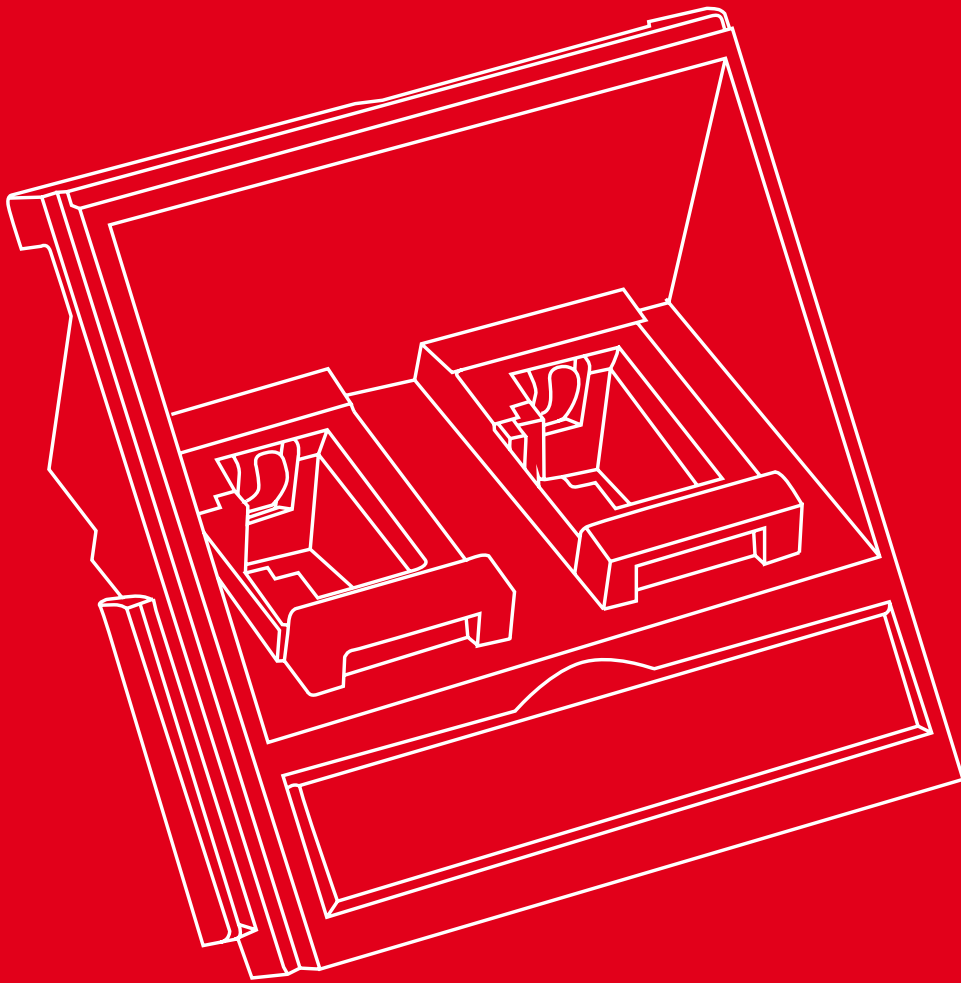


EVOLine®

the e-place design

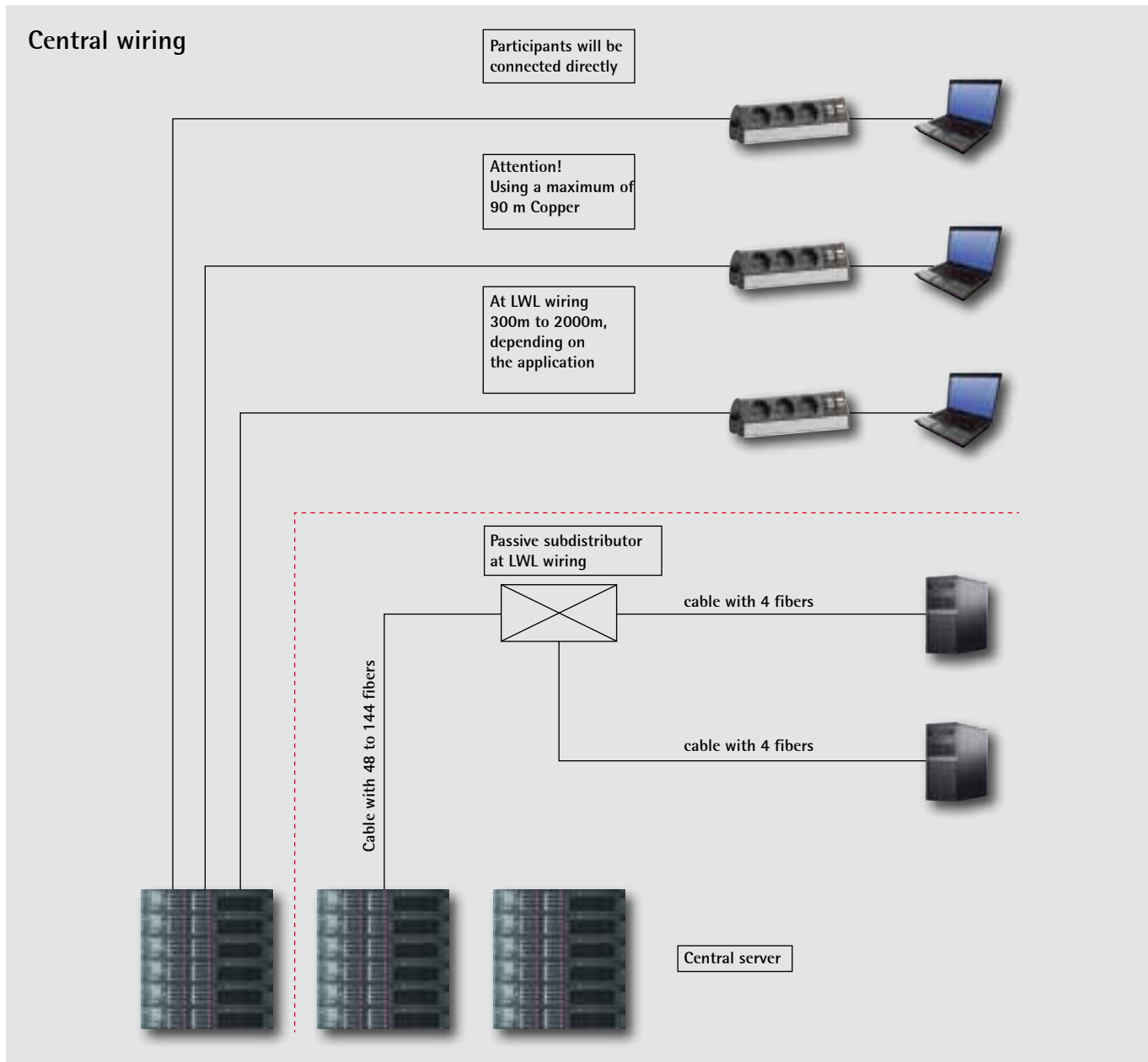




EVOLine® Data Modules



Structured Cabling in Buildings



The structured wiring of building is described in the EN 50173.

There basically two kinds or topologies are mentioned:

1. The Central wiring structure

The centralised wiring makes sense when link lengths are small (below 90 m) or in case of a pure light wave cabling.

Doing this the individual participants are linked directly or via passive subdivisions.

In a central room (server switchboard) where the entire active equipment is kept than all the cable merge.

