Introduction to Multimedia Solutions

Multimedia Solutions, APAC

May 2017

Prysmian Group

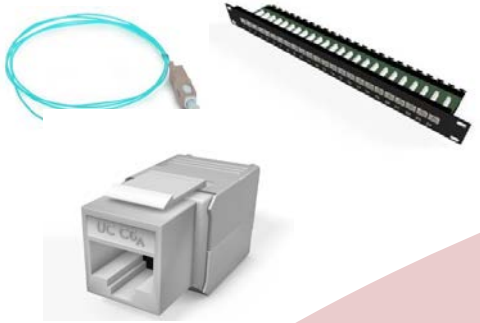
PRYSMIAN

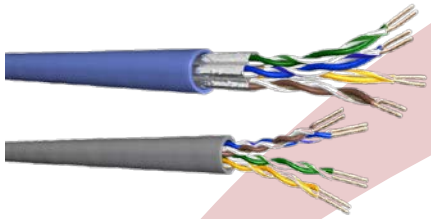
Draka

Draka UC – Our New Generation of Structured Cabling Solution

DRAKA UC – Structured Cabling

With more than a 100 years of cable manufacturing experience, we now complement our structured cabling portfolio with a complete end-end solutions, aiming to be a top structured cabling brand with our wide R&D expertise and cabling technology.





Up 2012

- Only focused on cables manufacturing.
- Started R&D on Connectivity solutions to complement cables portfolio

2013

- First generation of connectivity solution became available to the market in ASEAN, China and UK

2014

- Enjoyed many successes by offering a complete solution with system warranty.
- Launched 2nd Gen of structured cabling solution now known as DRAKA UC (Universal Cabling), and gaining popularity regionally.

2016

- Draka UC solution recognized as the fastest growing structured cabling brand. (BSRIA)
- Secured numerous key projects in the region.
- Awarded Alibaba Global ELV contract to supply Draka UC products.

Draka UC

UC CONNECT™

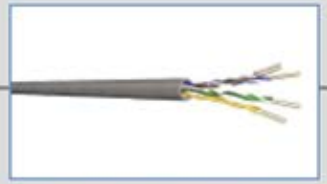
DRAKA UC – Structured Cabling

Category 5e Solution Configurator

UCDATA™, UCCONNECT™

Floor distributor

Installation cable



Wall outlet or
Consolidation point

Component and Channel Approval

All our connecting components from cables, keystones, punch down panels to patch cords are component and Channel tested !

Individual components that form part of the link/channel, tested to conform compliance to the relevant standards which ensure compatibility as part of any link/channel, when used with other component level approved products.

Relevant Standards:

- Edition 2.2 of ISO/IEC 11801
- CENELEC EN 50175-1 (draft July 2010)
- IEC Connecting hardware standard 60603-7-51
- ANSI/TIA 568-C.2
- IEC Test standard 60512-27-100 (draft 48B/2060/CD)

UC C500 MJ TR S V5

Keystone Jack,Cat.6$_A$,RJ45,FTP, 180°, Tool Fast, Shielded

Specification

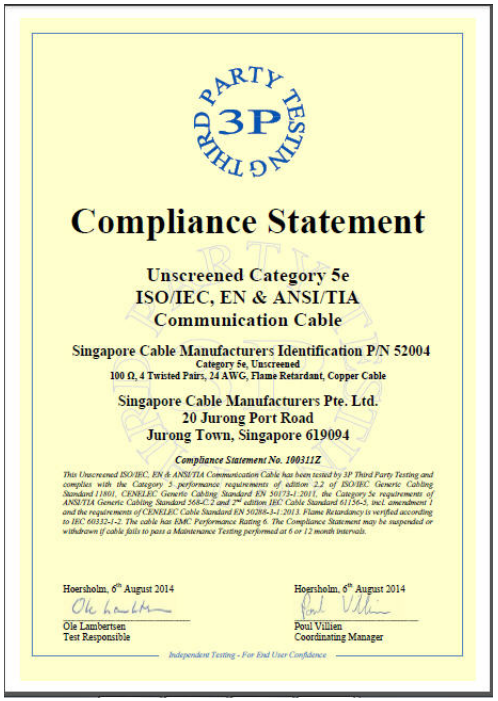
Item	Description
RJ45 Housing	Zinc Alloy with nickel plated
Contacts and IDC	Phosphor bronze
Contact Surface Finish	50u" gold plated over contact area
IDC Surface Finish	Tin plated
IDC Housing	PC, UL94V0
PCB	FR4 94V0

3.3 Keystone Jacks

COMPONENT
TESTED

Products Overview – Third Party Certificates

3P



THIRD PARTY TESTING 3P

Compliance Statement

Unscreened Category 5e
ISO/IEC, EN & ANSI/TIA
Communication Cable

Singapore Cable Manufacturers Identification P/N 52004
Category 5e, Unscreened
100 Ω, 4 Twisted Pairs, 24 AWG, Flame Retardant, Copper Cable

Singapore Cable Manufacturers Pte. Ltd.
20 Jurong Port Road
Jurong Town, Singapore 619094

Compliance Statement No. 100311Z

This Unscreened ISO/IEC, EN & ANSI/TIA Communication Cable has been tested by 3P Third Party Testing and complies with the Category 5 performance requirements of edition 2.2 of ISO/IEC Generic Cabling Standard 11801, CENELEC Generic Cabling Standard EN 50173-1:2011, the Category 5e requirements of ANSI/TIA Generic Cabling Standard 568-C.2 and 2nd edition IEC Cable Standard 61156-5, incl. amendment 1 and the requirements of CENELEC Cable Standard EN 50288-5-1:2013. Flame Retardancy is verified according to IEC 60332-1-2. The cable has EMC Performance Rating 6. The Compliance Statement may be suspended or withdrawn if cable fails to pass a Maintenance Testing performed at 6 or 12 month intervals.

Hoersholm, 6th August 2014
Ole Lambertsen
Test Responsible

Hoersholm, 6th August 2014
Poul Villien
Coordinating Manager

Independent Testing - For End User Confidence

Intertek

Intertek

3933 US Route 11
Cortland, New York 13045 USA
Phone Number: (800) 345-3851
Fax Number: (607) 758-6637
Web: www.intertek.com

ETL VERIFIED
Intertek

ETL Verified Certificate of Conformance Number: 101761176CRT-001a

On the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the essential requirements of the referenced specifications at the time the tests were carried out.

Rendered to:
Singapore Cables Manufacturers PTE Ltd.
(Wholly owned by Prysmian Group)
No. 20 Jurong Port Road
Jurong Town 619084, Singapore
www.prysmiangroup.com
Contact: Mr. Ronald Wee

Product Tested	4 pair, 24 AWG, UTP, PVC, Non-Plenum, Horizontal (Solid) Cable.
Model(s) and or Brand Name:	62486/Draka UC 400 Cat 6 Bronze
Standard(s)/Specification	ANSI/TIA-568-C.2, ISO/IEC 11801 and EN 50173-1 Category 6 with the applicable electrical transmission characteristics
Jacket marking shall include:	ETL Verified to ANSI/TIA-568-C.2, ISO/IEC 11801 and EN 50173-1 Category 6.

