# The Trick with the Click

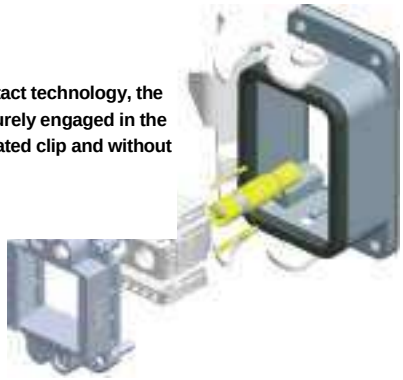
## A high-quality and robust connector solution which convinces with economic viability and flexibility

Nowadays, economic viability and flexibility are the requirements which the user demands, no matter whether in the telecommunications, medical or mechanical and test engineering fields. These requirements naturally also play an outstanding role in the connector field. ODU Steckverbindungssysteme in Mühldorf am Inn developed the modular rectangular connector ODU MAC LC so as to enable its customers to profit from a connector which is economically viable, in addition to it being high-quality and robust.

**As a modular system, the ODU MAC LC connector offers** a high level of flexibility. The system comprises four main components -a metal frame, diverse plastic modules which serve as an insulating body, a wide range of corresponding contacts together with housings which are tailor-made for the system. “A contact certainty is an absolute necessity for connectors", said Dr.-Ing. Kurt Woelfl, the managing director of ODU Steckverbindungssysteme/Otto Dunkel in Mühldorf am Inn, putting this well-known fact in a nutshell. He continues to explain “An interruption in the electrical conduction can result in enormous difficulties with the application. Machine standstills, malfunctions and even injuries can occur, depending on the application. In order to achieve an accordingly high level of contact certainty, ODU makes use of the crimp-climp-contact which has already made a name for itself in numerous applications in the Push-Pull range. “The advantage of this technology: it guarantees a secure contact, which even exists after 5,000 mating cycles, so that the requirements of numerous applications can be covered. It is recommended that a connector with wire spring contacts such as the ODU MAC be used if higher mating cycles are required in automated test engineering for example, or for devices which are subjected to a number of manual mating cycles on a daily basis. According to information from the manufacturer, this connector is capable of achieving mating cycles which exceed 100,000 by far.

## Offering an economical solution

The ODU MAC LC is predestined for all applications for which the high number of mating cycles does not play such an important role but it still scores with a high level of contact certainty and economical advantages. After all, an economical solution not only depends on the connector price. As Dr.-Ing. Kurt Woelfl emphasises: “Economic viability is not only measured by the connector price. The taking of the entire system costs into account is much more important. The preforming costs also obviously have to be added to the connector costs. Economical is the person who reduces these total costs and not only the costs for the one or other component." With the ODU MAC LC, the Mühldorf company relies on Crimp-Clip-Contact technology, which not only convinces with a good level of contact certainty, but also with extensive preforming advantages. After crimping, the contact can be easily and securely engaged into the insulating body with the assistance of the integrated clip and without the need for an additional tool. “This simple economical preforming is in the foreground as far as the ODU MAC LC is concerned, resulting in our clients benefiting from the system costs and a significant increase in the economical viability“, said Dr. Woelfl. He goes on to explain “The pin and socket contacts are simply clicked into the insulating body without a tool being required. The clear numbering of the contact positions on each of the insulating bodies helps to avoid incorrect preformings and the resulting reworking costs." If there should be an incorrect occupancy, each of the contacts can be removed from the plug-in side without



**With the ODU Crimp-Clip-Contact technology, the contact can be easily and securely engaged in the insulating body with an integrated clip and without the use of an additional tool.**

difficulty with the assistance of an ejection tool, states the manufacturer. After the insulating bodies have been fitted with contact, there is the possibility of inserting each of the modules in the frames manually without the use of a tool. The user can avoid possible incorrect assemblies by referring to the coding which is integrated in the insulating bodies and the frames. Furthermore, the modules can also be dismantled manually and without the use of tools. “With this property, the simple handling of the ODU MAC LC meets the high requirements of a very comfortable and economical preforming. Even the most demanding preformings can be accomplished by simply clicking the modules into the frames ", summarised Dr.-Ing. Kurt Woelfl.