Plug faces for Copper cabling



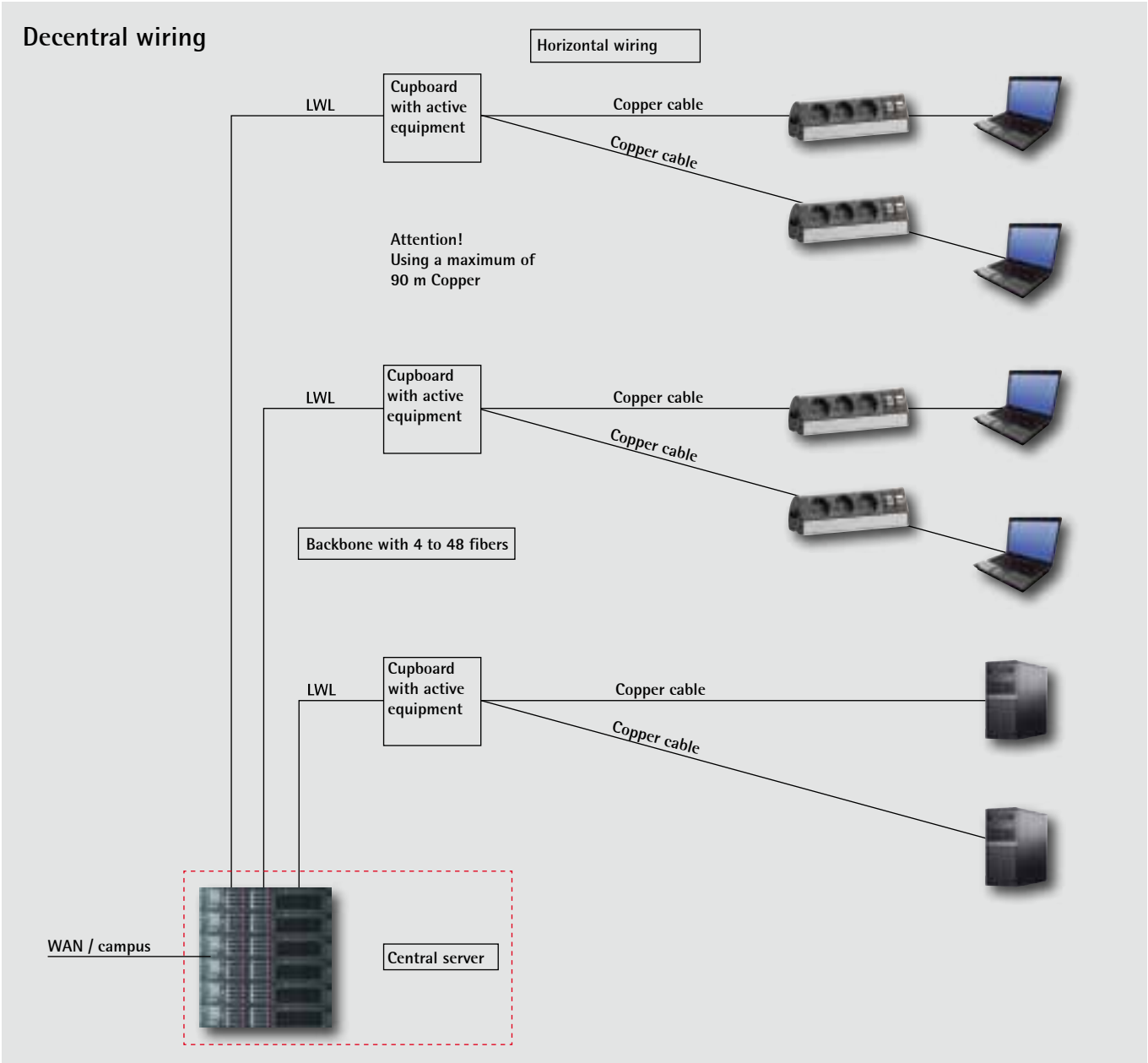
RJ 45



GG 45



TERA



2. The decentral cabling structure

Within the area of horizontal cabling the medium Copper is used for subdivision to the floors and therefore the supply of work places. Within the dividers the wiring is continued with the medium fiber optic cables.

These are merged normally inside the building distributor (server switchboard). Both alternatives have their specific advantages and disadvantages which have to be regarded according to the utilised situation.

Categories and frequencies of Copper components are divided into so called categories. Their various parameters are described in a certain frequency range. Every category stands for a performance frequency.

CAT 5e	125 MHz
CAT 6	250 MHz
CAT 6A	500 MHz
CAT 7	600 MHz
CAT 7A	1000 MHz

**Reichle & De-Massari
Category 6 and Real10
6A connector units**

For the data network connection in our system EVoline® we favour the products of company

Reichle & De-Massari (R&M). For more than 45 years the Swiss family enterprise is one of the distinguished



Category 6 REAL10 connection unit



Category 6_A connection unit

The category 6 REAL10 system from R&M fulfills the category 6 demands of standards ISO/IEC 11801:2002, DIN EN 50173-1:2007-12 as well as ANSI/TIA/EIA 568 B.2 1. It has been tested and certified according to the „re-embedded“-measuring procedure of standard IEC 60603 7 5, interoperable and downwards compatible to category 5 and 5e. Tested according to R&M manufacturing control with 100% single conformity inspection as well as the permanent quality control by the „GHMT PREMIUM Verification Program“.

It can be combined with category 6 systems of other brands. Furthermore it is suitable for the installation of transmission channels class EA according to ISO/IEC 11801 AMD1 (4 Connector-Channel) and therefore constructed for 10GBase T-applications according to IEEE 802.3an up to 500 MHz and 100 m. Condition is a consistent network cabling with R&M REAL10-components, including RJ45 shunting and connection cable. The category 6A system from R&M offers even more system reserve compared to the category 6 system.

It fulfills the category 6A-requirements of component standard according to ISO/IEC 11801: AMD2. This must not be confused with category 6A (notation: no set down „A“) according to standard ANSI/TIA/EIA 568 B.2 10, which accepts components with lower performance. The category 6A system from R&M has been tested and certified according to the „re-embedded“ measuring procedure of standard IEC 60603-7-41 (UTP) respectively-51 (STP). It is interoperable and downwards compatible to category

6, 5 and 5e. Tested according to R&M manufacturing control with 100% single conformity inspection as well as permanent quality control by „GHMT PREMIUM Verification Program“. It can be combined with category 6A systems of other brands. It is constructed for 10GBase T-applications according to IEEE 802.3an at 500Mhz and 100 m length.




EVOline® Data Modules

One of the top manufacturers and suppliers in the communication cabling industry.

These systems comply to the highest quality and standards for the data and communication network.






Examples of existing certificates. More certificates or data sheets available if required.

