MEDIA RELEASE

R&M Introduces Cabling for the Digital Office Ceiling

How every LED lamp gets an Internet address / Power supply with data cables / On the way to smart IP-based building management

Wetzikon, May 4, 2017. R&M, the global Swiss developer and provider of cabling systems for high-quality network infrastructures based in Wetzikon, supports initiatives for the digital office and room ceiling. The aim of these digital ceiling initiatives is to integrate the ceiling infrastructure into local data networks. Sensors and controls for lighting, air conditioning and surveillance could be networked more simply and safely with building services engineering and the Internet of Things. Functions and services that in the past have been run separately could now be brought together for the first time in the data network. This would make it possible to automate office and building operations. There are already energy-saving, smart LED ceiling lights available on the market featuring intelligent sensors and a data network connection.

"These are fascinating new possibilities. But things are not yet working out quite so easily in the field due to the frequent lack of appropriate cabling and a solution for the power supply of end devices on the ceiling," says Matthias Gerber, Market Manager LAN Cabling at R&M. This is why R&M has developed special digital ceiling solutions for office buildings based on tried-and-tested cabling systems.

For example, R&M is supporting the combination of data connection and power supply for LED lighting with an incredibly low amount of cabling. The LED lights are fed with power via the data cable – referred to as Power over Ethernet (PoE) – and at the same time obtain their own IP address in the LAN. Surveillance cameras, smoke alarms, temperature and motion sensors or WLAN antennas on the ceiling could be integrated in the Internet of Things in the same way.

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The R&M U-Box is the core of these solutions. The multifunctional, flat distributor housing can provide up to 24 data network or PoE connections. "But Power over Ethernet will not be enough in the digital ceiling. High-power end devices, such as digital ceiling switches, that need greater power are coming onto the market. And that changes the requirements fundamentally. In the future we are going to be needing an adequate 230-Volt power supply as well as structured LAN cabling in the ceiling," says Matthias Gerber. In such cases, ceilings can be accessed with the R&M U-Box as it can accommodate not only the LAN connections but also the connections for the 230V power supply.

"It is crucial you plan an appropriate cabling structure for the digital ceiling at an early stage," emphasizes Matthias Gerber. In conventional planning, the number of LAN connection points in the ceiling is not usually enough. The tried-and-tested star cabling based on a central floor distributor was developed particularly with work area access in mind. But these connections are normally in the wrong place when it comes to connecting building infrastructure applications. This is why R&M recommends positioning small ceiling distributors, called service outlets (SO), compliant with EN 50173-6 at regular intervals in all rooms. To reduce the need for star cabling, an active zone switch can be positioned next to the SO point. These can take care of LAN cabling and PoE power supply in their relevant zones.
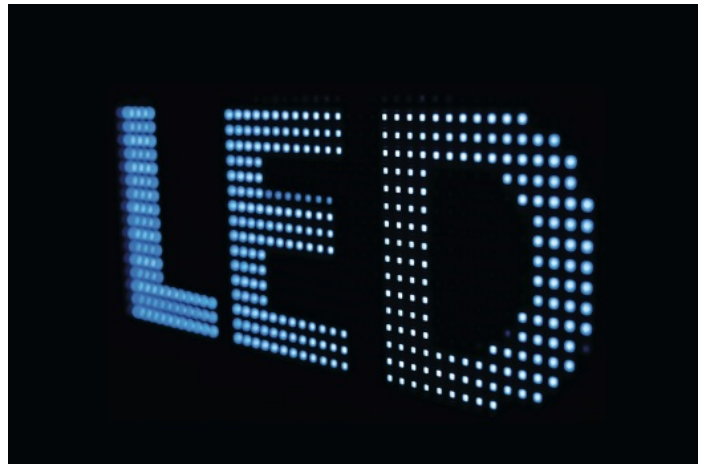
The digital ceiling solutions provided by R&M are paving the way to a plannable development of the ceiling – both for IP-based intelligent building automation and for WLAN access using structured cabling. The combination of data network and 230V power supply on one platform has been a specialty of R&M for many years, and is now finding a new application. R&M uses approaches from data cabling and work area access which have been proved millions of times over and can be adapted to suit any particular scenario.

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Matthias Gerber, Market Manager LAN Cabling, R&M

Caption:

The Internet of Things is now arriving in office ceilings. That is the aim of the digital ceiling initiatives which Swiss cabling expert R&M is also supporting. Digital ceiling aims to create IP infrastructures for intelligent building management. Sensors and controls for lighting, air conditioning and surveillance, or even the power supply for LED lights can be brought together in the data network. R&M has developed special digital ceiling solutions on the basis of tried-and-tested cabling systems for office buildings. The R&M U-Box is the core of these solutions. The multifunctional, flat distributor housing can provide LAN and power connections.

Image source: R&M

About R&M

R&M (Reichle & De-Massari AG) is a leading global producer of future-proof products and systems for communication and data networks. The company's close collaboration with certified partners results in pioneering connectivity solutions in the sectors LAN, Public and Telecom Networks as well as Data Centers. The Swiss family company stands for innovation, quality, and proximity to customers. More information can be found at www.rdm.com

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