

PRESS RELEASE

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Reliable IR temperature measurement in extreme conditions

Berlin, 25 January 2012. The [ratio pyrometer optris CTratio 1M](#) is designed for non-contact measurement of temperatures in the range between 700°C and 1800°C. Its functional principle guarantees precise measurements even when the field of view is severely occluded, for example by fumes. This makes it highly useful for applications in harsh environments as they prevail in the metal and glass industries.

With the CTratio 1M, Optris has added a ratio pyrometer with fibre optic cable to its high-performance series. The measuring instrument is used especially in ambient temperatures up to 250°C where the measuring head requires no cooling. In contrast to traditional connections, the optical multi-fibre cables used here comprise multiple interwoven glass fibres. This makes the fibre highly break-resistant, so that the pyrometer can be installed in difficult-to-access areas and maze-like production environments. Cables are deliverable in lengths up to 22 m to cover the majority of installation scenarios. Other advantages are the very fast response time of 5 ms and an integrated laser sight to mark the actual spot size.

Accurate measurements even in harshest industrial conditions

The functional principle of ratio pyrometry (i.e. measuring at two different infrared wavelengths) makes the pyrometer largely insensitive to dust, fumes and soiled sight glasses. This means that measurements remain accurate even when the degree of soiling of a sight glass exceeds 90 %. The pyrometer also delivers reliable measurements if the target object fills only 5 % of the spot size, or if it moves very rapidly. This reliability of the infrared sensor permits the implementation of process control and quality assurance even in the harshest of industrial environments. In the standard package, the measured values are output as analog data. Alternatively, [six different digital interfaces](#) are available (USB, RS232, RS485, CAN, Profibus DP, Ethernet).



The optris CTratio 1M sensor proposed by Optris GmbH is a ratio pyrometer for use in harshest industrial environments. Picture by Optris GmbH

Optris GmbH

Technology company Optris GmbH specializes in the development, production and sales of infrared sensors for non-contact temperature measurement. The product range covers portable infrared thermometers, stationary industrial IR thermometers as well as infrared thermal imaging cameras and calibration sources. These measuring instruments set new benchmarks for uses in OEM solutions and applications involving infrared monitoring of multiple measuring points.

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