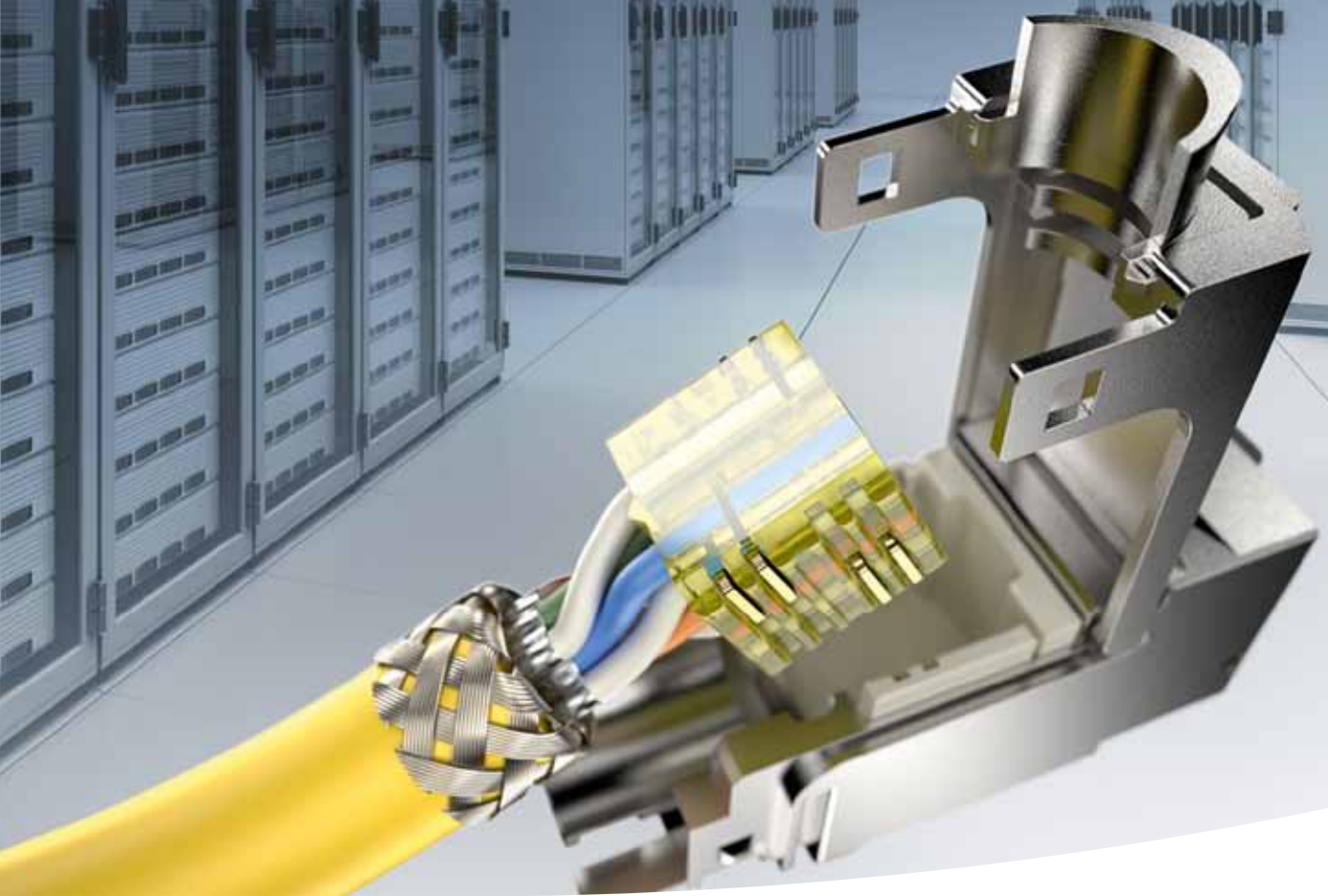


MegaLine® Connect45

square. practical. secure.



The Quality Connection

LEONI

Open the flap. Insert the cable. Close the flap.



MegaLine® Connect45 – benefits that speak for:



Easy assembly

- Attach the cable connector + cut the wires to size in a single step.
- Precision cut



LEO function

- Light Emitting Outlet
- By means of a signal transmitter
Optical detection of the module over a maximum length of 200 m



Performance

- No ShortLink problems:
Permanent link class E_A already available from 1 metre onwards
- Cat. 6_A acc. to IEC 60603-7-51
- Cat. 6A acc. to EIA/TIA 568-C.2



High Density panels

- Compact design:
up to 48 ports/1RU
- Minimum assembly times thanks to pre-assembly

Connection technology can be so easy.

The shortest possible installation times and an uncompromising approach to electrical performance are the key features of a future-proof cabling system.

With this in mind, LEONI has developed a new copper connection system, MegaLine® Connect45. The innovative modular system unites ultimate performance with maximum ease of installation. The basic version, consisting of a category 6_A/7/7_A data cable and cable connector is completed by simply attaching the required jack module. You can choose from RJ45 jack modules in category 6_A (IEC 60603-7-51) and category 6A (EIA/TIA 568-C.2).

Easy assembly – the wires are pressed together and precision-cut in a single step.

Time is money - the shortest possible assembly times are achieved by combining the attachment of the cable connector with the cutting of the wires to size. Easy installation is particularly useful in data centres where installation work must be carried out with zero downtime. Pre-assembled trunks help to keep the necessary assembly times to a minimum.

The unlocking tool is a handy solution for opening modules.

In this way, the existing cabling system can be fitted with a new module – e.g. with LEO function – in next to no time “at a click”.

Minimum assembly times – maximum performance.

The distances to be covered with cables in data centres are often less than 15 metres. The standards refer to these connections as “short links” and, because not all products are of the same quality, it is necessary to separate the wheat from the chaff when assessing them. The MegaLine® Connect45 system can be used to implement extremely short link lengths from one metre upwards. The requirements of the E_A Permanent Link class are easily exceeded.

Easy assembly – the wires are pressed together and cut to size in a single step.



MegaLine® Connect45 – Everywhere you go.



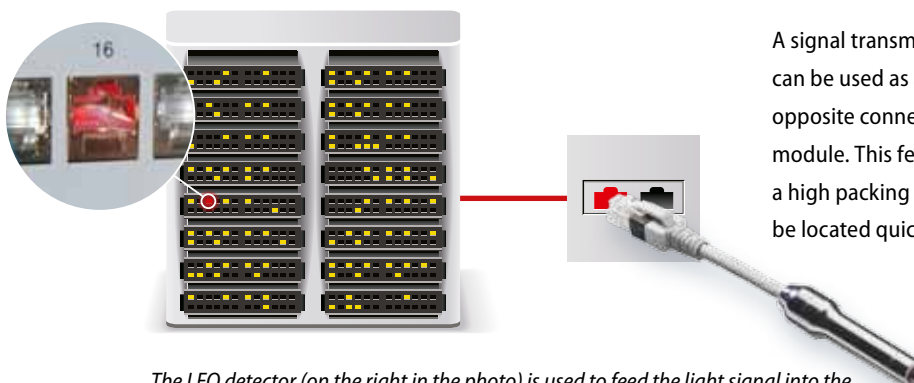
From data centres to industrial facilities and from offices to exhibition centres – MegaLine® Connect45 can be used in a whole host of areas:

- Office and administrative buildings
- Banks and insurance companies
- Schools and universities
- Airports and train stations
- Carriers and providers
- Production plants and facilities, e.g. in the car industry, at manufacturers of prefab homes, etc.
- Electricity, water and gas distribution companies
- Stadiums and exhibition centres
- Ships and offshore platforms
- Logistics companies
- Department stores and DIY stores
- Hotels and restaurants
- Harbours and shipyards
- Public authorities
- At home etc.



LEO (Light Emitting Outlet) – the “pathfinder feature”.



Jack modules are equipped with the LEO function on an optional basis (LEO = Light Emitting Outlet).

