

FREOCOM FCAx3

ADVANCED TEMPERATURE CONTROLLER WITH ENERGY SAVING AND BUILT-IN BLUETOOTH

DESCRIPTION

The FCAx3 provides accurate temperature control, advanced defrost function and energy saving capabilities for all your refrigeration and freezer applications. The FCAx3 is available with internal Bluetooth and external Always-on solution providing remote access to the controller.

The FCAx3 is panel mounted and provides an easy drop-in replacement to mechanical thermostats. The Temperature control dial allows end-users to adjust temperature settings to match their requirement.

The FCAx3 controls up to 3 outputs (depending on model) including compressor, fans, lights and heater and has three sensor inputs for temperature probes and/or door switch. The FCAx3 is HC compatible with Hydro-Carbon rated relays. The FCAx3 allows a Sollatek digital LED display to be connected for live temperature readings and manual configuration.

Via the smart device app controller live and historical status / events can be viewed as well as parameter reading. Bluetooth also provides you the ability for customer engagement at the point of purchase (proximity marketing).

The FCAx3 can be connected to the sollatek advanced plug-in Always-on GSM device (GMC4) to provide remote monitoring, configuration and location via the online portal here in the cooler.

FEATURES

- Advanced Electronic temperature controller for coolers, fridges and freezers with energy saving
- Highly accurate temperature measurement and control – not affected by barometric pressure
- Direct retrofit for electro-mechanical thermostats
- Time and/or temperature controlled defrost with advanced features
- Controls up to 3 outputs including compressor, fans, lights and heater
- Three external inputs for; temperature probes and door switch
- Bluetooth (BLE) for remote monitoring via the Sollatek smart device app
- Proximity marketing through iBeacon and Eddystone beacons
- Rechargeable battery for RTC & Bluetooth advertisement when mains power is OFF
- Up to 15 days battery autonomy depending on requirement
- Embedded flash memory for data storing between transmissions
- Optional plug-in GSM communication and tracking module (GMC4) for complete remote monitoring via the online portal
- Switching at zero voltage crossing for long relay life
- Complete voltage protection (high/low, Spike/surge protection)