Continuing compliance to this specification is monitored through production testing, ongoing inspections by Intertek at the production facility and random sample testing.

Date Issued: August 05, 2014

Approved By:
John Cash, Associate Engineer
Antoine Pelletier, Team Leader

This verification supersedes all previous verifications with the noted Verification/Report number(s) dated before this verification notice.

NOTE: This verification is part of the full test report(s) and should be read in conjunction with it.

This Verification is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to copy or distribute this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this Verification are relevant only to the sample tested. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Delta

DELTA
We help ideas meet the real world.

Compliance Statement No. 2014-436

Connecting Hardware, Category 5e

Company
Singapore Cables Manufacturers Pte Ltd.
(Wholly owned by Prysmian Group)
No. 20, Jurong Port Road,
Jurong Town,
Singapore 619094

Product description
Unshielded and Shielded Category 5e RJ45 Wall Outlets characterised up to 100 MHz, 100 Ω

SAP/C / ASIA P/N	Product identification
YMJBP01563 / MJTR8660W	Keystone Jack, Cat.5e, RJ45, UTP, 180°, Punch-down, White
YMJBP01564 / MJTR8660B	Keystone Jack, Cat.5e, RJ45, UTP, 180°, Punch-down, Black
YMJBP01565 / MJTF1252W	Keystone Jack, Cat.5e, RJ45, UTP, 180°, Tool Free, White
YMJBP01566 / MJTF1252B	Keystone Jack, Cat.5e, RJ45, UTP, 180°, Tool Free, Black
YMJBP00335 / MJTR9660	Keystone Jack, Cat.5e, RJ45, UTP, 180°, Tool Fast, Blue
YMJBP00336 / MJTR9661	Keystone Jack, Cat.5e, RJ45, FTP, 180°, Tool Fast, Shielded

Generic cabling and cabling components standards - Category 5e connector requirements
- ISO/IEC 11801:2011 (Ed. 2.2)
- IEC 60603-7-(2,3):2010 (Ed. 2.0)
- EN 50173-1:2011
- EN 50173-2:2007 including amendment A1:2010
- ANSI/TIA-568-C.2:2009

Technical report	EC Cabling product ID	CS valid until
DELTA-T209701-01, DANAK-19/14588	5788, 5789	23 October 2015

This product has been tested by EC Cabling Group of DELTA 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 9 test cases in both measurement directions. The product takes part in a maintenance of certification schedule, which implies that DELTA EC Cabling 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, 23 October 2014

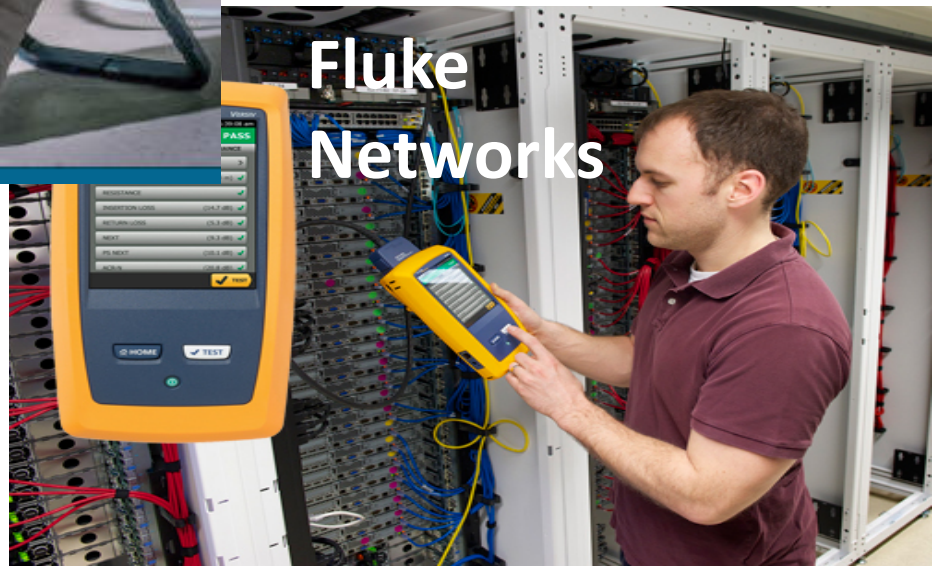
Lars Lindskov Pedersen
Test Manager

Claude Videl
Project Manager

DELTA
Venlighedsvej 4
2970 Hørsholm
Denmark
Tel. +45 72 19 40 00
Fax +45 72 19 40 01
www.madebydelta.com/cable

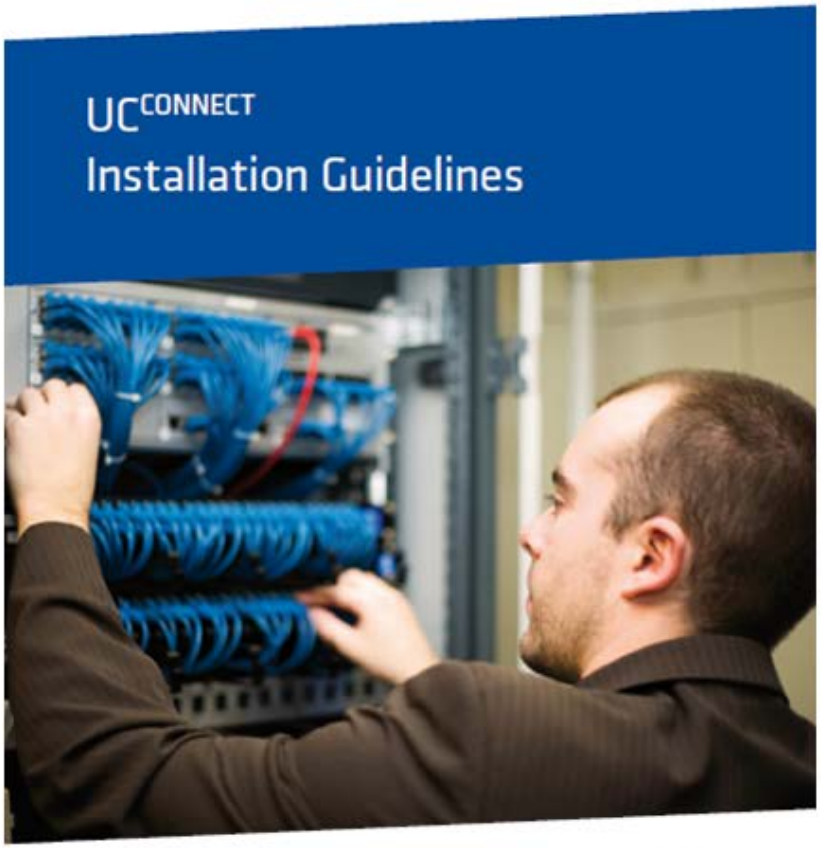
EC

Authorized Cable Testers



Up to 28 Years System Warranty

Draka



A brand of the Prysmian Group

Draka

UNIVERSAL CABLING (UC)