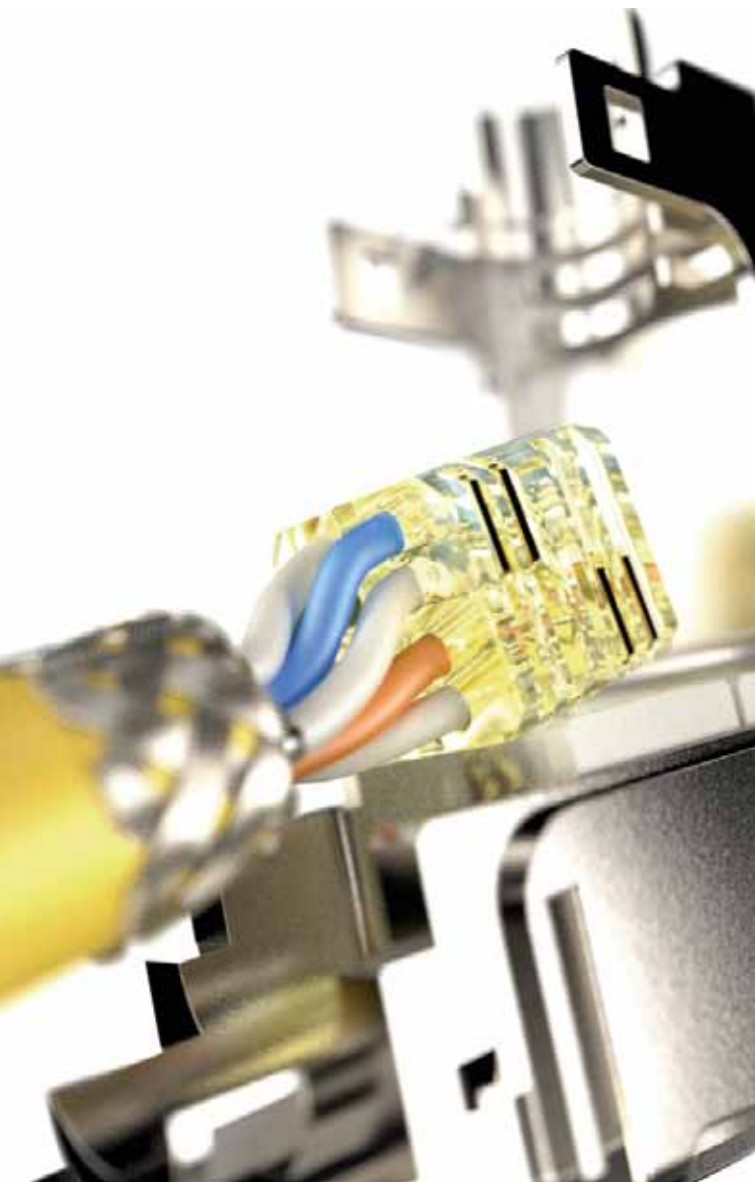


A signal transmitter connected to one side of an installed link can be used as a convenient way to identify the corresponding opposite connection by means of a red LED indicator in the jack module. This feature is particularly useful in environments with a high packing density, enabling the corresponding modules to be located quickly and reliably.

The LEO detector (on the right in the photo) is used to feed the light signal into the link so that the red LED on the corresponding jack module on the other side lights up.

Product range

System components at a glance		6
MegaLine® CU data cables	<ul style="list-style-type: none"> • MegaLine® E5-70 F/F Cat. 6_A • MegaLine® E5-60 U/F Cat. 6_A 	8 10
MegaLine® Connect45 cable plugs	<ul style="list-style-type: none"> • for AWG24–22 • for AWG27–26 	12
MegaLine® Connect45 jack modules	<ul style="list-style-type: none"> • Cat. 6_A ISO/IEC • Cat. 6A EIA/TIA • LEO Cat. 6_A ISO/IEC • LEO Cat. 6A EIA/TIA 	13
MegaLine® Connect45 Patch field 19" / 1 RU	• HD 48 Cat. 6 _A	14
MegaLine® Connect45 Patch field 19"	24 ports	15
MegaLine® Connect45 trunk cables /CP cables	<ul style="list-style-type: none"> • with Cat. 6_A modules • with Cat. 6A modules 	16
MegaLine® Connect45 trunk cables, 8-fold	with Cat. 6 _A modules	17
MegaLine® Connect45 wall outlets	<ul style="list-style-type: none"> • 1-fold / 2-fold / 3-fold  • 1-fold / 2-fold  	18
Consolidation Point housing	<ul style="list-style-type: none"> • CP6-B Consolidation Point housing • CPL6-B 6 port module panel • CP6-B 6 port protecting cap 	19
Carriers for underfloor systems	<ul style="list-style-type: none"> • UF TA2 / UF TA3 • UF TEK3 / UF TEV3 	20
Adapter/blind cover for underfloor systems	<ul style="list-style-type: none"> • UF AP3 adapter • UF BP-T blind cover 	21
Patch cords RJ45	<ul style="list-style-type: none"> • Cat. 6/500 MHz • Cat. 6/500 MHz with light signal 	22 23
Accessories for patch cords	<ul style="list-style-type: none"> • RJ45 marking ring • LED marking clip • LED detector 	24
Accessories & tools (MegaLine® Connect45)	<ul style="list-style-type: none"> • LEO detector • Protecting cap • Pressing tool • Unlocking tool 	25
MegaLine® Connect45 sample case		26
Quality and environmental management		27



MegaLine® Connect45

System components at a glance.

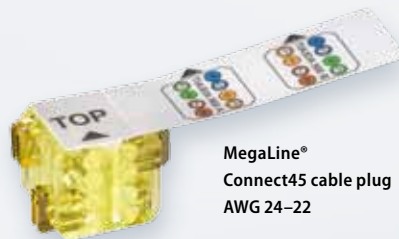
All components are coordinated for optimum performance:

- quick & easy installation
- maximum performance
- assured functionality for the entire product lifespan

MegaLine® F10-115 S/F
MegaLine® F6-90 S/F
MegaLine® F6-80 S/F
MegaLine® E5-70 F/F
MegaLine® E5-60 U/F



MegaLine®
Connect45 cable plug
AWG 27-26



MegaLine®
Connect45 cable plug
AWG 24-22

Cable & cable plugs



Pre-assembled cables



MegaLine® Connect45 jack module
Cat. 6_A (ISO/IEC)
Cat. 6A (EIA/TIA)
with LEO function



MegaLine® Connect45 jack module
Cat. 6_A (ISO/IEC)
Cat. 6A (EIA/TIA)

Jack modules



VarioLine® UF underfloor systems

Floorbox solutions



Wall outlets for MegaLine® Connect45 jack modules

Wall outlets

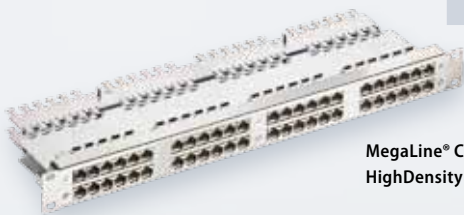


VarioLine® CP6-B Consolidation Point housing

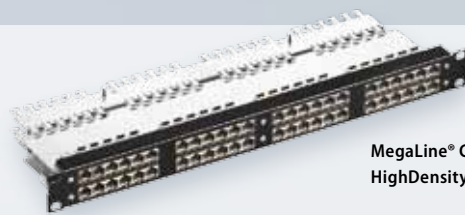


MegaLine® Connect45 patch field 19"

Housings



MegaLine® Connect45-Panel HighDensity Cat.6_A 48Port



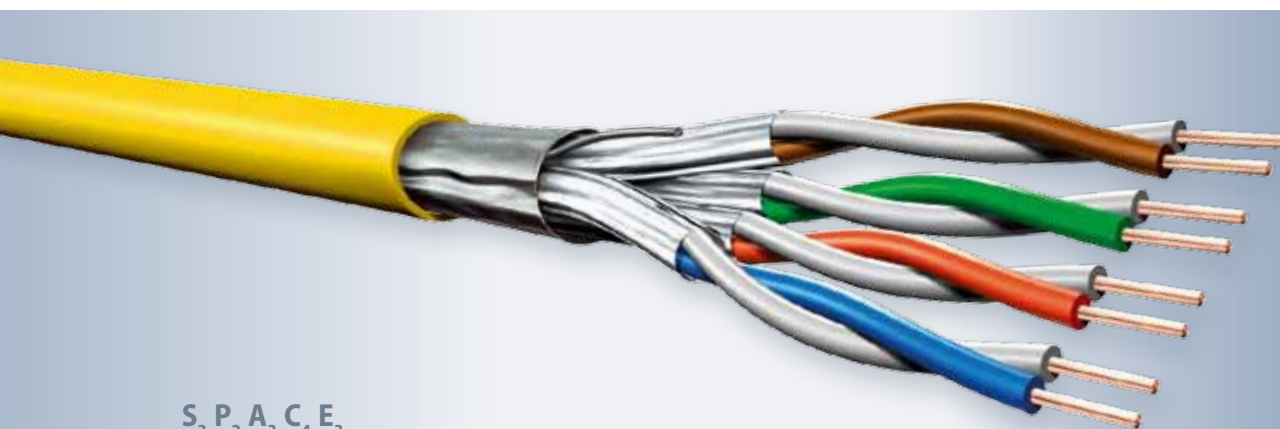
MegaLine® Connect45-Panel HighDensity Cat.6_A 48Port

