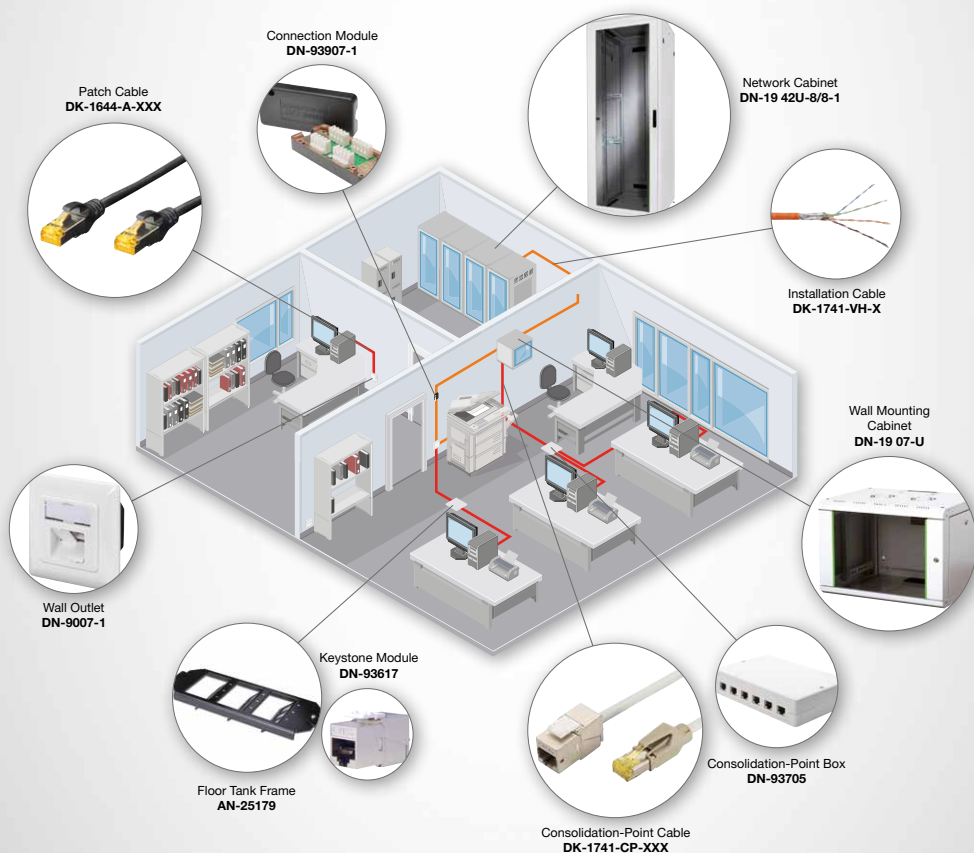


6-Connector- Channel-Link Class E_A (STP)

DIGITUS[®]
Professional



MAXIMUM FLEXIBILITY FOR YOUR NETWORK



The world's first company with shielded CAT 6_A Class E_A 6-Connector-Channel-Link Certification

GHMT[®]

Certificate

No. z3941a-15-E

Customer:

Assmann Electronic GmbH
Auf dem Schüffel 3
58513 Lüdenscheid, Germany

Class E_A

Test sample(s):

Data Cable:

DIGITUS[®] Professional CAT 7 S-FTP Installation Cable, AWG 23/1, 1200MHz, LSZH-1
Part-no.:DK-1741-VH

Connector:

DIGITUS[®] Professional CAT 6a Keystone Module, design compatible

Part-no.:DN-93617

DIGITUS[®] Professional CAT 6a Keystone Module

Part-no.:DN-93615

Patchcord:

DIGITUS[®] Professional CAT 6a S-FTP Patch Cable, LSZH-1, AWG 26/7

Part-no.:DK-1644-A-XXX

DIGITUS[®] Professional CAT 6a S-FTP Patch Cable, UC 900, TM31, LSZH-1, AWG 27/7

Part-no.:DK-1643-A-XXX

CP-Cable:

DIGITUS[®] Professional CP Cable CAT 6a S-FTP, Keystone, LSZH-1, AWG 26/7

Part-no.:DK-1744-CP-XXX

DIGITUS[®] Professional CP Cable CAT 6a S-FTP, UC 900, TM31, Keystone, LSZH-1, AWG 27/7

Part-no.:DK-1741-CP-XXX

Patch Panel:

DIGITUS[®] Professional CAT 6a Patch Panel

Part-no.:DN-916745-EA

Applied standard(s):

ISO/IEC 11801 Ed.2.2 (2011-06)

Result(s):

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

6 Connector Channel, Copper, Class E_A

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. **P3941a-15-E** and shall only be applicable in conjunction with the test report.
This certificate is valid 24 months after date of issue.

Bexbach, 27. July 2015



Dirk Wilhelm, engineer
(Chairman of the Managing Board)



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

GHMT AG

In der Kolling 13
66450 Bexbach / Germany

PO box 11 16
66442 Bexbach / Germany

T: +49 6826 92 28-0
F: +49 6826 92 28-290

info@ghmt.de
www.ghmt.de

**RELIABILITY IN TOTAL
REQUIRES ACCURACY IN DETAIL.**

Gain a maximum degree of flexibility for your Network Infrastructure with the Class E_A 6-Connector-Channel-Link!

Today, flexible network connections are an absolute must at every company, office, facility, production site, and business. Flexibility, security and high performance of the components that can be used are indispensable for creating future-oriented, future-proof data networks. The 6-Connector-Channel-Link offers you incredibly flexible options for setting up or expanding a data network within a building.

The DIGITUS® Professional brand of network infrastructure products from ASSMANN have now been certified according to ISO/IEC 11801 Edition 2.2, using the class E_A 6-Connector-Channel-Link test method.

These products include:

- CAT 7 S-FTP Horizontal Installation Cables
- CAT 6_A STP Distribution Fields
- CAT 6_A S-FTP Consolidation-Point Cables
- CAT 6_A S-FTP Patch Cables
- CAT 6_A STP Keystone Modules

DIGITUS® Professional is currently the only brand on the market with certified Class E_A 6-Connector-Channel-Links.

What does the 6-Connector-Channel-Link have to offer?

The 6-Connector-Channel-Link offers you a high degree of flexibility in the data network through the use of Consolidation-Point cables. In comparison to solid conductors (installation cables), Consolidation-Point cables are easier to work with due to their smaller wire cross section that makes the cables more flexible. In addition to this, floor distributors (wall housings) can be dispensed with since it is possible to set up a direct channel link from the server right through to the terminal device.

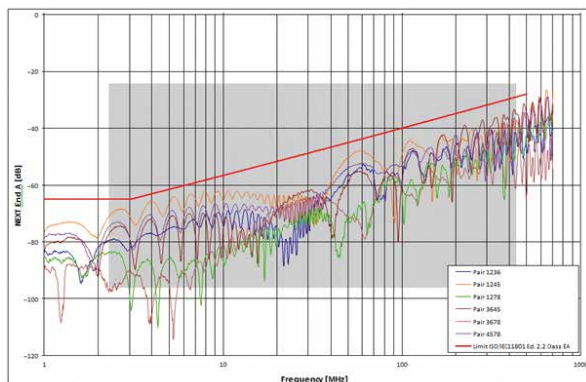
All shielded Class E_A DIGITUS® copper components can be mixed and matched to suit your needs. On the one hand, that demonstrates the quality of our products. On the other, it guarantees substantial margins (power reserves) for the measurement parameters.