WARRANTY

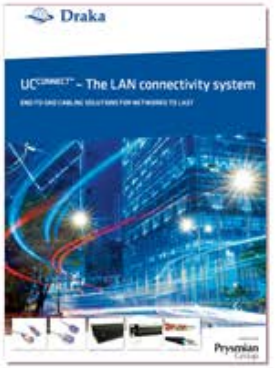
GUIDELINES & CONDITIONS

Draka

A brand of the Prysmian Group

MMS Products Overview - UCDATA®

UCDATA®



Overview	Product types
Category 5e - Class D, link/channel up to 100MHz - Up to 1000BASE-T - Typical 24 awg conductor size - 25 watts carrying for POE applications - Used primarily in premises.	
Category 6 - Class E, link/channel up to 250MHz - Up to 10GBASE-T , 55m max. - Typical 23~24 awg conductor size - More stringent in Xtalk & system noise. - Used primarily in premises & enterprise.	
Category 6a - Class Ea, link/channel up to 500MHz - Up to 10GBASE-T, 100m - Typical 23 awg conductor size - High alien-Xtalk performance in higher freq. - Used primarily in enterprise and datacenters.	
Category 7 - Class F, link/channel up to 1000MHz - Up to 10GBASE-T, 100m - Typical 22~23 awg conductor sizeHigh alien-Xtalk performance in higher freq. - Used primarily in datacenters & future proofing	

MMS Products Overview - UCDATA™

UCDATA™

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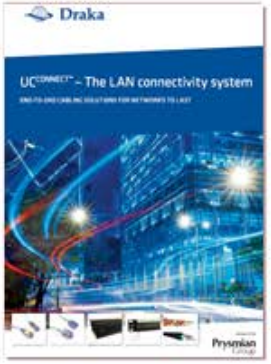
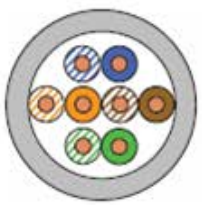


Overview	Product types
Category 7a - Class F_A, link/channel up to 1200MHz - Suitable for multiple applications ie CATV (862MHz) - Typical 22~23 awg conductor sizeHigh alien-Xtalk performance in higher freq. - Used primarily in datacenters & future proofing - Not recognized by EIA/TIA yet.	
Category 8.2 @ 40Gbits ! - Class F_A, link/channel up to 2000MHz! - World first certified channel with Cat 8.2 acc. ISO/IEC 11801-99-1 Class II - Compact 22 awg, SFTP design. - Used exclusively in high transfer flow datacenters requiring 40Gb/s up to 30m.	

MMS Products Overview - UCCONNECT®

UCCONNECT®

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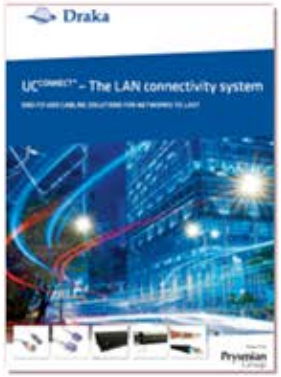
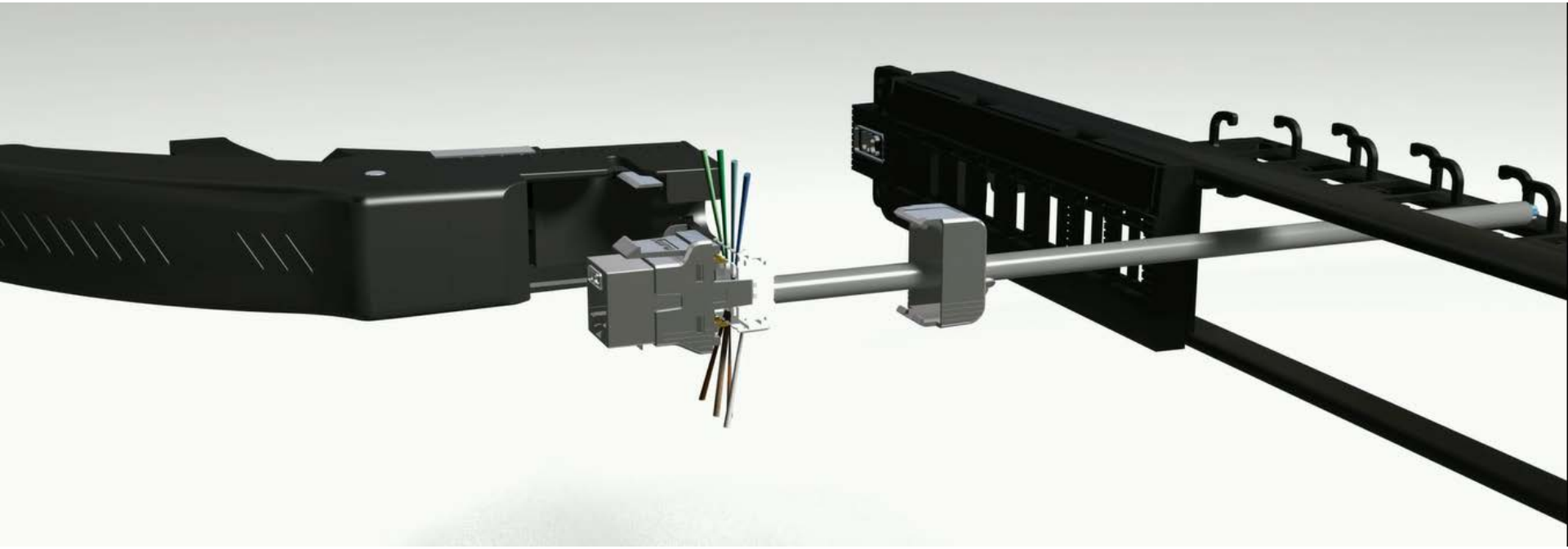


Overview	Product types
UCC_Copper_Keystones Jacks - Plug in connectors for patchcord to cable. - Available in premium, toolfast - Available in standard, punchdowns and toolfree. - Cat 5e to Cat 6a.	
UCC_Copper_Patchcords - Stranded copper cable terminated with RJ45 connectors on both side. - Available in premium and standard level. - Cat 5e to Cat 6a.	
UCC_Copper_Panels & Managements - Housing for the proper arrangements of keystones, so that patching can be done neatly. - Punchdown and empty panels. - Available in premium and standard level. - Cat 5e to Cat 6a	
UCC_Copper_Faceplates - Plastic or metal plating at the end of the work for end connection to machines. - Cosmetic outlook is concern. - Available in premium and standard level. - UK, France, Asia design	

DRAKA UC TOOLFAST TECHNOLOGY



- Simplest ever one-step 8-wire cut-terminate
- Reduces termination time up to 40%

Leading Technologies give us the Advantage

UC Products – Designed for Ease

- Keystones ensure high speed and high quality termination enforced by innovative product design.