HighDensity panels

MegaLine® E5-70 F/F

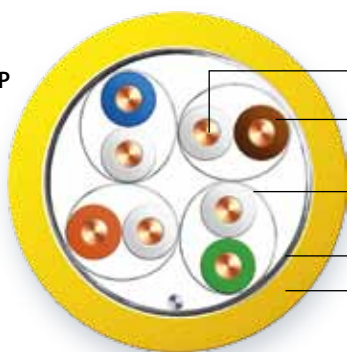
Category 6_A

Type KS-02YS(ST)H 4x2xAWG 23/1 PIMF
KS-02YS(ST)H 2x(4x2xAWG 23/1 PIMF)



S₃ P₂ A₃ C₄ E₃

Construction for 4 P



Conductor	bare copper wire, AWG 23/1
Insulation twisting element	cellular-PE, core-Ø: nominal value 1.4 mm Pair
Individual screen	aluminium-bonded polyester tape, metal side outside (PiMF)
Twisting	4 pairs
Overall screen	aluminium-bonded polyester tape, metal side inside, with underlayered tinned copper drain wire
Outer sheath	halogen free, flame retardant compound

Fire behavior

Flame retardance	acc. to IEC 60332-3-24
Halogen acid gas emission	acc. to IEC 60754-1/2
Smoke density	acc. to IEC 61034-1/2
Calorific value (approx.)	0.60 MJ/m (Sx), 1.2 MJ/m (Dx)

Performance

better than category 6_A acc. EN 50288 and IEC 61156
very good NEXT,
good screening characteristics (individual and overall screen),
low SKEW, Bandwidth 700 MHz

Applications

Installation cable for generic cabling systems acc. ISO/IEC 11801 und EN 50173 (2. edition).
Ideal for all applications of classes D up to E_A
up to 10 GbE acc. IEEE 802.3 an, Cable sharing, VoIP, PoE

Mechanical characteristics

Bending radius during installation	8 x overall diameter (min.)
after installation	4 x overall diameter (min.)
Tensile strength (max.)	110 N (Sx), 220 N (Dx),
Crush	1000 N/100 mm
Impact (number of shocks)	10

Electromagnetic behaviour (nominal values)

Transfer impedance at 10 MHz	50 mΩ/m
Screening attenuation up to 1000 MHz	60 dB
Coupling attenuation up to 1000 MHz	70 dB

Security (fire behaviour)

S	1 IEC 60332-2-2	2 IEC-60332-1-2	3 IEC-60332-3-24	4 EFP Grade 1	5 EFP Grade 2
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Performance (cabling class, bandwidth)

P	1 > Class E > 250 MHz	2 > Class E _A > 500 MHz	3 > Class F > 600 MHz	4 > Class F _A > 1000 MHz	5 > Class "G" > 1200 MHz
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Application (Ethernet, TV)

A	1 > 100 MbE	2 > 1 GbE	3 up to 10 GbE	4 > 10 GbE	5 > 10 GbE TV
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Construction (conductor size, tensile strength)

C	1 AWG 27	2 AWG 26/25	3 AWG 24	4 AWG 23	5 AWG 22
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EMC (coupling attenuation)

E	1 > 40 dB	2 > 50 dB	3 > 60 dB	4 > 70 dB	5 > 80 dB
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Electrical characteristics (HF) at 20 °C

Frequency MHz	Attenuation dB/100m		NEXT dB		PS-NEXT dB		ACR dB at 100m		PS-ACR dB at 100m		ACR-F dB at 100m		PSACR-F dB at 100m		RL dB	
	typ.	Cat. 7 _A max.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*
1	1.9	2.1	95	75.3	92	72.3	93	73.2	90	70.2	91	68	88	65	25.1	–
10	5.2	5.9	90	60.3	87	57.3	85	54.4	82	51.4	96	48	93	45	35.2	25
100	17.7	19.1	75	45.3	72	42.3	57	26.2	54	23.2	90	28	87	25	37.2	20.1
200	26.4	27.6	68	40.8	65	37.8	42	13.2	39	10.2	78	22	75	19	31.1	18
250	29.9	31.1	66	39.3	63	36.3	36	8.3	33	5.3	75	20	72	17	29.5	17.3
300	31.9	34.3	65	38.1	62	35.1	33	3.9	30	0.9	72	18.5	69	15.5	28.3	17.3
450	38.9	42.7	63	35.5	60	32.5	24	-7.2	21	-10.2	69	14.9	66	11.9	26.7	17.3
500	41.2	45.3	61	34.8	58	31.8	20	-10.4	17	-13.4	66	14	63	11	26.3	17.3
600	46.2	–	57	–	54	–	11	–	8	–	60	–	57	–	25.8	–
700	51.4	–	54	–	51	–	3	–	0	–	56	–	53	–	–	–

* EN 50288-10-1 (draft)/EN 50288-5-1(2004)/IEC 61156-5(2009)

Electrical characteristics (NF) at 20 °C

DC resistance	max.	82 Ω/km
Insulation resistance	min.	5 GΩ x km
Mutual capacitance	approx.	42 pF/m
Transfer capacitance (e)	approx.	1500 pF/km
Signal velocity (c)	approx.	0.80
Propagation delay	approx.	417 ns/100 m
Skew at 100 MHz	approx.	7 ns/100 m
Characteristic impedance	at 100 MHz	100 ± 5 Ω
Test voltage U _{eff}		1000 V
Operating voltage	max.	125 V

Thermal characteristics

for fixed installation	-20 °C up to +60 °C
for mobile operation	0 °C up to +50 °C

Chemical characteristics

Free of hazardous substances acc. to RoHS 2002/95/EG

Printing outer sheath for 4 P

LEONI MegaLine E5-70 F/F 4P H SPACE Code 32343
 "VDE approval mark" "Production lot code" "Meter marking"

Colour code

wh/bu, wh/or, wh/gn, wh/bn

Certificates and approvals

Quality mark with production control: <VDE>
 Link-Performance: LEONI MegaLine® systems and further
 commercial cabling systems
 Inspection certificate: acc. to DIN 55350-18-4.2.1 respectively
 EN 10204; in agreement to LVD (73/23/EEC): **CE**

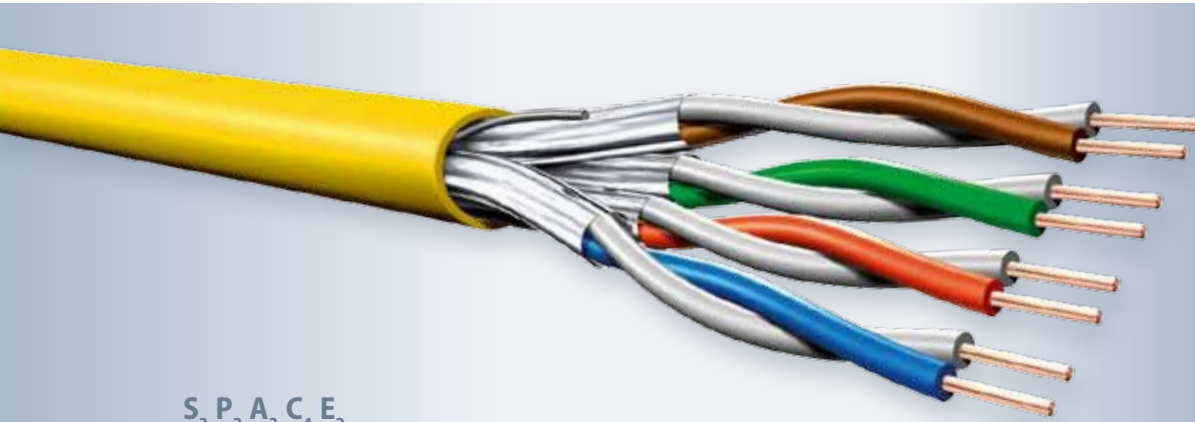
size	overall-Ø approx.	weight approx.	copper content	colour outer sheath	Order no.
	mm	kg/km	kg/km		
4P	7.5	58	23.5	● rape yellow RAL 1021	LKD 7KS6 0022 0000
2 x 4P	7.5 x 15.2	120	47	● rape yellow RAL 1021	LKD 7KS6 0023 0000

Package: drum 1000 m

MegaLine® E5-60 U/F

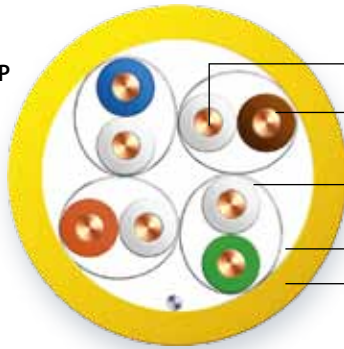
Category 6_A

Type KS-02YSH 4x2xAWG 23/1 PIMF
KS-02YSH 2x(4x2xAWG 23/1 PIMF)