FEATURES



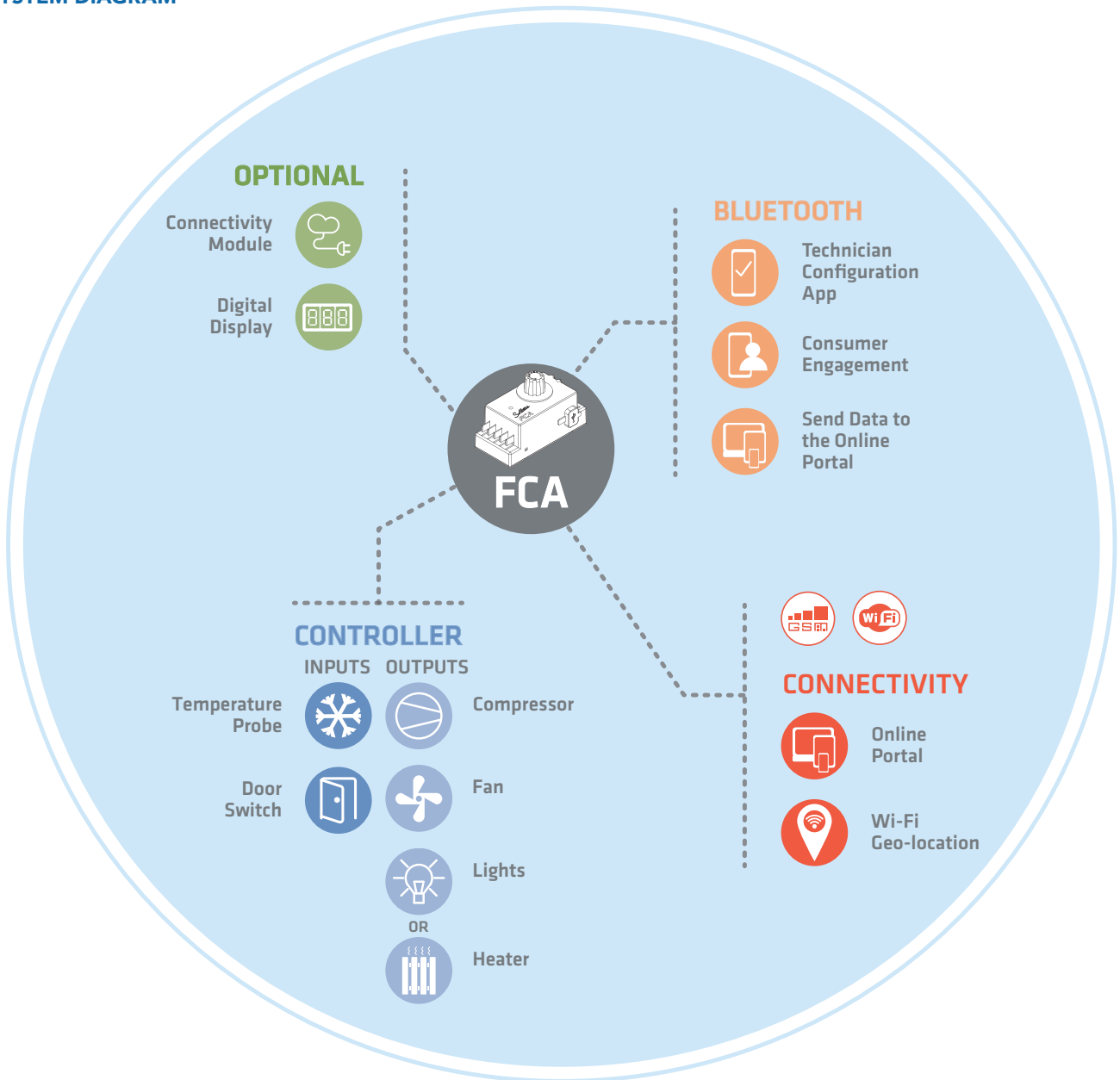
OPTIONS



FEATURES (CONTINUED)

- Intelligent time delays for compressor off periods including brownouts and blackouts
- TIMESAVE™ Function - voltage sensing period before reconnecting supply after a bad voltage disconnection
- User-adjustable temperature dial. Range fully customisable
- Connects to a digital display
- 3 LEDs for status indication
- Programmable via SPP02 programmer device for factory and in the field upgrades
- Hydrocarbon refrigerants compatible
- Encapsulated for maximum environmental protection

SYSTEM DIAGRAM



DISPLAY COMPATIBILITY

- FDM3 LED Digital Display
- 3-digit 14mm Display
 - 4 Control Buttons
 - 6 Controller Status icons
 - 2 Temperature Unit

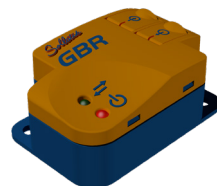


CONNECTIVITY COMPATIBILITY

- GMC4 Plug-in Connectivity Device
- GSM Connectivity Options
 - Wi-Fi Geolocation
 - Bluetooth Connectivity
 - Back-up Battery