Furthermore, Consolidation-Point wiring has the big advantage that the flexible cables only have to pass the minor fire prevention test (FRNC-B; IEC 60332-1; test on cables, insulated wires in the event of fire. Test of vertical flame proliferation on a conductor, an insulated wire, or a cable). This is important because tenders for public buildings, in particular, stipulate the major fire prevention test (FRNC-C; IEC 60332-3).

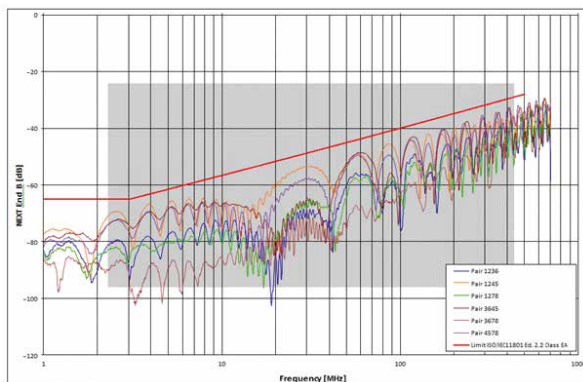
Where can I use it?

Office buildings with connection to production facilities are a main field of application. In this case, use of Consolidation-Point cables enables flexible connection of individual departments, such as the server room, office and production. Open-plan offices with flexible workstations also call for a network infrastructure that is able to adapt to new requirements in no time at all.

The 'clean desk' trend is now a priority for current construction projects in Germany. The spaciouly designed floors enable flexible wiring with Consolidation-Point cables in appropriate housings or floor tanks. This gives the owner of the building the required flexibility to make changes to the Consolidation-Points in the raised floor if changes are made to the office layout. Financial institutes with various levels of security and authorization represent another field of application. The installation cables are routed from the server room to the different areas. Installation in the floor tanks enables the Consolidation-Point cables to be routed through to the terminal device.



100 m Channel Link Measurement NEXT (END A)



100 m Channel Link Measurement NEXT (END B)

The Products in Detail

Consolidation-Point Cables

Consolidation-Point cables offer a high degree of flexibility: The AWG 27/7 wire cross section and the 'stranded conductor' design enable flexible cable installation in comparison to the 'solid' conductors from installation cables.

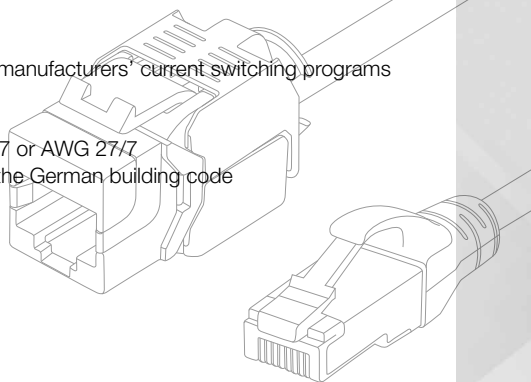
The cable offers outstanding measured values, due to the high power reserves provided by the strong cable stranding and the perfectly tailored RJ45 connections of the connectors and keystone socket.

Moreover, the cable features a low fire load: The cable has a halogen-free sheath (IEC 60332-1; FRNC-C); the RJ45 connector is made from flame-retardant plastic (UL-94V-0); the keystone module from zinc, nickel and flame-retardant plastic (UL-94V-0).

Product Highlights

1. Female module, design compatible with switch manufacturers' current switching programs (Gira, Jung, Busch-Jaeger, etc.)
2. Suitable for 10 Gbps Ethernet; 500 MHz
3. Maximum flexibility, wire cross section AWG 26/7 or AWG 27/7
4. Complies with the tender criteria established in the German building code through use of halogen-free materials

Detailed product data on page 24 – 27



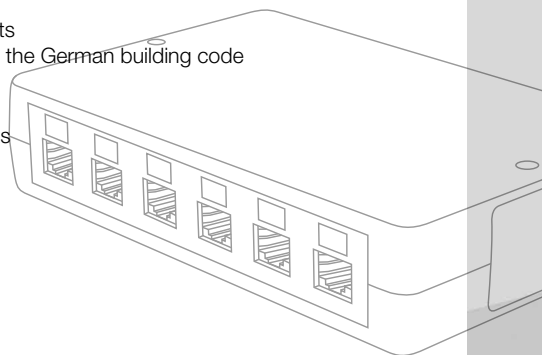
Consolidation-Point Box

The high packing density enables up to 12 Consolidation-Point cables to be accommodated per housing. The housing can be easily mounted on raised floors, false floors or exposed fittings. The cable inlet is flexibly routed, either laterally or from beneath. Moreover, the housing has a low fire load (UL-94V-0 material).

Product Highlights

1. Flexibly accommodates up to six or twelve ports
2. Complies with the tender criteria established in the German building code through use of halogen-free materials
3. Simple installation
4. Mounting material included in shipping contents

Detailed product data on page 28 – 29



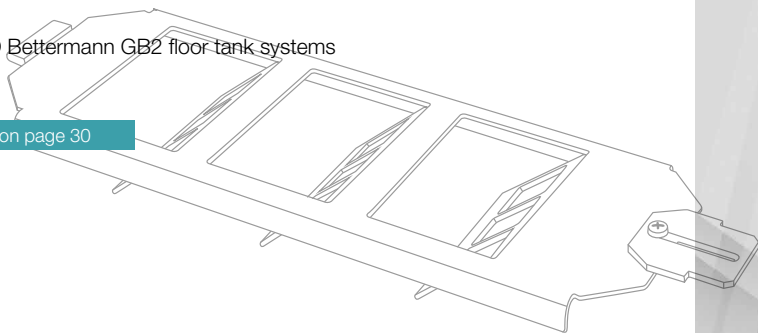
Floor Tank Brackets

The floor tank brackets are suited to installation in OBO Bettermann GB2 floor tank systems. A high packing density is guaranteed in the floor tank, up to nine keystone modules can be installed in the floor tank.

Product Highlights

1. Compatible with OBO Bettermann GB2 floor tank systems
2. Simple installation

Detailed product data on page 30



Keystone Modules

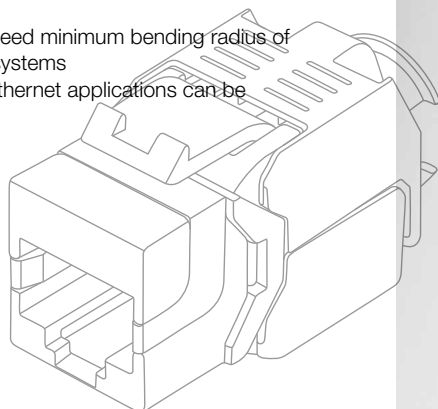
The design-compliant keystone modules guarantee use of conventional switch programs from the various switch manufacturers, such as Gira, Jung, Busch Jaeger and many more. These modules are currently one of the shortest modules available on the market, thereby guaranteeing low bending radiuses in the wall boxes and underfloor systems.

The keystone module is CAT 6_A type sample certified and features 360° shield contacting for improved EMC protection. The toolless mounting connection makes light work of installing the modules.