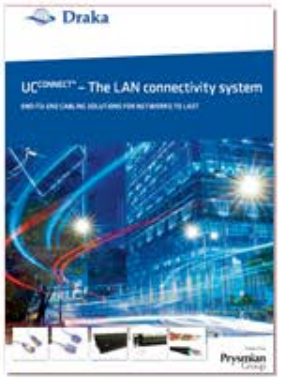
- TOOLFAST keystone utilizes a unique one-step tool for fast termination up to 40% speed efficiency.

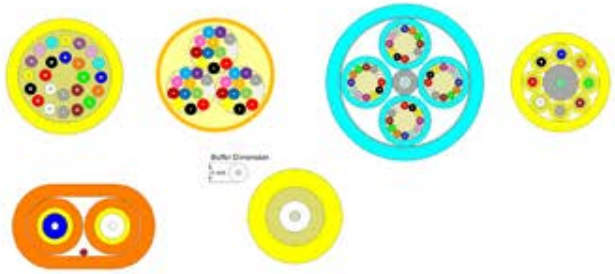
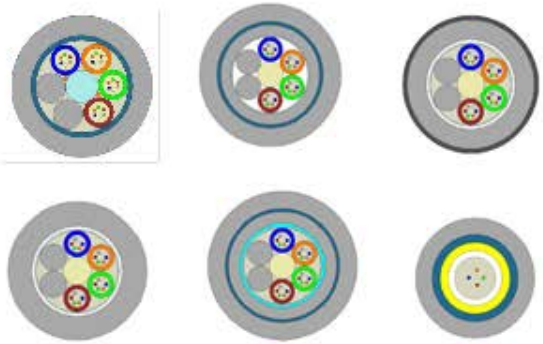
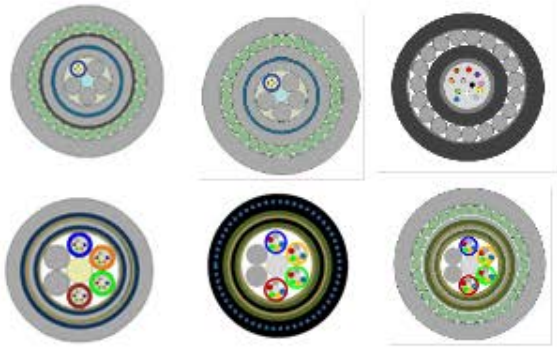
Tool-Fast Video

MMS Products Overview - UCFIBRE®

1.Fibre Data

UCFIBRE ®



Overview	Product types
Indoor FO Cables - Used in indoor premises, LANs, Datacenters. - Tight buffered, breakout, compact designs. - Zipcords, Interconnect 2~8 cores allows connection to desks. - LSZH mostly to IEC 60332-3C. - Available up to OM4 , bendbright XS.	
Light Armored FO Cables - Loose tubes or unitube with water blocking gel. - Armored by metallic (corrugated steel tape) or non metallic (glass yarns). - Between buildings, in ducts underground or indoor dark areas. - HDPE or LSZH. - Good water blocking properties.	
Specialty FO Cables - Loose tubes, heavily armored by double sheaths and steel wire armoring. - Special chemical resistance sheath, Nylon - Used mainly in industrial, direct buried, OGP and harsh elemental environment. - Fire resistance type using special fire barriers. - Rodent/Termite/Water protected, can be LSZH.	

8. Fibre Optic

8.1 Cables

Overview

One of the most widely used UC FIBRE® Indoor cable, MT series is excellent for indoor installation that provides a safe setup against flame propagation and its flexible yet robust construction makes installation at ease.

UC FIBRE® MT Series

2-24 Cores, Indoor Tight Buffer Distribution Cable, LSZH Sheath

Features

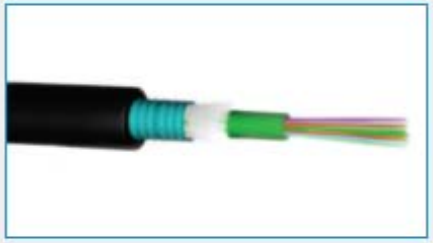
- **Tight buffer** : Each fibre is coated to 0.9mm with LSZH
- **Strength Member** : Aramid yarn
- **Outer Sheath** : LSZH compliant to IEC 61034, IEC 60754-1&2, IEC 60332-1 & 60332-3-24
- **Tight Buffer Color** : ANSI TIA/EIA 568-C.3
- **Sheath Color** : ANSI TIA/EIA 568-C.3
- **Suitable for indoor installation requiring flame retardant, low smoke and halogen free environment**
- **Ripcord only when requested**

Main characteristics

Test	Standard	Value	Sanction*
Maximum installation load (a few hours)	IEC 60794-1-2-E1	1000 N (2F-8F), 1200N (12F, 24F)	Fibre strain ≤ 0.6%, Δα reversible
Short term tensile strength. (some days)	IEC 60794-1-2-E1	600N	Fibre strain ≤ 0.4%, Δα reversible
Max operation tension	IEC 60794-1-2-E1	280N (2F-12F), 340N (24F)	Fibre strain ≤ 0.2%, Δα ≤ 0.4 dB(MM), ≤0.30(SM)
Crush (short term)	IEC 60794-1-2-E3	1000 N / 100mm	Δα ≤ 0.4 dB(MM), ≤0.30(SM), no damage
Temperature range	IEC 60794-1-2-F1	-20 -> +70°C	Δα ≤ 0.6 dB /km(MM), ≤ 0.40dB/km(SM)

8. Fibre Optic

8.1 Cables



Overview

UTM Series is excellent robust installations that enables flexible bending radius but till provide adequate mechanical protection in exposed installation environment, ie factories, outside buildings facilities.

UC FIBRE® UTM Series

2-24 Cores, Light Armoured, Uni-tube Cable, LSZH Sheath

Features

- **Unitube:** thermoplastic material, containing up to 12 fibres and filled with a suitable water tightness compound.
- **Peripheral Strength Elements:** Aramid yarns.
- **Armour:** corrugated steel tape.
- **Outer Sheath:** LSZH in accordance to IEC 61034, IEC 60754-1 & 2.
- **Fibre Color :** ANSI TIA/EIA 568-C.2
- **Suitable for Duct Buried or Indoor/Outdoor Installation**
- **Ripcord only when requested**

Main characteristics

Test	Standard	Value	Sanction*
Maximum Tension at installation (short term)	IEC 60794-1-2-E1	220N	Δl/l fibre ≤ 0.6%, Δα reversible
Tension opération max	IEC 60794-1-2-E1	800N	Δl/l fibre ≤ 0.2%, Δα reversible
Crush	IEC 60794-1-2-E3	1500N / 800N / 100mm	Δα ≤ 0.3 dB , cable integrity
Temperature range	IEC 60794-1-2-F1	-20 -> +70°C	Δα ≤ 0.3 dB/km

8. Fibre Optic

8.1 Cables

Overview
LTZSM Series is one of the most value for cost UCFibre® cable which is able to run outdoor into indoor premises with protection against harsh elements ie Water / UV / Mechanical stress, while ensuring saftey fire standards are in place.

