FTTH - FIBRE TO THE HOME

Cutting-edge total solutions for superfast
fibre-optic broadband networks

DATWYLER

One click worth your while!

www.daetwyler-cables.com
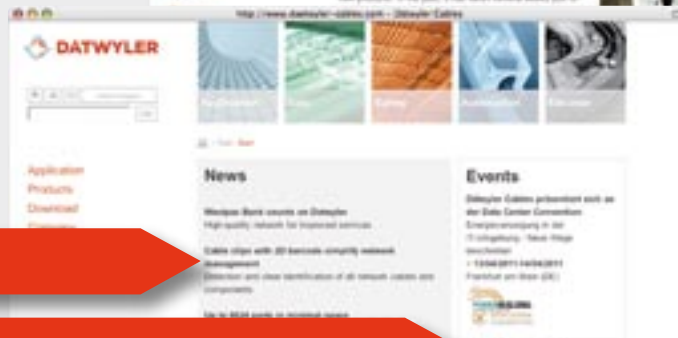
Our website will always keep you updated on:

Product and system news

Current events

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References
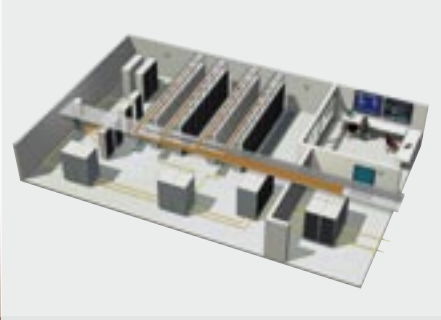
Technical documentation

Fibre to the Home (FTTH)

Content

Convincing –
every time, everywhere

Office blocks

Data centres

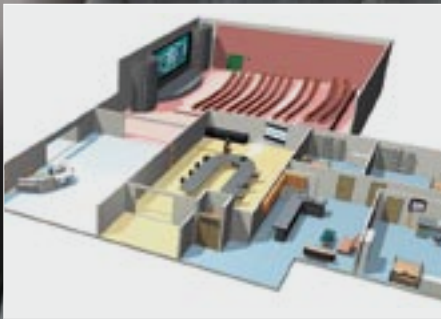**Shopping centres**

Tunnels

Hotels, hospitals

FTTx projects

Event arenas

Parliament buildings, universities

A reliable partner at your side

The life blood of a modern public or commercial buildings is the functionality and reliability of the system solutions for communications, building automation, power supply, safety and lifts. This is true of any such construction, irrespective of whether it is an office block, hotel, sports stadium, television studio or a tunnel. Choose a reliable system partner right from the start.

Choose Datwyler!

Datwyler is a highly regarded company about to celebrate its 100th year of operation. With the backing of a financially powerful group, Datwyler operates on the international stage as a successful supplier of total solutions for the electrical and communications infrastructure of buildings and for FTTx networks. We lead the way in innovations for applications such as information and communications technology, power supply and safety, building automation and lifts.

Our systems are reliable and constitute a secure investment on your part. This is all thanks to the years of experience and proven expertise of our engineers and technicians. Datwyler is a one-stop source of customised solutions for all your specific applications – as attractive total solutions, with all the necessary test certificates, authorisations and certificates and with long-term warranties.

Our workforce prides itself on delivering a full package of services for all the products and solutions supplied by the company. You can rely on our expert support for all aspects of our supply – beginning with planning, consultancy, through pre-assembly, logistics, installation and ending with system maintenance.

Central Office/PoP Solutions

Cabling Solutions

In-house Cabling Solutions

Management Software Solution

Turnkey installations

Advice

Communication

Safety

Maintenance

Planning

Electrical and communications infrastructure

Energy

Building automation

Implementation
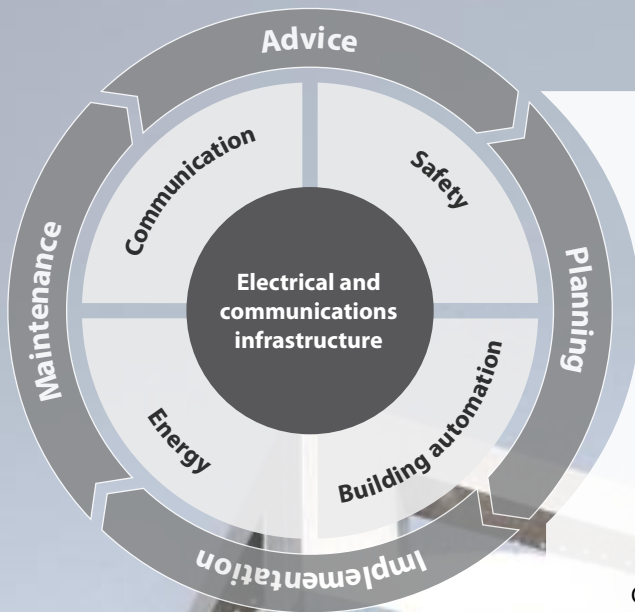
Datwyler does not only supply integrated total solutions, but has positioned itself successfully as a turnkey partner: for all manner of purpose-built constructions including multi-site projects and for FTTx projects. Our successful processing of turnkey projects derives from our high-level skills in developing and manufacturing the required products and solutions, our comprehensive applications expertise and the international scope of Datwyler activities.

Our international presence and our worldwide, actively managed and certified partner network have also proved invaluable in the multi-site projects of major clients. National and international companies rely on Datwyler on-the-spot site audits. Using the site audits as a base, our engineering experts work out customised solutions with uniform standards for all the sites concerned. Our total solutions package is rounded off by the implementation and assurance of regular operations. While operations are running, we provide servicing and maintenance work to optimise your infrastructure solution. These MAC (move, add, change) services increase the performance and working life of your equipment.

Worldwide expertise in turnkey creation, multi-site projects and services

High-quality solutions for all your applications

Year on year, Datwyler invests in even better materials and process technologies, production resources and test methods. This is why our system solutions always keep ahead of the current norms and repeatedly set new standards. The important functions which our solutions must deliver in practice demand the highest possible level of safety and reliability. This is why we measure each product against stringent quality standards before it leaves the company. Of course, all our processes are ISO 9000-2001/14001 certified.

Opt for sustainable solutions that provide you with high-level operational reliability coupled with low operating costs. The proof that Datwyler systems can deliver these benefits has been evident for many years in thousands of installations around the world. In addition, we have a particularly keen eye for consistent, intelligent solutions that simplify planning, sourcing and installation and shorten your construction times.

We have the right total solutions for all your applications, whatever they are – high-speed communications networks, modern energy distribution, monitoring and control duties, fire alarm systems or lift cabling. Or you may want to integrate new systems, interconnect and automate existing systems or simply ensure a reliable power supply. All this is possible with our carefully thought out, pre-assembled and prefabricated subsystems.

Just tell us how, when and where

Besides quality and product price, the logistics performance capability of suppliers is a decisive factor in the successful handling of construction projects. This is particularly true of major projects. With its years of experience and high logistics competences, Datwyler can handle even time-critical major projects smoothly and to the complete satisfaction of customers. Just-in-time deliveries at the right place are all in a day's work for us and our partners.

Besides delivering straight to the construction site, we also offer you additional logistics services (time slots, pre-fitted and pre-assembled products etc.). Many customers and suppliers have a direct link to our IT system for rapid and flexible order processing.

As regards cable pre-assembly, Datwyler also has wide-ranging expertise, the product of decades of experience. In our modern cable cutting centre, the engineering department passes the cutting orders electronically without any media discontinuity straight to the production area. Our efficient order communication system with all our customers is due to years of experience with B2B interfaces.

In the growth markets of Eastern Europe and the Middle East, and in many other countries as well, Datwyler works in close co-operation with independent distribution partners. Customers can rely on the consistently high quality standard of all Datwyler products and solutions whilst benefiting from local contacts and logistics services.

We support you in realising your infrastructure project – reliably, capably, complete and with the highest quality!

The last infrastructure revolution in telecommunications

Colocation (Telehouse)

City networks

Access network / Fibre to the Building

Fiber to the Home (FTTH)

Fibre to the Home (FTTH)

Over the last ten years, demand for bandwidth and the accompanying expansion of bandwidth in industrialised countries has increased ten-fold. The move from traditional, analogue TV consumption to individual digital television, Video on Demand, online gaming and Voice over IP means that copper is gradually approaching its physical capacity limits over the last mile. Glass will replace copper over the last mile – this is being called the 'last infrastructure revolution in telecoms'.

Interest in Fibre to the Home (FTTH) projects has therefore grown steadily both in Europe and worldwide. Prominent flagship cities are Amsterdam, Västerås, Vienna and Zurich. Due to the great complexity and multi-dimensional nature of FTTH projects during the planning, implementation and operating phases, the companies involved must have in-depth expertise in a wide range of disciplines including the business management, legal and technical fields. Great attention must be paid to the development of business cases in order to ensure that investors enjoy long-term financial success.

In many countries, energy supply companies and local utility companies have a crucial part to play in FTTH projects. They are the companies with access to the basic infrastructure which must be used if the high investments are to be kept within reasonable bounds. In addition to this, topics such as Smart Metering and Smart Grid are becoming increasingly important to both groups. It is relatively easy to integrate these technologies during FTTH installation.

Complexity of FTTH projects

The FTTH network provider will face a wide range of challenges which will vary according to the strategy selected. For example, there is the question of whether the company itself should provide a service to customers, including triple play services, or make the infrastructure (optical distribution network) available to one service provider or several.

The aspects listed clearly indicate that a large number of disciplines are involved in an FTTH project.

The core elements of successful FTTH projects are:
- Business model and business plan
- Service portfolio
- Collaboration with telecoms service providers

- 'Reeling in' the building owner, including building acquisition
- Drafting of contracts with service providers and end customers
- Conceptual network design, in-house/outdoor
- Survey of the existing infrastructure (routes, pipes, building connections, etc.)
- Availability of expertise, resources and organisation
- Establishing and evaluating business and operation support systems (BSS/OSS)
- Carrying out a pilot/reference project
- Process optimisation, eliminating work stages, cost optimisation
- Roll-out in the planned area
- Maintenance and servicing of the FTTH infrastructure

FTTH projects

Service providers	Service portfolio	In-house concept	Network architecture	BSS/OSS	BP/contract framework	Pilot projects
Concepts S&M Support Standards	Definition Services Establish standards	Definition Standards Acquisition Connections Properties	Design Purchase HW Construction Operation	Evaluation Purchase SW Def. interf. Outsourcing Outtasking	BC model SP contract Connection Contract Regulatory	Planning Execution Testing Standards

Passive network infrastructure
Standardisation of work/process stages
Purchasing

The Datwyler solution

Datwyler realised the complexity of FTTH projects at a very early stage and developed a range of solution concepts which it has implemented successfully when planning and carrying out a variety of projects, both in Switzerland and internationally. It has become clear that standardisation and modularisation offer excellent possibilities for completing projects cost-effectively on an optimum time-scale.

With its wealth of project experience, Datwyler can support energy supply companies and local utility companies at every stage of a project. Detwyler has also proved that it is capable of taking on full responsibility for a project if required.

As a leading provider of high-quality total solutions for FTTx network infrastructure, Datwyler sees its task not only as providing support through products and conventional consultancy services. Its experience also makes it a specialist in implementing FTTH projects on the ground.

The Datwyler FTTH portfolio includes:
- Turnkey infrastructure solutions from one source (as a general contractor)
- Business model preparation, business case validation and planning
- Telecom service level definition and development
- Clarification of the regulatory framework
- Strong partnerships with the leading technology providers in the FTTH field
- Consideration and use of local partners during implementation

Our FTTH solutions are modular. The customer can assemble an individualised package of relevant services. This applies to all three phases of an FTTH project: planning, execution and maintenance.

With its own engineering and service organisation and its existing network of highly qualified, certified partners, Datwyler can execute all aspects of turnkey FTTH projects in the role of a total or full service general contractor. Customers may also prefer to appoint Datwyler to execute individual modules within an FTTH project.

Key factors for your success

In FTTx projects both the choice of concept and the selection of suitable components should be guided by local conditions. The key factor is the type of development area, i.e. urban or rural.

"Green field" or "brown field"

Brown field is an area on at least part of which an infrastructure is already present. Here existing pipes have to be integrated into the design or new sub-pipes need to be laid. Datwyler recommends microtubes for in-pipe installation. Green field, on the other hand, is the name for an unbuilt area which will incorporate a new infrastructure. For reasons of cost it is advisable to rule out sub-pipes here and to plan direct-buried cable systems. Hollow cables from Datwyler suit this requirement: their sheath structure conforms to a cable design which has been tested for longitudinal and transverse leakage and has been well proven for decades.

The siting of technology centres (POPs)

Each chosen POP location should be central so that as many point-to-point connections as possible can be established without an intermediate distribution frame. If the POP locations are defined, further planning needs to cover average supply length and maximum individual length. The following is a rough guide:

Brown field – from POP to household an average of roughly 350 m and a maximum individual length of 800 m: The hollow cables mentioned above are ideal for this purpose, fitted, for example, with 24 pcs. 3/5 mm (internal/external diameter) tubes.

Green field – from POP to household an average of more than 350 m and individual ranges of over 800 m for more than 10% of households: Datwyler's microtubes are recommended here, carrying a maximum of 7 10/12 mm tubes.

In an urban development, therefore, 24 individual pathways are available for each hollow cable, 7 tubes in a rural area. It is advisable to set aside approximately 15% of the tubes as spares.