Product Highlights

1. The module design is compatible with switch manufacturers' current switching programs (Gira, Jung, Busch-Jaeger, etc.)
2. Suitable for 10 Gbps Ethernet; 500 MHz
3. Maximum flexibility thanks to compact design, guaranteed minimum bending radius of data cable when installing in wall boxes or underfloor systems
4. The module is suitable for POE+; typical Power over Ethernet applications can be easily implemented

Detailed product data on page 14 – 17



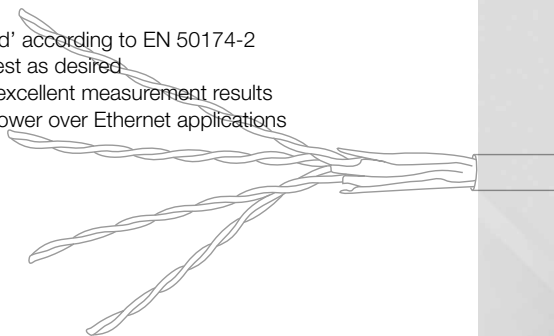
Installation Cables

Depending on the construction project, FRNC-B (LSZH-1) and FRNC-C (LSZH-3) CAT 7 installation cables can be provided with a minor or major fire prevention test. This ensures that the right product is consistently provided for the respective project. The installation cables are laid with a maximum degree of precision in order to ensure optimum measuring results and transmission properties. Moreover, the cable features a copper drain wire, which improves the electronic conductivity of the cable. The cable fulfills the requirements of isolation category 'd.' As such, the cable can be routed adjacent to power supply cables without any problems, and there is no risk of accidental impedance.

Product Highlights

1. Suitable for 10 Gbps Ethernet
2. The cable fulfills the criteria of isolation class 'd' according to EN 50174-2
3. Available with minor or major fire prevention test as desired
4. Heavy transposition of wire pairs guarantees excellent measurement results
5. The data cable is suitable for POE+; typical Power over Ethernet applications can be easily implemented

Detailed product data on page 10 – 13



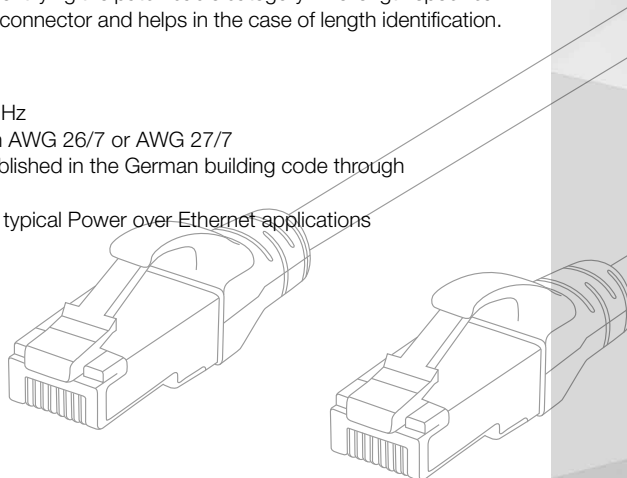
Patch Cable

The patch cable offers increased flexibility due to the decreased wire cross section AWG 27/7. A specially designed locking latch simplifies plugging/unplugging of the patch cables. The color coding of the connector face simplifies identifying the patch cable category. The length specification is printed on the sleeve of the RJ45 connector and helps in the case of length identification.

Product Highlights

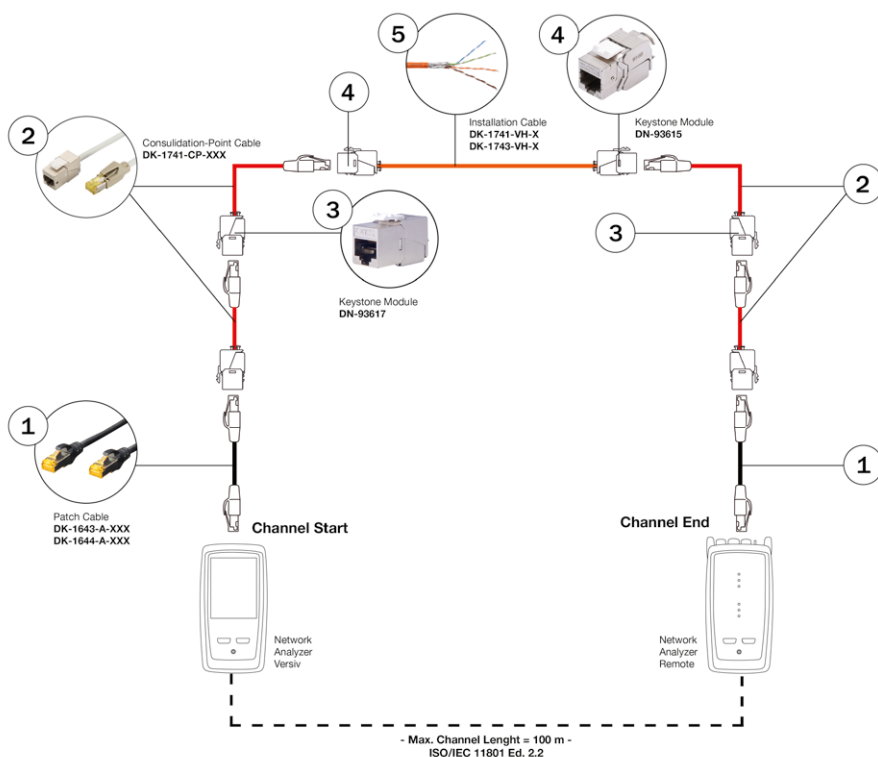
1. Suitable for 10 Gbps Ethernet; 500 MHz
2. Maximum flexibility, wire cross section AWG 26/7 or AWG 27/7
3. Complies with the tender criteria established in the German building code through use of halogen-free materials
4. The patch cable is suitable for POE+; typical Power over Ethernet applications can be used without any problems

Detailed product data on page 20 – 23



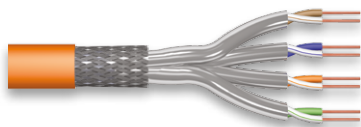
Sample applications of the Channel Link (line from server to terminal device)

1. Server cabinet: Connection via cable
(switch to network cabinet)
2. Network cabinet: Connection via Consolidation-Point cable
(network cable to Consolidation-Point)
3. Cable duct/underfloor: Connection via installation cable
(cable duct, underfloor, raised floor)
4. Consolidation-Point: Connection via Consolidation-Point cable
(cable duct, underfloor, raised floor)
5. Terminal device: Connection via patch cable
(Consolidation-Point to terminal device)



The wiring concept at a glance

DIGITUS® CAT 7, Class F, S-FTP Twisted Pair Installation Cable, LSZH-3



- ✓ Separating class „d“
- ✓ High NEXT reserver
- ✓ GHMT Channel Link certified

Product Overview

Area of Application:	Primary (Campus), Secondary (Riser), Tertiary (Horizontally) IEEE 802.3: 10Base-T; 100Base-T; 1000Base-T; 10GBase-T IEEE 802.5: 16 MB; ISDN; FDDI; ATM; PoE/PoE+
Norms:	ISO/IEC 11801 2nd Ed.; IEC 61156-5 EN 50173-1; EN 50288-4-1
FRNC (Flame retardancy):	IEC 60332-3-24; IEC 60754-2; IEC 61034-2
Physical Description:	
Basic conductor	Solid AWG 23/1; bare annealed copper, Diameter 0.57 mm nominal
Insulation	SFS-PE (Foam-Skin Polyethylene)
Total number of insulated conductors	8, twisted in 4 pairs
Color code	Blue-white, orange-white, green-white, brown-white
Individual pair shielding	Aluminum foil, providing 100% coverage
Overall shielding	35% wire braid, copper drain wire
Outer jacket	Halogen-free (FRNC-C/LSZH-3)
Outer jacketed diameter	0.7 mm nominal
Color	Orange (RAL 2000)
Mechanical Properties:	
Tensile loading	150 N max.
Dynamic bending radius	8x AD mm min.
Static bending radius	4x AD mm min.
Shipping- and storage temperature range	-20 °C up to +75 °C
Operating temperature range	-20 °C up to +60 °C
Installation temperature range	0 °C up to +50 °C
Overall diameter	7.3 mm nominal
Flame retardancy	IEC 60332-3-24
Halogen-free & smoke-proof	IEC 60754-2 & IEC 61034-2
Fire load	620 MJ/km
Weight	55 kg/km