UC FIBRE® LTZSM Series

12-96 Cores, Light Armoured Cable, LSZH Sheath

Features

- **Central strength member (CSM)**: steel wire with plastic coating when needed.
- **Tube**: thermoplastic material, containing up to 12 optical fibres and filled with a suitable water tightness compound.
- **Stranding**: The required numbers of elements (tubes or fillers) are SZ stranded around the central strength member.
- **Longitudinal Water Tightness**: WB jelly and water blocking yarn (partial jelly filled).
- **Armour**: corrugated steel tape.
- **Outer Sheath**: LSZH.
- **Fibre Color** : ANSI TIA/EIA 568-C.3
- **Loose Tube Color** : ANSI TIA/EIA 568-C.3
- **Suitable for Duct Buried or Indoor/Outdoor installation.**
- **Ripcord only when requested**

Main characteristics

Test	Standard	Value	Sanction*
Max. installation tension	IEC 60794-1-2-E1	3000 N	fibre strain ≤ 0.33%, Δα reversible
Crush(short term)	IEC 60794-1-2-E3	3000N / 100mm	Δα ≤ 0.3 dB(MM), 0.1 dB(SM)
Temperature range	IEC 60794-1-2-F1	-40 -> +70°C	Δα ≤ 0.3 dB/km(MM), 0.1 dB/km(SM)
Water Penetration	IEC 60794-1-2-F5B	sample=3m, water=1m	No water leakage after 24 hour

Leading Technologies give us the Advantage

Plasma Vapor Activated Chemical Deposition Process (PVCD)

- Fibre rods with highly precise index profiles and pure material compositions – optical fibre properties exceed telecom's most demanding and stringent quality control.

Leading Technologies

ColorLock^{XS}

- Coating method used for permanent color embedding in the fibre coating, which allows for quicker and easier installation
- Color is integrated in fibre coating, instead of applied to the outside of the coated fibre
  - Coloring achieved by adding color components to the secondary layer of the acrylate coating during the fibre manufacturing process
  - Method for coloring the fibre is more durable than other technologies

Draka ColorLock^{xs} at core

BendBright^{XS} (G.657.A2/B2)

- Combines two attractive features: true bend insensitivity and backward compatibility with existing single-mode fibres and loose tube cables
- Ideal for a wide variety of applications, including end-to-end FTTH network roll-outs
- Excellent bending properties and reduced diameter allow for compact installations, leading to significant reduction of Total Cost of Ownership (TCO)

Draka BendBright^{xs} at core

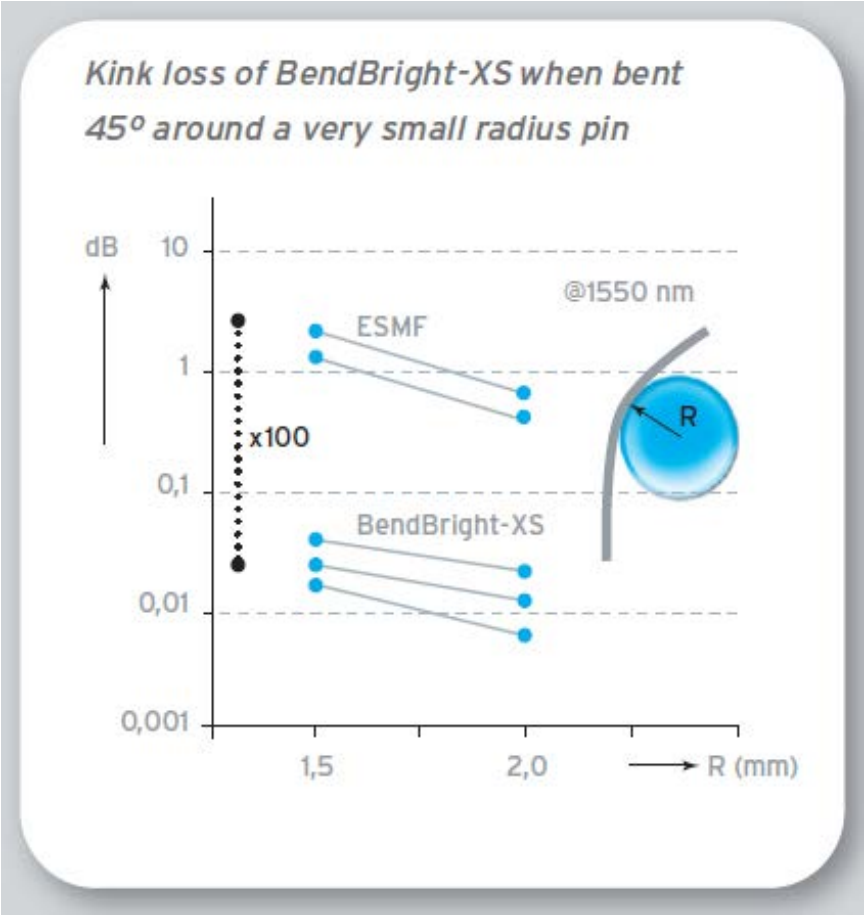
Technological Advantage

Bendbright video

Leading Technologies give us the Advantage

- Draka BendBright-XS highly bend insensitive singlemode fibres.
- 100 times microbending improvement over G.652D SMF.
- Very low loss at very short radii “Kink Loss”
- Excellent splice performance over conventional SMF.
- Exceeds toughest bending standards ITU-T G.657.A&B
- Fully backward compatible with G.652D SMF

Draka BendBright^{xs} at core



MMS Products Overview - UCCONNECT®

UCCONNECT®

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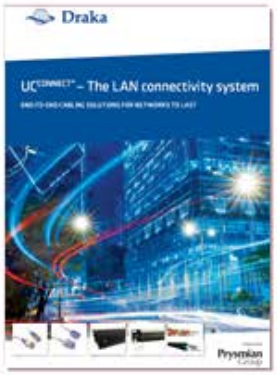

Overview

UCC_Copper_Accessories

- Accessories for security ie Panel secure plug, release key.
- Termination tools for Toolfast and normal punch down keystones jacks.

UCC_Copper_SmartMANAGE

- A solution of interfacing connectivity primarily panels and patch cords which are linked by a pre-set software, to monitor various status of any points, ie loading %, connection %, and breakage, point-point trace, loose links etc…

UCC_Multimedia boxes

- Office/home points for jointing of horizontal to last end connection to peripherals.
- Copper or fibre or both connectors boxes are available.

UCC_Fibre_Adaptors

- Available in multiple connectors types ie LC/FC/ST/SC/Escon/MTRJ.
- UPC (ultra polished contact) is default, Angled Polished Contact is also available.