The right concept, the right products and an experienced partner by your side

Cell division (cluster creation)

Household tube allocations are drawn up at the planning stage. Thus, for example, a trunk cable is planned for every 20 households (24 individual pathways, of which 4 are reserves). All the hollow microcables run to the POP and are logically numbered. Distribution closures are installed as tube distributors. Y-diverters and distribution closures from Datwyler are ideal for this purpose: connectors are used to provide individual tubes with a pressure-resistant joint (10 bar).

The ODF (Optical Distribution Frame)

The choice of an ODF depends on your concept, the anticipated packing density and take-rate (subscribers = active ports). In an urban development each of the 20 individual tubes may carry up to 12 fibres. In a rural development 6 individual tubes (1 = reserve) may carry 144 fibres each. An ODF of considerable size may therefore be required! Selection of the right components depends on fibre concept and quantity. ODFs, unilan® racks and distribution panels from Datwyler are an excellent choice for all these requirements.

Household termination

Datwyler's FTTx household distributors were specially developed for passive OWG household ter-mination. A gas-tight connector can be integrated with each distributor. For house-front mounting we also supply solutions which can be customised to suit any given situation.

Residential cabling

As a rule a new building incorporates a viable, modern standard-compliant star-shaped hollow pipe installation. In older buildings, however, one often has to contend with a tightly dimensioned pipe infrastructure generally laid in a daisy-chain configuration, if not a surface-mounted installation. For all these requirements Datwyler can supply special modular products which are hard-wearing enough for heavy-duty residential use.

Among others these include our flush- and surface-mountable hybrid socket, which can be fitted as a modular component, and thin in-house cables with bend-optimised fibres which are ideal for installing in ducts and pipes. Where customer end devices need to be connected with patch cables we supply steel-reinforced OWG patch cables which will withstand heavy loads and have a predetermined breaking point designed to give if you trip over them, thus preventing injury or damage.

Dietlikon Public Utility Company

References

Zurich Electric Utility Company (ewz)	Zurich	e.wa riss GmbH	Biberach
Dietlikon Public Utility Company	Dietlikon	HL komm	Leipzig
Sankt Gallen Public Utility Company (sgsw)	St Gallen	SIG Services Industriels de Genève	Geneva
Bamberg Public Utility Company	Bamberg		
GSW Gemeinschaftsstadtwerke Kamen-Bönen-Bergkamen			

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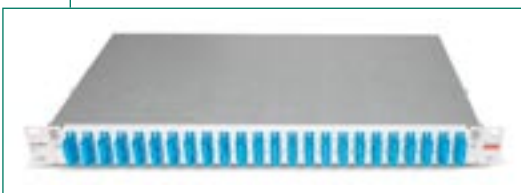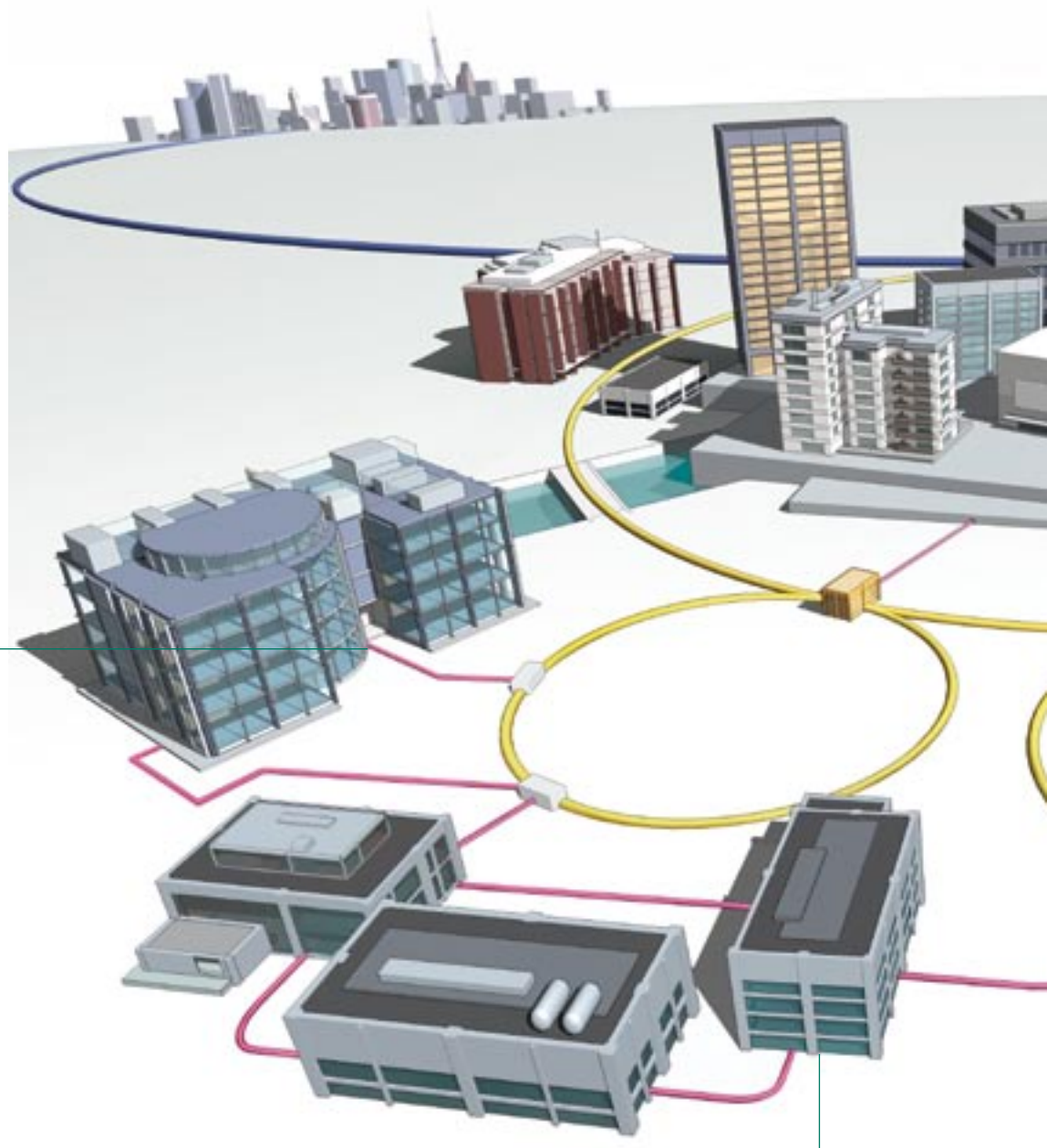
unilan® patch panel OV-A
Fibre optic patch panel 19" 1 U
Splice box
page 20

Subject to technical modification.

unilan® optical distribution frame
19"/47 U passive frame
page 14

unilan® optical distribution frame
19"/47 U active frame
page 15

unilan® ODF
optical distribution frame
19"/47 U passive frame

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Product information

Application

For use in the carrier sector for backbone solutions and distribution networks
The intelligent cable management system allows trouble-free horizontal and vertical cable routing
Bend radius control on all routing path
Cable entry possible from bottom and top

Dimensions

19" / 47 U, H x W x D: 2200 x 1200 x 800   mm
19" / 47 U, H x W x D: 2200 x 1200 x 400   mm

Delivery

- Pre-assembled
- Without doors or walls

Description

- Base frame material of 2mm galvanised steel powder-coated RAL 7035
- Weight approx. 170 kg
- Equipped with 4 height-adjustable pedestals and 4 floor-mounting brackets
- Depth profile variably mountable
- Earthing set pre-assembled
- 400 mm version is equipped with 24 semi-circular and 4 circular aluminum bend radius control cones
- 800 mm version is equipped with 48 semi-circular and 8 circular aluminum bend radius control cones
- Further cable management and cable divider to be purchased separately (see page 19)

Article No.	Description	Height	Width	Depth	Colour
343 000	unilan® optical distribution frame, passive, 19", 47 U	2200	1200	800	RAL 7035
343 001	unilan® optical distribution frame, passive, 19", 47 U	2200	1200	400	RAL 7035

When ordering rack combinations please state whether the passive rack is to the right or left of the active rack.

FO-optical distribution frame passive 0111/e

Subject to technical modification.

unilan® ODF
optical distribution frame
19"/47 U active frame

Communication technology

uni°lan®

Product information

Application	For use in the carrier sector for backbone solutions and distribution networks The intelligent cable management system allows trouble-free horizontal and vertical cable routing Bend radius control on all routing paths Cable entry possible from bottom and top
Dimensions	19" / 47 U, H x W x D: 2200 x 800 x 1000mm 19" / 47 U, H x W x D: 2200 x 800 x 800mm 19" / 47 U, H x W x D: 2200 x 800 x 600mm 19" / 47 U, H x W x D: 2200 x 800 x 400mm
Delivery	- Pre-assembled - Without doors or walls
Description	- Base frame material of 2 mm galvanised steel powder-coated RAL 7035 - Weight approx. 140 kg - Equipped with 4 height-adjustable pedestals and 4 floor-mounting brackets - Depth profile variably mountable - Earthing set pre-assembled - 400 and 600 mm versions are equipped with 4 semi-circular aluminum bend radius control cones - 800 and 1000 mm versions are equipped with 8 semi-circular aluminum bend radius control cones - Further cable management to be purchased separately (see page 19)

Artikel No.	Description	Height	Witdh	Depth	Colour
343 021	unilan® optical distribution frame , active, 19", 47 U	2200	800	1000	RAL 7035
343 022	unilan® optical distribution frame , active, 19", 47 U	2200	800	800	RAL 7035
343 023	unilan® optical distribution frame , active, 19", 47 U	2200	800	600	RAL 7035
343 024	unilan® optical distribution frame , active, 19", 47 U	2200	800	400	RAL 7035

When ordering rack combinations please state whether the passive rack is to the right or left of the active rack.

Subject to technical modification.

unilan® network rack
19"/42 U

Product information

Application

unilan® 19" network rack
Professional network solution with:
- 2 point locking
- Two 19" levels (bothe in front and behind)
- Installation height 42 rack units
- Protection category IP20
- Load 700 kg

Dimensions

19"/42 U, H x W x D: 2100 x 800 x 800 mm
19"/42 U, H x W x D: 2100 x 600 x 800 mm
19"/42 U, H x W x D: 2100 x 600 x 600 mm

Delivery

- Pre-assembled including adjustable foot
- Bolts / cage nut / washers (50 pcs.) and earthing set included

Description

- Basic frame of steel section / can be disassembled
- Socket, height 100 mm, RAL 7035
- Flat top of sheet steel with pre-cut perforations
  for brushes (included) and up to 6 fans
- Glass front door, sheet-steel rear door with 180° hinge
- Both doors fitted with swivel handle, hinge on right side
- Side panels made of sheet steel, can be removed
- Two 19" levels

Article No.	Description	Height	Width	Depth	Colour
190 822	unilan® network rack 19", 42 U	2100	800	800	RAL 7035
190 823	unilan® network rack 19", 42 U	2100	600	800	RAL 7035
190 824	unilan® network rack 19", 42 U	2100	600	600	RAL 7035
190 835	unilan® network rack 19", 42 U, basic frame	2100	800	800	RAL 7035

Subject to technical modification.

Product information

unilan® 19" server rack

Application

The safe alternative for any server
- 2 point locking
- Two 19" levels (both in front and behind)
- Effective height 42U or 24U
- Protection category IP20
- Load 700 kg

Dimensions

19"/42 U, H x W x D: 2100 x 800 x 1000 mm
19"/42 U, H x W x D: 2100 x 600 x 1000 mm
19"/42 U, H x W x D: 1300 x 600 x 1000 mm

Delivery

- Pre-assembled including adjustable foot
- Bolts / cage nut / washers (50 pcs.) and earthing set included

Description

- Basic frame of steel section / can be disassembled
- Socket, height 100 mm, RAL 9005
- Flat top of sheet steel with pre-cut perforations
  for brushes (included) and up to 6 fans
- front door and rear door sheet steel, with passive ventilation,
  with 180° hinge
- Both doors fitted with swivel handle, hinge on right side
- Side panels made of sheet steel, can be removed
- Two 19" levels

Article No.	Description	Height	Width	Depth	Colour
190 825	unilan® server rack 19", 42 U	2100	800	1000	RAL 9005
190 826	unilan® server rack 19", 42 U	2100	600	1000	RAL 9005
190 827	unilan® server rack 19", 24 U	1300	600	1000	RAL 9005

Subject to technical modification.

