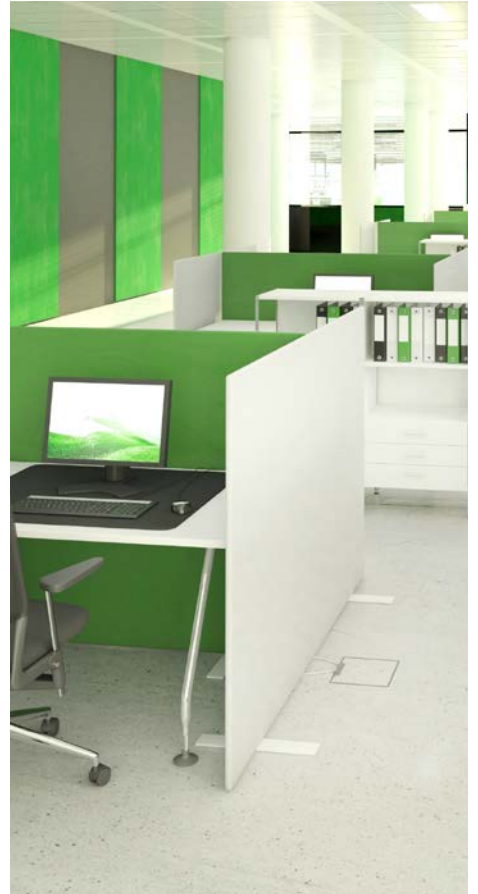# wieland

gesis® NRG

SMART SUPPLY

Application examples for the flexible and efficient electrical installation with flat cable.

THE **POWER AND LIGHTING SUPPLY** OF THE FUTURE? **PLUGGABLE!**

As an experienced and reliable partner, we can help you satisfy your building infrastructure cabling requirements with safety and efficiency. For over 40 years now, we have been offering our pluggable, decentralized systems as smart cabling solutions for lighting, floor boxes, workstations, and retail spaces.

Floor box supply, flexible workstation supply, and smart lighting are standard building features, especially in rooms used for commercial purposes. Any desired fixture requires suitable technical infrastructure. To this end, we offer optimal installation solutions and energy-efficient automation components. Tight time frames and short-term completion deadlines are the norm for the electrical installer on the construction site. Thanks to pluggable components, our modular gesis® system saves time, is supremely flexible, and is therefore an extremely appealing solution economically.

THE SYSTEM FOR:

+ OFFICES

+ HOTELS

+ EDUCATIONAL ESTABLISHMENTS

+ SHOPS, MARKETS, FURNITURE STORES

+ HOSPITALS

ECONOMICAL PLAN-NING CAPABILITY

gesis® ensures that project flows can be calculated and guarantees standardized quality in planning and execution.

SUSTAINABLE PROCESS QUALITY

gesis® is the standardized interface for all trades of building installation and automation. The mechanical coding reliably prevents mismating.
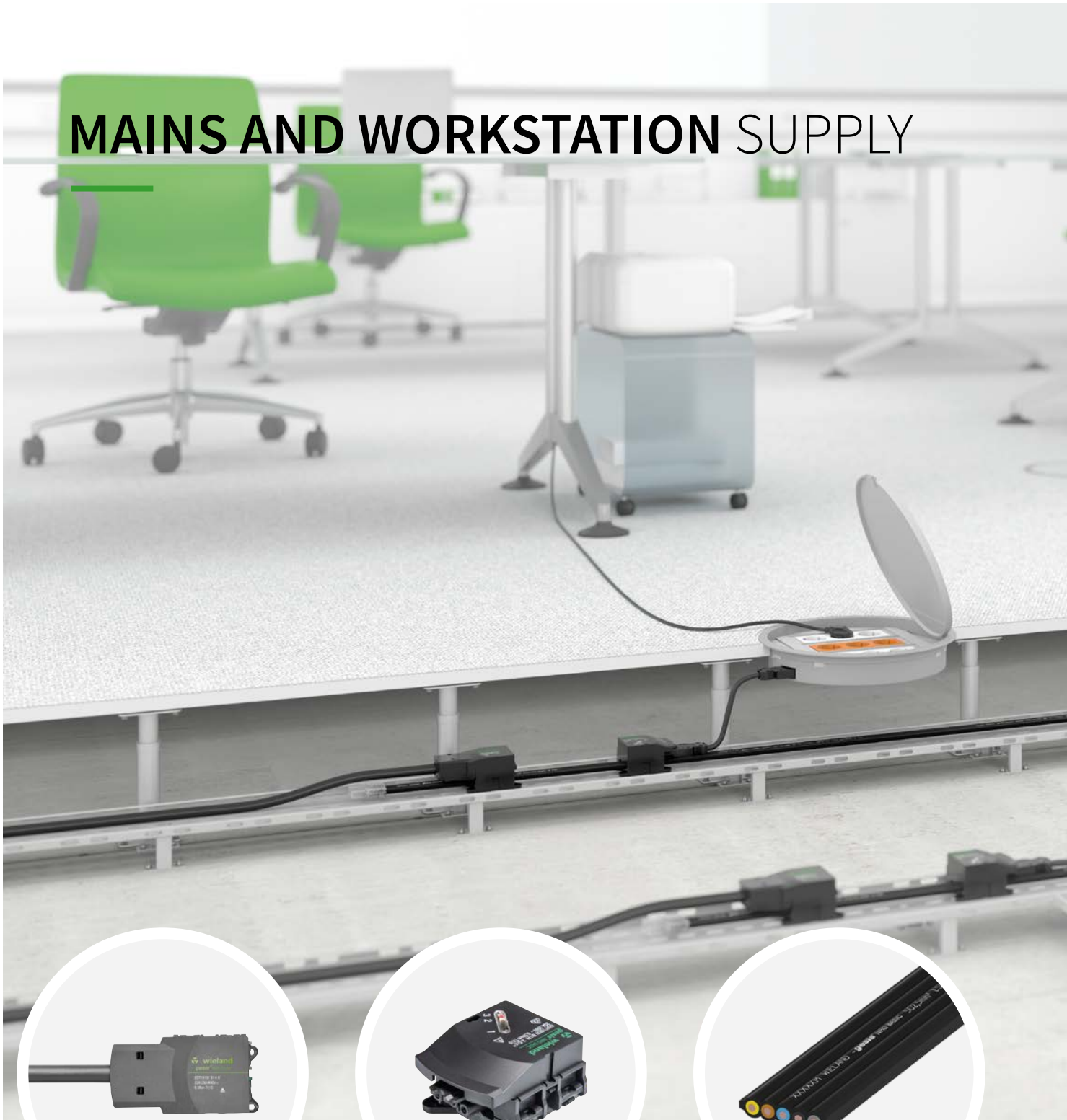
QUICKER ASSEMBLY

