

## Hylec-APL Launches New IP67 CAT6A Ethernet Connectors from Ria Connect

The growth of Ethernet has been exponential, becoming the default network communications format in PC based technology. While the format has quickly been adapted into home and office life it has so far struggled to find its place in harsher industrial environments. Fortunately Ria Connect's new IP67 CAT6A RJ45 'X-Synergy' connectors, available exclusively from Hylec-APL, provide a solution that could herald a wave of Ethernet enabled devices reaching outdoors and to the factory floor.

Industrial environments specify much higher requirements for connectivity. In a factory for example, plug connections often have to be protected against dust, humidity and other influences. In some applications, vibrations and high variations in temperature require additional measures to guarantee reliable contact and mechanical stability over long periods of time. These limitations and requirements have all been considered in the design and development of the new IP67 'X-Synergy' connectors.

The distinctive feature of the 'X-Synergy' is a surface mount design (SMD) Edge Connector, connecting the modules to the PCB; compared to the use of normal THR RJ45 jacks, SMD assembly both saves time and cost for users. The Edge Connector means that there is no mechanical stress of the solder joints and helps to massively simplify the design and speed up installation and replacement times. The system also provides complete EMC signal shielding from the Cable to the PCB.

The 'X-Synergy' is based on different bulkheads and plug housings in industry standard variants V1, V4, V5 and V14 standardised according to ODVA and IEC 61076-3-106, all offering IP67 protection class. This level of protection means that it is both waterproof and dustproof and suitable for many industrial applications including: outdoor, marine and construction.

A particular challenge for industrial RJ45 connectors is the connection of optical signals in harsh environments. Each interface of a plug/jack combination is accompanied by data losses by reflexion or pollution for example. The so caused loss of signal energy results in a lower reach and signal reserve.

Direct connection of the SFP transceiver to the pc board by an edge connector offers an improvement of signal performance. This means one optical plug connection less compared to the general practice where the optical signal is carried from a jack in the housing wall via patch cable inside to the SFP transceiver. Thus X-Synergy offers in addition to the already launched RJ45 Ethernet modules for CAT6A 10/100 Mbit/s and 1 Gbit/s the possibility to use IP67 protected SFP transceivers by combining them with the proven bulkhead/plug variants.

Alex D'Arcy of Hylec-APL comments: "The Ria Connect X-Synergy range is an ideal solution for those who are looking for reliable and flexible connectivity for their device design. The advantage of the X-Synergy over other connectors is that the data cable is directly connected to the PCB. This means that installation is quick, mechanically sound and does not take up much space, while the connection is protected from wet weather environments, vibrations and exposure to chemicals."