KELINE

Certificate bundle

from independent testing laboratories for Keline® structured cabling

Keline® components Cat. 6$_A$, Cat. 7

• Installation cable, Category 6$_A$, 550 MHz, (B2$_{ca}$, D$_{ca}$, Outdoor)	FORCE Technology
• Installation cable, Category 7, 1000 MHz, (B2$_{ca}$, D$_{ca}$)	FORCE Technology
• Keystone jack, patch panely, Category 6$_A$	FORCE Technology
• Keystone jack, HD, Category 6$_A$	GHMT
• Patch cabel, Category 6$_A$	FORCE Technology

Certificate verification step by step

On the website of the testing laboratories*
check if the certificate is not fake, created or edited in software.

Check certificate:

FORCE TECHNOLOGY

Compliance Statement   No. 2022-124B

Data communication cable, Category 6A

Company
KRUGEL EXIM spol s r.o.
Rybničná 38/H
831 06 Bratislava
Slovakia

check if your supplier is the official distributor and is able to provide support and warranties ensured by the manufacturer

Product description
Screened cable (U/FTP) characterised up to 500 MHz
Horizontal floor wiring cable, 100 Ω
4 individually screened twisted pairs
Flame retardant, halogen free

Product identification
KELine 10Giga 550MHz, STP 4x2xAWG23 Cat.6A, LSOH
Part number: KE550HS23/1E

check if the purchased product is compliant with the product listed in the certificate (label on the product packaging and P/N on the certificate)

Generic cabling and cabling components standards - Category 6A cable requirements
- ISO/IEC 11801-1:2017 (Ed. 1.0) / ISO/IEC 11801-2:2017 (Ed. 1.0)
- IEC 61156-5:2020 (Ed. 3.0)
- EN 50173-1:2018 / EN 50173-2:2018
- EN 50288-10-1:2012
- TIA-568.2-D:2018

Standards for flammability, halogen acidity, and smoke performance
- IEC 60332-1-1:2015 (Ed. 1.1) / IEC 60332-1-2:2015 (Ed. 1.1)
- IEC 60754-2:2019 (Ed. 2.1)
- IEC 61034-1:2019 (Ed. 3.2) / IEC 61034-2:2019 (Ed. 3.2)

*check if the product has been tested according to the current and relevant standards***

Technical report	EC Cabling product ID	CS valid until
12223093-01, DANAK-19/22523	6217	1 March 2023

check if the certificate is valid
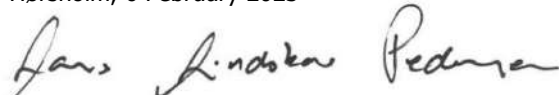
This product has been tested by FORCE Technology and complies with the requirements of the above specified standards and "Terms and conditions for the EC VERIFIED programme for Generic and Coaxial Cabling", DQP231006. The product takes part in a maintenance schedule, which implies that FORCE Technology performs a quality audit of the manufacturer's production and QA sites. The maintenance testing of the product is performed on a sample basis. This compliance statement has been revised, original issue date 14 February 2022.

check if the quality of the mass production is under constant supervision of testing laboratories

Hørsholm, 1 March 2022

Lars Lindskov Pedersen
Test Manager

Dennis Andersen
Head of Department

EC VERIFIED

FORCE Technology
Venlighedsvej 4
2970 Hørsholm
Denmark
Tel. +45 43 25 14 00
lan.forcetechnology.com

---

* https://lan.forcetechnology.com/en/customers/krugel-exim-spol-s-r-o/
https://typeapproval.ghmt.de/index.php/ta-pub

** **ISO/IEC 11801:2017 (Ed.1.0)** - International standard defining the requirements for structured cabling
TIA-568.2-D:2018 - American national standard defining the requirements for structured cabling

Compliance Statement No. 2023-113

Data communication cable, Category 6A

Company
KRUGEL EXIM spol. s r.o.
Pri majeri 13
831 06 Bratislava
Slovak Republic

Product description
Screened cable (U/FTP) characterised up to 500 MHz
Horizontal floor wiring cable, 100 Ω
4 individually foil screened twisted pairs
Flame retardant, halogen free

Product identification
Keline 10Giga 550MHz, STP 4x2xAWG23 Cat.6A, LSOH
Part no. KE550HS23

