

# XC50-LS cross-scanner

## Data sheet



**METRIS**

Reliable and Innovative Metrology Solutions

## METRIS XC50-LS CROSS-SCANNER WITH LONG STAND-OFF

CMM-based laser scanning offers major benefits for both reverse engineering and inspection applications:

- For reverse engineering and surface inspection, the high density point clouds that are captured in a small time frame allow surfaces to be described in great detail resulting in better insights.
- Also features are described in more detail and with a minimum of CMM displacements.
- In general, this non-contact technique is ideally suited to measure soft and fragile surfaces. On soft surfaces, results will be independent of the contact force without leaving any marks on the surface.

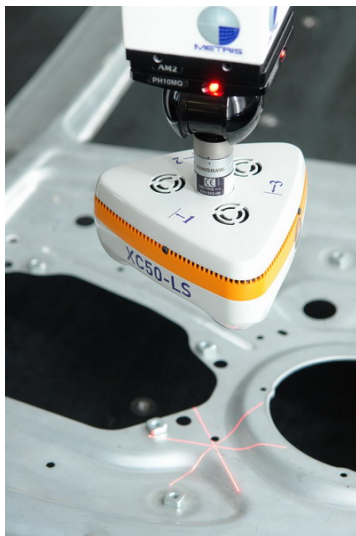
The Metris XC50-LS cross-scanner features 3 line scanners each rotated over 120° into a single sensor. This reduces cycle time as there is no need anymore to re-orient the head during scanning. Furthermore each laser line is slightly tilted so that features are observed under an angle. This means it is possible to "look into" features. Thanks to its stand-off of 180mm it can easily scan over fixture clamps and inside deep pockets.

## KEY BENEFITS

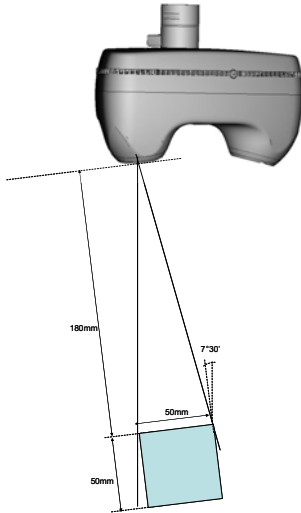
- Faster feature inspection by eliminating scanner re-orientation and without need for an extra C-axis
- High accuracy feature measurements thanks to true 3D digitizing
- Scanning over fixture clamps and into deep pockets due to long stand-off
- Suited for both surface and feature scanning as XC50-LS can also work in line scanner mode
- Seamless integration with most leading CMM brands
- Compatible with Renishaw ACR3 auto-exchange rack for true multi-sensor support

## APPLICATIONS

- Sheet metal inspection
- Full body inspection
- Gap and flush measurements
- Casting inspection



## Technical specifications



The XC50-LS cross-scanner features three measurement planes each rotated over 120° around the C-axis of the scanner. The above scheme only displays one of the three measurement planes.

## Software support

- Metris Scan for support on all major CMM brands
- Metris Camio CMM software
- An API is available for integration of the LC50-LS laser scanner into 3<sup>rd</sup> party CMM software packages

CMM mounting	Renishaw PH10M(Q) motorized indexing probe head with Multiwire
Weight	560g (1.23lbs)
Dimensions	145x103x135mm (5.71x4.06x5.31")
Scan speed	Cross- scanner mode: 3 x 6,400pts/s Line scanner mode: 1 x 19,200pts/s 25 lines/s
Width of view	3x50mm (3x1.97")
Depth of view	3x50mm (3x1.97")
Stand off distance	180mm (7.08")
Accuracy*	20µm (0.0008") (1σ sphere fit)
Laser class	2

\* Depending on CMM & according to Metris acceptance procedure

## Environmental requirements

Operating temperature	0°C to +50°C
Storage temperature	-10°C to +70°C
Relative humidity	80% maximum for temperatures up to +31°C. Linear decrease to 50% at +40°C.

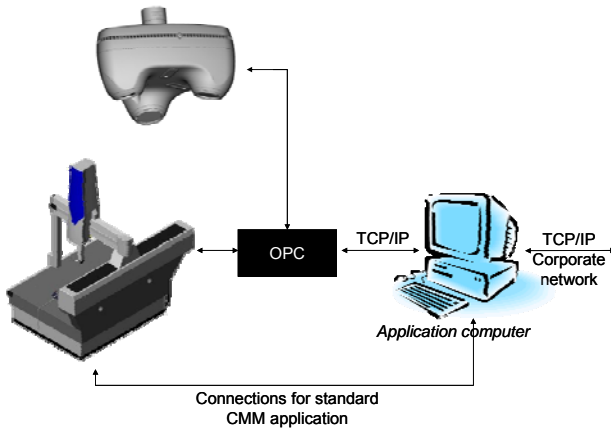
## RECOMMENDED OPTIONS

### Optical probe controller

The Optical Probe Controller (OPC) is a dedicated controller that

- Takes care of the communication of the scanning application with the CMM and the laser scanner
- Processes the raw data coming from the laser scanner

The OPC has been optimized for scanning performance preventing any dropouts in the resulting point cloud.



The OPC communicates with the application PC through a dedicated TCP/IP network connection.

Please contact Metris about the required connections

Dimensions	179x310x195mm
Power supply	110/220V-> 12V DC
Current	Max. 350mA
Desktop fixture	Hole for M8/M10
Wall fixture	4 x M6

between OPC and CMM as this is CMM model specific.

### Scanner heating options

In order to avoid the scanner heating time and consequently maximize CMM productivity, it is possible to power the laser scanner while it is not connected to the PH10 e.g. while touch trigger measurements are done. By keeping the laser scanner at its operating temperature, it is immediately operational as soon as it is connected to the CMM.

This can be done by putting the laser scanner manually in a dedicated warm-up station or by equipping the CMM with a dedicated version of the Renishaw ACR3 auto-exchange rack with heating option. In the latter case, the switching between probes is done fully automatically

### Metris heating station



### Renishaw ACR3 with heating option



DS-XC50LS-0611

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