Product types

MMS Products Overview - UCCONNECT®

UCCONNECT®

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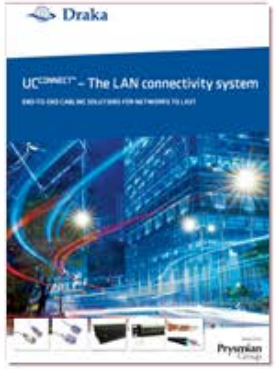


Overview	Product types
UCC_Fibre_Patchcords & Pigtails - Available with G652D, OM1 & OM2 and specialty fibres, OM3, OM4, BendbrightXS bend insensitive fibres. - Available in multiple connectors types, ie LC/FC/ST/SC	
UCC_Fibre_Panels - Enclosures for cross connections. - Aluminum for light weight - Drawer and fixed types - Normal 1U to high density 4U 576 ports LC.	
UCC_Fibre_MPOs - The MTP/MPO cabling system is a factory pre-terminated and tested solution with a high density MPO connector. Low loss. - Available in complete solution for MPO, ie Pre-terminated FO cables with MPO, modules etc	
UCC_Fibre_IDC Cabinets - Standard 19' / ETSI racks configures with mounting rails, shelves and sub racks. - Specially design locking mechanism - Compatible with all 19' rack products - 42U or 47U, double depth racks available.	

DRAKA UC – Structured Cabling

DATA CENTRE CABLING SOLUTIONS

Modules Connectivity

- Fiber & Copper version available
- MTP® / MPO for fiber modules
- 12 cores high density fibers modules Bendbright™ fibers inside
- Low loss fibers or standard OM3 / 4
- Copper cassette up to 6 x 6a shielded
- Bunched cat cables terminated in factory

Fiber Optics Panels

- 1U, 2U, 4U patch panels
- Lightweight, highly durable
- Fixed or sliding body for easier access
- Preloaded when requested
- Modules up to 96 fibers per U
- Up to 384 fibers 3U with cable management
- Higher density available

10G – 40G Ethernet Cabling

- Category Cables up to Cat 8.2 standards
- Utilize Draka's tight extrusion, slim design
- High performance fibers up to OM5
- Sole proprietary technology PCVD fibers
- Min heat dissipation from copper cabling and superior transmission for energy savings

Compact Cat 7 Multi pairs

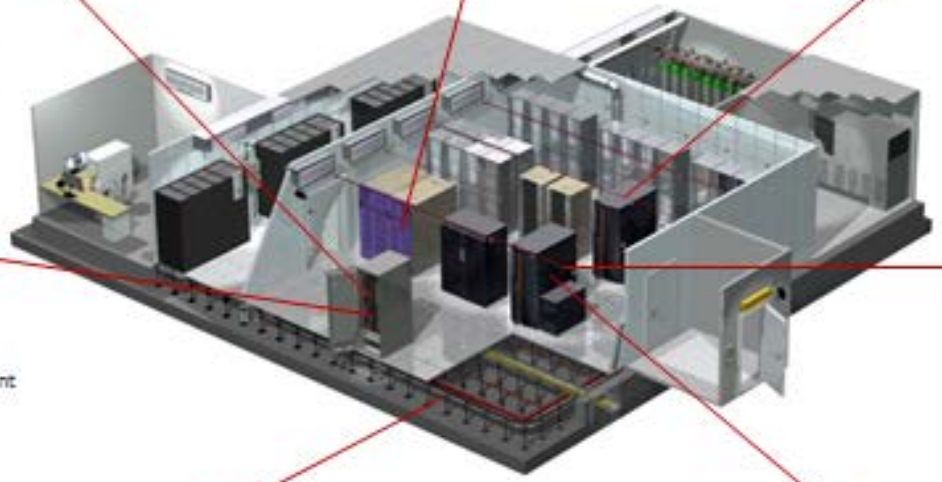
- High density cabling utilizing high pairs laying technology, up to 24 pairs
- S/FTP version, compact / loomed
- 40% less weight, 50% less cabling space, increasing 20% higher air cooling

Smart Management

- UCSMART infrastructure management
- Real time IP traffic and cabling inputs monitoring.
- Alert tool for mis-patching / faulty connections, in-proper fitting
- User friendly and easy to operate

Data Centre Cabinet

- 42HU IDC for high density cross-connect
- Designed for both fiber and copper cabling
- Power supply unit compatible
- Enhanced card access / key management



Copper Patch Cords

- Cat 6a – shielded patch cords
- Small 30 awg Slimflex available
- Red-Blue-Green-Yellow-Grey-White
- Standard lengths or as demand
- Highly durable with dual boot design

Copper Cables Panels

- Patented angled foldable
- Self adjustable swivel type
- Staggered panel 6a
- Optimized for Data Centre cabling
- Ideal for high density patching

Fibre Pigtails / Patch cords

- Standard or Bendbright™ fibers
- Low loss connectors
- Mini duplex LCs / LC / ST / SC / FC
- "Long tail" LCs for easier removal

Pre-Terminated Cabling

- Fiber and copper pre-terminated
- Plug & Play convenience
- Available in all transmission modes
- Red-Blue-Green-Yellow-Grey-White
- Standard lengths or as demand

DRAKA UC – Structured Cabling

WideCap-OM4 Multimode Fibre

Fibre Optimised for Multi-Wavelength Systems

Product Type: WideCap-OM4
Coating Type: Dual Layer Primary Coating (DLPC9)

Issue date: 09-2014
Supersedes: -

WideCap-OM4 multimode fibre delivers OM4 performance in the 850-950nm window while maintaining compatibility with current laser-optimised multimode fibres. Traditional OM4 fibres offer high bandwidth in a narrow band centred at 850nm. To satisfy the exponentially increasing information demand in Data Centres, the capacity of WideCap-OM4 has been extended to longer wavelengths up to 950nm. WideCap-OM4 and multi-wavelength systems are a viable solution for future 100 and 400Gbps transmission systems. WideCap-OM4 incorporates BendBright® technology to deliver enhanced macro-bending performance.

Features	Advantages
WideCap-OM4 multimode fibre is optimised for multi-wavelength systems	**WideCap-OM4** is designed for high performance data centres to support the advent of multi-wavelength systems at 40/100/400Gbps
WideCap-OM4 offers OM4 capacity in the 850-900nm window	**WideCap-OM4** supports four 25Gbps channels in the 850-950nm window
WideCap-OM4 with BendBright® technology to deliver enhanced macrobending performance	**WideCap-OM4** allows the use of smaller, high density fibre management systems in space limited data centres, computer rooms and LANs, improving overall system network reliability

Draka BendBright^XS at core

DRAKA UC – Structured Cabling

Draka UC Cat8.2 22 AWG 4-Pair S/FTP (2 GHZ)

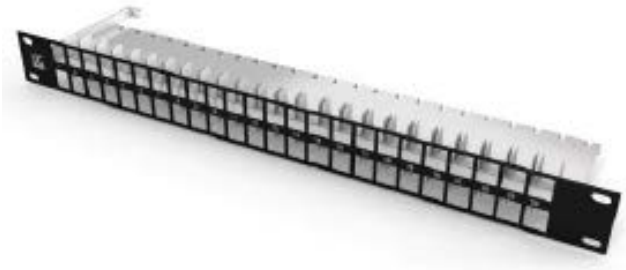
WorldFirst

3rd party Certified 40G Copper Channel

Draka UC Cat8.2 to Cat 8.2 Patch Cord

Draka UC Cat 8.2 Connector (4Ghz)

Draka UC Cat8.2 2RU 48 Port Empty Patch Panel



Draka UC RJ45 to Cat 8.2 Patch Cord

Draka UC Cat8.2 1RU 24 Port Empty Patch Panel

Worldwide References and Applications

Draka MMS Project References

Due to the strong branding and presence of Draka Multimedia Solutions ie FO cables, Copper Data Cables etc, Draka UC is used together widely in all industry applications from Datacenters, bank offices, institutions, commercial buildings, hospitals , airports to residential estates and industrial projects.

