

## MAXIMUM FLEXIBILITY IN PCB TESTING

INGUN creates new test possibilities  
in cooperation with ODU



**The combination of the classic test fixtures from INGUN together with the Mass Inter-connect interface from ODU now offers a solution for testing PCBs and electrical assemblies from a single source.**

Connectors are an indispensable element of modern technologies, because they enable the modular structuring of assemblies, systems, and entire machines. Over the decades, a great variety of connectors have been developed, with countless versions in terms of shape, function, and scope of performance. One of the world's leading companies for connector systems is ODU GmbH & Co. KG

from the Bavarian town of Mühldorf am Inn in the southeast of Germany. More than 2,300 employees worldwide ensure the flexible transmission of signals, current, high current and high voltage, high frequency signals, media such as air or fluids as well as data and light waves - in industries such as medical technology, measuring and testing technology, safety and communication technology, and of course automotive.

In addition to connectors and electrical contacts, ODU also supplies so-called Mass Interconnect (MI) systems. This is an interface for measuring and testing systems that enables particularly efficient

testing of printed circuit boards and electronic assemblies. In order to create additional synergies and an attractive offer from a single source for customers, ODU has been cooperating with the testing technology specialist INGUN, based in Constance in south-west Germany, since 2020: The MI systems from the ODU-MAC<sup>®</sup> Black-Line series can be combined with all manual test fixtures in the MA 20xx, MA 21xx and MA 32xx series, offering another option in addition to existing interface systems.





## MASS INTERCONNECT: UP TO 4,608 SIGNAL CONTACTS IN ONE INTERFACE

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As Product Manager, Maximilian Baumann has been responsible for the Mass Interconnect division at ODU for two years. He describes the beginnings of the cooperation with INGUN as follows: „In 2019, the idea of grouping the related enquiries received separately by both companies together was born. This means we can offer customers an ideally-suited complete solution quickly and without complications. Like ODU, INGUN is internationally positioned and pursues similar goals. Right from the start, the cooperation has been very positive and focused on technological advantages for the end customer“.

As a result, INGUN has been supplying complete test fixtures with MI interface for very modular device testing with a high degree of flexibility since 2021: Each ODU-MAC<sup>®</sup> Black-Line interface can be equipped with up to 12 docking frames. To ensure transmission of signals, current, high frequency, high

voltage, media (air/fluids) as well as light waves and vacuum, a range of 32 modules are available. These are installed in the frame using a tool-free clip assembly. This makes it possible to adapt the interface precisely to individual customer requirements.

## NEW LEVEL OF PERFORMANCE IN PCB AND ELECTRONICS TESTING

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Alexander Weinzierl, Area Sales Manager at INGUN, says: „At the beginning, both companies received the requests separately. Relatively quickly, the idea arose to simplify this for the benefit of the customers. In line with our vision of providing an optimum connection between test point and test system, we can supply a very versatile and individually-configurable test solution from a single source thanks to the ODU-MAC<sup>®</sup> Black-Line. This takes testing technology in the field of PCBs and electronic systems to a whole new level of performance.“

An innovation from ODU additionally facilitates the integration of the complete

solution consisting of test fixture and MI interface into superior systems: The new electromechanical engagement of the ODU-MAC<sup>®</sup> Black Line increases functional safety and, thanks to its small footprint and push-button operation, also allows automation in an inline test system. For the assembly of the MI system, customers can rely on the reliable electrical contacts in the ODU-MAC<sup>®</sup> Blue Line. The world's largest portfolio of spring-loaded test probes from INGUN is available for contacting devices under test (DUT). This ensures ideally-suited solutions for efficient, reliable contacting. Baumann concludes: „Both companies share a notable hands-on mentality. This quickly resulted in constructive approaches to solutions in the innovative field of Mass Interconnect testing. The customers appreciate this, because they benefit from the shared expertise and the combined technology of INGUN and ODU“.

## ABOUT INGUN

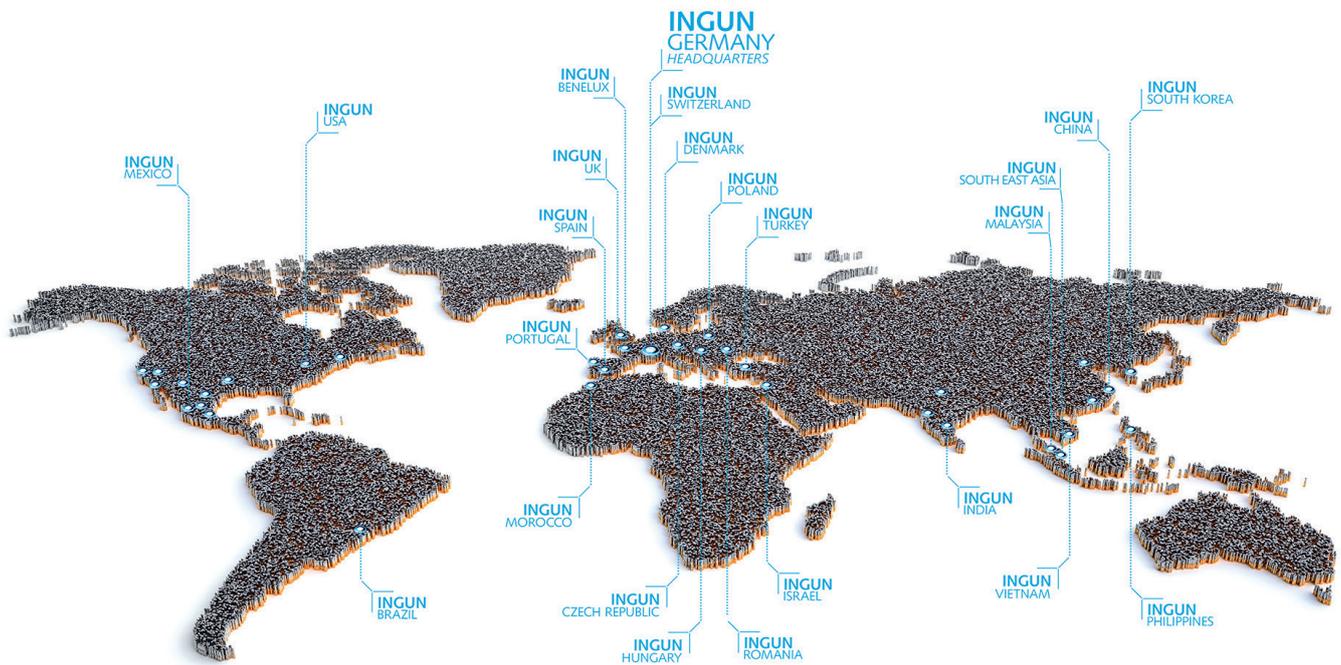
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Since 1971 INGUN has been providing the optimum connection between test point and test system. With the world's largest portfolio of test fixture kits, customisation accessories, and test probes, the company from Constance,

Germany on the banks of Lake Constance is an important Partner for Future Technology.

More than 400 employees at over 40 locations worldwide ensure INGUN's innovative, modular, and ideally-suited

solutions are readily available. As a development partner for its customers in industries such as automotive, telecommunications and medical technology, INGUN ensures the quality of electrical and electronic products.



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