S₃ P₂ A₃ C₄ E₂

Construction for 4 P



Conductor	bare copper wire, AWG 23/1
Insulation twisting element	cellular-PE, core-Ø: nominal value 1.4 mm Pair
Individual screen Twisting	aluminium-bonded polyester tape, 4 pairs
Tape	plastic foil (optional) with underlayered tinned copper drain wire AWG 24/1
Outer sheath	halogen free, flame retardant compound

Fire behavior

Flame retardance	acc. to IEC 60332-3-24
Halogen acid gas emission	acc. to IEC 60754-1/2
Smoke density	acc. to IEC 61034-1/2
Calorific value (approx.)	0.60 MJ/m (Sx), 1.2 MJ/m (Dx)

Performance

better than category 6_A acc. EN 50288 and IEC 61156
very good NEXT,
good screening characteristics (individual and overall screen),
low SKEW, Bandwidth 600 MHz

Applications

Installation cable for generic cabling systems acc. ISO/IEC 11801 und EN 50173 (2. edition).
Ideal for all applications of classes D up to E_A
up to 10 GbE acc. IEEE 802.3 an, Cable sharing, VoIP, PoE

Mechanical characteristics

Bending radius during installation	8 x overall diameter (min.)
after installation	4 x overall diameter (min.)
Tensile strength (max.)	110 N (Sx), 220 N (Dx),
Crush	1000 N/100 mm
Impact (number of shocks)	10

Electromagnetic behaviour (nominal values)

Transfer impedance at 10 MHz	50 mΩ/m
Screening attenuation up to 1000 MHz	55 dB
Coupling attenuation up to 1000 MHz	65 dB

Security (fire behaviour)

S	1 IEC 60332-2-2	2 IEC-60332-1-2	3 IEC-60332-3-24	4 EFP Grade 1	5 EFP Grade 2
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Performance (cabling class, bandwidth)

P	1 > Class E > 250 MHz	2 > Class E _A > 500 MHz	3 > Class F > 600 MHz	4 > Class F _A > 1000 MHz	5 > Class "G" > 1200 MHz
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Application (Ethernet, TV)

A	1 > 100 MbE	2 > 1 GbE	3 up to 10 GbE	4 > 10 GbE	5 > 10 GbE TV
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Construction (conductor size, tensile strength)

C	1 AWG 27	2 AWG 26/25	3 AWG 24	4 AWG 23	5 AWG 22
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EMC (coupling attenuation)

E	1 > 40 dB	2 > 50 dB	3 > 60 dB	4 > 70 dB	5 > 80 dB
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Electrical characteristics (HF) at 20 °C

Frequency MHz	Attenuation dB/100m		NEXT dB		PS-NEXT dB		ACR dB at 100m		PS-ACR dB at 100m		ACR-F dB at 100m		PSACR-F dB at 100m		RL dB	
	typ.	Cat. 7 _A max.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*	typ.	Cat. 7 _A min.*
1	1.9	2.1	95	75.3	92	72.3	93	73.2	90	70.2	91	68	88	65	25.1	-
10	5.2	5.9	90	60.3	87	57.3	85	54.4	82	51.4	96	48	93	45	35.2	25
100	17.7	19.1	75	45.3	72	42.3	57	26.2	54	23.2	90	28	87	25	37.2	20.1
200	26.4	27.6	68	40.8	65	37.8	42	13.2	39	10.2	78	22	75	19	31.1	18
250	29.9	31.1	66	39.3	63	36.3	36	8.3	33	5.3	75	20	72	17	29.5	17.3
300	31.9	34.3	65	38.1	62	35.1	33	3.9	30	0.9	72	18.5	69	15.5	28.3	17.3
450	38.9	42.7	63	35.5	60	32.5	24	-7.2	21	-10.2	69	14.9	66	11.9	26.7	17.3
500	41.2	45.3	61	34.8	58	31.8	20	-10.4	17	-13.4	66	14	63	11	26.3	17.3
600	46.2	-	57	-	54	-	11	-	8	-	60	-	57	-	25.8	-
* EN 50288-10-1 (draft)/EN 50288-5-1(2004)/IEC 61156-5(2009)																-

Electrical characteristics (NF) at 20 °C

DC resistance	max.	82 Ω/km
Insulation resistance	min.	5 GΩ x km
Mutual capacitance	approx.	42 pF/m
Transfer capacitance (e)	approx.	1500 pF/km
Signal velocity (c)	approx.	0.80
Propagation delay	approx.	420 ns/100 m
Skew at 100 MHz	approx.	7 ns/100 m
Characteristic impedance	at 100 MHz	100 ± 5 Ω
Test voltage U _{eff}		1000 V
Operating voltage	max.	125 V

Thermal characteristics

for fixed installation	-20 °C up to +60 °C
for mobile operation	0 °C up to +50 °C

Chemical characteristics

Free of hazardous substances acc. to RoHS 2002/95/EG

Printing outer sheath for 4 P

LEONI MegaLine E5-60 U/F 4P H SPACE Code 32343
 "VDE approval mark" "Production lot code" "Meter marking"

Colour code

wh/bu, wh/or, wh/gn, wh/bn

Certificates and approvals

Quality mark with production control: <VDE>
 Link-Performance: LEONI MegaLine® systems and further commercial cabling systems
 Inspection certificate: acc. to DIN 55350-18-4.2.1 respectively EN 10204; in agreement to LVD (73/23/EEC): **CE**

size	overall-Ø approx.	weight approx.	copper content	colour outer sheath	Order no.
	mm	kg/km	kg/km		
4P	7.2	53	25	● rape yellow RAL 1021	LKD 7KS6 0035 0000
2 x 4P	7.4 X 15.0	112	50	● rape yellow RAL 1021	LKD 7KS6 0036 0000

Package: drum 1000 m

MegaLine® Connect45 cable plug

AWG24–22 / AWG27–26



Fig. 1
cable plug AWG24–22



Fig. 2
cable plug AWG27–26

MegaLine® Connect45 cable plug AWG24–22
MegaLine® Connect45 cable plug AWG27–26

Description

The MegaLine® Connect45 cable connector has a cutting-clamping connector and is pressed directly onto the installation cable. It is the interface with the modular interchangeable MegaLine® Connect45 jack module.

This means that generic transmission links far exceeding the requirements for Class E_A can be established, depending on the relevant jack module. The jack module can also be changed later without any additional installation effort.

- Easy and quick assembly

Structure

Material	Plastic
Wiring	4 pairs via IDC-contacts according to EIA/TIA 568A/B
Wire type	AWG 24 – 22 solid and flex respectively AWG 27– 26 solid and flex

Accessories (see page 22)

MegaLine® Connect45 protecting cap:

Once attached, the cable connector can be protected from environmental influences by means of the protecting cap.



Fig.	Article	Wire type	Colour	Order no.
1	MegaLine® Connect45 cable plug AWG24–22 (25 pieces)	AWG 24 – 22 solid and flex	● plastic yellow	LKD 9A50 4010 0000
2	MegaLine® Connect45 cable plug AWG27–26 (25 pieces)	AWG 27 – 26 solid and flex	○ plastic transparent	LKD 9A50 4011 0000

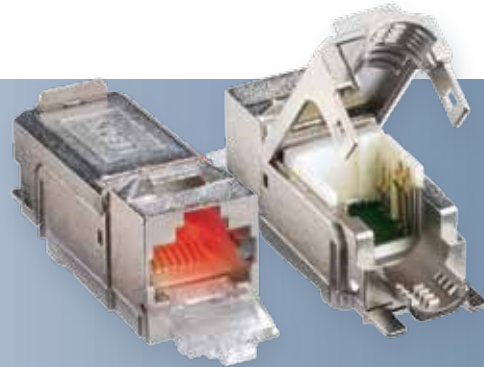
MegaLine® Connect45 jack modules

Category 6_A / 6A

Fig. 1
jack module Cat. 6_A
aqua



Fig. 2
jack module Cat. 6A
white



jack module
Cat. 6A with
LEO function
opal white

MegaLine® Connect45 jack module Cat. 6_A ISO/IEC
MegaLine® Connect45 jack module Cat. 6A EIA/TIA

MegaLine® Connect45 jack module LEO Cat. 6_A ISO/IEC
MegaLine® Connect45 jack module LEO Cat. 6A EIA/TIA

Description

For transmitting analogue and digital voice, picture and data signals. The features correspond to Cat. 6_A (ISO/IEC) and/or Cat. 6A (EIA/TIA) up to 500 MHz. The requirements of the class E_A Channel and Permanent Link according to ISO/IEC 11801 Amd. 1/2 are met from 1 m (Cat. 6_A) and/or 10 m (Cat. 6A). The lengths relate to the 2-connector model.

