



JEA

Advanced Energy Saving Controller
with Connectivity Options



ADVANCED LEARNING CAPABILITY

The JEA is an Energy Management Device (EMD) which learns the usage behaviour of the cooler and constructs a pattern for the compressor and lights to deliver an energy saving routine which will be most cost effective and extend equipment life.

SOPHISTICATED MENU CONFIGURATION

The JEA has a multi-level menu which can be password protected so unauthorised personnel cannot access or save changes. Within the menu, a large range of settable parameters can be viewed and configured to create operating modes to suit your needs.

CAPACITIVE TOUCH BUTTONS

The four capacitive touch buttons located on the front of the JEA allow for easy operation. The buttons can be used for; browsing menu items, configuring parameter values and manually setting controller modes (e.g. switching to energy saving mode).

HYDROCARBON REFRIGERANTS COMPATIBLE

Hydrocarbon refrigerants are becoming increasingly popular as an alternative to CFC refrigerants however, their volatile nature means equipment must be nonsparking in the event of a gas leak. The JEA controller is hydrocarbon compatible with hydrocarbon-rated relays.

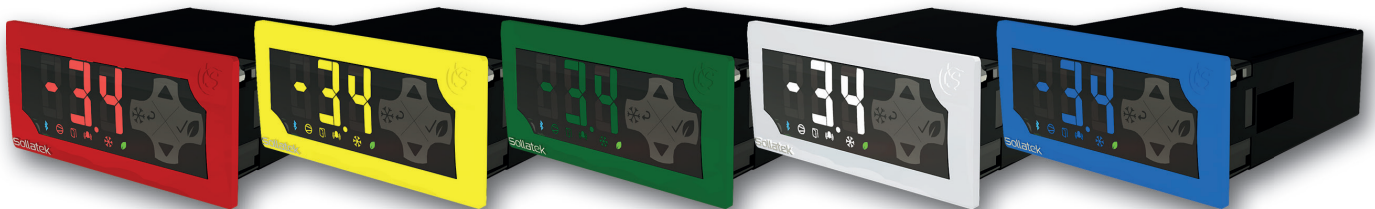


IP65 FRONT PANEL

The construction of the JEA ensures the front has a high ingress protection rating (IP65). This means the JEA can also be installed in more humid and aggressive environments. The JEA will withstand frequent washdown and sanitation processes.

VERSATILE CONFIGURATION TO MAXIMISE SYSTEM EFFICIENCY

The JEA is a multi-sensor controller / EMD to give you maximum flexibility in configuration and complete control of cooler functions. The JEA allows the control of up to 4 outputs for compressor, lights, fan, and heater (defrost and cooler) control and 5 sensor inputs which accept temperature probes, door switch, PIR or any other input required.



CUSTOMISABLE

The JEA is customisable with the front bezel and LEDs available in a range of colours, allowing for seamless integration with the cooler branding and aesthetics.

HIGH VISIBILITY LED DISPLAY

The JEA is made up of 3 digits, with 6 status indicators all lit up with modern, bright LEDs to enhance visibility and simplify the reading of the display.

MOUNTING

The JEA provides flexibility in mounting. It can either be mounted via the discrete front mounting system or the traditional rear mounting system.

The JEA fits industry standard apertures making it ideal for use in new or existing coolers.



The JEA controllers can be upgraded with connectivity and location capabilities for remote monitoring as well as intergraded within a complete system with seamless communication and control for multi device optimised operation.

GMC4 - ALWAYS-ON & PROXIMITY

The GMC4 is Sollatek's most advanced, all-in-one plug-in connectivity device which upgrades the JEA with GSM (2G, LTE-M, NB-IoT and in the future LoRa and SigFox), Bluetooth and Wi-Fi capabilities for complete fleet management and asset tracking. GSM and Bluetooth provide detailed technical and marketing analysis via the Sollatek smart device application and the online portal. Wi-Fi provides precise cooler location.



FFX - FUTURE EXPANDABILITY

The FFX is a unique customisable communication and tracking solution which adds remote management, configuration and tracking capabilities to the JEA with a unique plug-in module system which can be easily upgraded / changed in the field as required.

The FFX accommodates communication technology popular today (2G, LTE-M, NB-IoT, Wi-Fi & GPS) and any up and coming / future technologies (LoRa).



In-store Analytics
View and analyse cooler telemetry and performance data. View and configure cooler parameters.