Our pluggable components minimize assembly times thanks to well-conceived interface technology and diversified connection technology with prefabricated cable sets.

MAINS AND WORKSTATION SUPPLY

SUPPLY ON SAFE GROUND

Mains power is distributed via a gesis® NRG 5G2.5/4 flat cable. The floor boxes are connected by positioning a tap and a corresponding connecting cable. The 3-pole phase selection adapter allows the phasing to be adjusted at any time for optimal load distribution.

APPLICATION

The different versions of the gesis®NRG flat cables supply floor boxes with and without decentralized fuse protection.

SOLUTIONS

- Industrially prefabricated system components
- Flexible flat cable systems for easy extendability
- Flexible layout with modification option

BENEFITS

- Fast, easy, and safe installation
- High functional reliability through prevention of mismating
- Simple adjustment of the installation to local conditions
- Subsequent extensions made easy thanks to pluggable components

MAINS AND WORKSTATION SUPPLY

WORKSTATION READY TO USE

Supply to the desk involves creating an outlet with the help of a connecting cable from the gesis® NRG 5G2.5/4 flat cable installed in the raised floor. This is connected directly to the multiple sockets in the desk by means of a floor feed-through. This guarantees flexible, adaptable workstation supply.

![wieland logo]

APPLICATION

The pluggable electrical installation can also be continued into the furniture, creating clear interfaces and providing safety.

SOLUTIONS

- Industrially prefabricated system components
- gesis® NRG flat cable with 3-pole, pluggable adapters with phase selection
- gesis® CLASSIC cabling to the consumers

BENEFITS

- Fast, easy, and safe installation
- High functional reliability through prevention of mismating
- Simple adjustment of the installation to local conditions
- Subsequent extensions made easy thanks to pluggable components

MAINS AND WORKSTATION SUPPLY

ENERGY AIMS HIGH TOO

Thanks to the flat design of the gesis® NRG flat cable and the components, the system can be laid in dado trunking. A connecting cable allows the dado trunking sockets, which are also pluggable, to be connected easily, quickly, and safely.

APPLICATION

The space-saving use of gesis® NRG flat cables in the dado trunking enables a pluggable installation throughout for maximum flexibility.

