



FM45

The key
to freedom

Get more

Flexibility

Unlimited usability

Efficiency

Tool-free termination

Reliability

Robust contacting



Convincing cabling solutions

Independence.

Universal connection solution.

Field-mountable RJ45 connectors

Every second, every move counts on the building site out in the field. The easier the cabling, the more reliably objectives and deadlines can be met. The handier and more flexible the technology, the faster installers and network operators can respond to new challenges.

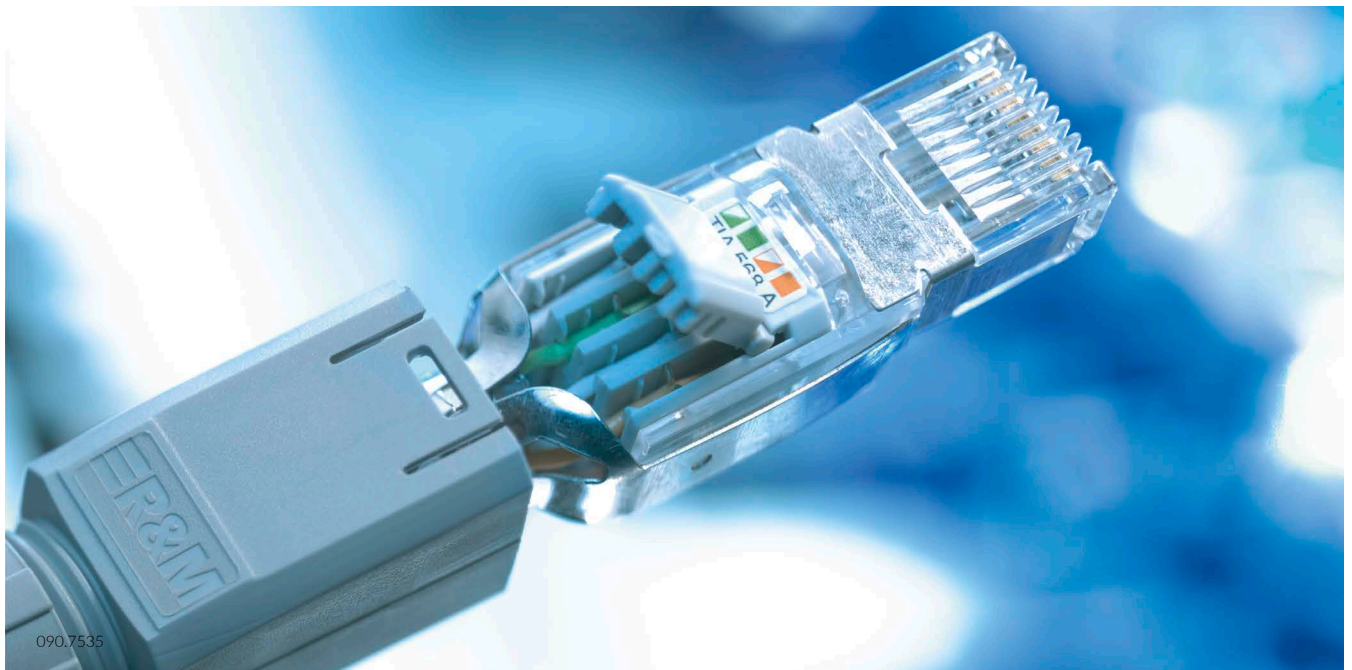
There are specific situations on a daily basis that require spontaneous solutions and maximum freedom when it comes to decision making. Whether in new buildings or renovations, on office or business premises, in data centers, production halls, recreational facilities or apartments. Cabling links may suddenly have to be altered or extended. A customer may want individual installations totally independently of the planning, or cables may have to be provisionally laid and directly connected.

The answer to these diverse challenges is: field termination. If connections can be made quickly and easily at any location as required, this means installers, users and customers can achieve the independence they want.

R&M presents the key to freedom.

With the FM45 product family, R&M has developed the pioneering innovation for field termination of high-performance RJ45 connectors for twisted pair copper cabling. True to the mission of creating convincing and installation-friendly cabling solutions, all FM45 connectors can be terminated without any special tools. A few easy steps are all you need for error-free connection of cables and connectors. The FM45 portfolio offers universal connection solutions for all applications.