Critical operations in Data Centers

Draka MMS Project References

Draka MMS Project References

Department of Lands, Thailand
Supply of Draka UC Cat 6 end to end solutions for the office premises; covering over 200 ports.

Phatthalung Hospital, Thailand
Installation of wireless system for over 600 ports using Draka UC Cat 6 end to end solutions.

Somdech Phra Pinklao Hospital, Thailand
Renovation of state hospital office covering 400 ports using Draka UC Cat 6 end to end solutions.

Rajanhat Rajanagarindra University, Thailand
Supply of over 200 points for this office renovation project using Draka UC Cat 5e end to end solutions.

Huangshi Police Station, Hubei, China
Largest smart panel project in China. Supply of 7000 Cat.6 data ports fully managed by Draka's smart panel solution.

Alibaba, China
Prymian is the major supplier of Alibaba's global cabling projects. About 3M USD Draka UC products are provided by Prysmian Group each year within China mainland.

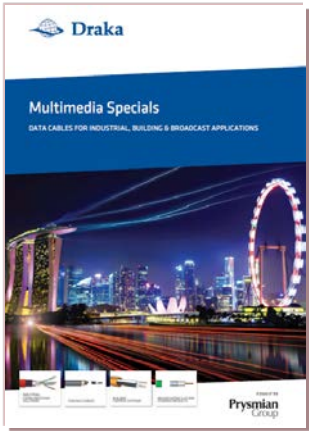
Chengdu 611 Airplane Factory, China
Installation of Draka UC Cat 6A end to end solutions for 3000 dataports.

Chengdu ICON, China
Landmark of southern part of Chengdu city. Supply of 3000 Cat.6 UTP ports.

Draka Multimedia Specials Products

Products Overview – MMS Specials

3.MMSpecials



Overview

Bus Cables

- Used for interconnecting sensors to monitoring peripherals ie computers.
-Characteristics usually shielded, bare conductor, and have high capacitance tolerance.
-For fast data rate transfer.
-Profibus DP/PA, Fieldbus, Canbus etc..

Coaxials

- Used as transmission line for higher frequency signals, primarily in CATV and CCTV usages.
-75ohm primarily for Pictures, 50ohm for Data.

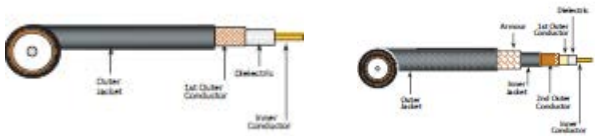
Screened Data & PAGA

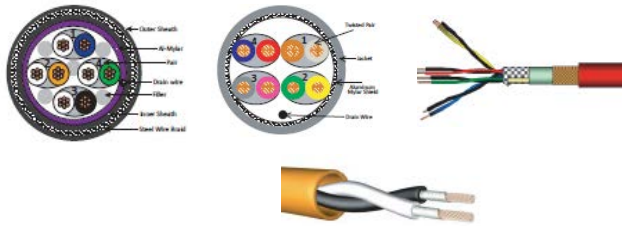
-Control data cables used primarily for serial link networks, also mainly in building management for simple logic control ie Door access, carpark sensors, HVAC sensors, lighting, intercom, Public Alarm & General Address.

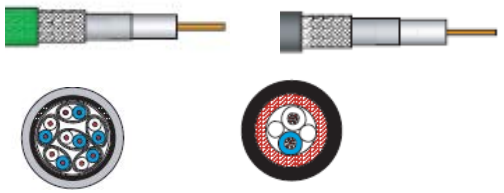
Studio & Broadcast

-Studio cables used in media broadcast facilities.
-Audio and multipairs cables for connecting broadcasting equipments.
-Microphone cables, audio cables, video links etc.

Product types

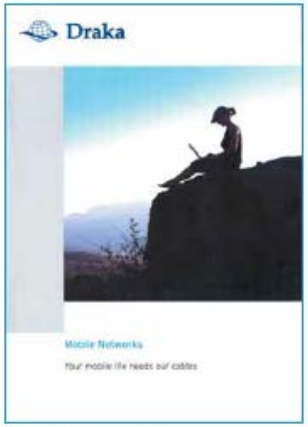






Products Overview – Mobile Network

5. Mobile Network



Mobile Networks

Overview

RFX & RF2X

-coupled mode cables with a corrugated and milled outer conductor. RFX cables have slots in one line on the outer conductor and RF2X have slots in two lines on the outer
-deliver excellent longitudinal attenuation and coupling loss.

RFA, Feeder Cables

-Radiating or “leaky” cables that transmit and receive radio waves, enabling transmission in enclosed area ie tunnels, elevators, basements etc..
-Standard ¼, 3/8, $1^{5/8}$, 7/8 etc..
-In Copper or Aluminum conductors.