Generic cabling and cabling components standards - Category 6A cable requirements
- ISO/IEC 11801-1:2017 (Ed. 1.0) / ISO/IEC 11801-2:2017 (Ed. 1.0)
- IEC 61156-5:2020 (Ed. 3.0)
- EN 50173-1:2018 / EN 50173-2:2018
- EN 50288-10-1:2012
- TIA-568.2-D:2018

Standards for flammability, halogen acidity, and smoke performance
- IEC 60332-1-1:2015 (Ed. 1.1) / IEC 60332-1-2:2015 (Ed. 1.1)
- IEC 60754-2:2019 (Ed. 2.1)
- IEC 61034-1:2019 (Ed. 3.2) / IEC 61034-2:2019 (Ed. 3.2)
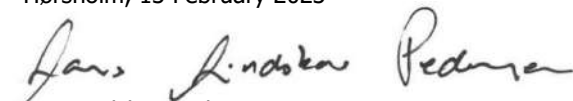
Technical report	EC Cabling product ID	CS valid until
12322647, DANAK-19/23250	7307	1 February 2024

This product has been tested by FORCE Technology and complies with the requirements of the above specified standards and "Terms and conditions for the EC VERIFIED programme for Generic and Coaxial Cabling", DQP231006. The product takes part in a maintenance schedule, which implies that FORCE Technology performs a quality audit of the manufacturer's production and QA sites. The maintenance testing of the product is performed on a sample basis.

Hørsholm, 6 February 2023

Lars Lindskov Pedersen
Test Manager

Dennis Andersen
Head of Department

FORCE Technology
Venlighedsvej 4
2970 Hørsholm
Denmark
Tel. +45 43 25 14 00
lan.forcetechnology.com

Compliance Statement   No. 2023-130

Data communication cable, Category 7

Company
KRUGEL EXIM spol. s r.o.
Pri majeri 13
831 06 Bratislava
Slovak Republic

Product description
Screened cable (S/FTP) characterised up to 1000 MHz*
Horizontal floor wiring cable, 100 Ω
4 individually foil screened twisted pairs with overall braid screen
Flame retardant, halogen free

Product identification
Keline 10Giga 1000MHz, S/FTP 4x2xAWG23 Cat.7, LSOH
Part number: KE1000HS23

Generic cabling and cabling components standards - Category 7 cable requirements
- ISO/IEC 11801-1:2017 (Ed. 1.0) / ISO/IEC 11801-2:2017 (Ed. 1.0)
- IEC 61156-5:2020 (Ed. 3.0)
- EN 50173-1:2018 / EN 50173-2:2018
- EN 50288-4-1:2013

Standards for flammability, halogen acidity, and smoke performance
- IEC 60332-1-1:2015 (Ed. 1.1) / IEC 60332-1-2:2015 (Ed. 1.1)
- IEC 60754-2:2019 (Ed. 2.1)
- IEC 61034-1:2019 (Ed. 3.2) / IEC 61034-2:2019 (Ed. 3.2)

Technical report	EC Cabling product ID	CS valid until
12322932, DANAK-19/23271	7463	1 March 2024

*Transmission parameters comply with extended Cat. 7 limits up to 1000 MHz.
This product has been tested by FORCE Technology and complies with the requirements of the above specified standards and "Terms and conditions for the EC VERIFIED programme for Generic and Coaxial Cabling", DQP231006. The product takes part in a maintenance schedule, which implies that FORCE Technology performs a quality audit of the manufacturer's production and QA sites. The maintenance testing of the product is performed on a sample basis.

Hørsholm, 13 February 2023

Lars Lindskov Pedersen
Test Manager

Dennis Andersen
Head of Department

Compliance Statement   No. 2022-290

Connecting Hardware, Category 6A
Including 4 Pair Power over Ethernet (4PPoE)
(Un-mating connectors under electrical load of up to 2 A per conductor)

Company
KRUGEL EXIM spol. s r.o.
Rybnicna 38/H
831 06 Bratislava
Slovak Republic

Product description
Screened Category 6A RJ45 Jack and Patch Panel characterised up to 500 MHz, 100 Ω

Product identification
KELine RJ45 Jack. Part number: KEJ-C6A-S-10G
KELine Patch Panel. Part number: KEP-C6A-S-10G
KELine Patch Panel. Part number: KEP-C6A-S-10G-NP