Accessories
for unilan® network and server rack

DATWYLER

Fig. 1: Fan set

Fig. 2: Thermostat

Fig. 3: Socket strip

19" Management panel, 1U, stainless steel

Fig. 4:
Slide rail set

Fig. 5:
Pull-out equipment shelf

Fig. 6:
Fixed equipment shelf

19" Management panel, 1U, black

Fig. 7: C-profile

Fig. 8: Mounting kit

19" Management panel, 1U, light grey

Product information

Application

Accessories
for unilan® network and server racks

Article No..	Fig.	Acessories / Description	Comment
401 200	-	Operating lever handle	on request
401 201	6	Equipment shelf 19" x 600mm (perforated, fixed, St, 1.5mm), RAL 7035	bearing load 120 kg
401 202	5	Equipment shelf 19" x 600mm (perforated, pull-out, St, 1.5mm), RAL 7035	bearing load 50 kg
401 203	4	Slide rail set 19" x 712mm for server rack	bearing load 40 kg
401 211	1	Fan set 2 units incl. protective grille and fixing material	
401 212	2	Thermostat	
401 214	-	Power cable 2 m CH	
401 221	3	Socket strip CH 10 x Type 13 vertical	other variants on request
401 230	8	Mounting kit for wall mounting	for wall-mounted housing
401 231	-	Mounting kit 19" bolt / cage nut	set of 50
401 232	-	Touch-up pen RAL 7035	on request
401 233	-	Touch-up pen RAL 9005	on request
401 234	-	Adhesive tape for mounting brackets 1-47 U	
401 235	-	Baying kit for network rack	on request
401 237	7	C-profile 600 for SP20 set of 2	on request
401 238	7	C-profile 800 for SP20 set of 2	on request
401 239	7	C-profile 1000 for SP20 set of 2	on request

Application

Management panel
For the neat routing of copper and fibre optic patch cables in 19" rack mount distribution racks or housings.

Delivery

19" / 1U patch panel base plates come in three versions:
a) stainless steel, b) black powder-coated or c) light grey powder-coated. These base plates are unpopulated and may be fitted with 5 shunting rings of the sizes required.
Please order shunting rings separately!

Article No..	Description	Colour / Material	PU
1411 480	Shunting ring 30 mm plastic	black	1 unit
1411 481	Shunting ring 75 mm	metal	1 unit
1411 482	Shunting ring 110mm	metal	1 unit
1411 604	Shunting ring 19", 1U, for 5 shunting rings	RAL 7035	1 unit
1407 689	Shunting ring 19", 1U, for 5 shunting rings	RAL 9005	1 unit
418 200	Shunting ring 19", 1U, for 5 shunting rings	stainless steel	1 unit
401 240	19" blanking plate 1U	RAL 7035	1 unit
401 241	19" blanking plate 1U	RAL 8005	1 unit
401 242	19"blanking plate 1U	stainless steel	1 unit
401 243	19" blanking plate 2U	RAL 7035	1 unit
401 244	19" blanking plate 2U	RAL 9005	1 unit
401 245	19"blanking plate 2U	stainless steel	1 unit
400 300	19"cable tray; NB: can only be mounted together with patch panel	-	1 unit
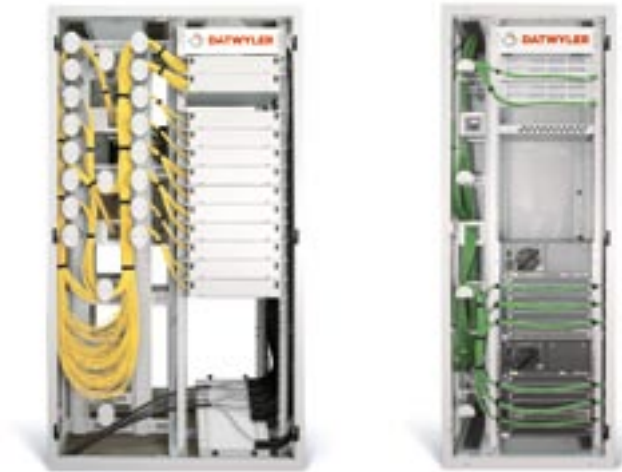
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Accessories
for unilan® ODF
optical distribution frame

unilan®

Communication technology

Product information

Application

Accessories
for unilan® ODF optical distribution frame

Article No..	Fig.	Acessories / Description	PU
343 041	-	Cable distribution box for fibre optic cable	1 pc
343 042	-	Horizontal ALU cable management for patching from front or rear	1 pc
343 043	-	Rubber clamps in ALU cable management, length 130mm	1 pc
343 044	-	Rubber coating on ALU cable management, 200x100x5mm	1 pc
343 046	-	ALU cable management, circular Ø 60mm, length 220 mm	1 pc
343 047	-	ALU cable management, semi-circular Ø 60mm, length 220 mm	1 pc
343 048	-	Roof without air vents to ODF optical distribution frame	1 pc
343 049	-	Roof with air vents to ODF optical distribution frame	1 pc
343 050	-	Baseplate with dust filter cartridge	1 pc
343 051	-	Doors without air vent, 800mm	1 pc
343 052	-	Doors with 40% air vent, 800mm	1 pc
343 053	-	Doors with 70% air vent, 800mm	1 pc
343 054	-	Double door set, without air vent, 2x600mm	1 pc
343 055	-	Double door set, with 40% air vent, 2x600mm	1 pc
343 056	-	Double door set, with 70% air vent, 2x600mm	1 pc
343 057	-	Side panel 400x2200mm	1 pc
343 058	-	Side panel 600x2200mm	1 pc
343 059	-	Side panel 800x2200mm	1 pc
343 060	-	Side panel 1000x2200mm	1 pc
343 061	-	Rear panel 800x2200mm to active component	1 pc
343 062	-	Rear panel 1200x2200mm to passive component	1 pc
343 063	-	19" parking lot, 1U, 24xLCD/APC couplings	1 pc
on request	-	plinths for racks and rack combinations	-

Note

The appropriate cable management is supplied when rubber clamps or rubber coating on ALU cable management is ordered.

When ordering baseplates and a roof with or without air vents please be sure to state the dimensions of the rack concerned.

Plinths for racks and rack combinations are made to order.
False floor plinths for raised floors are also possible on request.

Communication technology

unilan®

Central Office/PoP Solutions

Cabling Solutions

In-house Cabling Solutions

Management Software Solution

Fibre optic patch panel 19" 1 U
Patch panel OV-A
Splice Box

DATWYLER
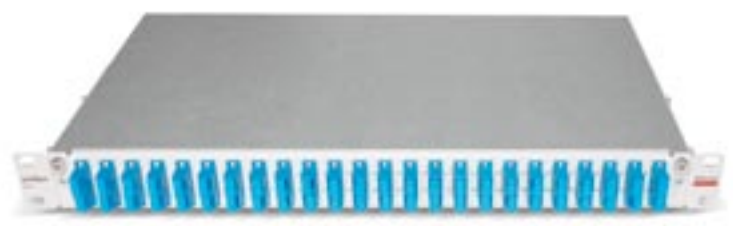
Fibre splice box panel 19" 1 U adjustable
sample with 24 singlemode SCD adapters and 48 pigtails

Product information

Application

Adjustable fibre optic patch panel, for every application with optical fibres.
Pre-assembled with adapters, pigtails prepared for splicing and splice accessories.

Construction

Cover:	metallic cover, adjustable, panel with locking device, can be extended to OV-AT,
Colour:	RAL 7035
Imprint:	number as a screen print
Size for:	up to 48 fibres
Strain relief:	with cable tie and screwed cable gland
Cable entry point:	real left and right
Size:	19" 1U, depth 254 mm

Connection System

Coupler: SCD, LCD, LSH

Delivery

- coloured pigtails including attenuation test report
- screwed adapter
- splice trays with cover
- telecom approved splice protector
- holder for ANT splice protector
- mounting system

Note

other configurations on request

Product information

Article No.	Description		
190 968	Splice box OV-A, adjustable, 1 unit	6 LCD adapter blue polymer housing	with ceramic sleeve and 12 LC pigtails 2 m E09/125 µm OS2
190 975	Splice box OV-A, adjustable, 1 unit	12 LCD adapter blue polymer housing	with ceramic sleeve and 24 LC pigtails 2 m E09/125 µm OS2
190 988	Splice box OV-A, adjustable, 1 unit	12 LCD adapter beiges polymer housing	with PB sleeve and 24 LC pigtails 2 m G50/125 µm OM2
191 761	Splice box OV-A, adjustable, 1 unit	24 LCD adapter blue polymer housing	with ceramic sleeve and 48 LC pigtails 2 m E09/125 µm OS2
190 989	Splice box OV-A, adjustable, 1 unit	6 LSH/APC adapter green polymer housing	with ceramic sleeve and 6 LSH/APC pigtails 2 m E09/125 µm OS2
190 893	Splice box OV-A, adjustable, 1 unit	12 LSH/APC adapter green polymer housing	with ceramic sleeve and 12 LSH/APC pigtails 2 m E09/125 µm OS2
190 894	Splice box OV-A, adjustable, 1 unit	24 LSH/APC adapter green polymer housing	with ceramic sleeve and 24 LSH/APC pigtails 2 m E09/125 µm OS2
190 888	Splice box OV-A, adjustable, 1 unit	6 SCD adapter blue polymer housing	with ceramic sleeve and 12 SC pigtails 2 m E09/125 µm OS2
190 889	Splice box OV-A, adjustable, 1 unit	12 SCD adapter blue polymer housing	with ceramic sleeve and 24 SC pigtails 2 m E09/125 µm OS2
190 973	Splice box OV-A, adjustable, 1 unit	24 SCD adapter blue polymer housing	with ceramic sleeve and 48 SC pigtails 2 m E09/125 µm OS2
309 427	Splice box OV-A, adjustable, 1 unit	2 LCD- adapter green polymer housing	with ceramic sleeve and 4 LC/APC pigtails 2m E09/125 µm OS2
309 454	Splice box OV-A, adjustable, 1 unit	6 LCD- adapter green polymer housing	with ceramic sleeve and 12 LC/APC pigtails 2m E09/125 µm OS2
309 455	Splice box OV-A, adjustable, 1 unit	12 LCD- adapter green polymer housing	with ceramic sleeve and 24 LC/APC pigtails 2m E09/125 µm OS2
309 418	Splice box OV-A, adjustable, 1 unit	24 LCD- adapter, green polymer housing	with ceramic sleeve and 48 LC/APC Pigtails 2m E09/125 µm OS2

Central Office/PoP Solutions

Cabling Solutions

In-house Cabling Solutions

Management Software Solution

unilan® high-density optical drawer
19"/2 U pivoting splice box OV-S
equipped with LC/APC quad adapter

DATWYLER

Product information

Application

unilan® 19" high-density optical drawer
Pivoting high-density fibre splice box, 2 U for mounting into optical distribution frame
144 patchings instead of 96 patchings in 2 U optical drawer
Protection of pigtails during installation and splice welding
With its dual function the optical fibre drawer can be used for left or right mounting

Dimensions

19" / 2 U, H x W x D: 88 x 498 x 305 mm

Delivery

- Housing and bend radius controls can be fitted on right- or left-hand side
- Pivoting module can be banded on both sides

Dimensions

Material of galvanised steel 2 and 3 mm powder-coated RAL 7035
Weight approx. 6 kg
Equipped with 36 quad adapters, 144 LC/APC pigtails and splice trays
Cable entry right or left side possible (due to dual function)
Cable exit left or right side possible (due to dual function)
Retractable front and pivoting case
Equipped with 2 wings for bend radius control on left and right side

unilan® high-density optical drawer
19"/2 U pivoting splice box OV-S
equipped with LC/APC quad adapter

Product information

Article No.	Description	Opening	Equipment	Pigtail	Colour
343 101	unilan® optical drawer 19", pivoting, 2 U	right	LC/APC quad adapter	Fibre G.652.D colour code white	RAL 7035
343 102	unilan® optical drawer 19", pivoting, 2 U	right	LC/APC quad adapter	Fibre G.652.D colour code yellow	RAL 7035
343 103	unilan® optical drawer 19", pivoting, 2 U	right	LC/APC quad adapter	Fibre G.652.D colour code Swisscom	RAL 7035
343 104	unilan® optical drawer 19", pivoting, 2 U	right	LC/APC quad adapter	Fibre G.652.D colour code D.Telecom	RAL 7035
343 105	unilan® optical drawer 19", pivoting, 2 U	right	LC/APC quad adapter	Fibre G.652.D colour code Telcordia	RAL 7035
343 121	unilan® optical drawer 19", pivoting, 2 U	left	LC/APC quad adapter	Fibre G.652.D colour code white	RAL 7035
343 122	unilan® optical drawer 19", pivoting, 2 U	left	LC/APC quad adapter	Fibre G.652.D colour code yellow	RAL 7035
343 123	unilan® optical drawer 19", pivoting, 2 U	left	LC/APC quad adapter	Fibre G.652.D colour code Swisscom	RAL 7035
343 124	unilan® optical drawer 19", pivoting, 2 U	left	LC/APC quad adapter	Fibre G.652.D colour code D.Telecom	RAL 7035
343 125	unilan® optical drawer 19", pivoting, 2 U	left	LC/APC quad adapter	Fibre G.652.D colour code Telcordia	RAL 7035

Other configurations on request.

Fibre optic patch panel 19" 1 U
Patch panel OV-A
Breakout box

DATWYLER

Fibre optic patch panel 19" 1 U adjustable
sample with 6 SC Duplex adapter

Product information

Application	Adjustable fibre optic patch panel, for every application with optical fibres. Pre-assembled with adapters	
Construction	Cover:	metallic cover, adjustable, panel with locking device, can be extended to OV-AT,
	Colour:	RAL 7035, 9005, stainless steel
	Imprint:	number as a screen print
	Size for:	up to 48 fibres
	Strain relief:	with cable tie and screwed cable gland
	Cable entry point:	real left and right
	Size:	19" 1 U, depth 254 mm
Connection System	Coupler:	SCD, LCD, LSH
Delivery	- screwed adapter	
	- mounting system	
Note	other configurations on request	

FO-Panel OV-A 1HEBObox 0111/e

Subject to technical modification.