Electrical Properties:

Mean impedance	100±5 Ohm @ 1-600 MHz
Propagation velocity	75-77% nominal
Capacitance	40 pF/m nominal @ 1 KHz
Capacitance unbalance to ground	1.6 pF/m max. @ 1 KHz
Insulation resistance	0.5 Ohm x Km min.
DC loop resistance	147 Ohm/Km max. (2% resistance unbalance)
Voltage resistance	72 Vdc max.
Coupling attenuation	85 dB min. @ 30-100 MHz 85-20 Log (f/100) dB min. @ 100-1000 MHz
PS-ANEXT loss	92.5-15 Log(f) dB min. @ 1-600 MHz (67 dB max.)
PS-AFEXT	78.2-20 Log(f) dB min. @ 1-600 MHz (67 dB max.)
Phase delay	534-36/f1/2 nS/100 m max. @ f=1-1000 MHz
Propagation delay	25 nS/100 m max.
Separating class	"d" acc. to EN-50174-2
NVP	79%

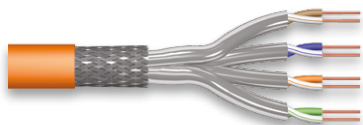
Transmission Properties:

FREQ.	Attenuation	NEXT	PS NEXT	ACR	PS ACR	EL FEXT	PS ELFEXT	EL-TCTL
MHz	dB/100 m	dB	dB	dB/100 m	dB/100 m	dB	dB	dB
1	1.8	100	97	98	94	105	103	23
4	3.4	100	97	97	92	93	91	25
10	5.4	100	97	95	90	85	83	30
100	14.4	100	97	97	87	65	63	25
250	28.1	90	87	87	68	57	55	23
500	40.0	86	83	58	54	50	48	23
600	44.8	84.5	82	44	40	49	47	23
1000	58.4	82	79	23	20	45	43	20
1200	68.0	70	69	18	15	40	38	18

Product Number Information

DK-1743-VH-5	DIGITUS® CAT 7 S-FTP PiMF Installation Cable, raw, length 500 m, drum, AWG 23/1, 1200 MHz, LSZH-3, simplex, color orange
DK-1743-VH-10	DIGITUS® CAT 7 S-FTP PiMF Installation Cable, raw, length 1000 m, drum, AWG 23/1, 1200 MHz, LSZH-3, simplex, color orange

DIGITUS® CAT 7, Class F, S-FTP Twisted Pair Installation Cable, LSZH-1



- ✓ Separating class „d“
- ✓ High NEXT reserver
- ✓ GHMT Channel Link certified

Product Overview

Area of Application:	Primary (Campus), Secondary (Riser), Tertiary (Horizontally) IEEE 802.3: 10Base-T; 100Base-T; 1000Base-T; 10GBase-T IEEE 802.5: 16 MB; ISDN; FDDI; ATM; PoE/PoE+
Norms:	ISO/IEC 11801 2nd Ed.; IEC 61156-5 EN 50173; EN 50288-4-1
FRNC (Flame retardancy):	IEC 60332-1; IEC 60754-2; IEC 61034
Physical Description:	
Basic conductor	Solid AWG 23/1; bare annealed copper, Diameter 0.57 mm nominal
Insulation	SFS-PE (Foam-Skin Polyethylene)
Total number of insulated conductors	8, twisted in 4 pairs
Color code	Blue-white, orange-white, green-white, brown-white
Individual pair shielding	Aluminum foil, providing 100% coverage
Overall shielding	Wire braid, 35% nominal coverage, copper drain wire
Outer jacket	Halogen-free (FRNC-B/LSZH-1)
Outer jacketed diameter	0.6 mm nominal
Color	Orange (RAL 2000)
Mechanical Properties:	
Tensile loading	150 N max.
Dynamic bending radius	8x AD mm min.
Static bending radius	4x AD mm min.
Shipping- and storage temperature range	-20 °C up to +75 °C
Operating temperature range	-20 °C up to +60 °C
Installation temperature range	0 °C up to +50 °C
Overall diameter	7.2 mm nominal simplex; 2x 7.2 mm nominal duplex
Flame retardancy	IEC 60332-1
Halogen-free & smoke-proof	IEC 60754-2 & IEC 61034
Fire load	650 Mj/km simplex; 1300 Mj/km duplex
Weight	50 kg/km

Electrical Properties:

Mean impedance	100±5 Ohm @ 1-600 MHz
Propagation velocity	75-77% nominal
Capacitance	40 pF/m nominal @ 1 KHz
Capacitance unbalance to ground	1.6 pF/m max. @ 1 KHz
Insulation resistance	0.5 Ohm x Km min.
DC loop resistance	147 Ohm/Km max. (2% resistance unbalance)
Voltage resistance	72 Vdc max.
Coupling attenuation	85 dB min. @ 30-100 MHz 85-20 Log (f/100) dB min. @ 100-1000 MHz
PS-ANEXT loss	92.5-15 Log(f) dB min. @ 1-600 MHz (67 dB max.)
PS-AFEXT	78.2-20 Log(f) dB min. @ 1-600 MHz (67 dB max.)
Phase delay	534-36/f ^{1/2} nS/100 m max. @ f=1-1000 MHz
Propagation delay	25 nS/100 m max.
Separating class	"d" acc. to EN 50174-2
NVP	79%

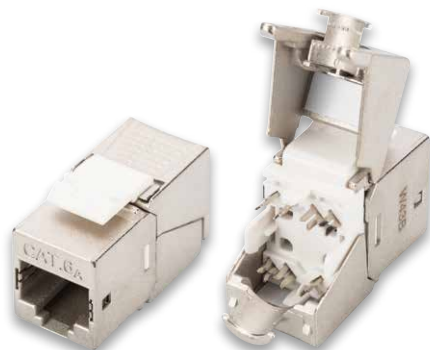
Transmission Properties:

FREQ.	Attenuation	NEXT	PS NEXT	ACR	PS ACR	EL FEXT	PS ELFEXT	EL-TCTL
MHz	dB/100 m	dB	dB	dB/100 m	dB/100 m	dB	dB	dB
1	1.8	100	97	98	94	105	103	23
4	3.4	100	97	97	92	93	91	25
10	5.4	100	97	95	90	85	83	30
100	14.4	100	97	97	87	65	63	25
250	28.1	90	87	87	68	57	55	23
500	40.0	86	83	58	54	50	48	23
600	44.8	84.5	82	44	40	49	47	23
1000	58.4	82	79	23	20	45	43	20
1200	68.0	70	69	18	15	40	38	18

Product Number Information

DK-1741-VH-1	DIGITUS® CAT 7 S-FTP PiMF Installation Cable, length 100 m, ring, AWG 23/1, 1200 MHz, LSZH-1, simplex, color orange
DK-1741-VH-5	DIGITUS® CAT 7 S-FTP PiMF Installation Cable, length 500 m, drum, AWG 23/1, 1200 MHz, LSZH-1, simplex, color orange
DK-1741-VH-10	DIGITUS® CAT 7 S-FTP PiMF Installation Cable, length 1000 m, drum, AWG 23/1, 1200 MHz, LSZH-1, simplex, color orange
DK-1741-VH-D-1	DIGITUS® CAT 7 S-FTP PiMF Installation Cable, length 100 m, ring, AWG 23/1, 1200 MHz, LSZH-1, duplex, color orange
DK-1741-VH-D-5	DIGITUS® CAT 7 S-FTP PiMF Installation Cable, length 500 m, drum, AWG 23/1, 1200 MHz, LSZH-1, duplex, color orange

