

With CAN interface to indicate process events

Coherent has released the Highlight SQD option for its laser system. It integrates process sensors and communicates their signals via CAN.



The Highlight fiber lasers are used for cutting and welding systems (Photo: Coherent)

The Highlight SQD option for the Highlight fiber lasers provides cutting and welding systems integrators a solution to implement process monitoring. It comprises process sensors integrated directly into the company's special fiber laser connectors, which detect back reflected laser power and visible spectrum process emissions. These signals, which are provided optionally on the CAN interface (at a 2-kHz sampling rate), can be used to detect various key process events. For cutting, these include piercing end, cut interruption, and self-burning during piercing. For welding, the option can indicate incomplete penetration (due to insufficient power at workpiece, focal shift or material changes), blow holes, contamination, gap detection for overlap joints, and other process instabilities.

Because it is contained within the fiber connector, the launched product delivers a more compact and easier to integrate solution than existing sensing systems employing dichroic mirrors or other bulk optical elements, stated the supplier. These traditional methods often suffer from signal variability, and increase the weight and size of the process head. According to the supplier, the Highlight SQD option is less costly than available sensors based on bulk components. For the end user, ease-of-use is further enhanced through a software interface that is integrated within the laser GUI.

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