Product information

Article No.	Description	
191 765	Breakout box OV-A, adjustable, 1 U	6 LCD SM adapter, blue polymer housing with ceramic sleeve
191 767	Breakout box OV-A, adjustable, 1 U	12 LCD SM adapter, blue polymer housing with ceramic sleeve
191 769	Breakout box OV-A, adjustable, 1 U	24 LCD SM adapter, blue polymer housing with ceramic sleeve
191 771	Breakout box OV-A, adjustable, 1 U	6 LSH/APC SM adapter, green polymer housing with ceramic sleeve
190 878	Breakout box OV-A, adjustable, 1 U	12 LSH/APC SM adapter, green polymer housing with ceramic sleeve
190 879	Breakout box OV-A, adjustable, 1 U	24 LSH/APC SM adapter, green polymer housing with ceramic sleeve
190 876	Breakout box OV-A, adjustable, 1 U	6 SCD SM adapter, blue polymer housing with ceramic sleeve
190 877	Breakout box OV-A, adjustable, 1 U	12 SCD SM adapter, blue polymer housing with ceramic sleeve
191 775	Breakout box OV-A, adjustable, 1 U	24 SCD SM adapter, blue polymer housing with ceramic sleeve
309 456	Breakout box OV-A, adjustable, 1 U	6 LCD/APC SM adapter, green polymer housing with ceramic sleeve
309 457	Breakout box OV-A, adjustable, 1 U	12 LCD/APC SM adapter, green polymer housing with ceramic sleeve
309 458	Breakout box OV-A, adjustable, 1 U	24 LCD/APC SM adapter, green polymer housing with ceramic sleeve

Communication technology

Central Office/PoP Solutions

Cabling Solutions

In-house Cabling Solutions

Management Software Solution

FO subrack OV-BG
4 U

DATWYLER
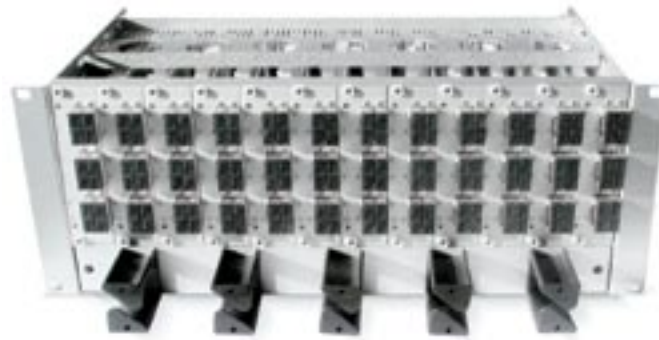
FO subrack OV-BG 4 U

Product information

Application

The subrack OV-BG is to devide a lose tube cable.

Construction

Cover:

19" 3 U or 4 U aluminium profil with side wall
19" integrated fixing
Subrack 3 U, 84 HP,
with panel for excess length of cable 4 U, 84 HP
module guide in 1 HP-steps for maximum 12 peices 7 HP-modules

Depth:

3 U 225 mm
4 U 295 mm

Connection System

LCD, SCD, SC, LSH

Assembled Module insert with prepared pigtails

Article No.	Description	Dimensions
416 980	Subrack	3 U/84 HP 185mm deep
416 907	Subrack	4 U/84 HP
417 212	Module insert 12 LCD unloaded	3 U/7 HP for snap in adapter
416 908	Module insert for 6xSCD (screw fastening)	3 U/7 HP
416 909	Module insert for 12xSC, LSH or LCD	3 U/7 HP
416 981	blanking front plate	3 U/7 HP for 416 907

Article No.	Description	
417 352	Module insert	with 6 LCD adapter (blue) and 12 LC pigtails E09/125 OS2
417 354	Module insert	with 12 LCD adapter (blue) and 24 LC pigtails E09/125 OS2
417 358	Module insert	with 6 SCD adapter (blue) and 12 SC pigtails E09/125 OS2

Assembling module insert with splice holder and splice protection. Pigtails are prepared for splicing.

Please ask for further assembling inserts!

Subject to technical modification.

DÄTWYLER

Fibre optic patch panel 19" 1 U WAN
for highest requirements
telescopic

Product information

Application

The fibre optic patch panel is adjustable without additional equipment.
It is telescopic, due to a telescopic bar.
The cable mounting plate is already fitted in the case.
The front plate will be delivered with a numbering and labelling strip.
Simple handling during installation means very short installation time
(cost saving)

Construction

Cover:	Aluminium with telescopic rails
Labelling:	1-24 on labelling tape
Mounting:	prepared for two splice trays
	possibility for max. 24 fibres
Dimensions:	19" 1U
Size standard:	44 x 483 x 280 mm
Size ETSI:	44 x 483 x 220 mm
Connecting system:	LSH Simplex, Duplex, Compact, each with angular outlet
	FC-PC

Article No.	Description	Size
		HxWxD [mm]
184 839	Fibre optic patch panel 19" 1 U standard	44x483x280 mm
182 577	Fibre optic patch panel 19" 2 U standard	88x483x280 mm
182 578	Fibre optic patch panel 19" 3 U standard	132x483x280 mm
on request	Fibre optic patch panel 19" 1 U ETSI	44x483x220 mm
on request	Fibre optic patch panel 19" 2 U ETSI	88x483x220 mm
on request	Fibre optic patch panel 19" 3 U ETSI	132x483x220 mm

Fibre optic pre-assembly
unilan® FO Trunk
factory made pre-assemblies
of fibre optic cables

DÄTWYLER

Trunk termination

Product information

Application

For the transmission of digital and analogue voice, video and data signals.
The cable is prepared for laying using a special cover.
The assembly is made to customer specifications.
Cost saving and simple installation without expensive fibre optic equipment.

Features

Trunk termination
- optoversal® or other loose tube fibre optic cables from the optofil® product range
- Connector assembly with a coupler (screwable)
- For all current fibre optic connecting systems, protection class IP68
- The cable is prepared for laying using a special cover for toolless removal
- Possibility of assembling up to 144 fibres
- For a number of fibres greater than 48 the distribution head is cascaded
- Max. length of free cable is 2m (stepped)
- Assembly includes attenuation test report

A higher-strength protection tube is available.

Trunk termination (Item numbers are valid for one side)

Fibre type	Multimode				Singlemode					
Number of fibres	Connector type:				Connector type:					
	ST	SC	LC	LSH	ST	SC	LC	LSH	SC/APC	LSH/APC
4	1406 098	1406 421	416 601	417 131	417 218	1407 244	415 030	417 219	415 001	417 222
6	1407 718	1407 658	415 018	417 213	1407 719	1407 778	415 014	415 010	417 221	415 006
8	1406 758	1407 777	415 028	417 214	1405 818	1410 923	417 132	417 220	415 002	417 223
12	1406 403	1406 794	415 019	417 215	1407 720	1407 035	415 015	415 011	415 003	415 007
24	1406 780	1408 597	415 020	417 216	1408 529	1406 242	415 016	415 012	415 004	415 008
48	1406 091	1408 725	415 021	417 217	1408 723	1406 768	415 017	415 013	415 005	415 009

Attention:
When ordering a trunk cable please ensure that the specified length of the trunk cable is defined by the length of the longest single optical fibre! This means that the total length of the trunk cable is the length of the cable between the splits plus the additional length of the single optical fibre on either side.
You can find the length of the single fibre elements in the instruction manual.

Subject to technical modification.

DÄTWYLER

Fibre optic pre-assembly
unilan® FO Trunk
factory made pre-assemblies of fibre optic cables
Connector assembly / Breakout assembly

Breakout assembly

Product information

Application

For the transmission of digital and analogue voice, video and data signals.
The assembly is made to customer specifications.
Cost saving and simple installation without expensive fibre optic equipment.

Features

Breakout assembly
- Breakout single fibre cable assembly
- Assemblies for all current fibre optic connecting systems
- The cable is prepared for laying using a special cover
- Single semi loose tube, stepped
- Assembly includes attenuation test report

Breakout assembly (Item numbers are valid for one side)

Breakout assembly	Connector type	Number of connectors	Type of multimode	Type of single mode
on each cable end			Article No.	Article No.
	SC	4	1410 596	415 023
	SC	8	1410 597	415 024
	SC	12	1410 598	415 025
	SC	24	415 083	415 081
	SC	48	415 084	415082
	LC	4	415 085	415 090
	LC	8	415 086	415 091
	LC	12	415 087	415 092
	LC	24	415 088	415 093
	LC	48	415 089	415 094

Attention:
When ordering a trunk cable please ensure that the specified length of the trunk cable is defined by the length of the longest single optical fibre! This means that the total length of the trunk cable is the length of the cable between the splits plus the additional length of the single optical fibre on either side.
You can find the length of the single fibre elements in the instruction manual.

Subject to technical modification.

Fibre optic pigtails
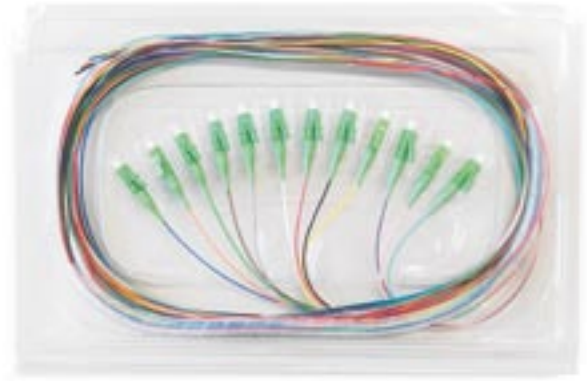
Product information

Type of connector	Type of Fibre	Fibre pigtail 2 m	Set of 12 pcs. FP 2 m*
SC	E09/OS2	421 121	421 122
LC	E09/OS2	423 321	423 322
LC/APC	E09/OS2	429 921	429 922
LSH	E09/OS2	424 421	424 422
FC/PC	E09/OS2	425 521	425 522
SC/APC	E09/OS2	427 721	427 722
LSH/APC	E09/OS2	428 821	428 822

* Set has 12 fibre pigtails in 12 colours (according IEC 60304).

Other pigtails on request.

Subject to technical modification.

DATWYLER

**Fibre optic patch-
and adapter cable**
LCD

Communication technology

unilan ®

FO patch- and adapter cable
LCD - LCD

FO patch- and adapter cable
LSH/APC - LC

FO patch- and adapter cable
SC/APC - LC

Product information

Fibre optic patch- and adapter cable LCD

Type of connector		Type of fibre	Length in m									
Side A	Side B		1	2	3	4	5	6	7	8	9	10
LCD/APC	SCD	E09	421 911	421 912	421 913	421 914	421 915	421 916	421 917	421 918	421 919	421 920
LCD/APC	LCD	E09	423 911	423 912	423 913	423 914	423 915	423 916	423 917	423 918	423 919	423 920
LCD/APC	LSH	E09	424 911	424 912	424 913	424 914	424 915	424 916	424 917	424 918	424 919	424 920
LCD/APC	SCD/APC	E09	427 911	427 912	427 913	427 914	427 915	427 916	427 917	427 918	427 919	427 920
LCD/APC	LSH/APC	E09	428 911	428 912	428 913	428 914	428 915	428 916	428 917	428 918	428 919	428 920
LCD/APC	LCD/APC	E09	429 911	429 912	429 913	429 914	429 915	429 916	429 917	429 918	429 919	429 920

Attention! Patch cords with pre-terminated duplex connectors on both sides: One duplex clip is not mounted but within the bag.

Other patch cords on request.

Subject to technical modification.

Fibre optic adapters
Fibre optic coupler

SC-Duplex

SC-Simplex

Shutter for SC-Duplex

LSH

LC/APC Quad

Product information

Fibre optic adapters

FO adapter side 1	FO adapter side 2	Type of fibre	Sleeve	Cover material	Colour	Article No.
SC	SC	SM	ceramics	polymer	blue	1412 752
SC/APC	SC/APC	SM	ceramics	polymer	green	1412 753
SCD	SCD	SM	ceramics	polymer	blue	1414 890
SCD/APC	SCD/APC	SM	ceramics	polymer	green	1414 892
SCD	SCD	SM	ceramics	metal		1414 403
LCD	LCD	SM	ceramics	polymer	blue	1414 417
LCD/APC	LCD/APC	SM	ceramics	polymer	green	309 318
FC/PC	FC/PC	SM	ceramics	metal		1412 762
LSH/APC-M	LSH/APC-M	SM	ceramics	polymer	green	417 856
LSH/APC	LSH/APC	SM	ceramics	polymer	green	1413 111
LSH	LSH	SM	ceramics	polymer	blue	1414 450
LC/APC Quad	LC/APC Quad	SM	ceramics	polymer	green	309 460

other adapter on request

Description		Type of fibre	Cover material	Colour	Article No.
Shutter for SCD POL BL		SM	polymer	blue	1414 887
Shutter for SCD POL GN		SM	polymer	green	1414 888
dummy plug SC/LSH/LCD	1 piece				1414 223
dummy plug SCD	1 piece				1414 224

Subject to technical modification.

Splice tray

Splice holder

Splice protection

Cable gland M20 and M25

Product information

Accessories

Article No.	Description	PU
1411 150	splice tray without cover	1 piece
1411 151	splice tray cover	1 piece
1411 152	splice holder for up to 12 splices (crimp technology)	1 piece
1411 153	splice holder for up to 6splices (heat shrink technology)	1 piece
1401 560	splice protection crimp technology	1 piece
1401 581	splice protection shrink technology	100 pieces
416 996	splice-kit incl. 2 splice protection crimp technology and splice tray cover	1 piece

Cable gland

Article No.	Type	Article	Diameter	Clamping range
418 160	M20	cable gland	20 mm	6-12 mm
418 161	M20	locknut		
418 162	M25	cable gland	25 mm	9-17 mm
418 163	M25	locknut		

Subject to technical modification.