“With the FM45 product family, R&M has developed a pioneering innovation for field termination.”



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Flexibility.

Unlimited usability.



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One solution for every need

Their usability: limitless. R&M's field-terminable FM45 connectors are suitable for structured cabling installations, simple data connections or point to point connections. They serve as practical accessories for servicing, maintenance and repairs, as well as when setting up individual LAN infrastructures.

The connectors are compatible with the RJ45 standard of the IT world and can be combined with existing copper cabling. Shielded and unshielded stranded and solid cable with wire diameters of AWG 22 to AWG 26 and cable cross sections of up to 10.5 mm can be terminated. An unbeatable application range. The FM45 is a single solution for every need.

The both types of FM45 Cat. 5e and FM45 Cat. 6A meet all the relevant standards. They are subject to uncompromising R&M quality standards. FM45 connectors provide the same signal quality as factory assembled connectors in a reliable and reproducible way.

Up to 10 Gigabit Ethernet

Transmission up to 1 Gigabit Ethernet (Cat. 5e) or 10 Gigabit Ethernet (Cat. 6A ISO) is supported along with Power over Ethernet (PoE and PoEP) up to 50W. FM45s are also suitable for:

- communication and telephone cabling
- bus cabling, building automation, safety and security technology
- industry 4.0, automation, industrial Ethernet
- home networks, smart homes, multimedia installations
- stage, show, concert and event installations

Simple, quick solution

How often do installers need to find a simple, quick and straightforward solution at the operating site? Field-terminable RJ45 connectors such as R&M's FM45 family enable you to respond in any situation. This makes the FM45 the idea solution for servicing and maintenance.

FM45.

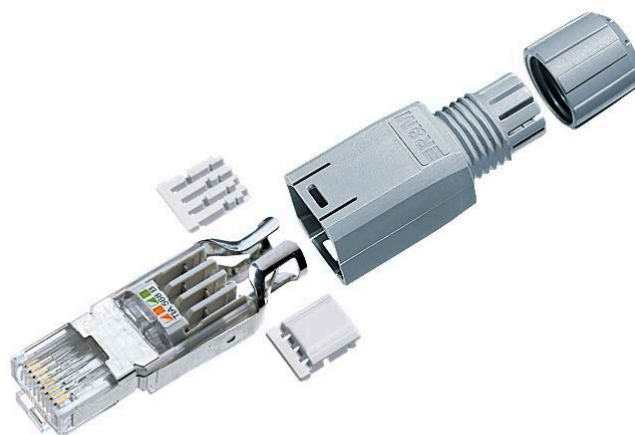
Top performance and handling.

All-round talent

It has never been easier to terminate one of these kinds of multifunctional RJ45 connectors yourself. With the FM45, R&M has created a product family which gives planners, installers, service engineers, facility managers and other network professionals new freedoms and convenience they never expected. FM45s are like Swiss tools: compact and handy, with lots of features, usable for a multitude of functions, extremely robust and of the highest Swiss quality. A typical R&M innovation and a unique solution for terminating RJ45 connectors in the field.

The tried-and-tested classic

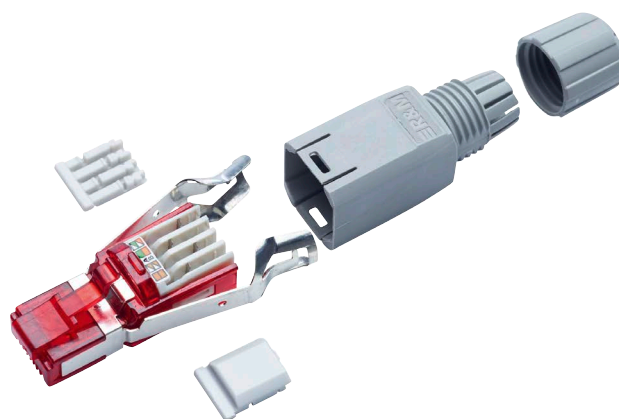
As the little brother in the FM45 family, the FM45 Cat. 5e is an impressive all-round talent. You can use it to carry out network installations which are intended for professional data transmission up to 1 Gigabit Ethernet. Easy handling means connectors are terminated in next to no time. Furthermore, the FM45 Cat. 5e is suitable for bus installations and many individual cabling requirements. Its performance values comply with ISO/IEC 11801 Cat. 5e.