In-store Marketing
Send special promotions and product campaigns eg. 20% off a 330ml bottle drink this weekend.

Multidrop Bus System
Connect different devices for a fully optimised system including computers and payment terminals.

Portal Sales Analysis
View and analyse cooler telemetry and performance data to forecast sales and marketing strategy.

Portal Asset Tracking
Use Wi-Fi or GPS data sent via GSM to locate and track cooler movement on an interactive map.



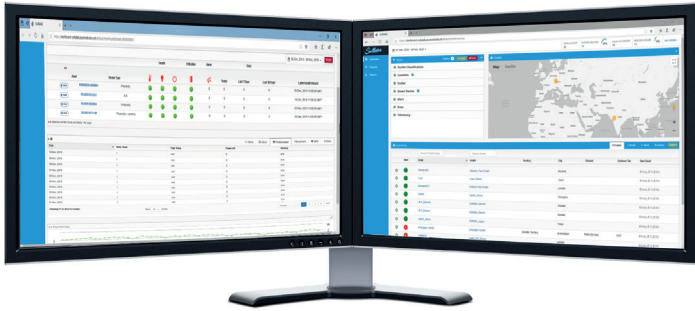
FMN485 - COMMUNICATION CONVERTER

FMN485 is a standalone TTL to RS485 converter. It provides an interface to industry standard RS485 serial communication bus which allows interaction with one or more devices using that standard bus. The JEA can be connected to the FMN485 and used with Modbus protocol for a multidrop communication bus.



ONLINE PORTAL AND APPLICATION DEVELOPED BY OUR WORLD LEADING PARTNERS

Sollatek provides smart device and online solutions for total fleet management. The solution provides detailed analytics for cooler operational status and sales performance. At Sollatek we understand the importance of efficiency for our customers, so we have developed user-friendly interfaces to ensure data is easy to read and accessible.



ONLINE PORTAL

The Sollatek online portal turns your fleet data into useable sales and performance data.

- **Detailed Reports** - View a vast list of controller operational data such as temperature, event history and alarms.
- **Intelligent Data Analytics** - Monitor technical and operational data in easy to read graphs and charts.
- **Accurate Sales Performance** - View and analyse cooler KPI's for enhanced sales forecasting and strategy.
- **Dynamic Map** - View and track cooler movements within a map and view the operational status of each cooler.

SMART DEVICE APPLICATION

The Sollatek smart device application provides technicians with all the tools to view, configure and upload controller status and event data.

- **Real-Time Data Analysis** - View real-time telemetry data, operational status and performance data.
- **Cooler Event Log** - Access all historical data which has occurred between store visits to identify any issues or problems.
- **Manage Settings and Parameters** - View, configure or reset JEA controller parameters for cooler optimisation. Set BLE beaconing protocols and event logging settings.
- **Connect to the Cloud** - Upload data to the cloud for access on the online portal for further analysis.