SOLUTIONS

- Industrially prefabricated system components
- gesis® NRG flat cable with 3-pole, pluggable adapters with phase selection
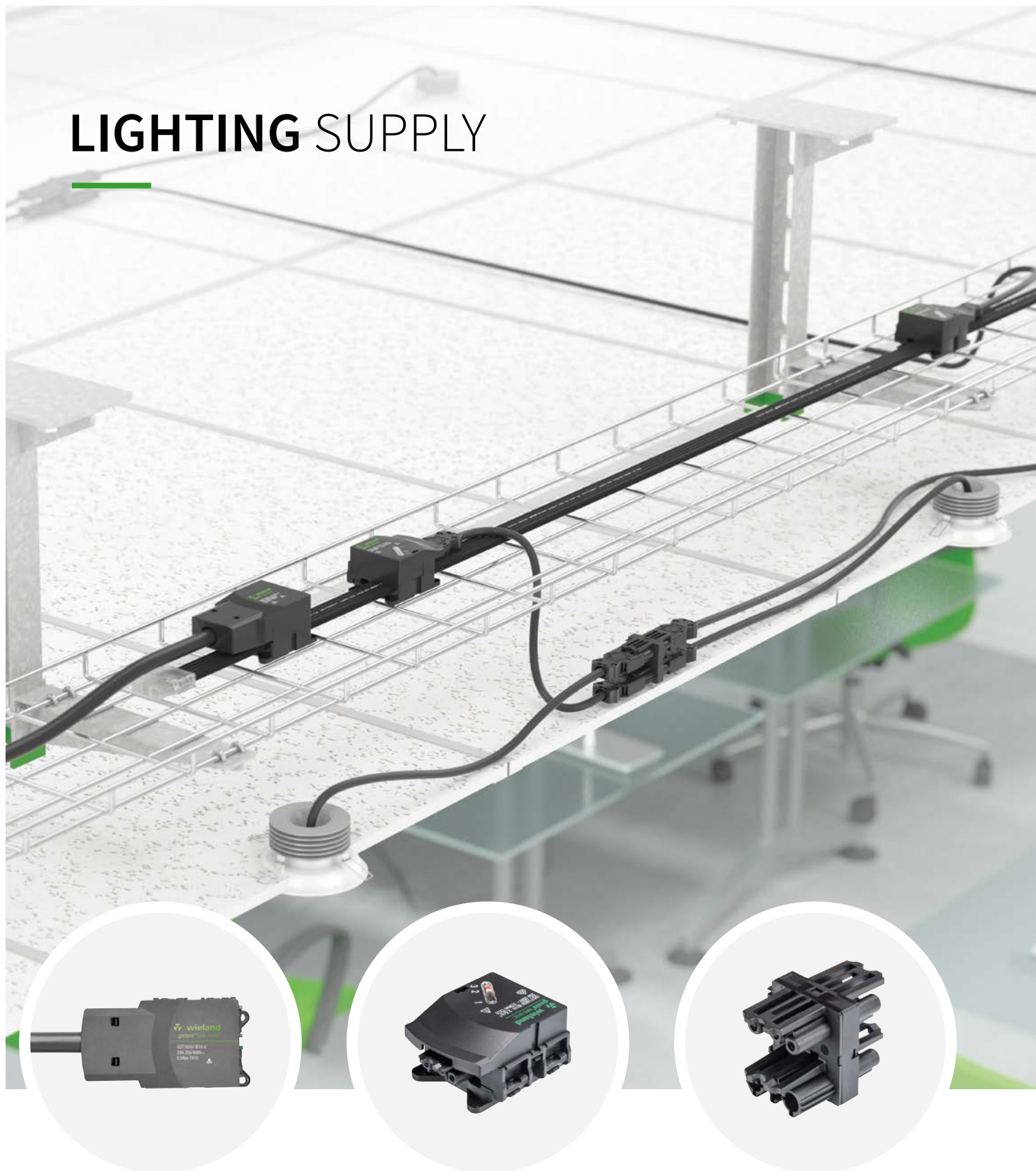- gesis® CLASSIC cabling to the consumers

BENEFITS

- Fast, easy, and safe installation
- High functional reliability through prevention of mismating
- Simple adjustment of the installation to local conditions
- Subsequent extensions made easy thanks to pluggable components

LIGHTING SUPPLY

SWITCHING TO FULL ENLIGHTENMENT

With switchable lighting, supply is via a 5-pole gesis® NRG flat cable. Several luminaire groups can be supplied via one tap by using the single-phase tap with phase selection adapter and distributors.

APPLICATION

Comprehensive lighting circuit coverage for office ceiling areas means that changes and extensions can be realized without any effort.