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“Red stands for outstanding performance.”

The Cat. 6A, the top-of-the-range model in the FM45 family, impresses with its compact housing and outstanding inner qualities. For the first time, a field-terminable RJ45 connector has surpassed the component requirements of ISO/IEC 11801- for Cat. 6A. This means the FM45 Cat. 6A is suitable for reliable 10 Gigabit Ethernet operation and also for the use of Power over Ethernet Plus (PoE+). It is of course backward compatible with Cat. 6 and Cat. 5e connections.



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Modular principle

Thanks to the modular principle of R&M solutions, the FM45 Cat. 6A can be directly combined with all components of the FM45 family:

- Color coding
- Metal housing for maximum shielding
- Plastic and metal housing for protection classes IP54 to IP67

Multifunctional.

FM45 throughout the building.

Flexible distribution of workstations

Workstations and IT equipment in large offices are often adapted to new situations. Cabling between telephones, computers, peripheral devices and wall ducts or consolidation points then has to be changed on an ad hoc basis as well. Field-terminable connection solutions such as R&M's FM45 family make it easier to adapt office environments quickly and in line with needs.

Material-saving CP cables, special-length patch cords or crossover cables can be created in just a few minutes. If cables or connectors are damaged by relocating desks, they can be immediately repaired on site using the FM45. A Facility Manager can connect additional monitors, WLANs, repeaters or access points in next to no time. An IP conference system can be integrated just as quickly into the network via the shortest route. FM45s foster teamwork capability in offices.

Using FM45 connectors enables the coupling of installation cables and RJ45 connectors. The number of 19" inserts in floor distributors can be reduced by point-to-point direct connection. This saves space, material and costs. Reliable, trouble-free communication connections are nevertheless provided.

Handy form factor

The special form and small dimensions of the connector mean that it can be stacked both horizontally and vertically in active equipment. This means that the FM45 can also be easily used in RJ45 harmonicas in high-density network switches.

Using Power over Ethernet

Power over Ethernet (PoE) is moving into offices and commercial areas. PoE is becoming more and more attractive with capacity increasing to more than 50 watts. It can supply sufficient power to mobile computers, VoIP telephones, WLAN access points, monitors, surveillance equipment and other systems. This makes parallel low-voltage power supply and power supply units superfluous.

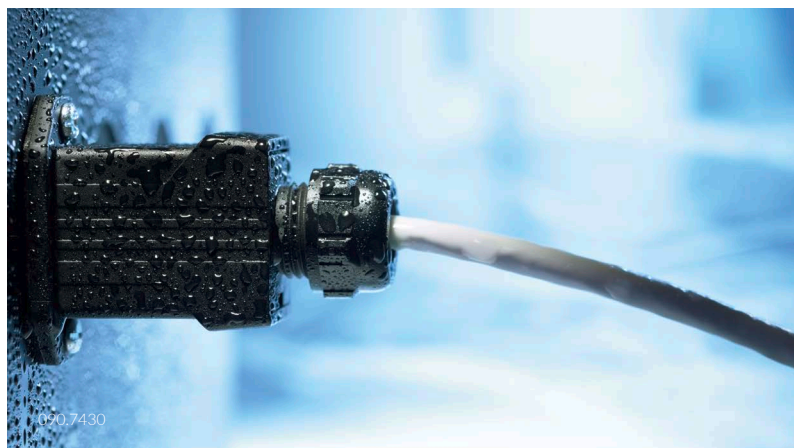
FM45 connectors support Power over Ethernet. The stable IDC connection prevents the connectors heating up and prevents short circuits.



Suitable for industrial use

The standard version of the FM45 is intended to be used in low-stress environments which require protection class IP20. Incorporating devices on the factory floor, in warehouses or in outside locations into the LAN requires robust, environmentally protected cabling solutions. They must be able to withstand dust, oil, humidity, climatic influences or electromagnetic loads.

The FM45 can be protected by an additional housing in a flash. This means it can also be used where there is dust and splashing. Different housings are available for protection classes IP54, IP65 and IP67, suitable for moderate to harsh industrial environments.