DIGITUS® CAT 6_A Keystone Module, shielded



✓ 10 GBit, 500 MHz

✓ GHMT Channel Link certified

✓ Design compatible

Features

- 360° cable screen connection for enhanced EMV protection
- Material enclosure: Zinc diecast - Nickel plated
- Material contacts: Phosphor bronze
- Contacts coating: Nickel, gold plated 0.5 µ
- Insertion force: Max. 30N (acc. to IEC 60603-7-5)
- Retention strength: 7.7 kg between jack and plug
- Operating Temperature: -10 °C up to +60 °C (ISO/IEC 11801, ANSI/TIA 568 C.2)
- Mating cycles: ≥ 750 (ISO/IEC 11801, IEC 60603-7-5)
- Diameter Cu-Conductor: AWG (26/1 ... 22), stranded and solid
- Tested with AWG 22 solid installation cable (DIGITUS® DK-1741-A-VH-X; AWG 22 CAT 7A installation cable)
- CAT 6, transmission performance is compliance with the ANSI/TIA 568 C.2 standard
- 500 MHz acc. ISO/IEC 60603-7-51, 11801 AMD2:2010-04
- Suitable for PoE/PoE+
- RJ45 jack, for patch panel and modular wall outlet installation
- Suitable for panel types: DN-91402, DN-91410, DN-91411, DN-91412, DN-91412S-ANP, DN-91413S-ANP, DN-91421, DN-91422, DN-91423, DN-91424
- Tool free cable installation via LSA stripes, color coded according to EIA/TIA 568 A & B
- Cable entry: Rear side
- DELTA certificated
- Dimensions (HxWxD): 19.5 x 14.5 x 35.3 mm
- Weight: 19.05 g
- Available as set with 24 pcs. ("DN-93617-24")

Product Overview

The shielded Keystone Module "DN-93617" from DIGITUS® provides best performance and link quality for your network. The compact design allows the installation of 24 pieces in a row of 483 mm (19") 1U Panels. It is conforming to Category 6_A / 10GBase-T Channel, ANSI/EIA/TIA 568C.2.1:2002, ISO/IEC 11801:2002. Due to its compact size, this module suits into design compatible modular wall outlets (face plates).

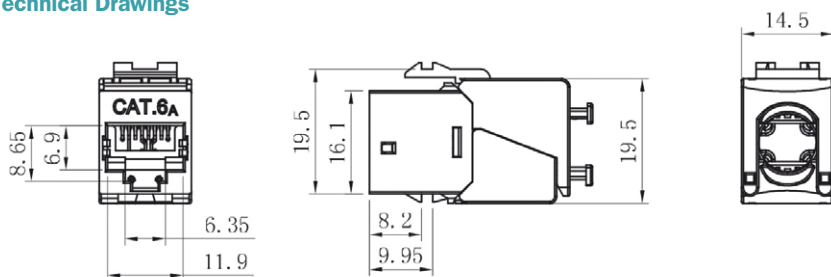
Product Number Information

DN-93617	DIGITUS® CAT 6 _A Keystone Module, shielded, 500 MHz, tool free connection
DN-93617-24	DIGITUS® CAT 6 _A Keystone Module, shielded, 500 MHz, tool free connection, set= 24 pcs.

Product Number Information - Faceplate

DN-93831	DIGITUS® Face plate for keystone module, 2x RJ45, 80x80 mm frame, 50x50 mm central plate incl. dust cover, design compatible, color similar pure white
-----------------	--

Technical Drawings

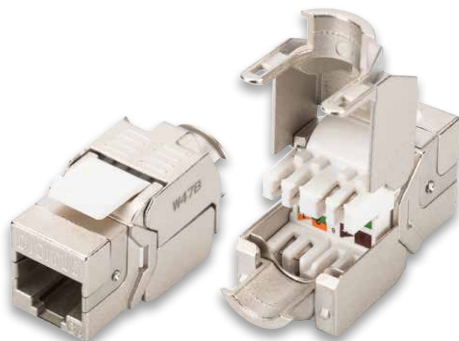


DN-93617-24



DN-93617

DIGITUS® CAT 6_A Keystone Module, shielded



✓ 10 GBit, 500 MHz

✓ GHMT Channel Link certified

Features

- Cable entry: Rear side
- Material enclosure: Zinc diecast - Nickel plated
- Material contacts: Phosphor bronze
- IDC contacts material: Phosphor bronze
- Contacts coating: Nickel, gold-plated 0.5 µ
- 360° cable screen connection for enhanced EMI protection
- Lining: 50 µm gold over 40 µm nickel
- Operating temperature: -10°C up to +60°C
- Material PCB: FR4, UL 94V-0, multilayer 1.45 mm thickness
- Mating cycles: ≥ 750
- Diameter Cu-Conductor: AWG (26/1 ... 22), stranded and solid
- Wire terminations: Tool free with cap for stranded and solid wires AWG 23-26
- Wiring standard: EIA/TIA 568 A/B
- Conformance: Category 6_A / 10GBase-T Channel, ANSI/EIA/TIA 568C.2.1:2002, ISO/IEC 11801:2002
- Certification: 3P
- Dimensions: 20x14x34 mm
- Weight: ca. 22 g
- Compact form allows an installation of 24x in 483 mm (19") 1U blank panel (modular)
- Suitable for bracket Types: DN-91402, DN-91410, DN-91411, DN-91412, DN-91412S-ANP, DN-91413S-ANP, DN-91421, DN-91422, DN-91423, DN-91424
- Opening size acc. Keystone Standard 19.35 mm x 14.8 mm
- Easy installation in floor boxes, surface mount boxes, distribution panels and desk housings due to its compact design

Product Overview

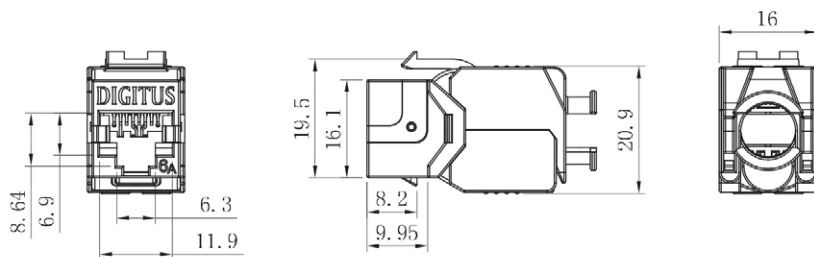
The item "DN-93615" from DIGITUS® is an unshielded CAT 6_A Keystone Module with tool free installation which provides best performance and link quality for your network. The compact design allows the installation of 24 pieces in a row of 483 mm (19") 1U panels. It is conform to Category 6A / 10GBase-T Channel, ANSI/EIA/TIA 568C.2.1:2002, ISO/IEC11801:2002.

Product Number Information

DN-93615 DIGITUS® CAT 6_A Keystone Module, shielded, 500 MHz tool free connection

DN-93615-24 DIGITUS® CAT 6_A Keystone Module, shielded, 500 MHz tool free connection, set= 24 pcs.

Technical Drawings



DN-93615-24



DN-93615

DIGITUS® CAT 6_A Patch Panel, shielded

✓ 10 GBit, 500 MHz

✓ Dust cover

✓ GHMT Channel Link certified

Features

- CAT 6_A Class E_A for up to 500 MHz
- Qualified for 10 GBit Ethernet
- Shielded RJ45 sockets, 8P8C
- Material housing: SECC, 1.5 galvanized, cold rolled steel acc. EN1.4301
- Suitable for 483 mm (19") rack mount
- 360° shield coverage
- Dust protection shutter included
- Cable installation via LSA strips, color coded according to EIA/TIA 568 A & B
- Fixing option for cable ties, central ground connection
- Complies with the 802.3at PoE+ and the 802.3af PoE standard

Product Overview

The item „DN-91624S-EA“ from DIGITUS® is a CAT 6_A, 24-port Patch Panel with integrated dust protection shutters which is made of 1.5 mm cold-rolled steel. It complies with the 802.3at PoE+ and the 802.3af PoE standard and is equipped with dust protection shutters.