SOLUTIONS

- Industrially prefabricated components.
- gesis® NRG flat cable with 3-pole, pluggable adapters with phase selection
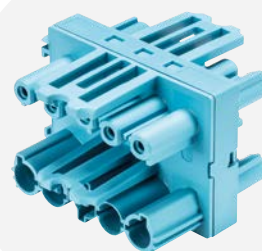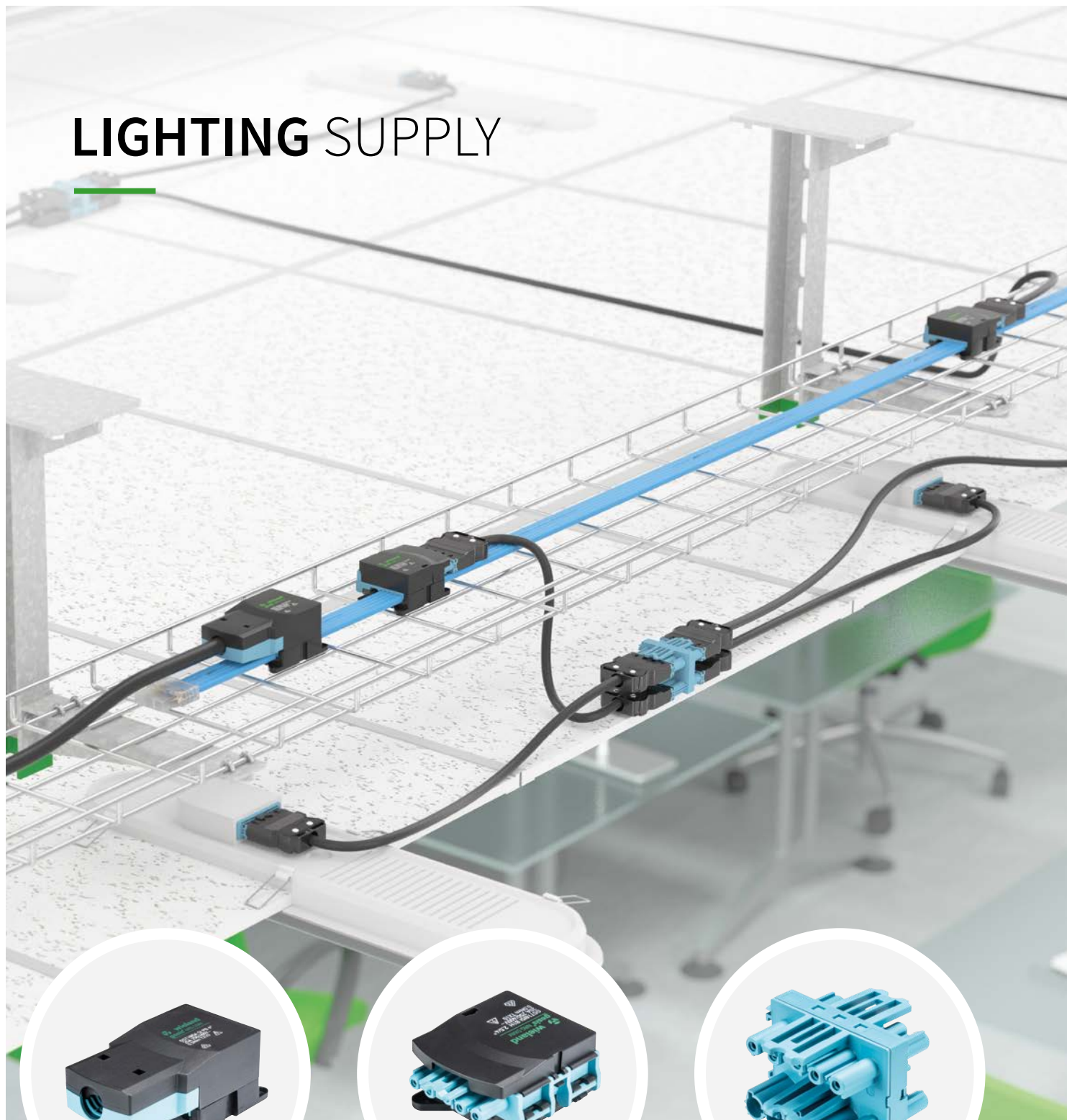- Distribution to consumers with gesis® CLASSIC

BENEFITS

- Fast, easy, and safe installation
- High functional reliability through prevention of mismating
- Simple adjustment of the installation to local conditions
- Subsequent extensions made easy thanks to pluggable components

LIGHTING SUPPLY

REGULATED RADIANCE

Energy and the DALI signal are delivered to the area with the 5-pole gesis® NRG DIMM flat cable. The luminaires can either be plugged in directly via the flat cable adapter and a connecting cable or supplied via a connection cable.

APPLICATION

Comprehensive mains and DALI signal coverage for offices means that changes and extensions can be realized without any effort.