Article	Picture	Specification	Type
Data plate with 1 telephone and data port (Reichle & De-Massari) Snap In Installation dimension: 25 x 50 mm with 3,0 m cable * and plug Fits profile: 1		RJ45 CAT5 unshielded* Cable extension ordered separately	9330 8400 0000
		RJ45 CAT5e shielded* Cable extension ordered separately	9330 7850 0000
		RJ45 CAT6 unshielded* Cable extension ordered separately	9330 8270 0000
		RJ45 CAT6 shielded* Cable extension ordered separately	9330 7860 0000
		RJ45 CAT6 _A shielded* Cable extension ordered separately	9331 0020 0000
Data plate with 1 telephone and data port. Angular outlet with a label field (Reichle & De-Massari) Snap In Installation dimension: 50 x 50 mm 3,0 m cable * and plug Fits profile: 2,3,4,5,6,7,8,9		RJ45 CAT5 unshielded* Cable extension ordered separately	9331 0000 0000
		RJ45 CAT5e shielded* Cable extension ordered separately	9330 6130 0000
		RJ45 CAT6 unshielded* Cable extension ordered separately	9331 0010 0000
		RJ45 CAT6 shielded* Cable extension ordered separately	9330 6140 0000
		RJ45 CAT6 _A shielded* Cable extension ordered separately	9331 0030 0000
Data plate with 2 telephone and data ports. Angular outlet with a label field (Reichle & De-Massari) Snap In Installation dimension: 50 x 50 mm with 3.0 m cable * and plug Fits profile: 2,3,4,5,6,7,8,9		RJ45 CAT5 unshielded* Cable extension ordered separately	9330 4330 0000
		RJ45 CAT5e shielded* Cable extension ordered separately	9330 1220 0000
		RJ45 CAT6 unshielded* Cable extension ordered separately	9330 4340 0000
		RJ45 CAT6 shielded* Cable extension ordered separately	9330 1230 0000
		RJ45 CAT6 _A shielded* Cable extension ordered separately	9331 0040 0000

* Cable length measured from the position of the connection field inside the profile. Other cable lengths per meter on request.

EVOLine® Data Modules

Article	Picture	Specification	Type
Data plate with 1 telephone and data port and label field (Reichle & De-Massari) prepared for Security Systems 1-3 ** Installation dimension: 50 x 50 mm with 3,0 m cable * and plug Fits profile: 1		RJ45 CAT5 unshielded* Cable extension ordered separately	9330 4620 0000
		RJ45 CAT5e shielded* Cable extension ordered separately	9330 2520 0000
		RJ45 CAT6 unshielded* Cable extension ordered separately	9330 4630 0000
		RJ45 CAT6 shielded* Cable extension ordered separately	9330 2530 0000
		RJ45 CAT6A shielded* Cable extension ordered separately	9931 0050 0000
Data plate with 1 telephone and data port. Angular outlet with label field (Reichle & De-Massari) prepared for Security Systems 1-3 ** Installation dimension: 50 x 50 mm with 3,0 m cable * and plug Fits profile: 2,3,4,5,6,7,8,9		RJ45 CAT5 unshielded* Cable extension ordered separately	9330 4350 0000
		RJ45 CAT5e shielded* Cable extension ordered separately	9330 2500 0000
		RJ45 CAT6 unshielded* Cable extension ordered separately	9330 4360 0000
		RJ45 CAT6 shielded* Cable extension ordered separately	9330 2510 0000
		RJ45 CAT6A shielded* Cable extension ordered separately	9931 0060 0000
Data plate with 2 telephone and data ports (Reichle & De-Massari) prepared for Security Systems 1-3 ** Installation dimension: 75 x 50 mm with 3.0 m cable * and plug Fits profile: 2,3,4,5,6,7,8,9		RJ45 CAT5 unshielded* Cable extension ordered separately	9330 4640 0000
		RJ45 CAT5e shielded* Cable extension ordered separately	9330 2540 0000
		RJ45 CAT6 unshielded* Cable extension ordered separately	9330 4650 0000
		RJ45 CAT6 shielded* Cable extension ordered separately	9330 2550 0000
		RJ45 CAT6A shielded* Cable extension ordered separately	9931 0070 0000

* Cable length measured from the position of the connection field inside the profile. Other cable lengths per meter on request.

** Ordering accessoires for the security systems see page 286-287

EVOLine® with Nexans LANmark-7A GG45 connector switches the channel mode to 1000 MHz

Nexans LANmark-7A Cat7 patch cable with GG45 plug switch and GG45 channel in 1,000 MHz mode.

The protruding plastic element on the GG45 plug activates the switch in the GG45 socket. The RJ 45 contacts 3, 4, 5 and 6 not used in Cat7 mode are grounded.

By utilization of the outer RJ45 contact 1/2 and 7/8 with the lower placed GG45 contacts 9/10 and 11/12, excellent NEXT and RL values are achieved!