Your benefits: At a glance.

Intuitive handling

Installers and network professionals are able to terminate FM45 connectors intuitively. The functions of the individual components are self-explanatory and child's play in terms of understanding. All components – terminal block, contact plate and housing with nut – fit precisely together. No special tools are required for the termination itself. Friends of Do It Yourself will be able to terminate the connectors after practicing just a few times.

Four work steps

Cutting and stripping cables. This is the customary first step for creating connections on site.

The eight conductors are arranged in accordance with the label and inserted into the wire guide. Both color codes, according to EIA/TIA 568A and 568B, are printed on them. This means pin assignment can be carried out on site as required, and all standard complying cables can be used. Stripping of individual conductors is no longer needed. Protruding ends are cut off.

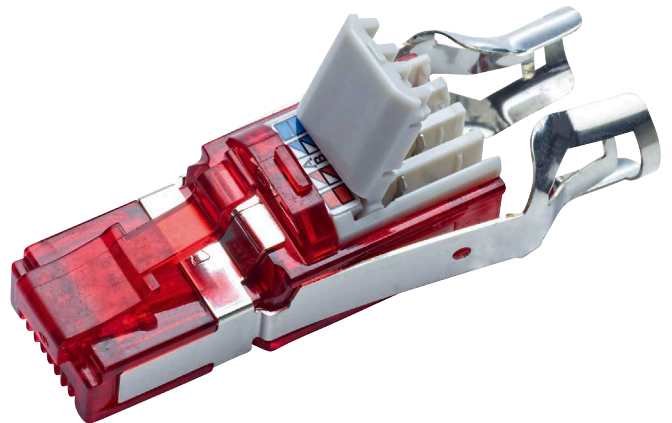
The third step involves inserting the Easy Lock lever and pushing it closed with just the force of your finger. The lever presses the conductors into the IDCs. This creates the contact.

Step four: Slide on housing and tighten box nut. The connection is completed. As an option, you can also attach colored coding elements or IP protection sleeves.

Consistent simplification of installations in terms of R&M's added value has again been successfully achieved here. This ensures highly efficient installations on the building site.

Angled and flat

If the connection point is located behind a cupboard or in a narrow conduit, this means the connector should be as small as possible. R&M has developed the version of the FM45 with right-angled housing for just such cases. The design is 40% shorter than for the standard straight version. The housing can be set up in 90° steps in all directions. The output direction can be changed at a later stage. A flexible solution for home and building cabling.

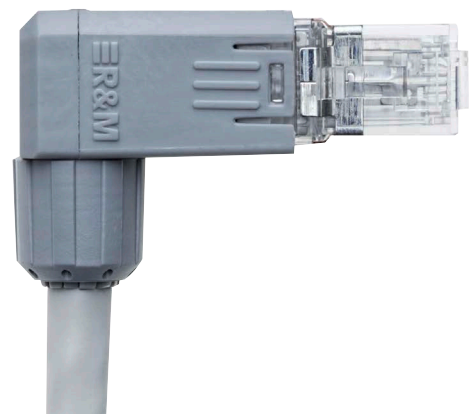


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Sophisticated IDC technology

The FM45's contacts work under all conditions – thanks to R&M's sophisticated and robust IDC technology. IDC conductor contacting (IDC = Insulation Displacement Contact) with tin-coated IDCs has crucial plus points for functional reliability:

- Can be rewired (up to 20 times)
- Guaranteed tensile strength, vibration resistance and temperature stability
- Gas, water and dust proof and therefore corrosion-resistant
- The contact resistance of an IDC is ten times lower than with piercing contacting. The FM45 contacts achieve a longer life cycle.
- They do not get hot when using Power over Ethernet (PoE).
- IDC technology is even able to withstand harsh situations in factories or the open air (heavy duty environments).



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Stable transmission

The IDCs developed by R&M mean conductors are held securely in their defined position. This applies to solid and stranded wire in the same way. Vibrations or typical movements on the cable do not influence the connection in any way. The large contact surfaces and constant contact heights ensure optimum conductivity.

Transmission values are reproducible and reliably stable.