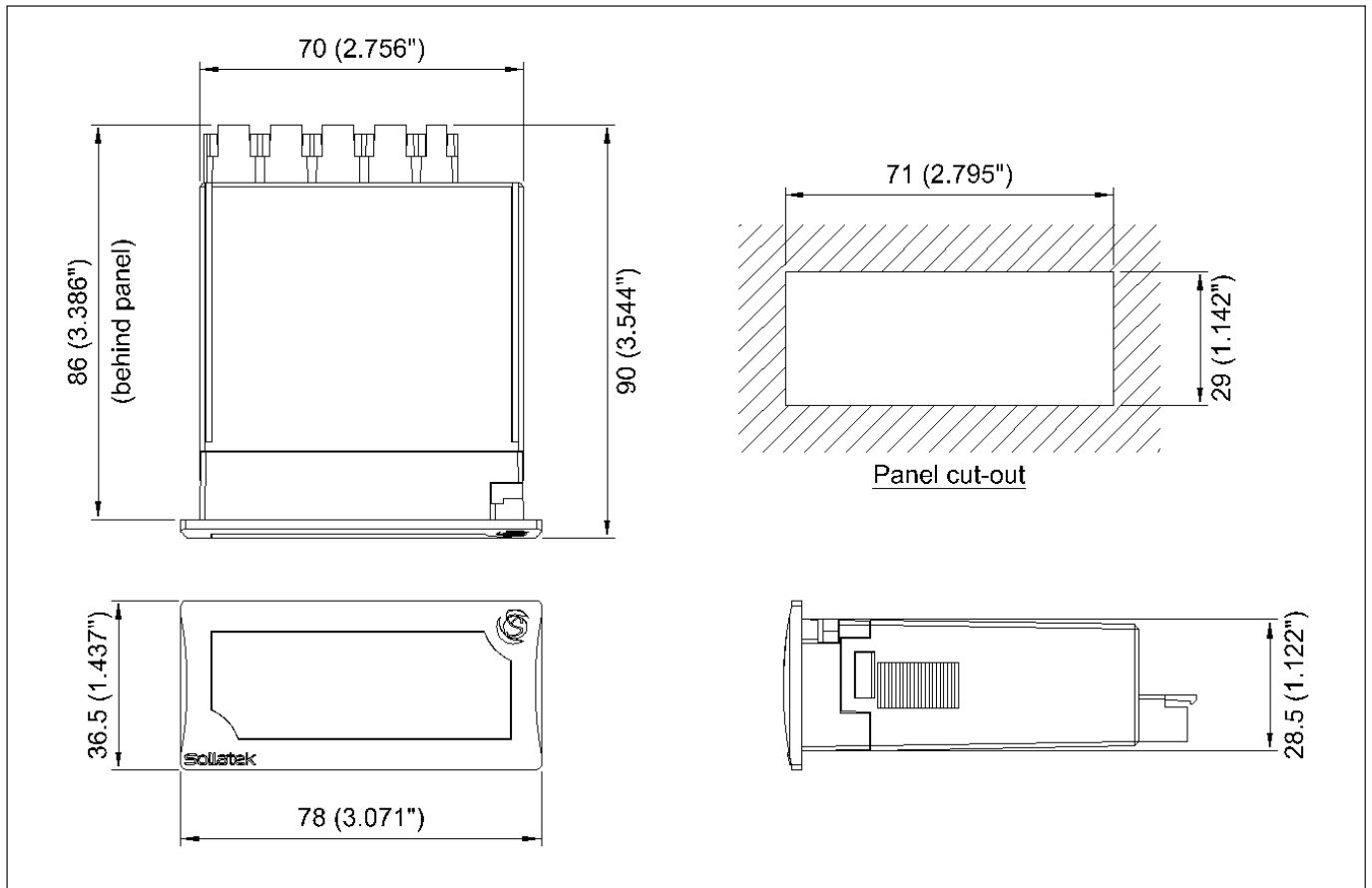


TECHNICAL SPECIFICATION

Refrigeration Control Specification			
Temperature Control Method	Air or Evaporator		
Temperature Control Range	-40°C to +40°C (-40°F to +104°F)*		
Temperature Control Modes	Day or Night Mode 3 Operational Sub modes: Normal Mode, Eco Mode, Superfrost Mode		
Temperature Time Delay	1 to 255 s		
Defrost Control	Timed, Active or Manual		
Energy Saving	Self Learning Algorithm - Switches from Day or Night mode automatically based on previous 7 day operation. Basic Energy Saving - Door tracking to switch between Day and Night mode		
Intelligent Time Delay	0 to 10 m - maximise compressor availability		
Refrigerant Compatibility	Hydrocarbon (per IEC 60079-15) & CO ₂		
Display and User Interface			
Display Type	3 x 7 segment LED digits		
Digit Height	16.6 mm		
Display Colour	Available in: Red, Yellow, Green, Blue & White		
Annunciators	Minus sign, Decimal point & 6 status icons Compressor, Door, Alarm, Superfrost Mode, Eco Mode & Bluetooth		
Keypad	4 x Capacitive touch buttons Up, Down, Tick/Eco mode, Back/superfrost		
Front Bezel	Available in: Black, Red, Yellow, Green, Blue & White (other colours available on request)		
Bluetooth (optional)			
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		
Standard	IEEE 802.15.1		
Memory	On-board storage of approx. 13,000 events		
Battery (Bluetooth Models Only)			
Type	Rechargeable Lithium Coin Battery		
Nominal Voltage	3 V		
Capacity	17 mAh		
Typical Run Time	Approx. 50 days (dependent on beaconing protocol(s) and frequency requested by client)		
Input and Output			
Input Type	Temperature Sensor, Door Switch, Passive Infra-Red (PIR) & Humidity Sensor		
Temperature Probe Type	10 k Ω NTC (β 25/85: 3435 K) Industry Standard		
Input Connector	1 x 2-way RAST Edge connector and 4 x 3-way RAST Edge connectors		
Output Control	Compressor, Evaporator fan, Condenser fan, Lights, Defrost heater, Cabinet heater *Lights and Fan can be powered from 12 or 24 VDC supply		
Output Rating		Relay Rating	Control Rating
	Compressor Relay:	16 A, 250 V	8(6) A, 230 V
	Heater Relay:	10 A, 250 V	8 A, 230 V
	Fan Relay:	5 A, 250 V	1(1) A, 230 V
	Light Relay:	5 A, 250 V	2(2) A, 230 V
Output Connector	Up to 7 x 0.25" (6.35 mm) Faston tabs		
Data Connector	8-way connector		
Power & Voltage Protection			
Operating Voltage	90 - 300 VAC		
Working Frequency	Auto-sense 45 - 60 Hz		
Type of Protection	High / Low, Spike / Surge & Frequency		
High / Low Voltage Blind time	0 to 255 s		
Surge Protection	Auto-sense 45/65 Hz		
Over voltage category	6.5 kA, <10 ns, 160 J		
General			
External Communication Protocol	Modbus RS485 (when connected with FMN485)		
IP Rating	IP65 Front for wash down		
Operating Temperature	0°C to +50°C (32°F to +122°F)		
Operating Humidity	0 - 100%		
Product Certification	CE, IEC60730-1, IEC60730-2-9		
Flammability	UL94 V0 at 1.5 mm; glow wire temperature (GWI): 960 °C at 2.0 mm		
Mounting	Front mounting: Screws ; Rear Mounting: Mounting Clips (sold separately)		
Unit Dimensions	78.0 x 90.0 x 36.5 mm		
Unit Weight	Approx. 116 g depending on model		

