





KE*Line*® components Cat.6_A, Cat.7

- Installation cable, Category 6_A , 550 MHz, (B2 $_{ca}$, D $_{ca}$, E $_{ca}$, Outdoor)
- Installation cable, Category 7, 1000 MHz, (B2_{ca}, D_{ca})
- Keystone jack, patch panels, Category $\mathbf{6}_{_{\Delta}}$
- Keystone jack, HD, Category 6_A
- Patch cable, Category 6_A

FORCE Technology FORCE Technology FORCE Technology GHMT

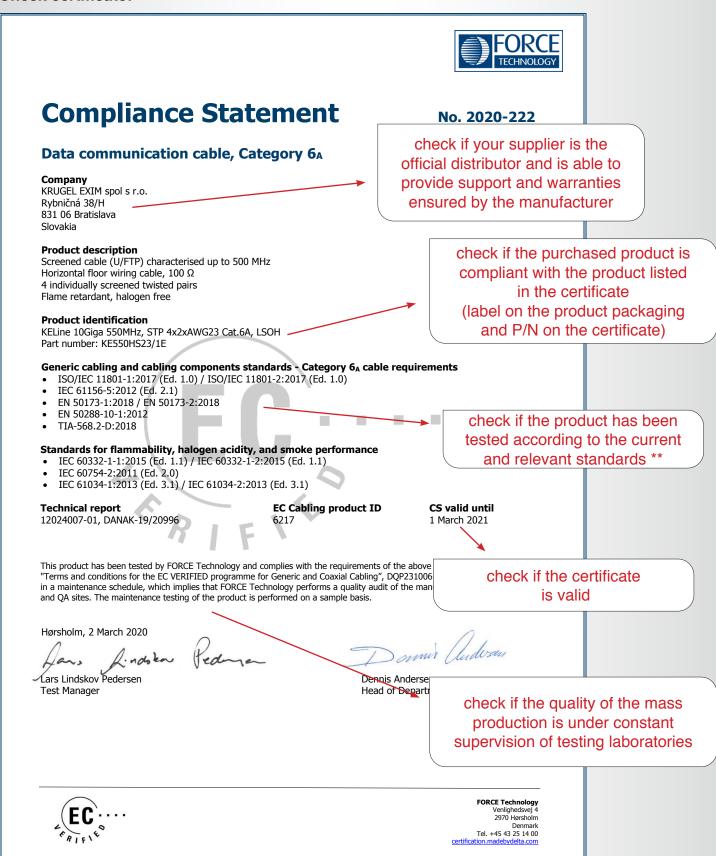
FORCE Technology

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:



- * http://www.madebydelta.com/delta/Business_units/LAN/EC_VERIFIED-components.page?
- ** 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.



No. 2020-222

Data communication cable, Category 6A

Company

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

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

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 61156-5:2012 (Ed. 2.1)
- 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 60754-2:2011 (Ed. 2.0)
- IEC 61034-1:2013 (Ed. 3.1) / IEC 61034-2:2013 (Ed. 3.1)

Technical report 12024007-01, DANAK-19/20996

EC Cabling product ID

CS valid until

1 March 2021

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.

6217

Hørsholm, 2 March 2020

Lars Lindskov Pedersen

Test Manager





No. 2020-223

Data communication cable, Category 7

Company

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

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 61156-5:2012 (Ed. 2.1)
- 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)

Lindska Pedera

- IEC 60754-2:2011 (Ed. 2.0)
- IEC 61034-1:2013 (Ed. 3.1) / IEC 61034-2:2013 (Ed. 3.1)

Technical report

12024007-02, DANAK-19/20997

EC Cabling product ID

CS valid until

6218 1 March 2021

*Transmission parameters comply with IEC 61156-7 and 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, 2 March 2020

Lars Lindskov Pedersen

Test Manager





No. 2020-308

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

KRUĞEL 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 60512-99-002:2019

including all connector alien crosstalk parameters (PS ANEXT and PS AFEXT)

Lindola Pedina

Technical report 12025813, DANAK-19/21090

EC Cabling product ID

CS valid until

10 May 2021

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.

5113

Hørsholm, 16 April 2020

Lars Lindskov Pedersen

Test Manager





Certificate

No. z5319b-18-E

Customer:

Krugel Exim spol. s.r.o. Rybnicna 38/H 831 06 Bratislava 35, Slovakia

Category 6A

Test sample(s):

Connector:
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.

Connector, 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. P5319b-18-E** and shall only be applicable in conjunction with the test report. This certificate is valid 24 months after date of issue.

Bexbach, 10. January 2019

Dirk Wilhelm, engineer (Chairman of the Managing Board)

GHMT TYPE APPROVAL. TYPE AD THE AD THE ADDITIONAL TYPE APPROVAL.

GHMT AG

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RELIABILITY IN TOTAL
REQUIRES ACCURACY IN DETAIL.

Test laboratory accredited by DAkkS in accordance with DIN EN ISO/IEC 17025:2005. The accreditation is valid for the test methods listed in certificate **D-PL-17559-01-00**.



No. 2020-037

Data communication cords, Category 6A

Company

KRUĞEL EXIM spol. s r.o. Rybnicna 38/H 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 6_A 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)

Lindolen Pedmen

Technical report

the product once a year.

EC Cabling product ID

CS valid until 1 March 2021

T936646-01, DANAK-19/20829

5008

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

Hørsholm, 14 January 2020

Lars Lindskov Pedersen

Test Manager