Structure

Material	full metal; zinc die-cast, nickel-plated
Wiring	4 pairs via cable plug
Connection	Keystone RJ45 jack, with integrated dust cap

Standards

- ISO/IEC 11801
- EN 50173-1
- IEC 60603-7-51/EIA/TIA 568-C.2

Description

For transmitting analogue and digital voice, picture and data signals. The features correspond to Cat. 6_A (ISO/IEC) and/or Cat. 6A (EIA/TIA) up to 500 MHz. The requirements of the class E_A Channel and Permanent Link according to ISO/IEC 11801 Amd. 1/2 are met from 1 m (Cat. 6_A) and/or 10 m (Cat. 6A). The lengths relate to the 2-connector model.

Structure

Material	full metal; zinc die-cast, nickel-plated
Wiring	4 pairs via cable plug
Connection	Keystone RJ45 jack, with integrated dustcap

Standards

- ISO/IEC 11801
- EN 50173-1
- IEC 60603-7-51/EIA/TIA 568-C.2

LEO function

LEO =	Patch field with LEO function
Light Emitting Outlet	permit easy link identification during installation.
Light detection	≤ 200 m
Signal feed	via the LEO detector Description see page 4

Fig.	Article	Marking	Order no.
1	MegaLine® Connect45 jack module Cat. 6 _A ISO/IEC	aqua	LKD 9A50 1010 0000
2	MegaLine® Connect45 jack module Cat. 6A EIA/TIA	white	LKD 9A50 1020 0000

Article	Marking	Order no.
MegaLine® Connect45 jack module LEO Cat. 6 _A ISO/IEC	aqua opal	LKD 9A50 1011 0000
MegaLine® Connect45 jack module LEO Cat. 6A EIA/TIA	white opal	LKD 9A50 1021 0000

MegaLine® Connect45 high density patch field 19" / 1 RU

with category 6_A jack modules



MegaLine® Connect45 patch field HD 48 Cat. 6_A

Description

For transmitting analogue and digital voice, picture and data signals. The features correspond to Cat. 6_A (ISO/IEC) up to 500 MHz. The requirements of the class E_A Channel and Permanent Link according to ISO/IEC 11801 Amd. 1/2 are met from 1 m (Cat. 6_A). The lengths relate to the 2-connector model.

The high-density patch field permits the high packing density of 48 ports at a single level. The pre-assembled jack modules reduce the installation effort significantly.

Structure

Housing	full metal
Colour	light grey, RAL 7035/black, RAL 9005
Holder	48 jack modules Cat. 6 _A (ISO/IEC)
Strain relief	via cable clips
Earthing	via a screw attachment on the back of the panel
Cable entry	over the entire width of the cable management rail

Dimensions

19" / 1 RU
121 mm mounting depth

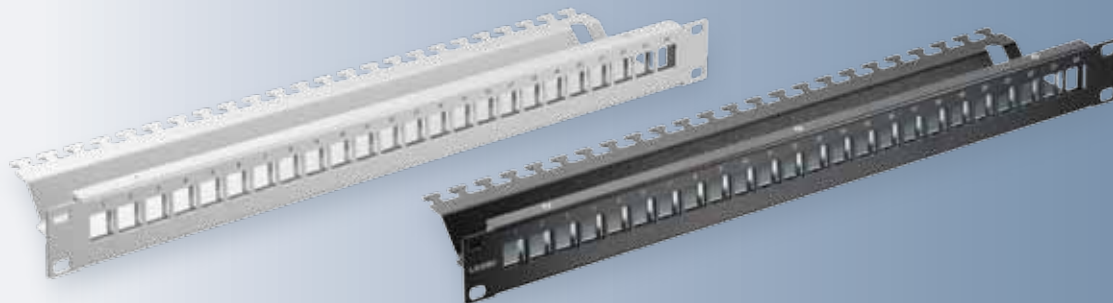
Standards

- ISO/IEC 11801
- EN 50173-1
- IEC 60603-7-51

Article	Colour	Order no.
MegaLine® Connect45 patch field HD 48 Cat. 6 _A (ISO/IEC)	● light grey RAL 7035	LKD 9A50 3214 0000
	● jet black RAL 9005	LKD 9A50 3215 0000

MegaLine® Connect45 patch field 19"

for MegaLine® Connect45 jack modules



MegaLine® Connect45 patch field 19"

Description

The patch field can be equipped with up to 24 jack modules.
For holding module types with Keystone dimensions.

Structure

Housing	full metal
Colour	light grey, RAL 7035
Holder	24 jack modules max.
Strain relief	via cable clips
Earthing	via a screw attachment on the back of the panel
Cable entry	over the entire width of the cable management rail

Dimensions

19" / 1 RU

110 mm mounting depth

Article	Colour	Order no.
MegaLine® Connect45 patch field 19"	● light grey RAL 7035	LKD 9A50 1200 0000
	● jet black RAL 9005	LKD 9A50 1201 0000

MegaLine® Connect45 trunk cable / CP cable

pre-assembled single cable with MegaLine® Connect45 jack modules Cat. 6_A / Cat. 6A



Documented acceptance
measurement on CD on request

MegaLine® Connect45 trunk cable Cat. 6_A
modules
MegaLine® Connect45 trunk cable Cat. 6A
modules

Description

The trunk cable is based on an F6-90 S/F data cable – pre-assembled with a MegaLine® Connect45 jack at both ends. Thanks to the high quality of the components, the pre-assembled cable meets all Permanent Link requirements (>1m, Cat. 6_A-modules) and/or (>10m, Cat. 6A modules) class E_A according to ISO/IEC 11801 and EN 50173 for 10 Gigabit Ethernet. The lengths relate to the 2-connector model.

Also available without a jack module – ideal in combination with high density patch fields (see page 14).

Structure

Cable	F6-90 S/F (4x2x AWG23/1) (see page 10)
Side A /side B (version 1)	MegaLine® Connect45 Cat. 6 _A (ISO/IEC) (Order no.: LKD 9A50 1010 0000)
Side A /side B (version 2)	MegaLine® Connect45 Cat. 6A (EIA/TIA) (Order no.: LKD 9A50 1020 0000)

Standards

- ISO/IEC 11801 ■ EN 50173-1
- IEC60603-7-51 (Cat. 6_A) ■ EIA/TIA 568-C.2 (Cat. 6A)

Article	Length*	Cat. 6 _A modules	Cat. 6A modules
MegaLine® Connect45 trunk cable	5.0 m	LKD 9A06 1132 0000	LKD 9A06 1127 0000
	10.0 m	LKD 9A06 1133 0000	LKD 9A06 1128 0000
	15.0 m	LKD 9A06 1134 0000	LKD 9A06 1129 0000
	30.0 m	LKD 9A06 1135 0000	LKD 9A06 1130 0000
	90.0 m	LKD 9A06 1136 0000	LKD 9A06 1131 0000

* Standard lengths/further lengths on request



Documented acceptance
measurement on CD on request

MegaLine® Connect45 CP cable

Description

The consolidation point cable is based on an F10-120 S/F flex data cable with a MegaLine® Connect45 jack on one end and a RJ45 SmartLock connector on the other.

Thanks to the high-grade components in combination with a CP Link (>10 m) the pre-assembled cable meets the requirements of the class E_A Permanent Link according to ISO/IEC 11801 Amendment 2 for 10 Gigabit Ethernet.

Structure

Cable	F10-120 S/F flex (4x2x AWG26/7)
Side A	MegaLine® Connect45 Cat. 6 _A (ISO/IEC) (Order no.: LKD 9A50 1010 0000)
Side B	RJ45 plug (SmartLock Cat. 6 _A)

Standards

- ISO/IEC 11801 ■ EN 50173-1 ■ IEC60603-7-51

Article	Length*	Order no.
MegaLine® Connect45 CP cable	5.0 m	LKD 9A02 3343 0000
	10.0 m	LKD 9A02 3344 0000
	15.0 m	LKD 9A02 3345 0000
	20.0 m	LKD 9A02 3346 0000
	25.0 m	LKD 9A02 3347 0000

* Standard lengths/further lengths on request

MegaLine® Connect45 trunk cable, 8-fold

pre-assembled multi cable with MegaLine® Connect45 jack modules Cat.6_A

Documented acceptance
measurement on CD on request



MegaLine® Connect45-Trunk cable, 8-fold Cat.6_A modules

Description

The trunk cable is based on an 8-fold F10-120 S/F flex data cable with a MegaLine® Connect45 jack on both ends. Thanks to the high quality of the components, the pre-assembled cable meets all Permanent Link requirements (>1 m, Cat. 6_A-modules) class E_A according to ISO/IEC 11801 and EN 50173 for 10 Gigabit Ethernet.

Also available without a jack module – ideal in combination with high density patch fields (see page 14).