Cabling Solutions

optofil® outdoor cable / A-DQ(ZN)B2Y
wbGGT HighP (City Compact)

Central Office/PoP Solutions

Cabling Solutions

In-house Cabling Solutions

Management Software Solution

Subject to technical modification.
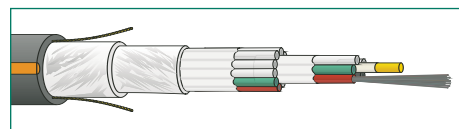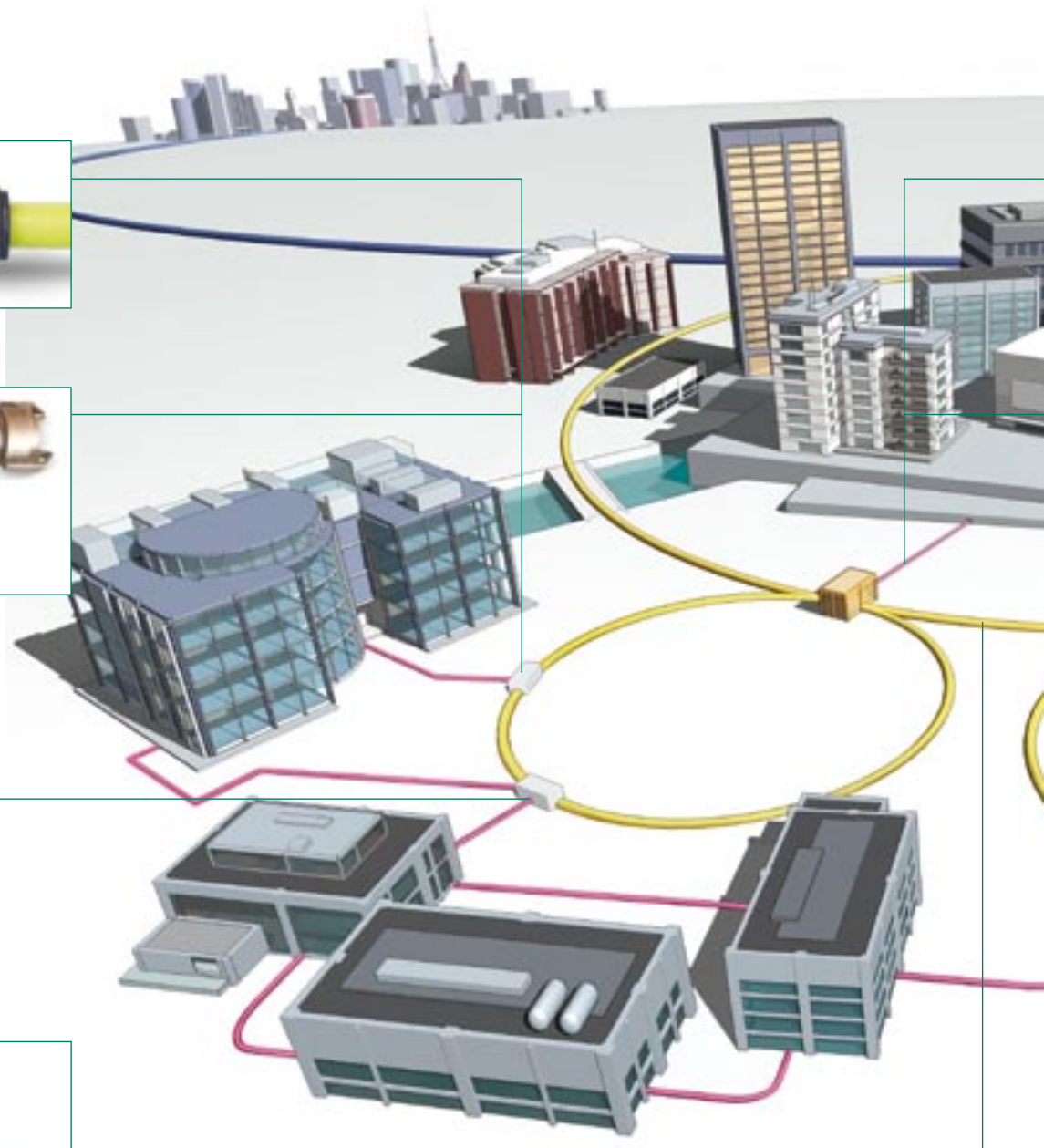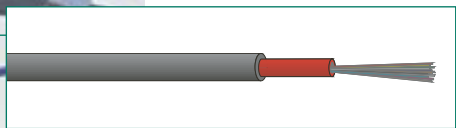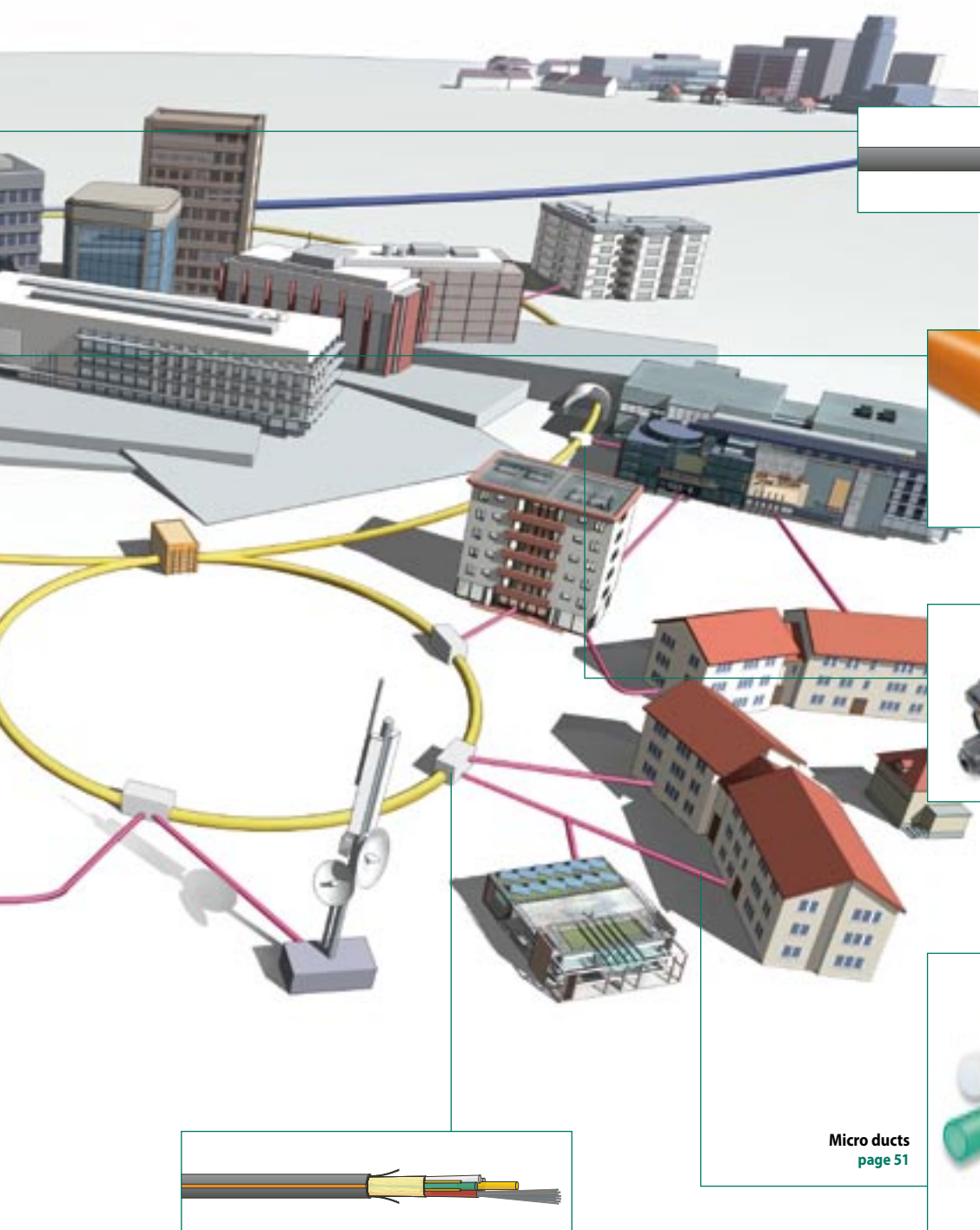
optofil® outdoor cable
S-Micro (up to 12 fibres)
page 36

Direct-burial cable
page 50

Tube distribution closure
page 58

Micro ducts
page 51
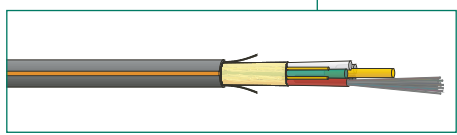
optofil® outdoor cable / A-DQ(ZN)2Y
S-Micro (up to 96 fibres)
page 40

uni°lan®

Communication technology

Central Office/PoP Solutions

Cabling Solutions

In-house Cabling Solutions

Management Software Solution

optofil® outdoor cable
S-Micro (up to 12 fibres)
optimised for injection into microducts
nonmetallic, non-armoured, water tightness

DÄTWYLER

Polyamid sheath   loose tube   ≤ 12 fibres

Product information

Features	Very thin, metal-free, fibre optic outdoor cable containing up to 12 fibres in a central tube design. Easily cut-back, installation friendly cable construction.
Application	Optimised for injection in to microducts. Fibre to the Home.
Optical characteristics	The cables are available with different types of fibre.

Mechanical characteristics

temperature range	storage	-25 / +70°C	IEC 60794-1-2 F1
	pulling in	-5 / +40°C	
	operation	-20 / +60°C	

tensile performance	IEC 60794-1-2 E1
crush resistance	IEC 60794-1-2 E3
repeated bending	IEC 60794-1-2 E6
torsion	IEC 60794-1-2 E7
bend	IEC 60794-1-2 E11
water penetration	IEC 60794-1-2 F5

General characteristics

Printing example	DÄTWYLER OPTOFIL 12E9 G.652D ZGGT S-MICRO

Zero halogen,
non corrosive gases   IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

optofil® outdoor cable
S-Micro (up to 12 fibres)
optimised for injection into microducts
nonmetallic, non-armoured, water tightness

description S-Micro		no. of fibres max.	loose tube max.	cableØ mm	weight kg/km	bending radius mm	tensile load N	crush resistance continuous N/cm	short term N/cm	Fire load kWh/km	MJ/km
optofil®-A S-Micro	1x12	12	1	2,6	5	50	80	50	200		

Varianten

S-Micro description	1xn	fibre number	Article No. E9/125 G.652.D
S-Micro	1x4	4	on request
S-Micro	1x6	6	on request
S-Micro	1x8	8	on request
S-Micro	1x10	10	on request
S-Micro	1x12	12	on request
Different fibre types on request.			

Subject to technical modification.

optofil® outdoor cable / A-DQ(ZN)2Y

ZKT Micro (up to 24 fibres)
optimised for injection into microducts
nonmetallic, non-armoured, water tightness

DÄTWYLER

ripcord

HDPE sheath   **aramid yarn**   **loose tube**   **≤24 fibres**
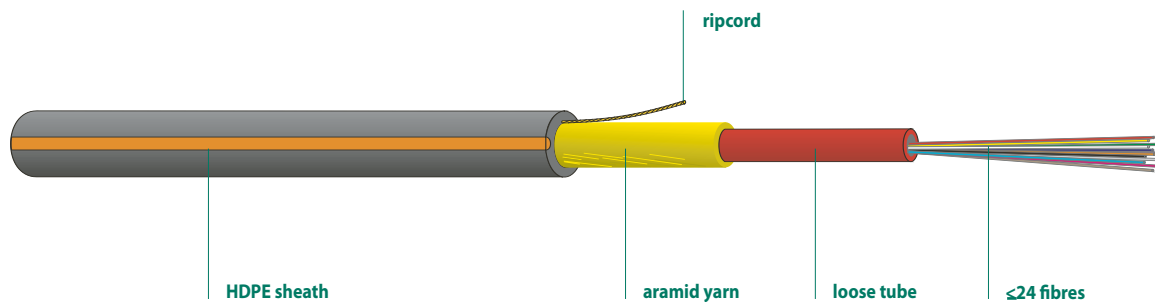
Product information

Features	Very thin, metal-free, fibre optic outdoor cable containing up to 24 fibres in a central tube design. Easily cut-back, installation friendly cable construction.
Application	Optimised for injection in to microducts of 7 mm and 10 mm diameter. Fibre to the Home.
Optical characteristics	The cables are available with different types of fibre.