Nexans LANmark-7 patch cable maximize the entire capacity of a system-channel and fulfill the requirements for an ISO 4 connector model. This ensures full data turnover up to 1,000 MHz and permits the inclusion of additional patch connections or Consolidation Point applications. All of this ensures an optimal system flexibility for support of all future data applications according to ISO 11 801.



Socket GG45

- High speed multimedia patch cable
- screened
- 2 x GG45 plug, 4 pairs
- not reverse compatible with RJ45
- reliable connection during entire network durability
- compatible to class FA standard (ISO 11801:2008 A1)
- compatible to SOHO standard (ISO 15018)
- audibly snapping in
- no erroneous plugging into RJ45 sockets by mechanical encoding
- standardized Cat7 standard GG45 (60603-7-7)

The GG45 socket is reverse compatible and can be used for standard RJ45 connectors

- standard version: halogen free, flame resistant
- colour of coating, standard orange, other colours on request
- 3 m and 5 m are standard lengths, more lengths on request

Utilization

The plug connector LANmark-7 GG45 supports applications for the categories of Cat5, Cat5e, Cat6, Cat6A, Cat7 up to Cat7A according to IEEE802.3.AN.

Performance

The LANmark-7 GG45 Snap-In plug connection has been developed to achieve the highest performance in Cat6A, Cat7 and Cat7A and Broadcast-applications (like e.g. ISO 15018 residence wiring).

The GG45 has an excellent performance for the damping (insertion loss), and back flow damping.

A metal cross inside the plug takes care of the high NEXT performance in Cat6A and Cat7A mode.

The excellent return loss values of LANmark-7 GG45 are suitable for all possible data applications and also serve the support of CATV signals up to 1.000 MHz.



Examples of existing certificates. More certificates or data sheets available if required.

Article	Picture	Specification	Type
<p>Dataplate with 1 telephone-/data port with label field and dust cover (Nexans) Installation dimension: 50 x 50 mm Black</p> <p>with 3.0 m cable halogen free* and plugs</p> <p>Fits profile: 1</p>		<p>RJ45 CAT6 unshielded* Cable extension LANmark6 ordered separately</p> <p>RJ45 CAT6 shielded* Cable extension LANmark6 ordered separately</p> <p>RJ45 CAT6A shielded* Cable extension LANmark6A ordered separately</p>	<p>9330 6990 0000</p> <p>9330 7010 0000</p> <p>9331 0080 0000</p>
<p>Dataplate with 2 telephone-/data ports with label field and dust cover (Nexans) Installation dimension: 50 x 50 mm Black</p> <p>with 3.0 m cable halogen free* and plugs</p> <p>Fits profile: 1</p>		<p>RJ45 CAT6 unshielded* Cable extension LANmark6 ordered separately</p> <p>RJ45 CAT6 shielded* Cable extension LANmark6 ordered separately</p> <p>RJ45 CAT6A shielded* Cable extension LANmark6A ordered separately</p>	<p>9330 7000 0000</p> <p>9330 7020 0000</p> <p>9331 0090 0000</p>
<p>Telephone with a data port GG45 Angular field outlet with label and dust cover (Nexans) Installation dimension: 50 x 50 mm Black</p> <p>with 3.0 m cable halogen free* and plugs</p> <p>Fits profile: 1</p>		<p>GG45 CAT7 shielded* Cable extension LANmark7 ordered separately</p> <p>GG45 CAT7 shielded* Cable extension LANmark7A ordered separately</p>	<p>9330 7030 0000</p> <p>9331 0100 0000</p>
<p>Telephone with two data ports GG45 Angular field outlet with label and dust cover (Nexans) Installation dimension: 50 x 50 mm Black</p> <p>with 3.0 m cable halogen free* and plugs</p> <p>Fits profile: 1</p>		<p>GG45 CAT7 shielded* Cable extension LANmark7 ordered separately</p> <p>GG45 CAT7 shielded* Cable extension LANmark7A ordered separately</p>	<p>9330 7040 0000</p> <p>9331 0110 0000</p>
<p>Data plate with a telephone -/ data port Angular with label field and dust cover (Nexans) Installation dimension: 50 x 50 mm Black</p> <p>with 3.0 m cable halogen free* and plugs</p> <p>Fits profiles: 2,3,4,5,6,7,8,9</p>		<p>RJ45 CAT6 ungeschirmt* Cable extension LANmark7 ordered separately</p> <p>RJ45 CAT6 shielded* Cable extension LANmark6 ordered separately</p> <p>RJ45 CAT6A shielded* Cable extension LANmark6A ordered separately</p>	<p>9330 7050 0000</p> <p>9330 7070 0000</p> <p>9331 0120 0000</p>

* Cable length measured from the position of the connection field inside the profile. Other cable lengths per meter on request.