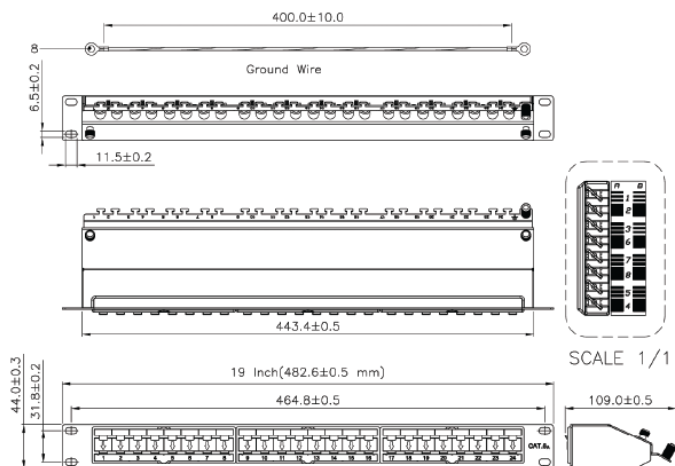
Product Number Information**DN-91624S-EA**

DIGITUS® CAT 6_A Class E_A Patch Panel, shielded, 1U, 24-port RJ45, incl. dust cover, 8P8C, color grey (RAL 7035)

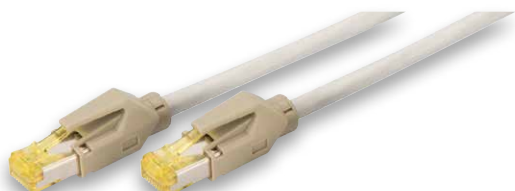
Product Images



Technical Drawings



Category 6_A, Class E_A, S-FTP PimF Patch Cable, LSZH-1



✓ 10 GBit, 500 MHz

✓ GHMT Channel Link certified

Features

- According to: EN-50173-1; EN-80288-4-2 and ISO/IEC 11801; IEC 61156-6
- 2x RJ45 HRS TM31, shielded
- With latch protection
- Boots with kink protections and strain reliefs
- Cable DRAKA UC 900 SS CAT 7 S-FTP PIMF
- Category: CAT 6_A
- Shielding: S-FTP, Pairs in metal foil and braid shielding
- Structure: 4x2 AWG 27/7, twisted pair
- Configuration: 1:1
- Jacket: LSZH-1

Product Overview

The Category CAT 6_A S-FTP PimF patch cables are manufactured and tested to the EN-50173-1; EN-80288-4-2 and ISO/IEC 11801; IEC 61156-6 specifications. All patch cables will guarantee the installed cabling system is compliant with the ISO & EN channel specification requirements and will provide optimum performance levels of CAT 6_A cabling. DIGITUS® offers a various range of colors and lengths. The cable length is state on each connector and it is suitable for use in routers, switches servers and other active and passive components. The cables are packed in individual polybags.

Performance Overview

The Category 6_A S-FTP patch cables are manufactured and tested to the ISO/IEC and DIN Standard bodies. The performance characteristics are tested up to 1000 MHz including NEXT and ELFEXT as well as return loss. It meets the required standards, the patch cables are made to fulfill the high demand of applications.

Performance- and Specification Overview

Conductor	Cu braid, AWG 27/7
Insulation	Foam-Skin Polypropylen, 0.98 mm nominal
Structure	4x 2 AWG 27/7, twisted pair
Pair shielding	Aluminum covered plastic bond foil
Overall shielding	Cu braid, tinned
Outer jacketed	LSZH
Bending radius	Without tensile loading: ≥ 25 mm; with tensile loading: ≥ 50 mm
Operating temperature range	Static: -20 °C - +60 °C; moving: 0 °C - +50 °C

Electrical Properties

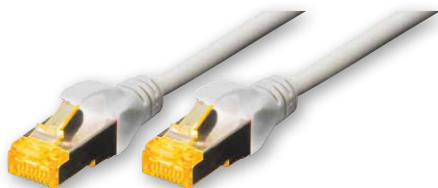
Loop resistance	$\leq 340 \, \Omega / \text{km}$
Resistance unbalance	$\leq 3\%$
Insulation resistance (500 V)	$\geq 2000 \, \text{M}\Omega \cdot \text{km}$
Capacity at 800 Hz	Nom. 43 nF/km
Capacity unbalance (Pair/Earth)	$\leq 1500 \, \text{pF/km}$
Characteristic impedance (100 MHz)	$100 \pm 5 \, \Omega$
Propagation velocity	Ca. 79 %
Signal transit time	$\leq 427 \, \text{ns}/100\text{m}$
Duration difference	$\leq 12 \, \text{ns}/100\text{m}$
Test voltage (DC, 1 min)	
Conductor	1000 V
Coupling resistance	At 1 MHz: 10m Ω /m; at 10 MHz: 10m Ω /m; At 30 MHz: 30m Ω /m
Coupling attenuation	85 dB

Transmission Properties

FREQ.	Attenuation	NEXT	PS NEXT	ACR	ACRF	PS-ACRF	Return loss
MHz	dB/100 m	dB	dB	dB/100 m	dB/100 m	dB	dB
1.0	0.3	90	87	87	80	77	23
4.0	0.6	90	87	84	80	77	24
10.0	1.0	90	87	80	80	77	25
16.0	1.3	90	87	77	76	73	25
20.0	1.4	90	87	76	74	71	25
31.20	1.8	90	87	72	70	67	25
62.50	2.6	90	87	64	64	61	23
100.0	3.2	87	84	55	60	57	21
125.0	3.6	85	82	49	58	55	20
200.0	4.6	82	79	36	54	51	18
300.0	5.6	80	77	24	50	47	17
450.0	6.9	77	74	8	47	44	17
600.0	7.9	75	72	-4	44	41	17

Product Number Information

Length	Grey
0.5 m	DK-1643-A-005
1.0 m	DK-1643-A-010
2.0 m	DK-1643-A-020
3.0 m	DK-1643-A-030
5.0 m	DK-1643-A-050
7.0 m	DK-1643-A-070
10.0 m	DK-1643-A-100
20.0 m	DK-1643-A-200

DIGITUS® Category 6_A, Class E_A S-FTP Twisted Pair Patch Cable, LSZH-1

✓ 10GBit, 500 MHz

✓ GHMT Channel Link certified

Features

- 2x RJ45 connectors
- Boots with kink protections and strain reliefs
- Spot length on boot
- Conductor: Cu
- Category 6_A, Class E_A
- Shielded
- Structure: 4x2 AWG 26/7, twisted pair
- Configuration: 1:1
- Sheath: LSZH
- Various lengths and colors available

Product Overview

The new DIGITUS® Category 6_A S-FTP patch cables are manufactured and tested to the ISO/IEC 11801 and DIN EN 50173 Category 6_A specifications. DIGITUS® patch cables will guarantee the installed cabling system is compliant with the ISO & EN channel specification requirements and will provide optimum performance levels of DIGITUS® Category 6_A cabling. The patch cables have a new reworked plug with bend and latch protection, which prevents the snagging of the cable and also protects the latching lever against breaking. You can easily identify the Category 6_A, because of the new yellow colored connector.