- GBR Bluetooth Module
- Bluetooth
 - Back-up Battery

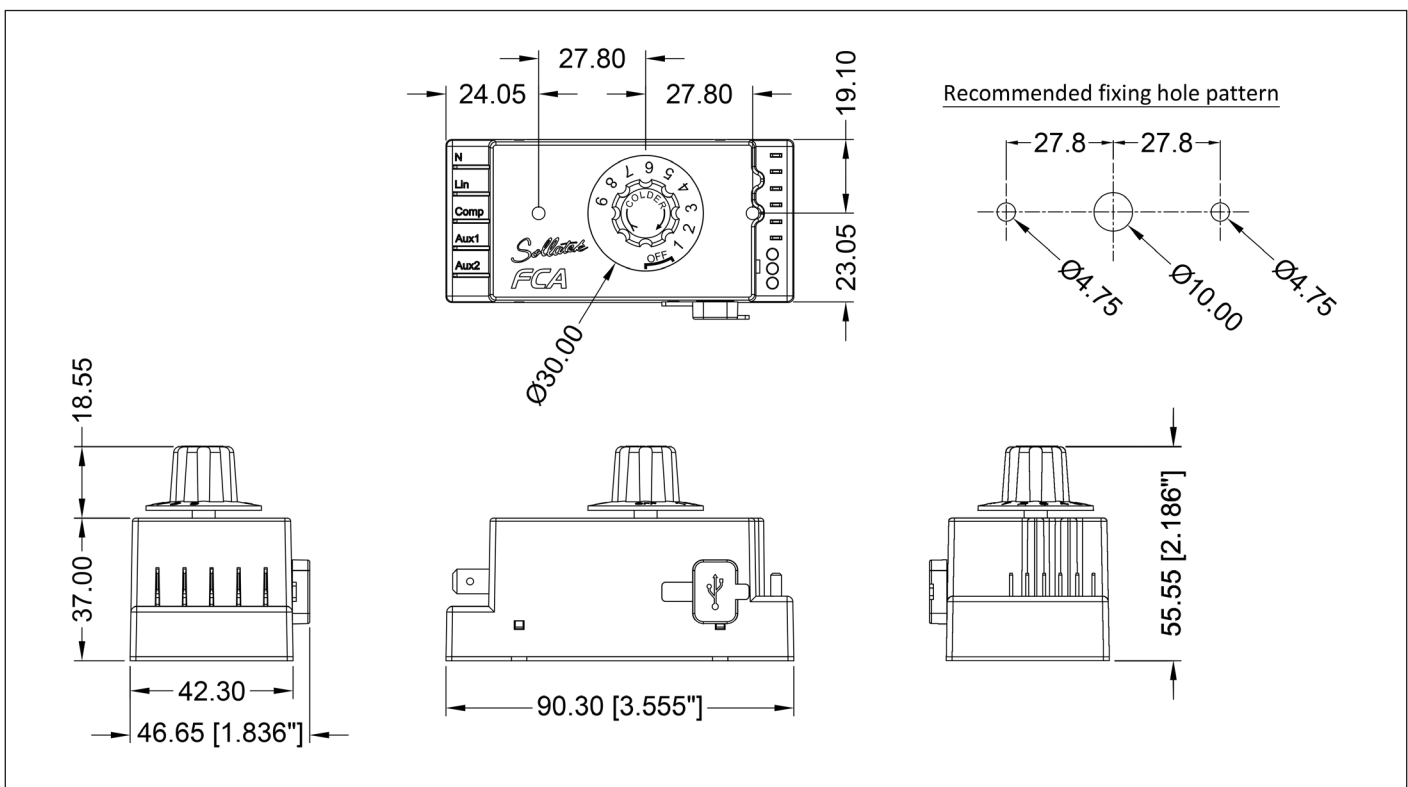


REFRIGERATION CONTROL SPECIFICATION			
Temperature Control Method	Air or Evaporator		
Temperature Control Range	-40 to +45°C (-40 to +113°F)		
Temperature Time Delay	1 to 255 s		
Defrost Control	Timed, Active or Manual		
Advanced Defrost Mode	Post/Post Defrost, Emergency Defrost		
Energy Saving	Temperature Set-back, Fan Cycling		
Input Type	Temperature Sensor & Door Switch		
Temperature Probe Type	100 K Ω NTC ($\beta_{25/50}$: 3990 k)		
Output Control	Compressor, Lights, Evaporator Fan, Reverse Fan or Heater		
Model Variants	FCA13 Compressor only	FCA23 Compressor & .Aux1	FCA33 Compressor, Aux1 & Aux2
Compressor Relay	UL60730 Motor Load 75-240 Vac 10 FLA 60 LRA 30k cycles Motor Load 75-120 Vac 12 FLA 72 LRA 30k cycles		IEC 6073730 16 A, 250 V
Aux1 (Relay#2)	Motor Load 75-240 Vac 1.5 FLA 9LRA 30k cycles		5 A, 250 V
Aux2 (Relay#3)	Resistive Load 75-240 Vac 5A, 50k cycles		5 A, 250 V
Maximum Total Current Rating	16 A	18 A	18 A
Intelligent Time Delay	0 to 600 s		
Refrigerant Compatibility	CO ₂ & Hydrocarbon		
BLUETOOTH & BATTERY			
Type/version	BLE 4.1		
RF Power Output	-20 dBm to +4 dBm		
Frequency	2.4 GHz ISM		
Connectivity	Eddystone, iBeacon & connection to the Sollatek Smart Device Application		
Bluetooth Standard	IEEE 802.15.1		
Battery Type	Rechargeable Lithium Polymer		
Nominal Voltage	3 V		
Capacity	5.5 mAh		
Typical Run Time	RTC Only: Approx. 15 days RTC & BLE Advertising: Approx. 10 days		
Memory Size	Approx. 11,000 events		
USER INTERFACE			
Temperature Control Dial	OFF, 1 to 9		
Status LEDs	3x LEDs (Red, Yellow, Green)		
POWER & VOLTAGE PROTECTION			
Operating Voltage Range	75 to 240 V		
Withstand Voltage	Up to 450 V		
Working Frequency	Auto-sense 50/60 Hz		
Type of Protection	High / Low, Spike / Surge & , Frequency		
High / Low Voltage Blind Time	0 to 255 s		
Rated Impulse Voltage	2.5 kV		