Mechanical characteristics

temperature range	storage	-40 / +70°C	IEC 60794-1-2 F1
	pulling in	-15 / +40°C	
	operation	-40 / +70°C	
tensile performance	IEC 60794-1-2 E1		
crush resistance	IEC 60794-1-2 E3		
repeated bending	IEC 60794-1-2 E6		
torsion	IEC 60794-1-2 E7		
bend	IEC 60794-1-2 E11		
water penetration	IEC 60794-1-2 F5		

General characteristics

Printing example	DÄTWYLER OPTOFIL 24E9 G.652D ZKT MICRO C-no. 10857 3750 m
Zero halogen, non corrosive gases	IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

GF-1403 optofil® Micro ZKT 24F 1108/e

Central Office/PoP Solutions

Cabling Solutions

In-house Cabling Solutions

Management Software Solution

optofil® outdoor cable / A-DQ(ZN)2Y
ZKT Micro (up to 24 fibres)
optimised for injection into microducts
nonmetallic, non-armoured, water tightness

description		no. of fibres	loose tube	cableØ	weight	bending radius	tensile load	crush resistance		Fire load	
A-DQ(ZN)2Y nxm		max.	max.	mm	kg/km	mm	N	continuous N/cm	short term N/cm	kWh/km	MJ/km
Micro ZKT	1x24	24	1	4.0	19	100	500	60	160	165	594

Versions

A-DQ(ZN)2Y nxm		fibre	Article No.
description		number	E9/125 G.652.D
Micro ZKT	1 x 12	12	190 227
Micro ZKT	1 x 24	24	191 235
Different fibre types on request.			

Subject to technical modification.

optofil® outdoor cable / A-DQ(ZN)2Y
S-Micro (up to 96 fibres)
optimised for injection into microducts
nonmetallic, non-armoured, water tightness

DATWYLER

ripcord

HDPE sheath   aramid yarn   loose tube   ≤12 fibres
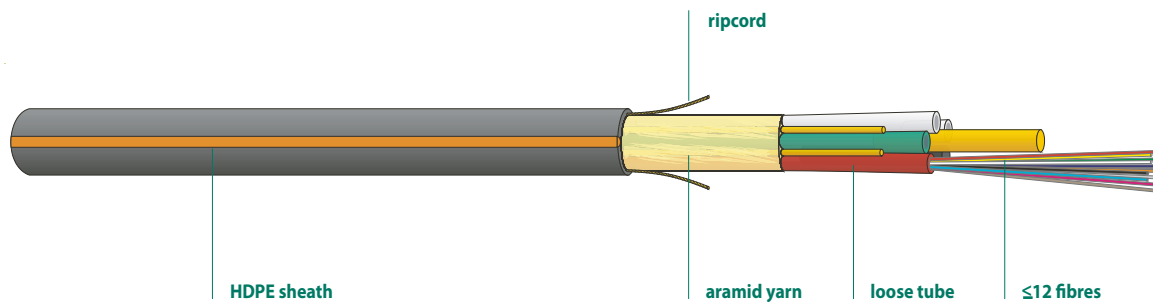
Product information

Features

Highly compact, metal-free, fibre optic outdoor cable containing up to 96 fibres with dry interstices and stranded loose tubes. Easily cut-back, installation-friendly cable construction.

Application

Optimised for injection in to microducts of 7 mm and 10 mm diameter.
Fibre to the Home.

Optical characteristics

The cables are available with different types of fibre.

Mechanical characteristics

temperature range	storage	-40 / +70°C	IEC 60794-1-2 F1
	pulling in	-15 / +40°C	
	operation	-40 / +70°C	

tensile performance	IEC 60794-1-2 E1
crush resistance	IEC 60794-1-2 E3
repeated bending	IEC 60794-1-2 E6
torsion	IEC 60794-1-2 E7
bend	IEC 60794-1-2 E11
water penetration	IEC 60794-1-2 F5

General characteristics

Printing example   DÄTWYLER OPTOFIL 96E9 G.652D WBKT S-MICRO
C-no. 10857 3750 m

Zero halogen,
non corrosive gases   IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

Subject to technical modification.

![Datwyler logo]

optofil® outdoor cable / A-DQ(ZN)2Y
S-Micro (up to 96 fibres)
optimised for injection into microducts
nonmetallic, non-armoured, water tightness

description		no. of fibres	loose tube	cableØ	weight	bending radius	tensile load	crush resistance		Fire load	
A-DQ(ZN)2Y nxm		max.	max.	mm	kg/km	mm	N	continuous N/cm	short term N/cm	kWh/km	MJ/km
S-Micro wbKT	4x12	48	4	4.2	13	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
S-Micro wbKT	8x12	96	8	6.2	37	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Versions

A-DQ(ZN)2Y nxm		fibre	Article No.
description		number	E9/125 G.652.D
S-Micro wbKT	4 x 12	48	––
S-Micro wbKT	8 x 12	96	192 159
Different fibre types on request.			

Subject to technical modification.

optofil® outdoor cable / A-DQ(ZN)B2Y
ZGGT 2500 HighP
central tube design, nonmetallic,
water resistant, rodent protected

DÄTWYLER

ripcord

HDPE sheath   glass armouring   loose tube   ≤24 fibres
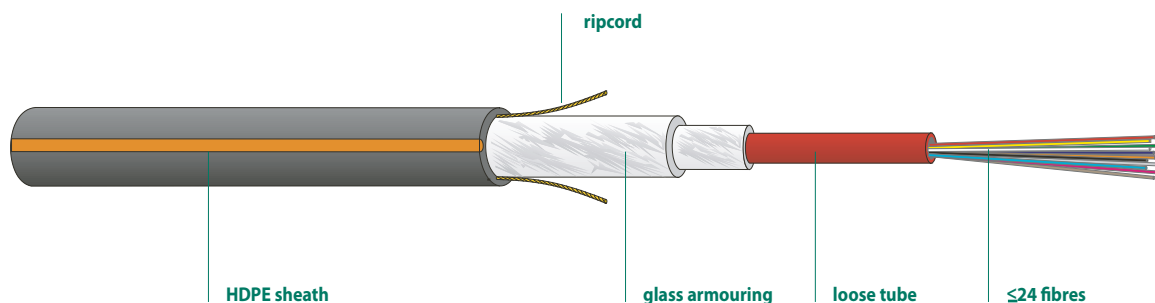
Product information

Features	Robust, non metallic fibre optic outdoor cable with central tube design for up to 24 fibres. High tensile strength and high radial load strength for the highest transmission security. Installation friendly cable design. Rodent protection thanks to glass fibre armouring. Suitable for use in complex cable routes.
Application	Pulling or blowing through plastic ducts. Laying on cable platforms and cable trays. Direct burial. Complex cable trays.
Optical characteristics	The cables are available with different types of fibre.

Mechanical characteristics

temperature range	storage	-40 / +70℃	IEC 60794-1-2 F1
	pulling in	-10 / +50℃	
	operation	-40 / +60℃	
tensile performance	IEC 60794-1-2 E1		
crush resistance	IEC 60794-1-2 E3		
impact	IEC 60794-1-2 E4		
repeated bending	IEC 60794-1-2 E6		
torsion	IEC 60794-1-2 E7		
bend	IEC 60794-1-2 E11		
water penetration	IEC 60794-1-2 F5		

General characteristics

Printing example   DÄTWYLER OPTOFIL 12E9 G.652D ZGGT2500 HIGHP
C-no. 10858 ~ 🔾 ~ 5125 m ~ 🔾 ~

Zero halogen,
non corrosive gases   IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

optofil® outdoor cable / A-DQ(ZN)B2Y
ZGGT 2500 HighP
central tube design, nonmetallic,
water resistant, rodent protected

DÄTWYLER

description		no. of fibres	loose tube	cableØ	weight	bending radius	tensile load	crush resistance		Fire load	
A-DQ(ZN)B2Y 1xm		max.	max.	mm	kg/km	mm	N	continuous N/cm	short term N/cm	kWh/km	MJ/km
ZGGT 2500 HighP	1x12	12	1	8.5	65	130	2500	600	1000	558	2009
ZGGT 2500 HighP	1x24	24	1	9.0	70	135	2500	600	1000	589	2120

Versions

A-DQ(ZN)B2Y 1xm		fibre	Article No.
description		number	E9/125 G.652.D
ZGGT 2500 HighP	1 x 4	4	190 166
ZGGT 2500 HighP	1 x 6	6	190 167
ZGGT 2500 HighP	1 x 8	8	190 168
ZGGT 2500 HighP	1 x 12	12	190 169
ZGGT 2500 HighP	1 x 24	24	190 149
Different fibre types on request.			

Subject to technical modification.

optofil® outdoor cable / A-DQ(ZN)2Y
wbKT Micro (up to 72 fibres)
nonmetallic, non-armoured,
dry interstices, water tightness

DÄTWYLER

ripcord

HDPE sheath   aramid yarn   loose tube   ≤12 fibres
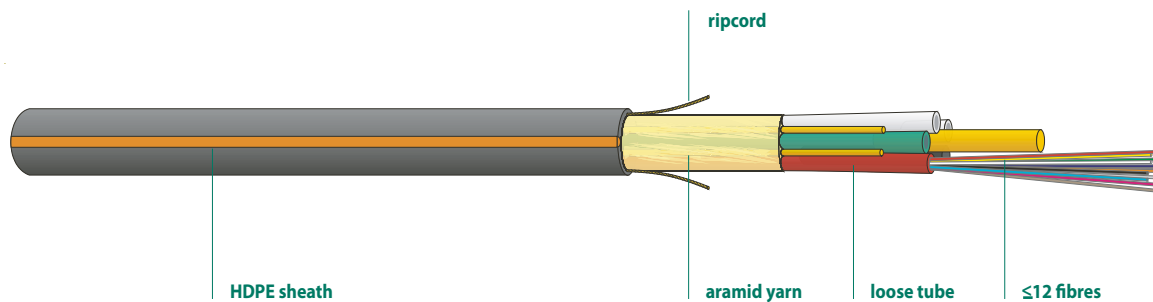
Product information

Features	Highly compact, metal-free, fibre optic outdoor cable containing up to 72 fibres with dry interstices and stranded loose tubes. Easily cut-back, installation-friendly cable construction.

Application

Optimised for injection in to microducts of 7mm and 10mm diameter.
Fibre to the Home.

Optical characteristics

The cables are available with different types of fibre.

Mechanical characteristics

temperature range	storage	-40 / +70°C	IEC 60794-1-2 F1
	pulling in	-15 / +40°C	
	operation	-40 / +70°C	

tensile performance	IEC 60794-1-2 E1
crush resistance	IEC 60794-1-2 E3
repeated bending	IEC 60794-1-2 E6
torsion	IEC 60794-1-2 E7
bend	IEC 60794-1-2 E11
water penetration	IEC 60794-1-2 F5

General characteristics

Printing example	DÄTWYLER OPTOFIL 72E9 G.652D WBKT MICRO
	C-no. 10857 3750 m

Zero halogen,
non corrosive gases   IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

GF-1404 optofil® Micro wbKT 60F 1108/e

Subject to technical modification.

DÄTWYLER

optofil® outdoor cable / A-DQ(ZN)2Y
wbKT Micro (up to 72 fibres)
nonmetallic, non-armoured,
dry interstices, water tightness

unilan®

description		no. of fibres	loose tube	cableØ	weight	bending radius	tensile load	crush resistance		Fire load	
A-DQ(ZN)2Y nxm		max.	max.	mm	kg/km	mm	N	continuous N/cm	short term N/cm	kWh/km	MJ/km
Micro wbKT	5x12	60	5	6.6	30	150	1000	60	160	247	889
Micro wbKT	6x12	72	6	6.5	30	150	1000	60	160	243	875

Versions

A-DQ(ZN)2Y nxm		fibre	Article No.
description		number	E9/125 G.652.D
Micro wbKT	1 x 12	12	191 706
Micro wbKT	2 x 12	24	190 080
Micro wbKT	3 x 12	36	190 229
Micro wbKT	4 x 12	48	190 230
Micro wbKT	5 x 12	60	190 231
Micro wbKT	6 x 12	72	190 232
Different fibre types on request.			

Subject to technical modification.

optofil® outdoor cable / A-DQ(ZN)B2Y
wbGGT HighP
nonmetallic, dry interstices,
water resistant, rodent protected

DATWYLER

swelling tape

HDPE sheath   ripcord   glass armouring   loose tube   ≤24 fibres
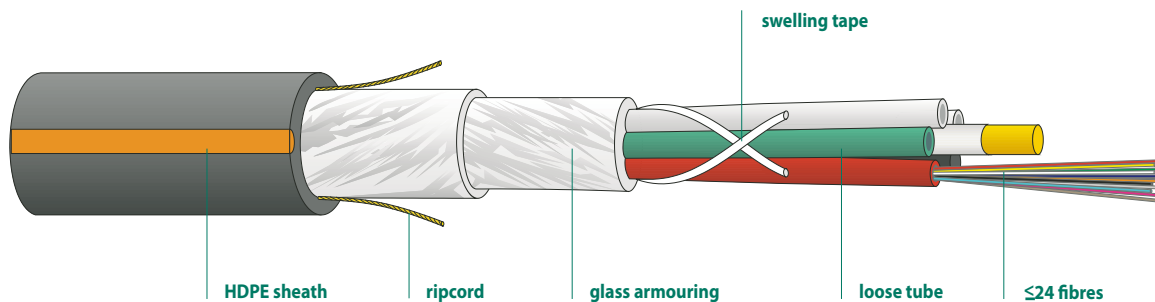
Product information

Features

Robust, non metallic fibre optic outdoor cable with stranded loose tube in one layer.
High crush resistance for high transmission reliability.
Easy handling cable construction by using dry interstices.
Non metallic rodent protection.
The 2 coloured ripcords are easy to identify for safe opening of the cable sheath.
HDPE sheath, easy to lay

Application

Pulling in or blowing through thermoplastic ducts
Laying on cable platforms and cable trays
Direct burial
Complex cable trays

Optical characteristics

The cables are available with different types of fibre.