100% quality

The sophisticated production process guarantees consistent high quality for each individual connector. One hundred percent testing during assembly (in-line testing) ensures that only functioning connectors leave the works. In the context of the certification and warranty program, the 25-year system guarantee is also valid for FM45 connectors, if the network is set up using R&M products.

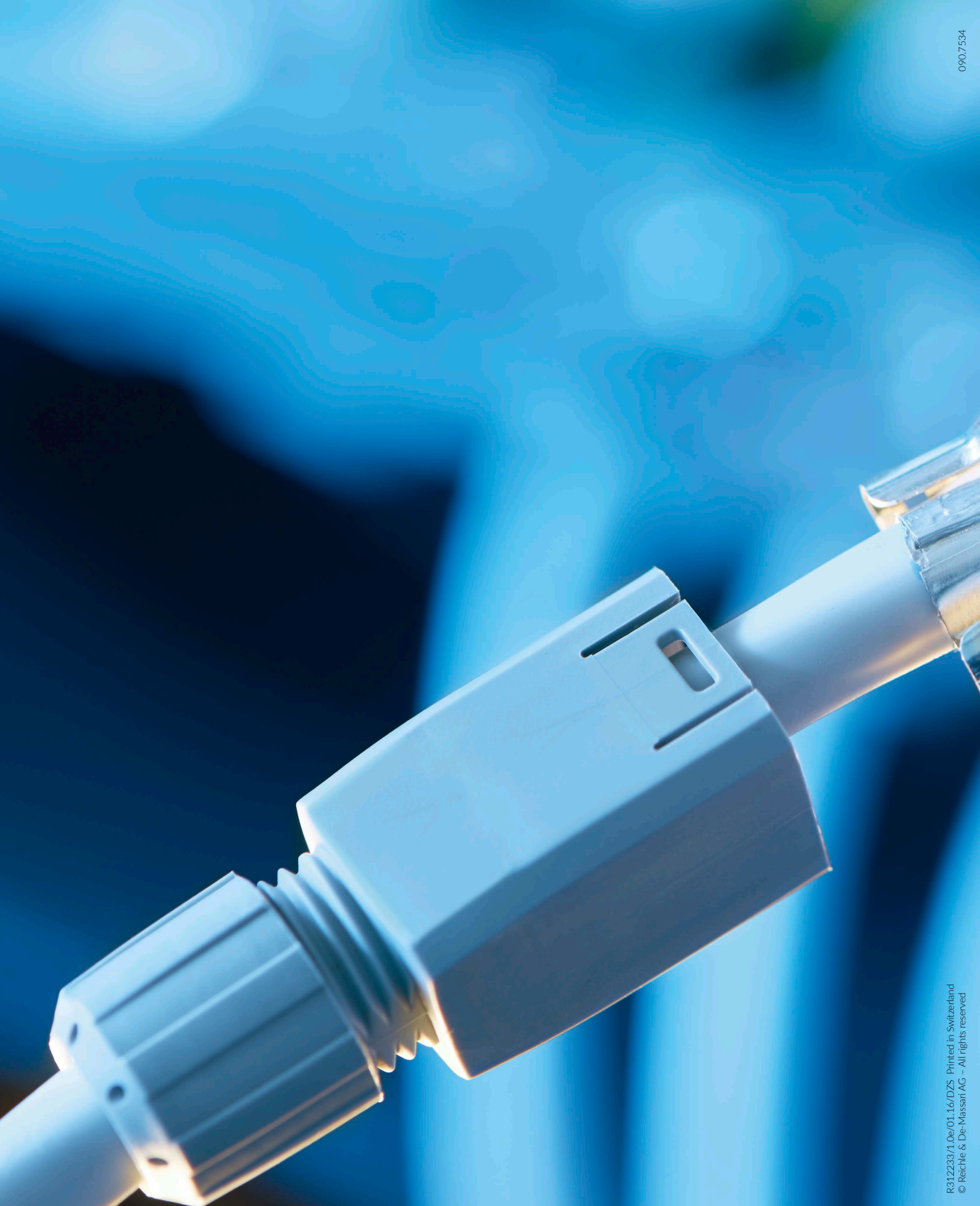
“The FM45 portfolio offers universal connection solutions for all applications.”



For more information and products, visit
www.rdm.com



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Convincing cabling solutions