SOLUTIONS

- Industrially prefabricated components
- gesis® NRG flat cable with 5-pole tap
- Distribution of mains power and signal to the consumers with gesis® CLASSIC
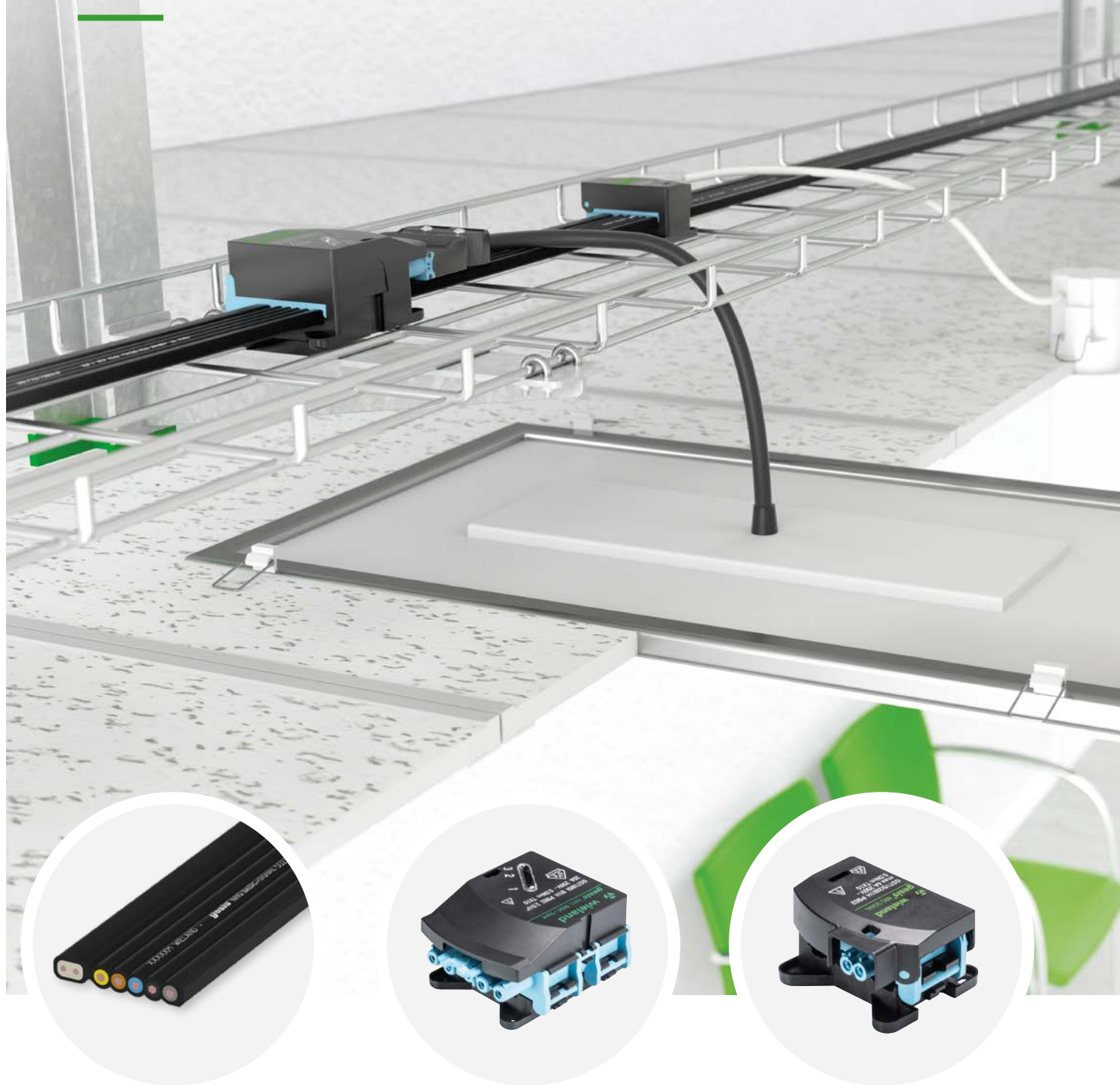
BENEFITS

- Fast, easy, and safe installation
- High functional reliability through prevention of mismating
- Simple adjustment of the installation to local conditions
- Subsequent extensions made easy thanks to pluggable components

LIGHTING SUPPLY

SHOWN IN THE RIGHT LIGHT WITH FLEXIBILITY

Energy (3-phase) and the DALI signal are distributed via the 7-pole gesis® NRG flat cable. The luminaires can be supplied directly with mains power and DALI signal via the flat cable adapter with phase selection. Among other things, presence detectors can be supplied directly with a DALI signal via the 2-pole flat cable adapter.

APPLICATION

Thanks to the design with a 7-pole flat cable with a 3-phase mains and DALI signal, the installation is equipped for future requirements.

SOLUTIONS

- Industrially prefabricated components
- Direct supply of luminaires with mains and DALI signal
- Supply with gesis® NRG over long distances
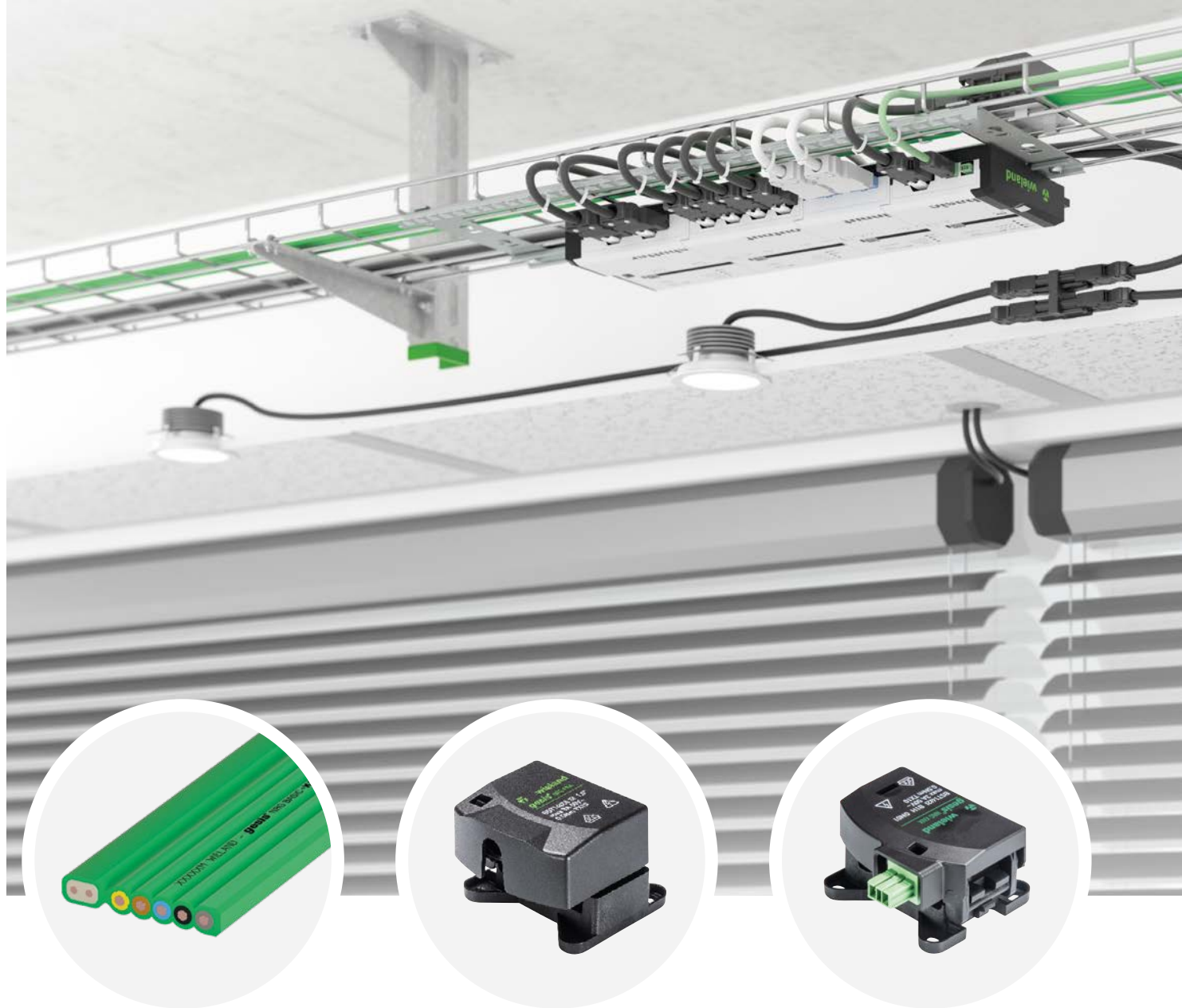
BENEFITS