Mechanical characteristics

temperature range	storage	-40 / +70℃	IEC 60794-1-2 F1
	pulling in	-10 / +50℃	
	operation	-40 / +60℃	
tensile performance	IEC 60794-1-2 E1		
crush resistance	IEC 60794-1-2 E3		
impact	IEC 60794-1-2 E4		
repeated bending	IEC 60794-1-2 E6		
torsion	IEC 60794-1-2 E7		
bend	IEC 60794-1-2 E11		
water penetration	IEC 60794-1-2 F5		

General characteristics

Printing example   DÄTWYLER OPTOFIL 96E9 G.652D WBGGT HIGHP
C-no. 10858 ~ 🠒 ~ 3630 m ~ 🠒 ~

Zero halogen,
non corrosive gases   IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

Subject to technical modification.

![Datwyler logo]

optofil® outdoor cable / A-DQ(ZN)B2Y
wbGGT HighP
nonmetallic, dry interstices,
water resistant, rodent protected

description	no. of fibres	loose tube	cableØ	weight	bending radius	tensile load	crush resistance		Fire load	
A-DQ(ZN)B2Y nxm	max.	max.	mm	kg/km	mm	N	continuous N/cm	short term N/cm	kWh/km	MJ/km
wbGGT5 HighP	60	5	12.0	126	180	9000	300	800	1040	3744
wbGGT6 HighP	72	6	12.8	146	195	9000	300	800	1137	4093
wbGGT8 HighP	96	8	14.0	170	210	9000	300	800	1305	5033
wbGGT10 HighP	120	10	15.4	200	230	9000	300	800	1491	5368
wbGGT12 HighP	144	12	16.9	237	255	9000	300	800	1707	6145
wbGGT6 HighP	144	6	13.8	167	205	9000	300	800	1291	4655
wbGGT8 HighP	192	8	15.0	199	225	9000	300	800	1570	5661
wbGGT10 HighP	240	10	17.0	250	255	9000	300	800	1962	7175
wbGGT12 HighP	288	12	18.8	292	285	9000	300	800	2422	8719

Versions

A-DQ(ZN)B2Y nxm		fibre	Article No.
description		number	E9/125 G.652.D
wbGGT5 HighP	1 x 12	12	190 059
wbGGT5 HighP	2 x 12	24	186 748
wbGGT5 HighP	3 x 12	36	190 058
wbGGT5 HighP	4 x 12	48	187 385
wbGGT5 HighP	5 x 12	60	190 171
wbGGT6 HighP	6 x 12	72	190 172
wbGGT8 HighP	8 x 12	96	186 760
wbGGT10 HighP	10 x 12	120	190 175
wbGGT12 HighP	12 x 12	144	187 394
wbGGT6 HighP	6 x 24	144	190 764
wbGGT8 HighP	8 x 24	192	191 270
wbGGT10 HighP	9 x 24	216	190 696
wbGGT10 HighP	10 x 24	240	190 109
wbGGT12 HighP	12 x 24	288	190 325
Different fibre types on request.			

Subject to technical modification.

optofil® outdoor cable / A-DQ(ZN)B2Y
wbGGT HighP (City Compact)
nonmetallic, dry interstices,
water resistant, rodent protected

DÄTWYLER

swelling tape

HDPE sheath   ripcord   glass armouring   loose tubes   ≤24 fibres
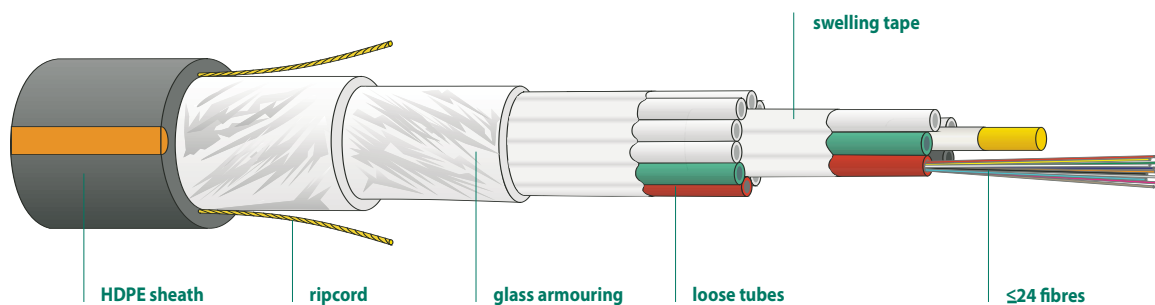
Product information

Features

Compact, fibre optic outdoor cable ≤ 576 fibres for city and access network applications.
Easy handling cable construction by using dry interstices.
Non metallic rodent protection.
The 2 couloured ripcords are easy to indentify for safe opening of the cable sheath.
HDPE sheath, easy to lay.

Application

Optimised for injection into compact thermoplastic ducts K28/D32 (design 18x12)
and K44/D40 (design 18x24, 24x12).

Optical characteristics

The cables are avaiable with different types of fibre.

Mechanical characteristics

temperature range	storage	-40 / +70℃	IEC 60794-1-2 F1
	pulling in	-10 / +50℃	
	operation	-40 / +60℃	
tensile performance	IEC 60794-1-2 E1		
crush resistance	IEC 60794-1-2 E3		
repeated bending	IEC 60794-1-2 E6		
torsion	IEC 60794-1-2 E7		
bending	IEC 60794-1-2 E11		
water penetration	IEC 60794-1-2 F5		

General characteristics

Printing example

DÄTWYLER OPTOFIL 216E9 G.652D WBGGT HIGHP
C-no. 10859 ~ ⬭ ~ 2550 m ~ ⬭ ~

Zero halogen,
non corrosive gases   IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

Subject to technical modification.

optofil® outdoor cable / A-DQ(ZN)B2Y
wbGGT HighP (City Compact)
nonmetallic, dry interstices,
water resistant, rodent protected

Communication technology

uniplan®

Central Office/PoP Solutions

Cabling Solutions

In-house Cabling Solutions

Management Software Solution

description	no. of fibres	loose tube	cableØ	weight	bending radius	tensile load	crush resistance		Fire load	
A-DQ(ZN)B2Y nxm	max.	max.	mm	kg/km	mm	N	continuous N/cm	short term N/cm	kWh/km	MJ/km
wbGGT18 HighP	180	18	18.5	285	470	9000	300	500	2492	7967
wbGGT18 HighP	192	18	18.5	285	470	9000	300	500	2492	7967
wbGGT18 HighP	216	18	18.5	285	470	9000	300	500	2492	7967
woGGT24 HighP	240	24	22.0	373	550	9000	300	500	2568	9245
woGGT24 HighP	288	24	22.0	375	550	9000	300	500	2568	9245
wbGGT18 HighP	432	18	20.6	335	515	9000	300	500	3115	11214
woGGT24 HighP	576	24	22.0	643	705	9000	300	500	4786	15123

Versions

A-DQ(ZN)B2Y nxm		fibre	Article No.
description		number	E9/125 G.652.D
wbGGT18 HighP	15 x 12	180	190 709
wbGGT18 HighP	16 x 12	192	190 699
wbGGT18 HighP	18 x 12	216	190 176
wbGGT24 HighP	20 x 12	240	191 693
wbGGT24 HighP	24 x 12	288	190 399
wbGGT18 HighP	18 x 24	432	190 178
wbGGT24 HighP	24 x 24	576	190 700
Different fibre types on request.			

Direct-burial cable

DATWYLER

Product information

Description

Single tubes of NDPE with colour code, system numbering and intermediate layer of swelling tape to prevent penetration of water. Inner coating of HDPE black, outer sheath of HDPE orange.

Colour code

1 way	4 way	7 way	12 way	19 way	24 way
1 Natural	1 Red	1 Yellow	1/4 Red	1 Yellow	1 and 10 Red
	2/3 Natural	2 Red	2 Natural	2 and 8 Red	2/8 Natural
	4 Green	3/6 Natural	3 and 12 Green	3/6 Natural	9 and 24 Green
		7 Green	5/7 Blue	7 and 19 Green	11/17 Blue
			8/11 Orange	9/13 Blue	18/23 Orange
				14/18 Orange	

Other colours and specific sheath printing on request.

Article No.	Description	PU
343 201	Direct-burial cable 1x5/3.5 mm	Drum of 2000 m
343 202	Direct-burial cable 4x5/3.5 mm	Drum of 2000 m
343 203	Direct-burial cable 7x5/3.5 mm	Drum of 2000 m
343 204	Direct-burial cable 12x5/3.5 mm	Drum of 2000 m
343 205	Direct-burial cable 19x5/3.5 mm	Drum of 2000 m
343 206	Direct-burial cable 24x5/3.5 mm	Drum of 2000 m
343 207	Direct-burial cable 24x5/3.5+10/8 mm	Drum of 2000 m

Subject to technical modification.

Product information

Description

The micro duct is used for mechanical protection of optical micro cables.
The outer structural wall is made from high density polyethylene (HDPE).
The surface of the inner wall is of finely corrugated. The tubes are available
in the outer diameter of 8 mm to 16 mm.

Packaging and Storage

Micro ducts are reeled on re-usable wooden drums and coils are wrapped in stretch film.
The ends of the ducts can be protected with plastic caps preventing penetration of dust.
The drum core diameter is 415 mm.
The periphery width can be up to 10% bigger due to micro ducts being pressure-winded
(drum width is measured from center of axis).

Article Nr.	Description	PU
343 3xx	Micro duct for direct-burial 8/5 mm	Drum of 4800 m
343 4xx	Micro duct for direct-burial 10/6 mm	Drum of 3000 m
343 5xx	Micro duct for direct-burial 12/7 mm	Drum of 2000 m
343 6xx	Micro duct for direct-burial 12/8 mm	Drum of 2000 m
343 7xx	Micro duct for direct-burial 14/10 mm	Drum of 1350 m
343 8xx	Micro duct for direct-burial 16/12 mm	Drum of 1000 m
343 9xx	Micro duct for in-pipe-laying 8/5 mm	Drum of 4800 m
344 0xx	Micro duct for in-pipe-laying 8/6 mm	Drum of 4800 m
344 1xx	Micro duct for in-pipe-laying 10/8 mm	Drum of 3000 m
344 2xx	Micro duct for in-pipe-laying 12/10 mm	Drum of 2000 m
344 3xx	Micro duct for in-pipe-laying 14/12 mm	Drum of 1350 m

	Colour	Article No. addition		Colour	Article No. addition
Micro ducts are available in following colours:	red	01		white	05
	green	02		grey	06
	blue	03		orange	07
	yellow	04			

Subject to technical modification.

Product information

Permanent connector

Description

Straight connector with permanent locking to micro ducts to avoid accidental tear-out.
Increased pressure limit. Disassembly of connector only possible with wrench.

Article No.	Description	PU
344 501	Straight Connector 5 mm	10 pcs
344 502	Straight Connector 8 mm	10 pcs
344 503	Straight Connector permanent 10 mm	10 pcs
344 504	Straight Connector permanent 12 mm	10 pcs
344 505	Straight Connector permanent 14 mm	10 pcs

Size-adjustable connector

Description

Straight connector suitable for joining micro ducts of different size.
Locking clips to prevent tear-out of micro ducts to be purchased separately.

Article No.	Description	PU
344 506	Reducing connector straight 8 to 5 mm	10 pcs
344 507	Reducing connector straight 10 to 8 mm	10 pcs
344 508	Reducing connector straight 12 to 8 mm	10 pcs
344 509	Reducing connector straight 12 to 10 mm	10 pcs

Permanent end cap

Description

Transparent end cap to cover open micro ducts and to prevent penetration of dirt.

Article No.	Description	PU
344 510	End cap 5 mm	10 pcs
344 511	End cap 8 mm	10 pcs
344 512	End cap permanent 10 mm	10 pcs
344 513	End cap permanent 12 mm	10 pcs
344 514	End cap permanent 14 mm	10 pcs

Subject to technical modification.

Product information

Description

Water-proof end cap
End cap with special seal to prevent penetration of water to installed micro ducts.
Locking clips to prevent tear-out of micro ducts to be purchased separately.

Article No.	Description	PU
344 515	Water-proof end cap 10 mm	10 pcs
344 516	Water-proof end cap 12 mm	10 pcs

Description

Gas-proof connector
Connector with special seal to prevent penetration of gas to installed micro ducts.
Locking clips to prevent tear-out of micro ducts to be purchased separately.

Article No.	Description	PU
344 517	Gas-proof connector 5 mm	10 pcs
344 518	Gas-proof connector 8 mm	10 pcs
344 519	Gas-proof connector 10 mm	10 pcs
344 520	Gas-proof connector 12 mm	10 pcs

Description

Half-shell sealing element
Half-shell sealing element to prevent penetration of water and gas to micro ducts and cables inside.

Article No.	Description	PU
344 521	Half-shell sealing element. cable dia. 4-8 mm, micro duct 10-12 mm outer diameter	1 pcs
344 522	Half-shell sealing element, cable dia. 4-8 mm, micro duct 14 mm outer diameter	1 pcs

Subject to technical modification.

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Product information

Locking clips
Locking clips to prevent accidental tear-out of micro ducts.

Description

Article No.	Description	PU
344 523	Locking clip 4-8 mm	100 pcs
344 524	Locking clip 10-12 mm	100 pcs
344 525	Locking clip 12-16 mm	100 pcs

Plastic cap
Plastic cap for temporary sealing of micro duct ends.