## Considering the modular system

The diecast zinc frame forms the basis for the modular system. The four different sizes on offer manifold possibilities of use, as Dr. Woelfl: “The customer selects the frame size he requires for his use, The frame is designed for mounting in the DIN aluminium housing which is already known from the ODU MAC range, which is already in use in the industry." The frame can also be directly fitted to the appliance so that the connector can also be used to create the flexible connection -»

## At a Glance

### Meeting high economical demands

Nowadays, economical viability and flexibility are also the basic demands for a component such as a connector, irrespective of the industrial areas. How can these demands be met in practice? This is where the ODU MAC LC rectangular connector comes into its own. This connector which is designed as a modular system offers a high level of flexibility, in addition to it scoring with the Crimp-Clip- Contact technology which enables a high level of contact certainty to be achieved. The user also benefits from preforming advantages as the crimp contacts do not require an additional tool, but are simply engaged in the insulating body with a simply click. Last but not least, the ODU MAC LC displays brilliance with a high contact density meaning that it can replace a large number of connector, this in turn having a positive effect on the wallet.

**The ODU MAC LC is equipped with various contact inserts for signal and current transmission, in addition to data transfer and with a high frequency and is available in housing versions with a spindle or hoop lock.**

**A high level of contact certainty, robustness and flexibility combined with economy: the ODU MAC LC connector.**

from cable to cable, cable to device or device to device. Vacant spaces are occupied by dummy modules. These modules which are available in three sizes not only provide the connector with an optically complete appearance, but also avoid larger foreign bodies and soiling from entering the preformed area.

## Plug-in certainty guaranteed

An additional important component for a high degree of connection certainty is the frame. A coded guiding system which is integrated in the frame ensures that the user is unable to plug the connector in incorrectly. “This guiding system makes it easier to plug the connector in correctly and also ensures that the connector still functions correctly after 5,000 mating cycles“, said Dr. Woelfl. He continues: “The customers who require an absolutely secure earth or shield transmission are pleased about the earth connection which is integrated in the frame. With the available pre-mating contacts, each design engineer can create a robust and secure connection for his application and offer the ultimate consumers a corresponding protection." The manufacturer currently has five different modules on offer in order to a possibility of use which is as flexible as possible, hereby covering the most diverse applications. The connector can not only be used to transmit signals, but also currents up to 23 amperes and a maximum line voltage of 630 volts. Two coax-modules with 50 and 75 Ohms can also be used i9n order to ensure a fast and above all, secure data transfer. The company anxious to continuously expand on its range of modules and contacts in order to meet the increasing demands of the industrial sector.

## Saving space

Space is a resource which most of the applications have a lack of and not only the connector manufacturers are aware of this. The ODU MAC LC has a high level of contact density due to its small unit distribution of 2.4 millimetres. The size 1 frame can accommodate up to 120 contacts. The largest configuration, size 4 has space for up to 370 single contacts. The advantage of this high level of contact density: the ODU MAC LC can replace a number of connectors and therefore save space and last but not least costs.

## Offer added value

“The flexibility of the ODU MAC LC range does not stop at the connector", points Dr.-Ing. Kurt Woelfl to the added values which the company’s customers benefit from. “ODU also offers the customers with two logistics possibilities. The customer can order the connector components separately. A set number can also be generated however." This means that under a certain number, the customer receives exactly the parts which he requires to assemble and preform the connector. Subsequent orders can be handled just as easily with the same article numbers.

Dr.-Ing. Kurt Woelfl from ODU Steckverbindungssysteme/Otto Dunkel in Mühldorf am Inn knows:
“Economic viability is not only measured by the connector price. The taking of the entire system costs into account is much more important. The preforming costs also obviously have to be added to the connector costs. Economical is the person who reduces these total costs and not only the costs for the one or other component.

This enables each user to choose the solution which is suitable for him and his processes.

The manufacturer from Mühldorf offers the connector both as a single part as a piece of storage equipment and as a complete connector set, so that the user has the greatest possible flexibility and is able to integrate the ODU MAC LC into his process chain. “The advantages gained from the contact certainty, the modular diversity, high level of contact density and a simple preforming enable the ODU MAC LC to be used in numerous areas of application. It is a high-quality and robust solution which convinces with economic viability and flexibility for industrial applications from measurement and test engineering to medical engineering“, summarised Dr.-Ing. Kurt Woelfl.

*(eck)* n
100ejl0608

[1] **infoDIREKT** www.elektronikjournal.de
Link to: ODU Steckverbindungssysteme

**ADVANTAGE** The connector sets standards when it comes to economic viability and flexibility. It economises with space as a resource, scores with a high level of contact certainty and good preforming possibility. Consequence: reduced overall costs.