- Fast, easy, and safe installation
- High functional reliability through prevention of mismating
- Simple adjustment of the installation to local conditions
- Subsequent extensions made easy thanks to pluggable components

DECENTRALIZED
BUILDING AUTOMATION

FULL POWER FOR THE BUILDING

For decentralized building automation, energy (3-phase) and KNX are brought to the area via the 7-pole gesis® NRG flat cable. The KNX signal can be tapped directly from the flat cable via the 2-pole flat cable adapter. Automation systems such as gesis® FLEX can be connected with a connecting cable.

APPLICATION

The decentralized, modular components can be mounted directly and without any additional housing, saving installation space in the local sub-distribution boards.

SOLUTIONS

- Industrially prefabricated components
- Provides room automation with three-phase current and KNX network
- Installation of room automation directly on site
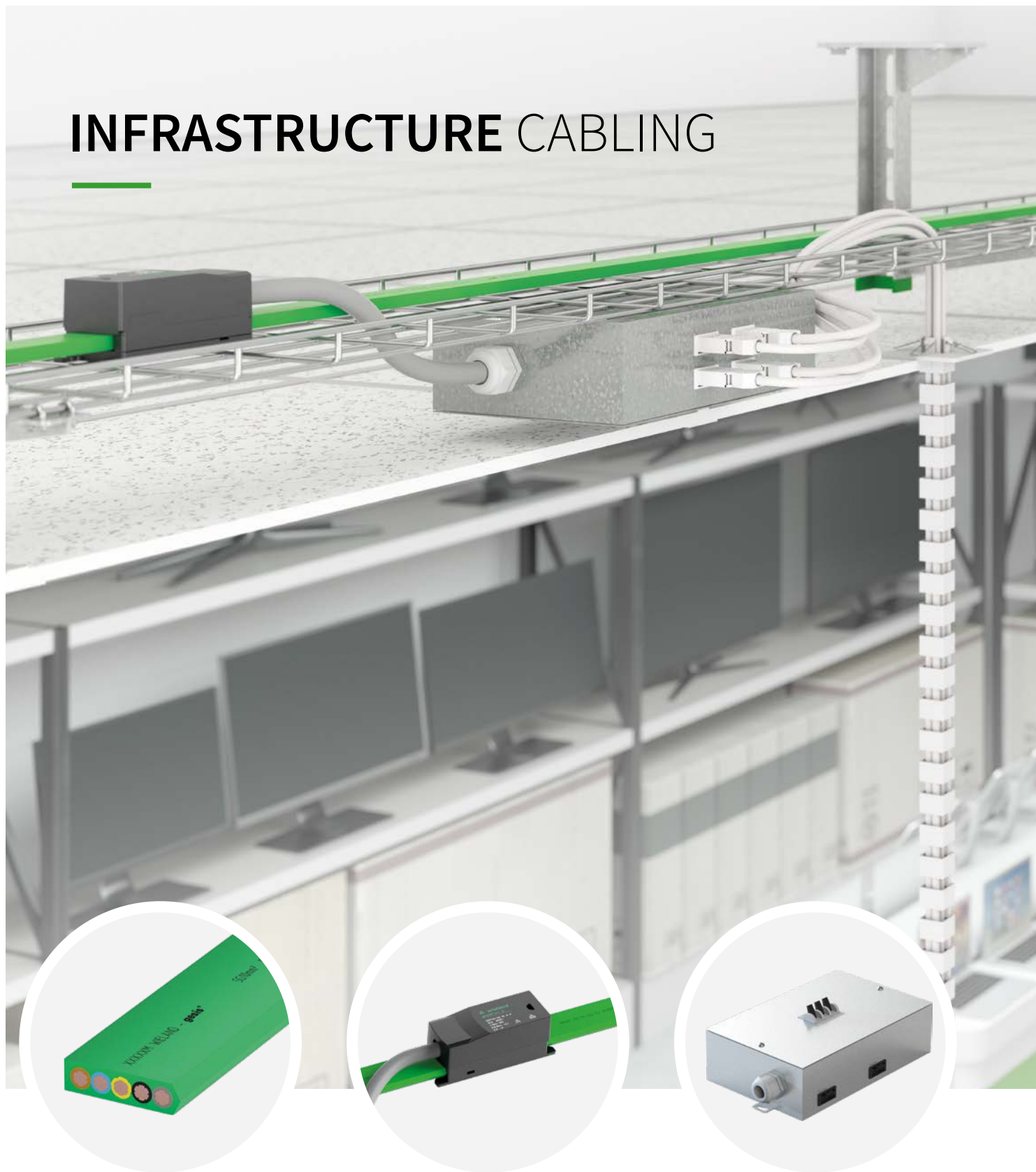
BENEFITS