EVOline® Data Modules

Article	Picture	Specification	Type
<p>Data plate Telephone and data ports with two ports Angular outlet with label field and dust cover (Nexans) Installation dimension: 50 x 50 mm Black with 3.0 m cable halogen free * and Plugs</p> <p>Fits profiles: 2,3,4,5,6,7,8,9</p>		<p>RJ45 CAT6 unshielded* Cable extension LANmark6 ordered separately</p> <p>RJ45 CAT6 shielded* Cable extension LANmark6 ordered separately</p> <p>RJ45 CAT6A shielded* Cable extension LANmark6A ordered separately</p>	<p>9330 7060 0000</p> <p>9330 7080 0000</p> <p>9331 0130 0000</p>
<p>Telephone with data ports GG45 Angular field outlet with label and dust cover (Nexans) Installation dimension: 50 x 50 mm Black with 3.0 m cable Halogen free * and Plugs</p> <p>Fits profiles: 2,3,4,5,6,7,8,9</p>		<p>GG45 CAT7 shielded* Cable extension LANmark7 ordered separately</p> <p>GG45 CAT7 shielded* Cable extension LANmark7A ordered separately</p>	<p>9330 7090 0000</p> <p>9331 0140 0000</p>
<p>Telephone with data ports GG45 Angular field outlet with label and dust cover (Nexans) Installation dimension: 50 x 50 mm Black with 3.0 m cable Halg free * and Plugs</p> <p>Fits profiles: 2,3,4,5,6,7,8,9</p>		<p>GG45 CAT7 shielded* Cable extension LANmark7 ordered separately</p> <p>GG45 CAT7 shielded* Cable extension LANmark7A ordered separately</p>	<p>9330 7100 0000</p> <p>9331 0150 0000</p>

* Cable length measured from the position of the connection field inside the profile. Other cable lengths per meter on request.

EVOLine® with AMP Tyco Data Systems

Frankfurt – For the second time the International Electrotechnical Commission (IEC) has chosen the interface based on the TERA® connector as the standard interface for a new high performance cabling category.

The IEC therefore decides again for the standard IEC 61076-3-104 Ed. 2.0 which is based on the TERA® interface.

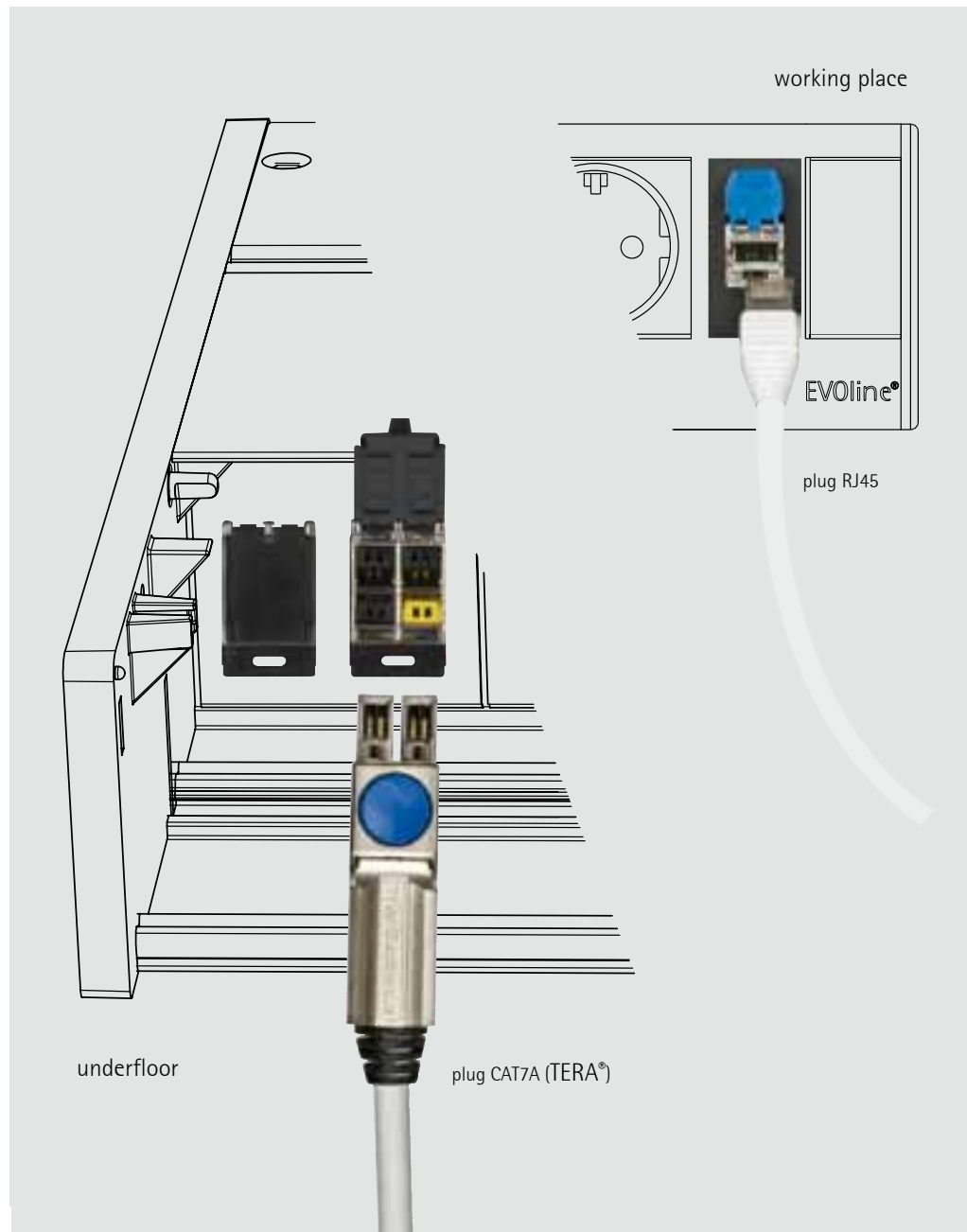
The Class FA is specified for an upper limit frequency of 1.000 MHz and is to support the future generation of data applications of more than 10GBASE-T as well as all cable television frequencies.