Cable

Type	F10-120 S/F flex (8x4x2x AWG 26/7)
Side A /side B	MegaLine® Connect45 Cat. 6 _A (Order no.: LKD 9A50 1010 0000)
Whip length	0.4 m

Structure

Material	full metal; zinc die-cast, nickel-plated
----------	--

Standards

- ISO/IEC 11801 ■ EN 50173-1 ■ IEC60603-7-51

Article	Length*	Order no.
MegaLine® Connect45 trunk cable, 8-fold	5.0 m	LKD 9A06 1137 0000
	7.5 m	LKD 9A06 1138 0000
	10.0 m	LKD 9A06 1139 0000
	15.0 m	LKD 9A06 1140 0000

* Standard lengths/further lengths on request

For every trunk cable:
Test report



also order

The measurement carried out prior to delivery is documented on CD as a test report and supplied on request.

measurements for trunks

- Permanent Link class E_A (with ISO/IEC jack module)
- Permanent Link class E_A (with EIA/TIA jack module)
- Channel class E_A (with ISO/IEC jack module)
- Channel class E_A (with EIA/TIA jack module)

measurements for CP cables

- Permanent Link class E_A (with ISO/IEC jack module)

Measurement	Acceptance tests	Order no.:
for trunk cable	Permanent Link class E _A (with ISO/IEC jack module)	LKD 9A50 4020 0000
	Permanent Link class E _A (with EIA/TIA jack module)	LKD 9A50 4021 0000
	Channel class E _A (with ISO/IEC jack module)	LKD 9A50 4022 0000
	Channel class E _A (with EIA/TIA jack module)	LKD 9A50 4023 0000
for CP cable	Permanent Link class E _A (with ISO/IEC jack module)	LKD 9A50 4024 0000

MegaLine® Connect45 wall outlets

for Keystone jack modules



Fig. 1
outlet 50 x 50 / 1-fold

Fig. 2
outlet 50 x 50 / 2-fold

Fig. 3
outlet 50 x 50 / 3-fold

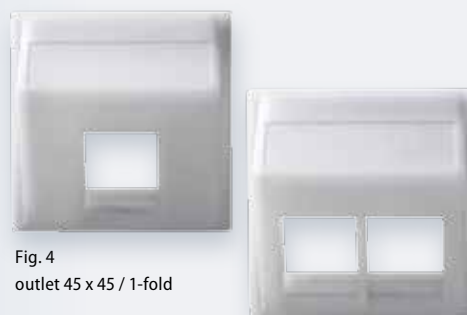


Fig. 4
outlet 45 x 45 / 1-fold

Fig. 5
outlet 45 x 45 / 2-fold

MegaLine® Connect45 wall outlet Keystone 50 x 50

German style






Wall outlets for configuration with MegaLine® Connect45 jack modules.

Housing

Housing material	full metal; zinc die-cast, nickel-plated
Colour	pure white, RAL 9010
Marking	via marking field

Central plate

50 mm x 50 mm x 30 mm (hwxwd),
downward inclination of 30°

Fig.	Article	Order no.:
1	 MegaLine® Connect45 wall outlet Keystone 50 x 50 / 1-fold	LKD 9A50 1100 0000
2	 MegaLine® Connect45 wall outlet Keystone 50 x 50 / 2-fold	LKD 9A50 1101 0000
3	 MegaLine® Connect45 wall outlet Keystone 50 x 50 / 3-fold	LKD 9A50 1102 0000
-	 40 mm surface-mounted housing	LKD 9A46 0086 0000
-	 Spacer frame for 1-fold 10 mm surface-mounted housing	LKD 9A46 0088 0000

MegaLine® Connect45 wall outlet Keystone 45 x 45

French style




Wall outlets for configuration with MegaLine® Connect45 jack modules.

Housing

Housing material	plastic
Colour	pure white, RAL 9010
Marking	via marking field

Central plate

45 mm x 45 mm x 42 mm (hwxwd),
downward inclination of 28°

Fig.	Article	Order no.:
4	 MegaLine® Connect45 wall outlet Keystone 45 x 45 / 1-fold	LKD 9A50 1104 0000
5	 MegaLine® Connect45 wall outlet Keystone 45 x 45 / 2-fold	LKD 9A50 1103 0000
-	 VarioLine® TO cover frame 45 x 45 (8 pieces)	LKD 9ZE8 0013 0000

Consolidation Point housing

for 6-port module panels



Sample application

VarioLine® CP6-B Consolidation Point housing
 VarioLine® CPL6-B 6 port module panel
 VarioLine® CP6-B 6 port protecting cap

Fig. 1
Consolidation Point housing



Fig. 2
6 port module panel

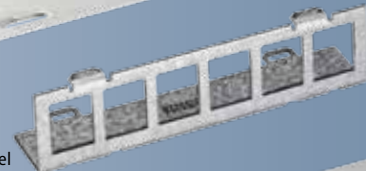
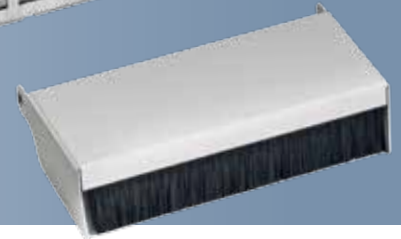


Fig. 3
6 port protecting cap



Description

For installation in raised floors or suspended ceilings.
 Consolidation Point housing with strain relief by means of cable ties (not included in scope of delivery).
 Can be configured with a 6-port module panel for up to 6 modules.
 Protecting cap with strip brush available on the patch side.

- modular (interchangeable module panel)
- also available with 12/24 ports as an option
- robust housing made from zinc-plated sheet steel
- manufactured in line with European directives
- RoHS-compliant

Assembly module panel

- 6 MegaLine® Connect45 (Keystone) modules

Assembly

- The CP housing is attached using the top hat rail mounting technique (a suitable clip is included)
- An alternative mounting with screws or nailed dowels is possible (not included in the scope of delivery)
- The module panel is attached by snapping it into the housing
- The modules are attached by snapping them into the module panel

Fig.	Article	Dimensions	Colour	Order no.:
1	VarioLine® CP6-B Consolidation Point housing	33 mm x 121,5 mm x 100 mm (hwxwd)	○ pure white, RAL 9010	LKD 9ZE6 1007 0000
2	VarioLine® CPL6-B 6 port module panel	31 mm x 121 mm (hwxw)		LKD 9ZE6 1064 0000
3	VarioLine® CP6-B 6 port protecting cap	31 mm x 121 mm (hwxw)	○ pure white, RAL 9010	LKD 9ZE6 1008 0000

Carriers for underfloor systems

for installing adapter panels



Fig. 1
Carrier VarioLine® UF TA2
for Ackermann
GES 2, 4, 6, R4, R7



Fig. 2
Carrier VarioLine® UF TA3
for Ackermann
GES 9, R7, R9



Fig. 1
Carrier VarioLine® UF TEK3
for Electraplan KDR-Serie
(old type)



Fig. 2
Carrier VarioLine® UF TEV3
for Electraplan
VQ12, VR12, VR10

VarioLine® UF TA2 / UF TA3

Description

For installing up to 2 or 3 adapter panels.

- for installation in Ackermann device inserts

Compatibility

UF TA2	Ackermann GES 2, 4, 6, R4, R7
UF TA3	Ackermann GES 9, R7, R9

Structure

Carrier	sheet steel, powder-coated, 1.5 mm
Colour	jet black, RAL 9005

Accessories (optional)

VarioLine® UF K1 / VarioLine® UF K2 cable retainer adjustable cable strain relief for up to 9 individual cables

Fig.	Article	Order no.:
1	VarioLine® UF TA2	LKD 9ZE6 0001 0000
2	VarioLine® UF TA3	LKD 9ZE6 0002 0000

VarioLine® UF TEK3 / UF TEV3

Description

For installing up to 3 adapter panels.

- for installation in Electraplan device inserts

Compatibility

UF TEK3	Electraplan KDR series (old type)
UF TEV3	Electraplan VQ12, VR12, VR10

Structure

Carrier	sheet steel, powder-coated, 1.5 mm
Colour	jet black, RAL 9005

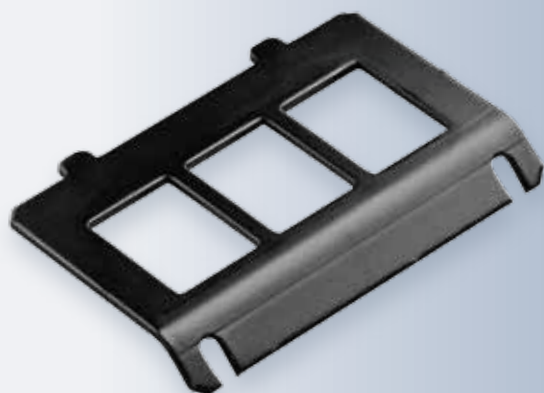
Accessories (optional)

VarioLine® UF K1 / VarioLine® UF K2 cable retainer adjustable cable strain relief for up to 9 individual cables

Fig.	Article	Order no.:
1	VarioLine® UF TEK3	LKD 9ZE6 0008 0000
2	VarioLine® UF TEV3	LKD 9ZE6 0042 0000

Adapter/blind cover for underfloor systems

for installation in VarioLine® UF carriers



VarioLine® UF AP3 MC45

Description

Adapters for installation in VarioLine® UF carriers.
For installing up to 3 modules.