Generic cabling and cabling components standards - Category 6A connector requirements
- ISO/IEC 11801-1:2017 (Ed. 1.0) / ISO/IEC 11801-2:2017 (Ed. 1.0)
- IEC 60603-7-51:2010
- EN 50173-1:2018 / EN 50173-2:2018
- TIA-568.2-D:2018
- IEC 60512-99-002:2022

including all connector alien crosstalk parameters (PS ANEXT and PS AFEXT)
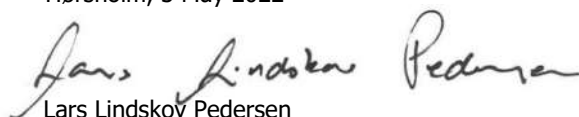
Technical report	**EC Cabling product ID**	**CS valid until**
12226146, DANAK-19/22654	5113	1 June 2023

This product has been tested by FORCE Technology and complies with the electrical requirements of the above specified standards and "Terms and conditions for the EC VERIFIED programme for Generic and Coaxial Cabling", DQP231006. The testing included measurement of NEXT with a compliant test plug and calculation of all the 14 test cases in both measurement directions. The product takes part in a maintenance of certification schedule, which implies that FORCE Technology performs a quality audit of the manufacturer's production and QA sites. The maintenance testing of the product is performed on a sample basis once a year.

Hørsholm, 3 May 2022

Lars Lindskov Pedersen
Test Manager

Dennis Andersen
Head of Department

EC····
VERIFIED

Certificate

No. c7715d-22

Customer:

Krugel Exim spol. s r.o.
Pri majeri 13
831 06 Bratislava 35, Slovakia

Category 6A

Test sample(s):

Connecting hardware:
Keline® RJ-45 Keystone Cat.6A

Part no.: KEJ-C6A-S-HD

Applied standard(s):

ISO/IEC 11801-1 Ed.1.0 (2017-11)
IEC 60603-7-51 Ed.1.0 (2010-03)

Result(s):

The sample meets the limits of the specified standards and regulations with respect to the parameters indicated above.

Connecting hardware, Copper, Category 6A

GHMT Type Approval

The test results which were determined in the course of the measurement refer to the submitted specimen. Any future technical modifications of the verified products are subject to the responsibility of the manufacturer.

This Certificate refers to the comprehensive test report **no. R7715d-22** and shall only be applicable in conjunction with the test report. This certificate is valid 24 months after date of testing.

Bexbach, 06.02.2023

Dirk Wilhelm, engineer
(Chairman of the Managing Board)

Test laboratory accredited by DAkkS in accordance with DIN EN ISO/IEC 17025:2018.
*The accreditation is valid for the test methods listed in certificate **D-PL-17559-01-00**.*

Compliance Statement No. 2023-080

Data communication cords, Category 6ᴀ

Company
KRUGEL EXIM spol. s r.o.
Pri majeri 13
831 06 Bratislava
Slovak Republic

Product description
Screened Category 6A RJ45 cords (equipment, patch, and work area) characterised up to 500 MHz

Product identification
KELine 10Giga patch cables STP Cat.6A, LS0H
Part number: KEL-C6A-P-xxx (xxx: denotes length in dm)

Generic cabling and cabling components standard - Category 6ᴀ balanced cord requirements
- ISO/IEC 11801-1:2017 (Ed. 1.0) / ISO/IEC 11801-2:2017 (Ed. 1.0)
- EN 50173-1:2018 / EN 50173-2:2018
- TIA-568.2-D:2018
- IEC 61935-2:2010 (Ed. 3.0) (transmission requirements)

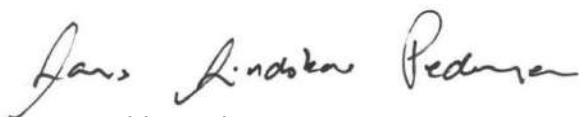| Technical report	EC Cabling product ID	CS valid until
12233517-01, DANAK-19/23232	5008	1 March 2024

This product has been tested by FORCE Technology and complies with the electrical requirements of the above specified standards and "Terms and conditions for the EC VERIFIED programme for Generic and Coaxial Cabling", DQP231006. The product takes part in a maintenance of certification schedule, which implies that FORCE Technology performs a sample test of the product once a year.

Hørsholm, 1 February 2023

Lars Lindskov Pedersen
Test Manager

Dennis Andersen
Head of Department

FORCE Technology
Venlighedsvej 4
2970 Hørsholm
Denmark
Tel. +45 43 25 14 00
lan.forcetechnology.com