Performance Overview

DIGITUS® Category 6_A S-FTP patch cables are manufactured acc. to ISO/IEC and DIN standards. The performance characteristics are tested up to 250 MHz inclusive the NEXT and ELFEXT return loss. DIGITUS® patch cables are designed and produced to fulfill the highest requirements of various application areas in full volume.

Performance- and Specification Overview

Conductor	AWG 26/7 bare copper, 7/0.15 ± 0.015 mm
Color code	Orange x White, Green x White, Blue x White, Brown x White
Insulations	HD-PE (High Density Polyethylene)
Outer sheath	LSZH
Overall diameter	6.0 mm ± 0.3 mm
RJ45 connector	3 µ minimum gold-plated in confined area (gold flash over remainder) over 60 µ nickel undercoat
Durability	750 insertion cycles

Contact resistance	230 Ω maximum
Resistance unbalance	2% maximum
Dialectric strength	2500 VDC for 3 seconds
Uninsulated resistance	150 MΩ/km minimum
Operating temperature	-20 °C up to +60 °C
Flame retardancy	IEC 60332-1
Smoke emission	IEC 61034
Colors	Various colors available on request
Marking	Brand name, cable length and cable information

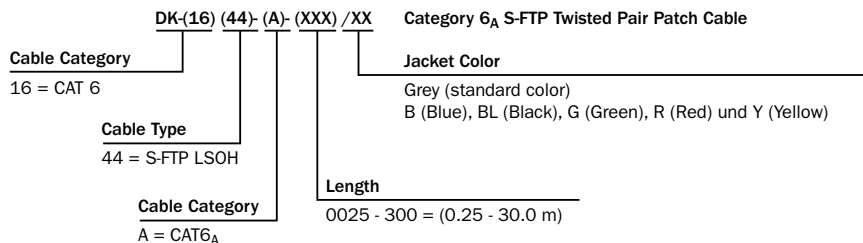
Transmission Properties

FREQ.	Insertion Loss	NEXT	RL	ACR	ACR-F	PS NEXT	PS ACRF
MHz	dB	dB	dB	dB	dB	dB	dB
1.00	4.00	65.00	19.00	63.30	62.00	60.30	23
4.00	4.20	63.00	19.00	51.20	60.50	48.20	24
8.00	5.80	58.20	19.00	45.20	55.60	42.20	25
10.00	6.50	56.60	19.00	43.30	54.00	40.30	25
16.00	8.20	53.20	18.00	39.20	50.60	36.20	25
20.00	9.20	51.60	17.50	37.20	49.00	34.20	25
25.00	10.20	50.00	17.00	35.30	47.30	32.30	23
31.25	11.50	48.40	16.50	33.40	45.70	30.40	21
62.50	16.40	43.40	14.00	27.30	40.60	24.30	20
100.00	20.90	39.90	12.00	23.30	37.10	20.30	18
200.00	30.10	34.80	9.00	17.20	31.90	14.20	17
250.00	33.90	33.10	8.00	15.30	30.20	12.30	17

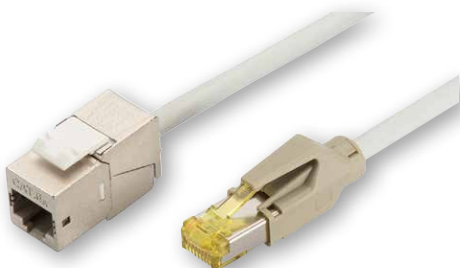
The results of the chart above are typical for Category 6A, Class EA patch cables 2 m, 5 m up to 10 m length

Product Number Information

Categorie 6_A S-FTP Cable Assemblies



DIGITUS® CAT 6_A S-FTP Consolidation-Point Cable



✓ GHMT Channel Link certified

✓ 10 GBit, 500 MHz

✓ Flexible installation

✓ Keystone Modul design compatible

Features

The product consists of the following single components:

Raw Patch Cable (Article No.: DK-1741-PH)

- DRAKA UC900 SS CAT7 S-FTP flex cable
- Shielding: S-FTP; pairs shielded in metal foil
- Sheath: LSZH-1 (FRNC-B), halogen-free
- Core cross-section AWG 27/7
- 600 MHz, Class F

RJ45 Plug (Article No.: A-M06A 8/8 HRS)

- Hirose HRS TM31 RJ45 Plug
- Fully shielded with strain relief and kink protection boot
- Colored coding, yellow color
- Mating cycles: ≥ 750
- Insertion force: ≤ 30 N
- Material contacts: Phosphor bronze
- Contacts coating: Nickel, gold-plated $0,8 \mu$
- Material connector body: Polycarbonat
- Material shielding housing: Brass 0.5 mm, nickel plated 2μ
- Temperature range in operation: -20 °C up to $+60$ °C
- Current carrying capacity: 1A at 50 °C
- Flammability rating: UL94V-2

Keystone Module (Article No.: DN-93617)

- Design compatible
- Material enclosure: Zinc diecast - Nickel plated
- Material contacts: Phosphor bronze
- Insertion force: max. 30 N (acc. to IEC 60603-7-5)
- Contacts coating: Nickel, gold plated 0.5 μ
- Retention strength: 7.7 kg between module and plug
- Operating temperature: -10 °C up to +60 °C (ISO/IEC 11801, ANSI/TIA 568 C.2)
- Mating cycles: \geq 750 (ISO/IEC 11801, IEC 60603-7-5)
- CAT 6_A transmission performance is compliance with the ANSI/TIA 568 C.2 standard
- 500 MHz acc. ISO/IEC 60603-7-51, 11801 AMD2:2010-04

Product Overview

The DIGITUS® Professional Consolidation-Point cables are 6-Connector-Channel-Link Class E_A certified by GHMT. The CP cable fulfills the LSZH-1 (FRNC-B) norms according to IEC 60332-1 as all materials are halogen-free, the outer jacket, the RJ45 plug and also the plastic parts of the Keystone Module. The CP cable offers a high performance ratio up to 10 G/Bit Ethernet by 500 MHz transmission rate. It has a high flexibility through the core cross-section of AWG 27/7. A locking lever simplifies the in- and output of the cable. There are no tools needed to snap in the Keystone Module to a floor tank, wall outlet or patch panel. It is design compatible with most switch programs of leading switch manufacturers and due to its compact size it offers a low bend for wall plates and under floor systems.

Product Number Information

DK-1741-CP-010	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	1.0 m
DK-1741-CP-020	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	2.0 m
DK-1741-CP-030	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	3.0 m
DK-1741-CP-050	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	5.0 m
DK-1741-CP-070	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	7.0 m
DK-1741-CP-100	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	10.0 m

DIGITUS® CAT 6_A S-FTP Consolidation-Point Cable, LSZH-1



✓ GHMT Channel Link certified

✓ 10 GBit, 500 MHz

✓ Flexible installation

Features

The product consists of the following single components:

Raw Patch Cable (Article No.: DK-1644-A)

- DIGITUS® CAT 6_A Patch Cable
- Shield: S-FTP pairs shielded in metal foil
- Sheath: LSZH-1 (FRNC-B)
- Core cross-section: AWG 26/7
- 500 MHz, Class E_A

RJ45 Plug

- 500 MHz RJ45 Plug
- Fully shielded with strain relief and kink protection boot
- Colored coding, yellow color
- Mating cycles: ≥ 750
- Insertion force: ≤ 30 N
- Material contacts: Phosphor bronze
- Contacts coating: Nickel, gold-plated 0.8μ
- Material connector body: Polycarbonat
- Material shielding housing: Brass 0.5 mm, nickel plated 2μ
- Temperature range in operation: -20 °C up to $+60$ °C
- Current carrying capacity: 1A at 50 °C
- Flammability rating: UL94V-2

Keystone Module (Article No.: DN-93615)

- Shielded, 500 MHz, tool-free installation
- Material enclosure: Zinc diecast - nickel plated
- Material contacts: Phosphor bronze
- Contacts coating: Nickel, gold plated 0.5 µ
- Operating temperature: -10°C up to +60°C (ISO/IEC 11801, ANSI/TIA/EIA 568 B.2)
- Mating cycles: ≥ 750 (ISO/IEC 11801, IEC 60603-7-5)
- Standards: IEC 60603-7-51, ANSI/TIA/EIA 568-C.2, IEC 60512-27-100, ISO/IEC 11801 am. 2.