- Fast, easy, and safe installation
- High functional reliability through prevention of mismating
- Simple adjustment of the installation to local conditions
- Subsequent extensions made easy thanks to pluggable components

INFRASTRUCTURE CABLING

ENERGY? ANY TIME AND ANY PLACE

Up to 34.5 kW can be distributed per phase via the 5-pole gesis® NRG flat cable 5G10. Energy is transported to the consumer via the gesis® RAN system distribution unit with built-in safety device and a pre-assembled connection cable.

APPLICATION

Retail spaces are supplied via a flexible busbar with a high core cross section. This ensures a comprehensive availability of power.

SOLUTIONS

- Industrially prefabricated components
- Decentralized system distribution units for installing safety devices
- Completely pluggable design up to the end device
- Easy to plug together on site

BENEFITS

- Fast, easy, and safe installation
- High functional reliability through prevention of mismating
- Simple adjustment of the installation to local conditions
- Subsequent extensions made easy thanks to pluggable components

THE **PRE-ASSEMBLED** CABLE

PRE-ASSEMBLED DIRECTLY ON THE CONSTRUCTION SITE

With time pressures on the construction site and defined consumer taps, the flat cable can be ordered from Wieland pre-assembled. The cable only has to be laid on the construction site and connected to the rest of the installation via connecting cables.

APPLICATION

If there is little time available on the construction site and the position of the consumers is defined, the installation can be carried out quickly by using pre-assembled flat cables.

SOLUTIONS

- The plan can be incorporated directly into a product that can be ordered
- Cables are delivered to the construction site without any further connection work
- Consumers can be connected directly via plug connectors

BENEFITS

- Time saving of up to 70 % on site due to the elimination of connection work
- High quality of workmanship due to industrial production and 100 % testing
- Subsequent extensions made easy thanks to pluggable components and the gesis® NRG flat cable

■ Conventional installation   ■ Wieland gesis® NRG

	Cable length	Fire load	Copper weight
Conventional	100%	100%	100%
Wieland gesis® NRG	20%	42%	33%
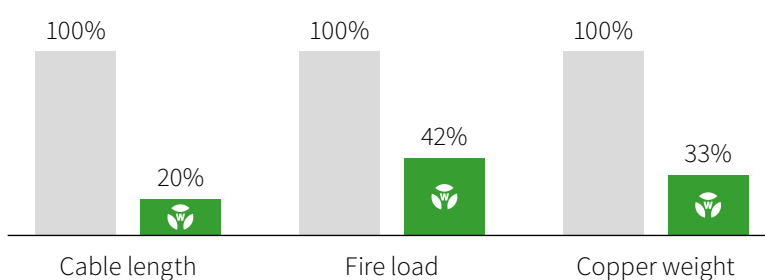
SYSTEM **COMPONENTS**

Our system components offer additional advantages, enabling you to win major projects and impress your customers:

FEED

Mains power or signal is fed into the flat cable system by connecting a round cable coming from the sub-distributor.

TAP

One or more phases as well as signals can be tapped close to the end consumer using the adapters.

FLAT CABLE

Almost any application requirement in a building can be met with a 5-pole to 7-pole cable and a cross section of 2.5 mm² to 4 mm² and through to 10 mm².

END PLATES

The end plate protects the open end of the cable from contact.

FROM PLANNING
TO INSTALLATION

VERY SIMPLE PLANNING

1. Roughly estimate the cable lengths and number of cables.
2. One feed per harness, with mains and signal separate if applicable.
3. Make sure there are two end plates per mains feed.
4. Determine outlet type and quantity, e.g. 15 floor boxes:
   15 x 3-pole mains adapter with phase selection.
5. Optional accessories: fastening materials and cutting tool.