In order to create the preconditions for the future Class FA parameters, the plug connector specifications which are included in IEC 61076-3-104, Ed. 2.0 raise the upper limit frequency of symmetrical twisted-pair-plug connectors of 600 MHz (with category 7) to now 1,000 MHz.

But notebooks and computers are still fitted with the familiar RJ45 components due to cost reasons.

Therefore the TERA® connector is not the usual connection type at the users (e-place).

Standard connectors for the next Copper cable generation, TERA®



Schulte Elektrotechnik solves this connection via its interfaces in a classic manner.

The connection between work-place (EVOLine® Dock) to the consolidation point has been equipped with the highest category as RJ45 components.

From there the path leads via high performance data cables to the TERA® plug which is then connected to the right slot of the Consolidation Point.

EVoline® Data Modules

Article	Picture	Specification	Type
<p>Data plate with 1 telephone and data port (AMP TYCO) Installation dimension: 25 x 50 mm</p> <p>with 3,0 m cable * and TERA® plug CAT7A</p> <p>Fits profile: 1</p>		RJ45 CAT6 shielded* Cable extension ordered separately	9330 9600 0000
<p>Data plate with 1 telephone and data port Angular outlet with a label field (AMP TYCO) Installation dimension: 50 x 50 mm</p> <p>with 3,0 m cable * and TERA® plug CAT7A</p> <p>Fits profile: 2,3,4,5,6,7,8,9</p>		RJ45 CAT6 shielded* Cable extension ordered separately	9330 9610 0000
<p>Data plate with 2 telephone and data ports Angular outlet and label field (AMP TYCO) Installation dimension: 50 x 50 mm</p> <p>with 3.0 m cable * and TERA® plug CAT7A</p> <p>Fits profile: 2,3,4,5,6,7,8,9</p>		RJ45 CAT6 shielded* Cable extension ordered separately	9330 9620 0000
<p>Data plate with 1 telephone and data port (AMP TYCO) Installation dimension: 25 x 50 mm</p> <p>with 3,0 m cable * and plug RJ45</p> <p>Fits profile: 1</p>		RJ45 CAT6 shielded** Cable extension ordered separately	9330 9630 0000
<p>Data plate with 1 telephone and data port Angular outlet with label field (AMP TYCO) Installation dimension: 50 x 50 mm</p> <p>with 3,0 m cable * and plug RJ45</p> <p>Fits profile: 2,3,4,5,6,7,8,9</p>		RJ45 CAT6 shielded* Cable extension ordered separately	9330 9640 0000

* Cable length measured from the position of the connection field inside the profile. Other cable lengths per meter on request.



Article	Picture	Specification	Type
<p>Data plate with 2 telephone-/ data ports Angular with label field (AMP TYCO) Installation dimension: 50 x 50 mm with 3.0 m cable * and plug RJ45</p> <p>Fits profile: 2,3,4,5,6,7,8,9</p>		<p>RJ45 CAT6 shielded* Cable extension ordered separately</p>	<p>9330 9650 0000</p>
<p>Data Modules of other manufacturers: Systemax (Avaya) Panduit Microsens Elbro</p>			
<p>Data plate with 2 phone / data ports Systemax (Avaya) GigaSPEED Installation dimension: 50 x 50 mm</p> <p>with 3.0 m cable * and plug</p> <p>Fits profile: 1</p>		<p>CAT6 unshielded</p>	<p>9330 4370 0000</p>
<p>Data plate with two phone / data ports Systemax (Avaya) GigaSPEED Installation dimension: 50 x 50 mm with 3.0 m cable * and plug</p> <p>Fits profile: 2,3,4,5,7,9</p>		<p>CAT6 unshielded</p>	<p>9330 4550 0000</p>

* Cable length measured from the position of the connection field inside the profile. Other cable lengths per meter on request.