Product Overview

The DIGITUS® Professional Consolidation-Point cables are 6-Connector-Channel-Link Class E_A certificated by GHMT. The CP cable fulfills the LSZH-1 (FRNC-B) norms according to IEC 60332-1 as all materials are halogen-free, the outer jacket, the RJ45 plug and also the plastic parts of the Keystone Module. The CP cable offers a high performance ratio up to 10 G/Bit Ethernet by 500 MHz transmission rate. It has a high flexibility through the core cross-section of AWG 26/7. A locking lever simplifies the in- and output of the cable. There are no tools needed to snap in the Keystone Module to a floor tank, wall outlet or patch panel. Due to its compact size it offers a low bend for wall plates and under floor systems.

Product Number Information

DK-1744-CP-010	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	1.0 m
DK-1744-CP-020	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	2.0 m
DK-1744-CP-030	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	3.0 m
DK-1744-CP-050	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	5.0 m
DK-1744-CP-070	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	7.0 m
DK-1744-CP-100	DIGITUS® CAT 6 _A S-FTP Consolidation-Point cable	10.0 m

Consolidation-Point Boxes for DIGITUS® Keystone Modules



✓ Accepts all DIGITUS® Keystone Modules

✓ 2-Port and 6-/12-Port Version

Features

- Capacity of DIGITUS® Keystone Modules when feeding the cables from the back: max. 6 modules; when feeding the cables from the bottom or the sides: max. 12 modules
- Suitable for all DIGITUS® Keystone Modules
- Available as 2-port or 6-port version
- Lower housing shell with an opening for cable entry and mounting holes for wall mounting
- Consisting of: 1x housing shell top, 1x housing shell bottom, 2x adapter plates with 6x (DN-93705) or 2x (AT-AG 302A-WH) Keystone openings, 1x adapter plate for cable entry
- Color: Pure white
- Material: ABS
- Dimensions (HxWxD): 40x170x120 mm (DN-93705); 30x50x50 mm (AT-AG 302A-WH)
- Weights: ca. 170 g (DN-93705); ca. 30 g (AT-AG 302A-WH)
- Temperature range: -10 °C up to +50 °C

Product Overview

The box is a part of the DIGITUS® modular connection system and is used for installation of Consolidation-Points at desks, in intermediate ceilings or in underfloor systems. The housing is suitable for DIGITUS® Keystone Modules.

Product Number Information

AT-AG 302A-WH
DN-93705

Consolidation-Point Box for 2x Keystone Module, color RAL 9010, 2-port
Consolidation-Point Box for 6x Keystone Module, color RAL 9010, 6-port

Product Images

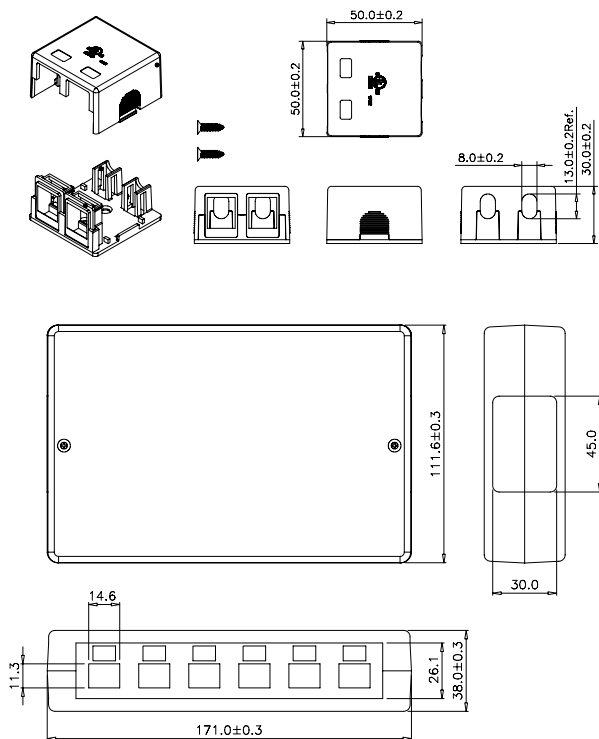
AT-AG 302A-WH



DN-93705



Technical Drawings



Frame Set for Keystone Modules



✓ Accepts all DIGITUS® Keystone Modules

✓ Double or triple Version

Features

- For installation of Keystone Modules
- Available as 2-level version for 6x Keystone Modules or 3-level version for 9x Keystone Modules

Product Overview

The Frame sets function as adapter for the installation of Keystone Modules. They are available as 2-level version for 6x Keystone Modules or as 3-level version for 9x Keystone Modules.

Product Images

Frame Set, 2-level



Frame Set, 3-level



Product Number Information

AN-25178

Frame Set, 2-level for 6x Keystone Modules

AN-25179

Frame Set, 3-level for 9x Keystone Modules

DIGITUS® Face Plate for Keystone Modules



✓ Integrated Dust Cover

✓ Easy Installation

✓ Design compatible

Features

- For connection of Keystone Modules
- Connection way of the modules is 45° vertical
- Central plate with name plate design for identification
- 80x80 mm frame, 50x50 mm central plate
- Central plate includes dust protection shutters
- Color (frame & central plate): similar pure white
- Compatible with DIGITUS® CAT 6_A Keystone Module "DN-93617"
- Design compatible

Product Overview

This DIGITUS® Face plate is suitable for the connection of the DIGITUS® Keystone Module "DN-93617". Included dust protection shutters provide a perfect protection. The connection way of the module is 45° vertical. The face plate is fully design compatible to common switch programmes (GIRA, JUNG, etc.).

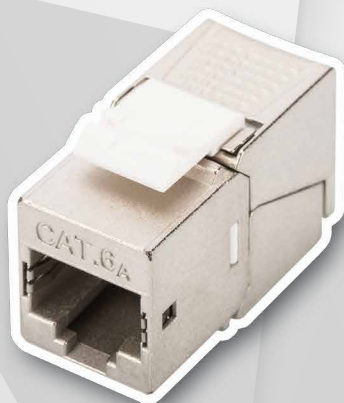
Product Number Information

DN-93831 DIGITUS® Face Plate for Keystone Modules, 2x RJ45, 80x80 mm frame, central plate 50x50 mm, incl. dust cover, design compatible, similar pure white

Product Number Information – Keystone Module

DN-93617 DIGITUS® CAT 6_A Keystone Module, shielded, 500 MHz
acc. ISO/IEC 60603-7-51, 11801 AMD2:2010-04, tool free connection

DN-93617-24 DIGITUS® CAT 6_A Keystone Module, shielded, 500 MHz
acc. ISO/IEC 60603-7-51, 11801 AMD2:2010-04, tool free connection
set= 24 pcs.



All brand names and logos that are mentioned are trademarks or registered trademarks of the respective owners. The right to make design-related variations from the photos, mistakes and technical changes is reserved. All information is provided without guarantee. We assume no liability for printing errors. The right to delivery is reserved and subject to availability. 03/2016