- with self-adhesive labels for personal labelling
- 2 nut-and-washer assemblies included

Compatibility

UF AP3 for VarioLine® UF carriers

Structure

Adapter sheet steel, powder-coated, 1.5 mm
Colour jet black, RAL 9005

Article	Order no.:
VarioLine® UF AP3 MC45	LKD 9ZE6 0044 0000



VarioLine® UF BP-T

Description

Blind cover for closing off an unused opening in the VarioLine® UF carrier

- 2 nut-and-washer assemblies included

Compatibility

UF BP-T for VarioLine® UF carriers

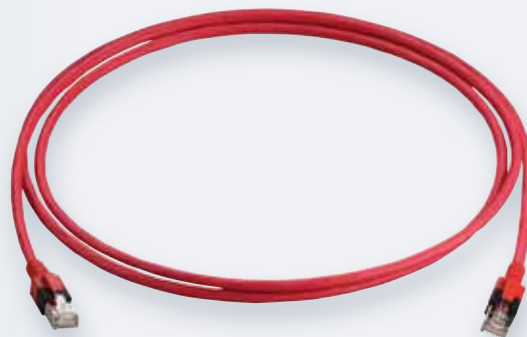
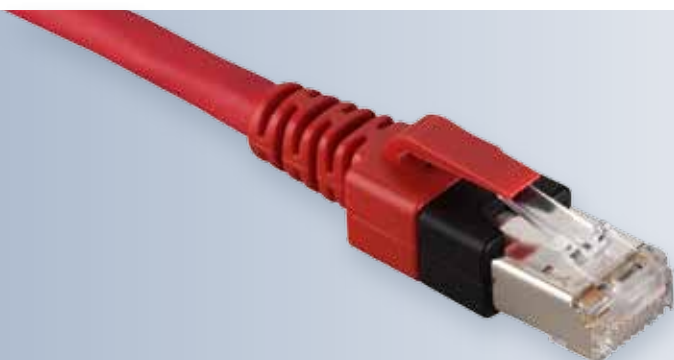
Structure

Blind cover sheet steel, powder-coated, 1.5 mm
Colour jet black, RAL 9005

Article	Order no.:
VarioLine® UF BP-T	LKD 9ZE6 0005 0000

MegaLine® patch cord RJ45 / RJ45 Cat. 6/500 MHz

shielded, Cat. 6, class E_A, with coloured moulded bending protection sleeve



MegaLine® Patch 6EA-RJ45

Description

The cable type used is suitable for transmission rates of up to 500 MHz. The pair shielding and the high-coverage copper braid as overall shield ensure excellent NEXT and impedance values.

The patch and work area cords are equipped with a shielded RJ45 plug and bending protection at both ends.

Applications

For use in structured building cabling systems as per ISO/IEC 11801 and EN 50173-x. Excellently suited to all applications up to Class E_A (video, data, telephony) >10 GbE as per IEEE 802.3, cable sharing, VoIP, PoE

Characteristics / Structure

EMC	combined shield (PiMf + braid)
RJ45 plug	EN 60603-7
Electrical values	Cat. 6, class E _A
Assignment	1:1
Standards	ISO/IEC 11801/ EN50173

Fire behaviour

Smoke density	IEC 61034
Halogen acid gas emission	IEC 60754-2
Flame retardance	IEC 60332-1-2

Accessories

Description see page 24

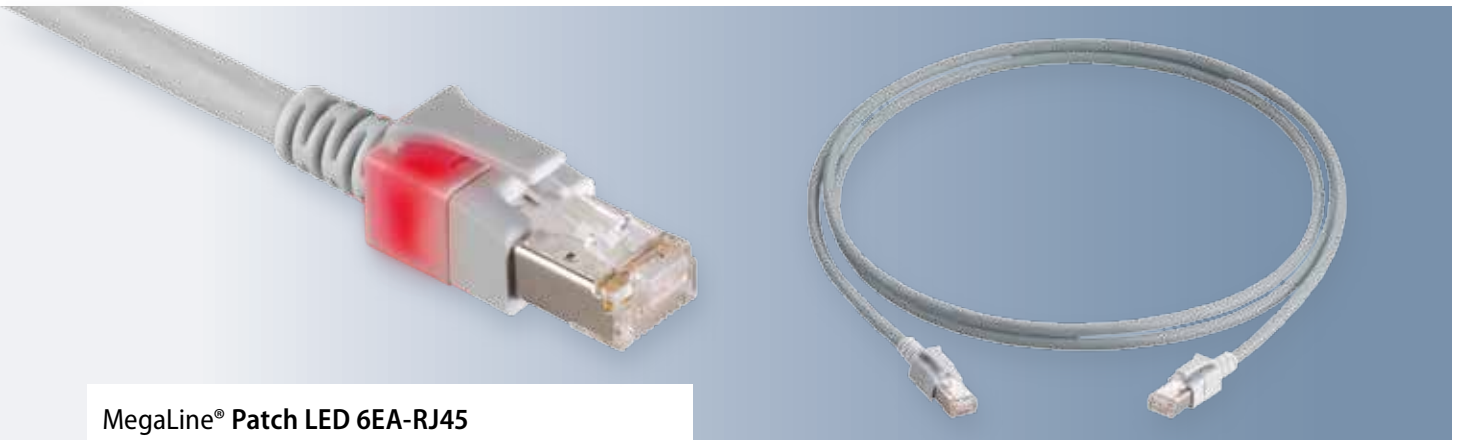
MegaLine® Patch RJ45 Marking ring

in different colours for visual coding of the patch cords

Length m	Article	Order no.				
		grey (LSOH)	blue (LSOH)	green (LSOH)	yellow (LSOH)	red (LSOH)
0.5	MegaLine® Patch 6EA-RJ45	LKD 9A02 1132 0000	LKD 9A02 1152 0000	LKD 9A02 1162 0000	LKD 9A02 1142 0000	LKD 9A02 1172 0000
1.0		LKD 9A02 1133 0000	LKD 9A02 1153 0000	LKD 9A02 1163 0000	LKD 9A02 1143 0000	LKD 9A02 1173 0000
1.5		LKD 9A02 1134 0000	LKD 9A02 1154 0000	LKD 9A02 1164 0000	LKD 9A02 1144 0000	LKD 9A02 1174 0000
2.0		LKD 9A02 1135 0000	LKD 9A02 1155 0000	LKD 9A02 1165 0000	LKD 9A02 1145 0000	LKD 9A02 1175 0000
2.5		LKD 9A02 1136 0000	LKD 9A02 1156 0000	LKD 9A02 1166 0000	LKD 9A02 1146 0000	LKD 9A02 1176 0000
3.0		LKD 9A02 1137 0000	LKD 9A02 1157 0000	LKD 9A02 1167 0000	LKD 9A02 1147 0000	LKD 9A02 1177 0000
4.0		LKD 9A02 1138 0000	LKD 9A02 1158 0000	LKD 9A02 1168 0000	LKD 9A02 1148 0000	LKD 9A02 1178 0000
5.0		LKD 9A02 1139 0000	LKD 9A02 1159 0000	LKD 9A02 1169 0000	LKD 9A02 1149 0000	LKD 9A02 1179 0000
7.5		LKD 9A02 1140 0000	LKD 9A02 1160 0000	LKD 9A02 1170 0000	LKD 9A02 1150 0000	LKD 9A02 1180 0000
10.0		LKD 9A02 1141 0000	LKD 9A02 1161 0000	LKD 9A02 1171 0000	LKD 9A02 1151 0000	LKD 9A02 1181 0000

MegaLine® LED patch cord RJ45 / RJ45 Cat. 6/500 MHz

shielded, Cat. 6, Class E_A, with LED light signal in the connector



MegaLine® Patch LED 6EA-RJ45

Description

Specially for use in offices, industrial plants and data centres. The connector contains one red LED. The light signal is activated using a detector that is placed on a contact pair on the back of the connector.

Three different signal types can be selected by repeatedly pressing the detector button:

→ continuous light / slow flashing / fast flashing

The other end of the LED patch cord then responds with the identical light signal and in this way can be clearly identified.