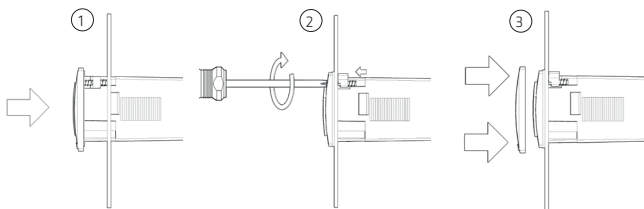
*Wider control temperature range available on request if required.

DIMENSIONAL DRAWING

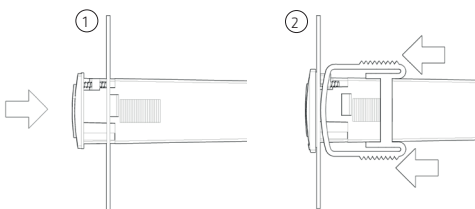


PANEL MOUNTING

Front Mounting

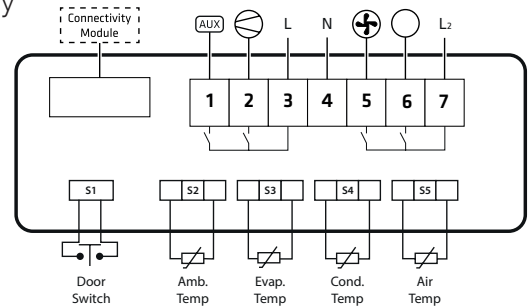


Rear Mounting

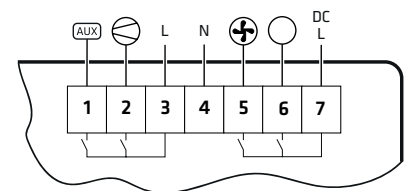


WIRING DIAGRAM

AC Supply



AC & DC Supply



MODEL SELECTION

The JEA can be customised to your requirement. Ordering a JEA is easy and model codes have been created to identify key features:

JEA	Display Colour	Number of Relays	Options
R	Red	1 = 16 A Only	B = BLE + Battery
Y	Yellow	2 = 16 A + 5 A	S = Self Learning
G	Green	3 = 16 A + 2 x 5 A	
B	Blue	4 = 16 A + 10 A + 2 x 5 A	
W	White		

Example: JEA-R4BS has:
 Red Display
 4 Outputs
 Bluetooth + Battery
 Self Learning Function



Sollatek's expertise extends worldwide through local networks



Global and Local

With a customer base across the world, a local presence in more than 50 countries and dedicated OEM offices in 5 continents, Sollatek is able to provide support services wherever you are.



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ISO9001: 2015 accredited company

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MJA	04/2021
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