

Enclosure customisation is key for fire safety control unit

The manufacturer of a new fire safety control unit has identified in-house precision customisation as the key factor in the selection of its protective enclosure. Coda Octopus Martech has chosen Spelsberg to supply the industrial enclosure for a new fire pump package. High accuracy customisation combined with premium product quality achieved the standard required for the exacting specification.

Designed and manufactured by Coda Octopus Martech and branded as the Grundfos FireSAFE, the new compact fire pump for sprinkler applications is used in domestic and residential properties. A crucial component of the system is the FireSAFE controller, which automates pump testing on a periodic basis. The FireSAFE controller ensures ongoing fully functioning operation of the fire safety system, and alerts in the event that a fault develops. It's vital that protection of the FireSAFE controller is guaranteed with an industrial enclosure. Coda Octopus Martech selected Spelsberg to provide the controller's enclosure as a result of construction quality and the in-house design and customisation capability provided by Spelsberg's UK team.

The Coda Octopus Martech FireSAFE controller includes a membrane keypad-overlay on the lid of the enclosure with a flexi-pcb ribbon cable that passes through the of the enclosure lid on to a PCB mounted inside the lid. For the enclosure to achieve both cable alignment and optimum protection, a customised design specification with highly accurate machining is required to machine minimal diameter cable entry/exit points. Minimising system footprint and providing structural protection and durability are also crucial demands. Spelsberg delivered the requirements through precision customisation of its premium GEOS enclosure.

"Coda Octopus Martech required an enclosure which would not only be highly durable and achieve the necessary IP standard, but could also be customised to their specific design requirements and delivered ready-made," says Chris Smith, area sales manager, Spelsberg UK.

"The GEOS premium enclosure achieves the high level of protection required for the demands of the fire safety system, and because of Spelsberg UK's in-house CNC machining capability, we were able to deliver the customisation within a short time frame."

Coda Octopus Martech's specification required a ready-made enclosure with cable glands, involving drilling to exact component fit with CNC machining to tenth of a millimetre accuracy. In addition, the design incorporates a membrane keypad which overlays the front panel of the system, operating a test/reset button, and the keypad attaches to a ribbon cable which connects to the system's PCB. Crucially, when the enclosure lid is applied, the design and accuracy of the machining ensures that the wiring lines up within the precise dimensions. Customised design with a compact footprint was also essential and the FireSAFE controller is housed in a Spelsberg GEOS enclosure, measuring just 300 mm x 300 mm.

In-house customisation by Spelsberg removed the challenge and time required for Coda Octopus Martech to select a third-party CNC machinist. As accountability for customisation also rested with Spelsberg, this ensured both the integrity of the finished product quality as well as the efficiency of project management. In-house manufacture and customisation also meant that project delivery time was faster compared to involving a third-party.

High precision customisation of the enclosure to provide a ready-made product also reduced resources in manufacture for Coda Octopus Martech, enabling fast, simple final assembly of the FireSAFE system.

"We take the customised Spelsberg GEOS enclosure straight of the box, and assembly of the FireSAFE system together with the enclosure is quick and easy," says Coda Octopus Martech managing director, Paul Baxter.

"We try to minimise production effort and resources at every stage. A ready-made, fast to assemble enclosure was therefore vital for us."

It was fundamental that the enclosure itself achieved the specification's durability and conformance standards. IP rating was critical and Spelsberg's GEOS premium enclosure achieves IP66/67. It was also a requirement that the enclosure achieved c UL us test mark, and in addition GEOS satisfies UL protection type 4X. GEOS' durability is provided by a glass fibre reinforced polycarbonate construction, which ensures structural strength.

Aesthetic design was another consideration of the specification. FireSAFE would be installed on interior fittings, and GEOS was also selected because the look of the enclosure signified durability, combined with rounded edges rather than sharp right angles.

"Spelsberg are very accommodating, which combined with the quality of the GEOS enclosure, means highly accurate customisation within an efficiently managed, quick turnaround project," concludes Paul Baxter.

Photo Captions

Photo 1: Coda Octopus Martech has chosen Spelsberg to supply the industrial enclosure for a new fire pump package.

Photo 2: Coda Octopus Martech selected Spelsberg to provide the controller's enclosure as a result of construction quality and the in-house design and customisation capability provided by Spelsberg's UK team.

About Spelsberg

Spelsberg is one of the largest manufacturers of electrical enclosures in the world. With over 4,000 enclosures available as standard and further customisation possible, it offers solutions for almost any application.

With the largest supply of non-metallic enclosures, ex-stock in the UK, its products are often available for delivery within 24 hours; customisation is possible on any product, including bespoke entries, engraved corporate logos or fitted terminals, within 48 hours. Products can be ordered direct from Spelsberg or from most leading supply specialists including RS, Rapid, Farnell and CPC.

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