Over Voltage Category	Category II		
CONNECTORS			
Input Sensors	3 pairs of 0.11" (2.80 mm) Faston Tabs		
Output / Load	Up to 5x 0.25" (6.35 mm) Faston Tabs (depending on Model)		
Data / Programming	Micro USB-B		
ENVIROMENTAL			
IP Rating	Electronics: IP65 (PCB Encapsulated)		
Operating Temperature	0 to +50°C (32 to +122°F) -40 to +50°C (-40 to +122°F) - tested at Sollatek		
Operating Humidity	<90% RH non-condensing		
Storage Temperature	-40 to +60°C (-40 to +140°F)		
CERTIFICATION / STANDARDS			
Product Certification	CE, UL, UL60730-1 and UL60730-2-9 (file no: E242907), IEC 60730-1, IEC 60730-2-9, Hazloc approved, ANSI 2-2018		
Disconnection Type	Type 1.B		



Flammability	UL94 V-0 @ 0.8 mm, GWFI = 960°C, GWIT = 850°C
EMC	Per EN 301 489-1, EN 301 489-7, EN 301 489-17
Pollution Degree	2
MECHANICAL	
Mounting	M4 x 12 (x2) self-tapping pozidriv screws
Unit Dimensions (L x W x H)	90.3 x 46.6 x 37.0 mm (without dial)
Unit Weight	Approx. 135 g
PACKING / SHIPPING	
Carton Quantity	100 units
Carton Dimensions (L x W x H)	507 x 304 x 277 mm
Carton Gross Weight	Approx. 14.5 kg
Cartons per Pallet	21 (2100 units per pallet)
Pallet Dimensions (L x W x H)	1200 x 1000 x 990 mm
Pallet Gross Weight	Approx. 320 kg

DIMENSIONAL DRAWING



PRODUCT CODE	DESCRIPTION
92373100	FCA13 16A 75-240V 3xInputs
92373100-BB	FCA13 16A 75-240V BLE+Batt
92373300	FCA23 16A + 5A 75-240V 3xInputs
92373200-BB	FCA23 16A + 5A 75-240V BLE+Batt
92373300	FCA33 16A + 2x5A 75-240V 3xInputs
92373300-BB	FCA33 16A + 2x5A 75-240V BLE+Batt

SOLLATEK (UK) LIMITED

Sollatek House, Waterside Drive, Langley, Slough SL3 6EZ, United Kingdom

Tel: +44 (1753) 214 500

Email: sales@sollatek.com

Web: www.sollatek.com

ISO9001: 2015 accredited company

All weights and dimensions are approximate. Specifications are subject to change without prior notice. ©Sollatek (UK) Limited 2023. All Rights Reserved. SOLLATEK and the SOLLATEK device are the trade marks of the Sollatek group of companies.

