

## The Eden Compact Range FAQ's

**Q.** Why have RCS developed the Eden Compact.

**A.** We spoke to both end users and engineers, and established that the form factor of the Eden compact combined with user friendly menu structures would be welcomed within the industry.

**Q.** I notice that there is a communication socket on the Eden Compact, but no mention of any communication modules to plug into it.

**A.** This is because the Eden Compact has been designed not to require any additional communications modules. Controllers are available with communication support on-board, including Wi-Fi.

**Q.** Will the Eden Compact fit into my standard metal work cut-out

**A.** Yes – The controller has been designed to fit into the standard 71mm x 29mm cut-out.

**Q.** Why use two part connectors, when others use fixed.

**A.** Again feedback from customers informed us that two part connectors have major benefits over fixed type when it comes to both manufacturing and service requirements.

**Q.** Why are there 7 probe inputs.

**A.** The Eden Compact supports the standard 5 probe connections, along with the ability to connect a product probe on the 6<sup>th</sup> input. The remaining input can be configured to accept different input signals, so that pressure, humidity, pulses etc. can also be read by the controller if required.

**Q.** My customer requires a remote display, does the Eden Compact support this.

**A.** Yes. Remote displays are available with / without setup buttons.

**Q.** What is the 3 way connector for on the rear of the Eden.

**A.** These are dedicated digital inputs for functions such as door monitoring. This feature again aids initial wiring and service and removes the need for external resistors to be used to signal input states.

**Q.** Is there a DIN rail version available.

**A.** Yes – this is due for release soon. It will be called the Eden Avanta.

**Q.** All sounds very good – will the Eden Compact cost me much more than other controllers that are available.

**A.** No. The Eden Compact will be very competitively priced against similar products, and don't forget no additional costs for comms modules are incurred.

**1.** The Eden Compact was conceived and designed to directly challenge the RDM Mercury series of controllers. Whether we like to admit it or not the RDM product has established itself as the industry leader. We at RCS spent huge amounts of time before the design process really started conducting benchmarking excises against not only the RDM product but also other manufacturers such as Carel, Danfoss and Eliwell who have all had similar products in the market for some time. Analysis was carried out which involved OEM and enduser input and resulted in many of the features that are present in the final product, such as dedicated digital inputs for case clean, door monitoring etc. rather than be required to swich resistor values across temperature inputs.

Another big consideration for us right from the outset was the controllers look and feel. Although ultimately buried under or over a cabinet when in use, we felt that it was important to ensure a quality finish and up to date impression. Hence considerable time, money and effort went into this aspect.

**2.** RCS decided to adopt the "all in one package" approach after again seeking the views and opinions of OEM's etc. The major benefits are two fold – cost and ease of order (inventory control). By incorporating any required communication standard within the same enclosure as the controller itself we minimise tooling and product costs and as a result can pass these savings onto the customer.

**3.** N/A

**4.** A lot of thought went into the selection of connectors for the Eden Compact. Firstly the debate about fixed or two part style. OEM's in particular were adamant that two part connectors were preferable. This allows case manufacturers to get electrical connection looms built and more importantly tested by specialists before being installed into the cabinet and removes any doubt of the final connections into a fixed style connector being made incorrectly.

In addition to this RCS also reconised that sensor wiring could be simplified by providing a dedicated single connection point for each of the standard 6 sensor grounds, as opposed to "doubling up" on what is already a small connector.

**5.** The 7 sensor inputs are designated within the controller software as – 1 Air On, 2 Air Off, 3 Evaporator In, 4 Evaporator Out, 5 Defrost Termination, 6 Logging (Product) Probe and 7 can be factory configured to customer requirements. As standard this is delivered to read an input signal of 0 – 10 Vdc predominatley to read a pressure transducer. However this can be configured to read temperature, or a current input such as 4 – 20 mA.

**6.** The remote displays are delivered with a cable length of 5 metres. These can be supplied either as a dumb temperature display or as a unit which also incorporates set-up buttons. The display module has dimensions – 41mm H x 85mm W x 26mm D. A separate data sheet is available for the remote display options.

**7.** The three way connector is for the dedicated wiring of two digital inputs. This removes the necessity to wire resistors into temperature channels to achieve the same function – as in RDM's case. These digital inputs are contact sense (NOT mains rated) and are normally open. The function of both inputs are defined within software and are user selectable. The default functions are – INTEGRAL CASE = Compressor 1 and 2 fault inputs, REMOTE CASE = Case clean and COLDSTORE = door open.

**8.** The DIN rail mounting version of the compact will use the same controller electronics as the existing controller with a new output board. The new output board will supply mains signals via 10A rated fuses. The connector arrangement will again utilise 2 part connectors. Versions incorporating a display are also available.

**9.** N/A