Applications

For use in structured building cabling systems as per ISO/IEC 11801 and EN 50173-x. Excellently suited to all applications up to Class E_A (video, data, telephony) >10 GbE as per IEEE 802.3, cable sharing, VoIP, PoE

Characteristics / Structure

EMC	combined shield (PiMf + braid)
RJ45 plug	EN 60603-7
Electrical values	Cat. 6, class E _A
Assignment	1:1
Standards	ISO/IEC 11801/ EN50173

Fire behaviour

Smoke density	IEC 61034
Halogen acid gas emission	IEC 60754-2
Flame retardance	IEC 60332-1-2

Accessories

Description see page 24

MegaLine® Patch LED marking clips
in different colours for visual coding of the patch cords

Length m	Article	Order no.					
		grey (LSOH)	blue (LSOH)	green (LSOH)	yellow (LSOH)	red (LSOH)	red (LSOH) crossover
0.5	MegaLine® Patch LED 6EA-RJ45	LKD 9A09 0100 0000	LKD 9A09 0110 0000	LKD 9A09 0140 0000	LKD 9A09 0130 0000	LKD 9A09 0120 0000	LKD 9A09 0160 0000
1.0		LKD 9A09 0101 0000	LKD 9A09 0111 0000	LKD 9A09 0141 0000	LKD 9A09 0131 0000	LKD 9A09 0121 0000	LKD 9A09 0161 0000
1.5		LKD 9A09 0102 0000	LKD 9A09 0112 0000	LKD 9A09 0142 0000	LKD 9A09 0132 0000	LKD 9A09 0122 0000	LKD 9A09 0162 0000
2.0		LKD 9A09 0103 0000	LKD 9A09 0113 0000	LKD 9A09 0143 0000	LKD 9A09 0133 0000	LKD 9A09 0123 0000	LKD 9A09 0163 0000
2.5		LKD 9A09 0104 0000	LKD 9A09 0114 0000	LKD 9A09 0144 0000	LKD 9A09 0134 0000	LKD 9A09 0124 0000	LKD 9A09 0164 0000
3.0		LKD 9A09 0105 0000	LKD 9A09 0115 0000	LKD 9A09 0145 0000	LKD 9A09 0135 0000	LKD 9A09 0125 0000	LKD 9A09 0165 0000
4.0		LKD 9A09 0106 0000	LKD 9A09 0116 0000	LKD 9A09 0146 0000	LKD 9A09 0136 0000	LKD 9A09 0126 0000	LKD 9A09 0166 0000
5.0		LKD 9A09 0107 0000	LKD 9A09 0117 0000	LKD 9A09 0147 0000	LKD 9A09 0137 0000	LKD 9A09 0127 0000	LKD 9A09 0167 0000
7.5		LKD 9A09 0108 0000	LKD 9A09 0118 0000	LKD 9A09 0148 0000	LKD 9A09 0138 0000	LKD 9A09 0128 0000	LKD 9A09 0168 0000
10.0		LKD 9A09 0109 0000	LKD 9A09 0119 0000	LKD 9A09 0149 0000	LKD 9A09 0139 0000	LKD 9A09 0129 0000	LKD 9A09 0169 0000

further lengths on request available

Accessories

for RJ45 copper patch cords



MegaLine® Patch RJ45 marking ring

Accessories

Marking ring for visual coding of the patch cords.
Can be installed by simply pushing on.

Compatibility

MegaLine® Patch 5D-RJ45
MegaLine® Patch 6E-RJ45U
MegaLine® Patch 6EA-RJ45
MegaLine® Patch 6AEA-RJ45
MegaLine® Patch Industry 6EA-RJ45

Article	Colour	Order no.
MegaLine® Patch RJ45 marking ring (100 pieces)	● light grey RAL 7035	LKD 9AW1 6031 0000
	● turquoise green RAL 6016	LKD 9AW1 6032 0000
	● sky blue RAL 5015	LKD 9AW1 6033 0000
	● flame red RAL 3000	LKD 9AW1 6034 0000
	● pastel orange RAL 2003	LKD 9AW1 6035 0000
	● rape yellow RAL 1021	LKD 9AW1 6036 0000
	● jet black RAL 9005	LKD 9AW1 6037 0000

Accessories

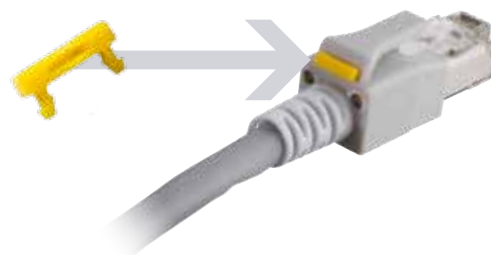
for LED copper patch cords



MegaLine® Patch LED marking clip
MegaLine® Patch LED detector

Accessories

Marking clip:
for visual coding of the LED patch cords.
Can be installed by simply snapping into the RJ45 connectors.



Detector:

For feeding the light signal for identifying the patch cord.

Batteries incl.: 4 x LR41

Article	Colour	Order no.
MegaLine® Patch LED marking clip (100 pieces)	● rape yellow RAL 1021	LKD 9A09 0180 0000
	● flame red RAL 3000	LKD 9A09 0181 0000
	● sky blue RAL 5015	LKD 9A09 0182 0000
	● turquoise green RAL 6016	LKD 9A09 0183 0000
MegaLine® Patch LED detector		LKD 9A09 0190 0000

Accessories & tools

for MegaLine® Connect45



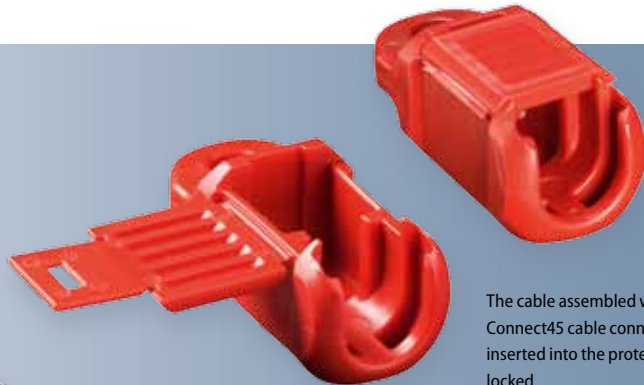
MegaLine® Connect45 LEO detector

Accessories

Detector for feeding in the voltage when using a Connect45 jack module with LEO function.

Housing full metal
 Contact RJ45 plug
 Power supply batteries incl. 4 x LR41

Article	Order no.
MegaLine® Connect45 LEO detector	LKD 9A50 4002 0000



The cable assembled with the Connect45 cable connector is simply inserted into the protecting cap and locked

MegaLine® Connect45 protecting cap

Accessories

For the safe and convenient protection of pre-assembled trunk cables equipped with MegaLine® Connect45 cable connectors.

Article	Order no.
MegaLine® Connect45 protecting cap (25 pieces)	LKD 9A50 4003 0000

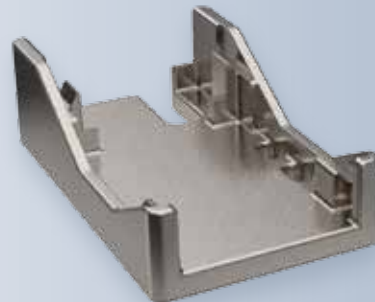


MegaLine® Connect45 pressing tool

Accessories

It takes just a single step to press the contacts of the cable connector together and remove the excess wires.

Article	Order no.
MegaLine® Connect45 pressing tool	LKD 9A50 4001 0000



MegaLine® Connect45 unlocking tool

Accessories

For quick and easy opening of the MegaLine® Connect45 jack module.

Article	Order no.
MegaLine® Connect45 unlocking tool (10 pieces)	LKD 9A50 4000 0000

MegaLine® Connect45 sample case

MegaLine®
Connect45 sample case



Quantity	Content
1	MegaLine® Connect45 trunk F6-90 0.19 m
1	MegaLine® Connect45 LEO detector
1	MegaLine® Connect45 jack module Cat.6 _A LEO
1	MegaLine® Connect45 jack module Cat.6A
1	MegaLine® Connect45 cable plug AWG 27–26
1	MegaLine® Connect45 cable plug AWG 24–22
1	MegaLine® Connect45 protecting cap
1	MegaLine® Connect45 unlocking tool

Article	Order no.
MegaLine® Connect45 sample case	LKD 9A50 4004 0000

Quality and environmental management

LEONI – The Quality Connection

MegaLine®

Performance and quality of the components and links certified by the renowned test laboratory GHMT.

LEONI quality management

One of the most important factors in the success of LEONI was and remains the uniformly high quality of its products over the decades.

We pay particularly close attention to this through precise planning, testing and documentation.

Quality management for the wire and cable types produced by LEONI is certified worldwide in accordance with ISO 9001:2000.



LEONI environmental management

New environmental directives have been in force in the European Union (EU) since 2006. EU directive 2002/96/EG WEEE (Waste Electrical and Electronic Equipment) regulates the disposal of electrical and electronic equipment and components.

EU directive 2002/95/EG RoHS (Restriction of the Use of certain Hazardous Substances in electrical and electronic Equipment) restricts the use of certain hazardous substances in electrical and electronic equipment and components.



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