Jumper Cables

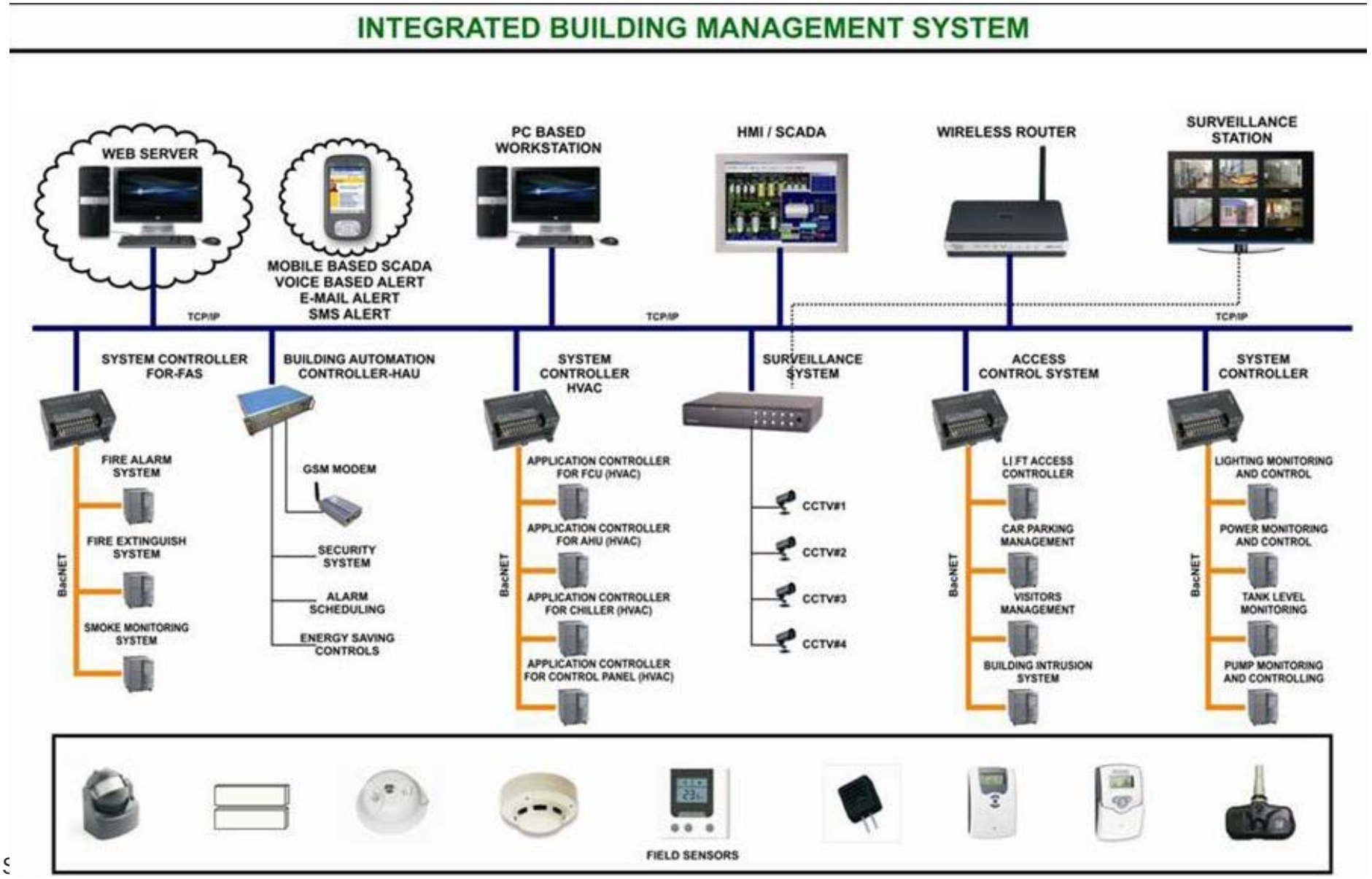
-For antenna line connections.
-Super flexible cable and a special connector head design, and a soldered inner and outer conductor.
-Standard ½ inch, angled or non angled type.
-Only copper conductor.

Product types

Products Overview – MMSpecials

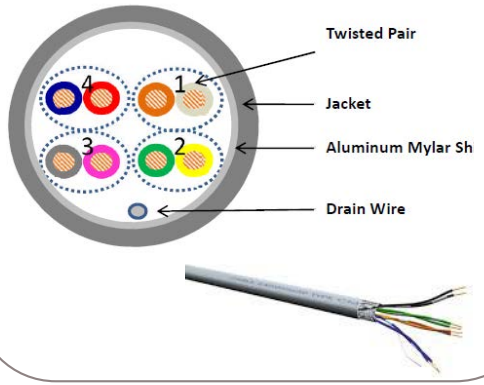
Using Draka Multimedia Solutions cabling products comprising both copper and fiber to support voice , data and video transmissions in mission critical applications.

MMSpecials Products



Multimedia Specials

Screened Data



Product range of screened data cables used primarily for monitoring, control and signaling purposes.

Our screened data cables ranges from the UL 2464 , RS 485 to Profibus. These cables provides good screening properties to enable un-interrupted transmissions and are critical for functions in an Airport for access systems, handling & control systems etc...

Premium Screened Data Cables Used

- UL 2464 LSZH – Overall screened, stranded tinned copper conductors, LSZH sheathed.
- EIA (RS) 485 LSZH – Overall screened, stranded tinned copper conductors, Overall braid, LSZH sheathed.
- UL 2919 LSZH – Individually screened, overall shield stranded copper tinned conductors, LSZH sheathed. (High EMS environment)

Key properties

- Multipairs or cores available.
- High screening of 90% or higher.
- LSZH – Low Smoke Zero Halogen with Flame retardant properties.
- Drum packing – In 500m to reduce wastages and yet easier for transportation and installing.

MMSpecials Products

BMS most commonly used type of communications network

	Serial Link Communications Network		
Specifications	**RS-232**	**RS-422**	**RS-485**
Mode of Operation	Single-Ended	Differential	Differential
Total No. of Drivers and Receivers on one line	1 Driver / 1 Receiver	1 Driver / 10 Receiver	32 Driver (only 1 active at a time) / 32 Receiver
Maximum Cable Length	50 ft (15m)	4000 ft (1200m)	4000 ft (1200m)
Maximum Data Rate (at max cable length)	100 kbit/s	10 Mbit/s - 40ft 100kbit/s - 4000ft	10 Mbit/s - 40ft 100kbit/s - 4000ft
Typical Cable Type used	UL 2464	UL 2464	TIA (RS) 485, Cat 5e F/UTP, UL 2919 (for extended distance up to 1800m)
Max Operating Voltage Range	±25 V	±15 V	±15 V

Multimedia Specials

Alarm & Speaker Cables are one of the most critical cables in a Fire Safety Systems but are often neglected as a 2nd priority requirements.

It is critical to note that without a reliable and quality fire performance Speaker Cables, the Public Announcement & General Alarm (PAGA) will not function or efficiently in a fire environment.

Draka renowned flexible speaker cables provides excellent fire and smoke protection in high traffic environment esp airports, is easy to install due to the unique flexitube.

It is also certified by the world famous TUV 3rd party body for fire performances up to the more stringent 950° C.

Max Foh™ Flexible Speaker Cables

2 Cores 1.5mm² Fire Resistant, Flexible Tube LSZH

CRITICAL !

FEATURES

- **1.5mm² Cores:** Grade A Copper specially protected by fire barrier tape to ensure circuit integrity in fire situations.
- **Core Insulation:** High temperature resistance PE
- **Outer Sheath:** LSZH in accordance to IEC 61034, IEC 60754-1 & 2.
- **Excellent for indoor applications whereby fire safety is of great importance.**

Main characteristics		
Nominal overall diameter	mm	8.0 (±0.5)
Nominal weight (completed cable)	Kg/km	66
Min bending radius	mm	60
Max pulling tension	kgf	21
Max conductor resistance @ 20°C	Ω/km	12.1
Min insulation resistance @ 20°C	MΩ/km	2000
Dielectric withstand test	kV/min	1/1

Overview

Most widely used fire resistance speaker & Audio/Motor control cables, which is highly flexible due to the unique tubing design. Draka Max Foh™ flexible speaker cables meets the stringent BS 6387 fire performance standards and can be used in all critical fire alarm or PAGA systems.

Additional Options

- Steel Wire Braiding for armouring protection
- PE sheathing (UV & water resistance)

Worldwide References and Applications

Worldwide References & Applications

The only Datacom brand capable to supply to ANY types of projects nature.

For further enquiries, please email to
mms.asia@prysmiangroup.com

Questions ?

Prysmian Group

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