EVoline® Data Modules

Article	Picture	Specification	Type
<p>Data plate with two telephone-/data ports Angular (Panduit) Installation dimension: 50 x 50 mm with 3.0 m cable * and plug</p> <p>Fits profile: 1</p>		RJ45 CAT5e shielded	9330 1210 0000
<p>Data plate for two telephone-/data ports Angular (Panduit) Bushes loosely enclosed Installation dimension: 50 x 50 mm without cable</p> <p>Fits profile: 2,3,4,5,6,7,9</p>		RJ45 CAT6 shielded RJ45 CAT5e shielded	9330 1200 0000 9330 1190 0000

Network-Data modules

<p>Dataplate, LAN Switch 6 Port Fast Ethernet Switch (Microsens) 4 x 10/100TX, 2 x 10/100Base-TX integrated power supply 230 V management VLANs with logical isolation individual services (network management, Voice over IP, Internet access) Packet prioritisation (QoS) Mounting dimension: 150 x 50 mm</p> <p>Fits profile: 1,9</p>		Black 4 horizontal ports accessible from the outside 2 ports inside the profile, one port with 3 m cable CAT6 routed to outside Cable extension ordered separately	9330 7960 0000
<p>Dataplate, LAN Switch 6 Port Fast Ethernet Switch (Microsens) 4 x 10/100TX, 2 x 10/100Base-TX integrated power supply 230 V management VLANs with logical isolation individual services (network management, Voice over IP, Internet access) Packet prioritisation (QoS) Mounting dimension: 150 x 50 mm</p> <p>Fits profile: 1,2,3,4,5,6,7,8,9</p>		Black 4 horizontal ports accessible from the outside 2 ports inside the profile, one port with 3 m cable CAT6 routed to outside Cable extension ordered separately	9330 7970 0000

* Cable length measured from the position of the connection field inside the profile. Other cable lengths per meter on request.

Article	Picture	Specification	Type
<p>Modular-Adapter RJ 45</p> <p>The modular RJ45 adapter is an interface for connecting two patch cables (data cables with RJ45 male / male). A consolidation point cable runs to the workplace, here it is contacted via a modular adapter which is located at the workplace (E.g. EVoline® Dock). Each user can then connect with the network, using a patch cable (RJ45 cable with male / male)</p>			
<p>Data plate with a modular adapter (Elbro) wired RJ45 to RJ45, 1:1 for patch cable Installation dimension: 25 x 50 mm</p>		<p>RJ45 CAT6 unshielded</p> <p>RJ45 CAT6 shielded</p>	<p>9330 6550 0000</p> <p>9330 8410 0000</p>
<p>Fits profile: 1</p>			
<p>Data plate with a modular adapter Angular with label field (Elbro) wired RJ45 to RJ45, 1:1 for patch cable Installation dimension: 50 x 50 mm</p>		<p>RJ45 CAT6 unshielded</p> <p>RJ45 CAT6 shielded</p>	<p>9330 6560 0000</p> <p>9330 5880 0000</p>
<p>Fits profile: 2,3,6,8,9</p>			
<p>Data plate with two modular adapter Angular with label field (Elbro) wired RJ45 to RJ45, 1:1 for patch cable Installation dimension: 50 x 50 mm</p>		<p>RJ45 CAT6 unshielded</p> <p>RJ45 CAT6 shielded</p>	<p>9330 6570 0000</p> <p>9330 3920 0000</p>
<p>Fits profile: 2,3,6,8,9</p>			

EVOLine® Data Modules

Article	Picture	Specification	Type
RJ 11 for telephone			
<p>Data plate with a telephone port RJ11 (Elbro) Installation dimension: 25 x 50 mm RJ11 unshielded</p> <p>Fits profile: 1,6,8</p>		with 3,0 m cable * and plug RJ45	9330 6620 0000
<p>Data plate with a telephone port RJ11 Angular with label field (Elbro) Installation dimension: 50 x 50 mm RJ11 unshielded</p> <p>Fits profile: 2,3,4,5,7,9</p>		with 3,0 m cable * and plug RJ45	9330 6630 0000
<p>Data plate with two phone ports RJ11 Angular with label field (Elbro) Installation dimension: 50 x 50 mm RJ11 unshielded</p> <p>Fits profile: 2,3,4,5,7,9</p>		with 3,0 m cable * and plug RJ45	9330 6640 0000

* Cable length measured from the position of the connection field inside the profile. Other cable lengths per meter on request.

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