TIP

1. Determine cable lengths per harness.
2. Each cable harness always requires:
- 2 end plates
- 1 feed
- Desired number of outlets

CHECK

1. Estimate of the number of harnesses = number of feeds
2. Number of end plates = 2 x number of harnesses

CONVENTIONAL

ORDER

OUR SERVICE
We can support you with planning and design.

PRE-ASSEMBLED

ORDER

IDEAL CONSTRUCTION PROCESS

Basic configuration:
- Flat cable is delivered on a reel (systemized deliveries also available)
- Lay flat cables and position adapters

Ultimate configuration:
- Plug in end consumer, e.g. floor box

FUTURE-PROOF

- Expansions and modifications are quick and easy using further adapters
- Flat cables for future-proof systems, e.g. KNX, DALI, SMI.

QUICK INSTALLATION

- Lay flat cable like an ordinary cable, position end plates
- Mount feed and taps at any point
- Connect feed
- Position all outgoing cables at the taps

IDEAL CONSTRUCTION PROCESS & QUICK INSTALLATION

- Flat cable is delivered to the construction site pre-assembled with all components (systemized deliveries also available)
- Insert, attach, and connect cable at the desired installation location

	5G2,5/4 BASIC	5G2,5/4 DIMM	5G2.5/4+2x1.5 not screened	5G2.5/4+2x1.5 screened	5G10
Flat cables PVC 2.5² E_{ca} Halogen-free 2.5² $B2_{ca}$ Halogen-free 4² $B2_{ca}$ PVC 10² E_{ca} Halogen-free 10² $B2_{ca}$	x=7 x=1 00.712.0303.x 00.770.0303.x 00.770.0304.x – –	00.712.0303.6 00.770.0303.6 00.770.0304.6 – –	00.712.1323.1 00.770.1323.1 00.770.1324.1 – –	00.712.0323.7 00.770.0323.7 00.770.0324.7 – –	– – – 00.702.0306.7 00.770.0306.7
Mains 5-pole feed	92.050.1553.1	–	92.050.1553.1	92.050.1553.1	92.050.9053.0 92.050.8853.0
Mains 5-pole outlet 3, N, PE, 2, 1 3∼	92.051.5453.1	–	92.051.5453.1	92.051.5453.1	92.050.9153.0
Mains 3-pole outlet L, N, PE 1∼	92.031.5453.1	–	92.031.5453.1	92.031.5453.1	–
Mains 3-pole + signal feed	–	92.050.1653.0	–	–	–
Mains 3-pole + 250 V signal e.g. DALI outlet L, N, PE, D1, D2 1∼ DALI	–	92.051.5553.0	92.051.5653.0	–	–
Mains 3-pole + 250 V signal e.g. TouchDIM or SMI outlet L, N, PE, D1, D2 1∼ SMI	–	92.051.5553.0	–	–	–
Only 250 V / 6 A signal e.g. DALI feed 1∼ DALI	–	92.050.1653.0	91.020.5453.0	–	–
Only 250 V / 6 A signal e.g. DALI outlet D1, D2 DALI	–	92.051.5553.0	91.021.5453.0	–	–
Only SELV 3 A e.g. KNX feed	–	–	–	93.420.5453.0	–
Only SELV 3 A e.g. KNX outlet 1+, 2- SELV KNX	–	–	–	93.421.5453.0	–
End cap [1] [2]	06.562.0653.0	06.562.0653.0	–	06.562.4353.0	Z6.562.4453.0
End cap containing silicone [1]	06.564.1753.0	06.564.1753.0	06.562.9753.0	–	–
Matching connector variants	gesis® CLASSIC, 3-pole, coding color black gesis® CLASSIC, 5-pole, coding color black	gesis® CLASSIC, 5-pole, coding color pastel blue	gesis® CLASSIC, 3-pole, coding color black gesis® CLASSIC, 5-pole, coding color black + pastel blue gesis® MINI, 2-pole, coding color pastel blue	gesis® CLASSIC, 3-pole, coding color black gesis® CLASSIC, 5-pole, coding color black gesis® NV, 2-pole, coding color green	–

[1] 2 end plates per cable piece. [2] Special cutting tool mandatory.

INFO **TO GO**

All brochures from Wieland Electric
are available for download on our website.

https://www.wieland-electric.com/en/support/downloads

Interesting for you

GESIS® KATALOG
Pluggable electrical
installation
Bestell-Nr. 0670.1

GESIS® ELECTRONIC
Decentralized room automation
with plug & play
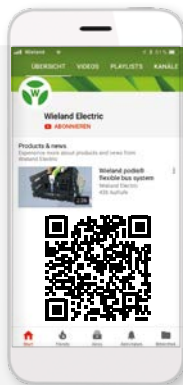**Bestell-Nr. 0700.1**

GESIS® NRG
Solution examples for
mains power and signal supply
Bestell-Nr. 0664.1

Wieland on YouTube
See our solutions
in motion

https://www.youtube.com/user/WielandElectric

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Building Solutions
Phone: +49 951 9324-996

Email: building@wieland-electric.com

Worldwide: https://wie.li/contactinternational

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