cabinets
- Manifolds
- Motor enclosures
- Valve blocks



FXB-FD Fixed Duty Double-Finned Enclosure / Cabinet Heaters						
Power	Voltage *	T Class	Ambient	Dim A	Weight †	Stock
100W	110-120V 230-240V	T3 T4	80°C 40°C	225mm	3.2kg	Yes
200W	110-120V 230-240V	T3 T4	80°C 40°C	225mm	3.2kg	Yes
250W	110-120V 230-240V	T3 T4	80°C 40°C	325mm	4.5kg	Yes
350W	110-120V 230-240V	T3	40°C	225mm	3.2kg	Yes
400W	110-120V 230-240V	T3	40°C	325mm	4.5kg	Yes
500W	110-120V 230-240V	T3	40°C	325mm	4.5kg	Yes

* Heaters are based on a nominal 120V and 240V with +0/-10% voltage tolerance on most models.
254V (+0/10%) and 277V (+0/10%) are available as a custom design which require special cartridge elements, pricing and lead time will vary.
† Weight including 3m cable

Direct Current (DCV) is now available on request
Refer to IOM for recommended mounting distance between heater and enclosure wall.



FXH-FD Fixed Duty 'Low Profile' Enclosure / Cabinet Heaters							
Power	Voltage *	T Class	Ambient	Dim A	Dim B	Weight †	Stock
45W	110-120V	T3	80°C	90mm	95mm	0.7kg	Yes
	230-240V	T4	40°C				
85W	110-120V	T3	40°C	90mm	95mm	0.7kg	Yes
	230-240V	T3	40°C				
100W	110-120V	T3	80°C	225mm	206mm	2.1kg	Yes
	230-240V	T4	40°C				
200W	110-120V	T3	40°C	225mm	206mm	2.1kg	Yes
	230-240V						

* Heaters are based on a nominal 120V and 240V with +/-10% voltage tolerance on most models.
 254V (+0/10%) and 277V (+0/10%) are available as a custom design which require special cartridge elements, pricing and lead time will vary.
 † Weight including 3m cable

Direct Current (DCV) is now available on request
 Refer to IOM for recommended mounting distance between heater and enclosure wall.

ADDITIONAL ACCESSORIES

Extended Cable

FX heaters are supplied with 3m of cable as standard. Lengths up to 10m are available upon request.

Bracket Kit (Stock code: S0960201650001)

Bracket Kits are available for the FXH series. (225mm only)

Thermostat

EXHEAT Industrial can integrate the following FXT thermostats in the heater's supply cable. Please speak to our sales representatives for more information on the range of available thermostats.

FXT-M Encapsulated Inline Thermostat						
Model	Open / Close Temperature (+/-3°C)	Stock Code	Voltage	Max Current	T Class	Max Ambient
FXT-M-5	16°C / 5°C	S760400500	0-277V	6.0 A 3.3 A 4.8 A	T6 T5	60°C 80°C
FXT-M-20	26°C / 15°C	S760402000				
FXT-M-30	37°C / 26°C	S760403000				
FXT-M-40	53°C / 42°C	S760404000				
FXT-M-60	69°C / 58°C	S760462000				
FXT-DI and FXT-DR Flameproof Thermostat						
Model	Open / Close Temperature (+/-3°C)	Stock Code	Voltage	Max Current	T Class	Max Ambient
FXT-DI-5 FXT-DR-5	16°C / 5°C	S760200500 S760300500	0-277V	9.0 A	T6 T5 T4 T3	80°C 95°C 130°C 195°C
FXT-DI-20 FXT-DR-20	26°C / 15°C	S760202000 S760302000				
FXT-DI-30 FXT-DR-30	37°C / 26°C	S760203000 S760303000				
FXT-DI-40 FXT-DR-40	53°C / 42°C	S760204000 S760304000				
FXT-DI-60 FXT-DR-60	69°C / 58°C	S760206000 S760308000				

PRODUCT SELECTOR

Heater Model	Heater Output (W)	Heater Voltage (VAC)	Thermostat Type	Thermostat Set Point (°C)
• FXB-FD	• 100 • 200 • 250 • 350 • 400 • 500	• 110 - 120 • 220 - 240 • 254 (special) • 277 (special)	• DI • DR • M • N †	• 5 • 20 • 40 • 60 • 80 §
• FXH-FD	• 45 • 85 • 100 • 200			

† If thermostat is not required, client to ensure that the maximum permissible ambient temperature is not exceeded.

§ 80°C set point not applicable for FXT-M models.

Example (FXB-FD-100-110-DR-5)

FXB-FD fixed duty double-finned enclosure / cabinet heater, 100W output, 110 voltage AC, with FXT-DR flameproof remote thermostat at 5°C pre-set temperature trigger point

Rev 1.5