Description

Article No.	Description	PU
344 526	Plastic cap 5 mm	100 pcs
344 527	Plastic cap 8 mm	100 pcs
344 528	Plastic cap 10 mm	100 pcs
344 529	Plastic cap 12 mm	100 pcs
344 530	Plastic cap 14 mm	100 pcs
344 531	Plastic cap 16 mm	100 pcs

Micro duct shears
Shears for cutting micro ducts with outer diameter 4-28 mm

Description

Article No.	Description	PU
344 532	Micro duct shears 4-28 mm	1 pcs

Product information

Description

Duct knife
Special knife with flat tip for stripping sheath of flat micro ducts

Article No.	Description	PU
344 533	Cable knife	1 pcs

Description

Micro duct deburring tool
Special tool for deburring inner edge of micro duct.

Article No.	Description	PU
344 534	Deburrer	1 pcs

Subject to technical modification.

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Communication technology

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Cabling Solutions

In-house Cabling Solutions

Management Software Solution

Product information

Description

Y enclosure (not water-proof)

Y enclosure for branching micro duct routes from 1 direction.
This solution is not water-proof.

Article No.	Description	PU
344 535	Y enclosure 50/50/32 mm	1 pcs
344 536	Y enclosure 50/50/50 mm	1 pcs

Description

T enclosure (not water-proof)

T enclosure for branching micro duct routes from 2 directions.
This solution is not water-proof.

Article No.	Description	PU
344 537	T enclosure 50/50/32 mm	1 pcs
344 538	T enclosure 50/50/50 mm	1 pcs

Description

Inline hermetic enclosure (water-proof)

Inline enclosure for inter-connection of micro tubes in duct route.
This solution is water-proof (IP65).

Article No.	Description	PU
344 539	I-Hermetic element for microducts 50 mm	1 pcs
344 540	Entry sealing element 40 mm HDPE	1 pcs
344 541	Cable gland 50 mm for enclosure	1 pcs
344 542	Entry sealing of 5x12 micro ducts	1 pcs
344 543	Entry sealing of 6x14 micro ducts	1 pcs

Subject to technical modification.

Product information

Description

Hermetic enclosure (water-proof)
H enclusure for branching micro duct routes.
This solution is water-proof

Article No.	Description	PU
344 544	H hermetic element for micro ducts 50 mm	1 pcs
344 540	Entry sealing element 40 mm HDPE	1 pcs
344 541	Cable gland 50 mm for enclosure	1 pcs
344 542	Entry sealing of 5x12 micro ducts	1 pcs
344 543	Entry sealing of 6x14 micro ducts	1 pcs

Description

CLP BOX – micro cable spare loop
Box for storing spare loop of micro cable.
Max. 50 m of micro cable up to 8 mm in size can be stored.

Article No.	Description	PU
344 549	CLP BOX – storing spare loop of micro cable, 8-10 mm	1 pcs
344 550	CLP BOX – storing spare loop of micro cable, 12 mm	1 pcs
344 551	CLP BOX – storing spare loop of micro cable, 14 mm	1 pcs

DATWYLER

Product information

Description

Tube distribution closure

The tube distribution closure is a direct-bury inline-sealed closure (IP68-rated) designed for intercepting a blown fibre tube cable/duct assembly to allow multiple spur-offs to blown fibre tube cables or ducts which are smaller in size.

Article No.	Description	PU
344 601	Tube distribution closure (TDC) MKII	1 pcs
344 602	17-21 mm inline seals	1 pcs
344 603	21-24 mm inline seals	1 pcs
344 604	24-28 mm inline seals	1 pcs
344 605	28-32 mm inline seals	1 pcs
344 606	32-36 mm inline seals	1 pcs
344 607	TDC end of run filter blank	1 pcs
344 608	Cable seal kit: 40 mm duct	1 pcs
344 609	14.5 to 17 mm end gland	1 pcs
344 610	17 to 20 mm end gland	1 pcs
344 611	22 to 24.5 mm end gland	1 pcs
344 612	4x DB1 (Ø9.5 mm) tube	1 pcs
344 613	8 to 11.5 mm side gland	1 pcs
344 614	14.5 to 16.5 mm side gland	1 pcs
344 615	TDC silicone grease	1 pcs
344 616	TDC silicone sealant	1 pcs
344 617	TDC cable gland spanner	1 pcs
344 618	TDC knock-out tool kit	1 pcs

Mikrorohr-Zubehör 0111/e

Subject to technical modification.

Product information

FTTH membrane-injection-house-inlet Ø 40-50mm

Description

FTTH house-inlet as membrane-injection-system for direct installation in holes with Ø 40-50 mm, suitable for all common types of walls with wall thickness of 200-600 mm. Gas- and water-proof up to min. 1,0 bar. Including outer wall sealing with integrated multiple sealing for fibre cables, ducts of Ø 5 – 9 mm and Ø 9 – 12 mm – with blind membrane water-proof seal.

Article no.	Description	Set content	PU
344 636	Set of wall ducts 40 mm for inlet of up to 2 cables/ducts with Ø 5-7 mm, incl. corrugated pipe and extender resin. For holes with Ø 40-50 mm and wall thickness from 200-600 mm	10 pcs wall duct 10 pcs corrugated pipes 10 pcs extender resin cartridge 1 pc installation tool	1 set
344 637	Wall duct 40 mm for inlet of 1 cable/duct with Ø 9-12 mm incl. corrugated pipe and extender resin. For holes with Ø 40-50 mm and wall thickness of 200-600 mm	10 pcs wall duct 10 pcs corrugated pipes 10 pcs extender resin cartridge 1 pc installation tool	1 set

FTTH membrane-Injection-house-inlet Ø 62-65mm

Description

FTTH house-inlet as membrane-injection-system for direct installation in holes with Ø 62-65 mm, suitable for all common types of walls with thickness of 200-600 mm. Gas- and water-proof up to min. 1,0 bar. Including outer wall sealing with integrated multiple sealing for fibre cables, ducts of Ø 6-34 mm. Including outer wall sealing flange.

Article no.	Description	Set content	PU
344 638	Set of wall ducts 60 mm for sealing cables with Ø 30-34 mm (option to seal cables with Ø 6-30 mm by using interchangable inserts) incl. extender resin For holes with Ø 62-65 mm and wall thickness from 200-900 mm	10 pcs wall duct 10 pcs extender resin cartridge 1 pc installation tool	1 set
344 627	LWL-corrugated pipe Suitable for FTTH house inlet 60 mm		1 pc.
344 629	Sealing-insert for duct/cables Ø 24-30 mm		1 pc.
344 630	Sealing-insert for duct/cables Ø 18-24 mm		1 pc.
344 631	Sealing-insert for duct/cables Ø 12-18 mm		1 pc.
344 632	Sealing-insert for duct/cables Ø 6-12 mm		1 pc.
344 633	Sealing-insert for duct/cables Ø 4x7 mm		1 pc.

Accessories

Description

Accessories to 40 mm – 60 mm house inlets

Article no.	Description	PU
344 634	Injection-gun for 2 components-resin	1 pc.

Subject to technical modification.

DATWYLER

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Cabling Solutions

In-house Cabling Solutions

Management Software Solution

In-Line Closure FOSC

Product information

In-Line Closure FOSC

Application

The in-line closure FOSC is the environmentally sealed enclosure for fibre managment in the outside plant network for aerial, underground or direct buried applications. It is a cold applied re-usable closure housing one mass splicing tray and cable attachment units. They fit perfectly well as a customer drop, tap-off or in-line splice closure in the low fibre count part of the network.

Features

round cable ports are provided in a wrap-around block with pre-installed gel profile for cable sealing. Compatible with most existing cable constructions: e.g. loose tube, central core and minibundle.
- easy re-entry and re-closure mechanism with hinge and latches
- cold applied cable sealing based on gel technology
- integrated cable jacket gripping devices

	FOSC 500AA	FOSC 500B	FOSC 600C	FOSC 600D
Dimensions (in mm)				
Length (without mounting parts)	422	636	828	828
Length (with mounting parts)	472	648		
Height	65	140	152	25.4
Width	125	160	274	274
Splice capacity (n fibres)				
Number of splices	24	144	216	504
Number of splicing trays	1	6	3	7
Number of splices per trays	24	24	72	72
with ANT splice protection	x	x	x	x
with SMOUV splice protection	x	x	x	x
Cable ports				
number of cable ports	2+2	2+4	max. 16	max. 16
cable ø range	5-15 mm	7-40 mm	10-28 (28-35) mm	10-28 (28-35) mm
Cable type				
loose tube cable design	x	x	x	x
central core cable design	x	x	x	x
minibundle cable design	x	x	x	x
Article No.	on request	on request	on request	on request

Subject to technical modification.
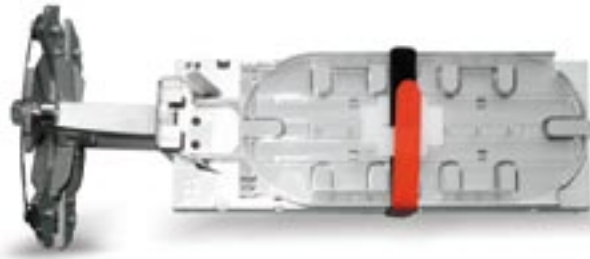
Fibre optic Splice Closure FOSC

Product information

Application

Fibre optic Splice Closure FOSC
All sizes are designed for use with any cable construction (loose buffer tube; central core - or minibundle cable), in any environment (aerial, pedestal, buried, handhole, manhole) and for numerous splice applications (wcpressed, tap-off, branch and repair).

Features

- Base-to-dome seals on FOSC are mechanical for ease of installation and re-entry.
- Cable seals feature a new heatshrink sleeve and hot melt adhesive system that is installed with a hot-air-gun.
- The large oval port enabled to receive main disttibution cable with a high number of fibres.

	FOSC 400 A4	FOSC 400 B2, B4	FOSC 400 D5
Dimensions (in mm)			
Length	420	540	710
diameter	180	180	260
Splice capacity (n fibre)			
number of splicing trays	2	4	8
number of splices with ANT	12	12	36
number of splices with SMOUV	24	24	72
Cable ports			
number of cable ports	4x round	2x (4x) round	5x round
cable ø range	5-19 mm	5-32 mm (5-19 mm)	5-32 mm
number of cable ports	1x oval	1x oval	1x oval
cable ø range	10-25 mm	10-25 mm	10-25 mm
Cable type			
loose tube cable design	x	x	x
central core cable design	x	x	x
minibundle cable design	x	x	x
Article No.	on request	on request	on request

Subject to technical modification.

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Communication technology

Central Office/PoP Solutions

Cabling Solutions

In-house Cabling Solutions

Management Software Solution

Fibre optic Splice Closure
GCOG2

DÄTWYLER

Fibre optic Splice Closure GCOG2

Product information

Application

Fibre optic Splice Closure GCOG2
The splice closures GCOG2 have a single-ended desgin and are compatible with most common cable types. The closures can be used as:
- splicing closure and branch tee
- coupling closure as an underground connection point
- distribution closure
- the FO-gel closure is suitable for storage in cable pits, in soil as well as attachment at masts, walls or racks.

Features

- 6 round cable ports are provided in a wrap-around block with pre-installed gel profile for cable sealing.
- Compatible with most common cable types: e.g. loose tube, central core and minibundle.
- Uncut fibres can be stored as single circuits in trays/or as cable elements in the storage space between the profiles.
- Storage baskets are available for mass storage of fibres of central core and minibundle cable constructions.

	GCOG2-BC6	GCOG2-BD6	GCOG2-BE6
Dimensions (in mm)			
Length excl. trigger	543	621	750
diameter	247	247	247
diameter with clamp	291	291	291
Splice capacity			
single circuit	80 fibres / 40 trays	144 fibres / 72 trays	208 fibres / 104 trays
single element	240 fibres / 20 trays	432 fibres / 36 trays	624 fibres / 52 trays
Cable ports			
number of cable ports	6	6	6
cable ø range	9-25 mm	9-25 mm	9-25 mm
Cable type			
loose tube cable design	x	x	x
central core cable design	x	x	x
minibundle cable design	x	x	x
Article No.	on request	on request	on request

Subject to technical modification.

Fibre optic Sewage Closure SCO2

Fibre optic Sewage Closure SCO2

Product information

Application

Fibre optic Sewage Closure SCO2
This slim metal closure is specially designed to fit in small sewage canal systems and is therefore resistant to very aggressive environments.

Features

- Heat-shrinkable cable seals with 6 or 10 round entry/exit ports for drop cables and 1 oval port for looped(uncut) cable
- Uncut fibres can be stored as single circuits in SC trays, as single element in SE trays or as loose buffer tubes at the back side of the UMS profile.
- The FIST-SCO2 with 10 ports specifically developed for loose tube cable, whereas the FIST-SCO2 with 6 ports is compatible with most common cable types: e.g. loose tube, central core, minibundle.

	SCO2-BE06	SCO2-BE10
Dimensions (in mm)		
Length including caps on cable ports	750	750
Width at base	285	285
Width at the top of dome	259	259
Depth at the base	147	147
Depth at the dome handle	142	142
Splice capacity (n fibres)		
Single Circuit, primary coated	96 fibres / 48 fibres	96 fibres / 48 fibres
Single Element, primary coated	288 fibres / 24 fibres	288 fibres / 24 fibres
Cable ports		
Number of cable ports	6 round	10 round
Cable ø range	5-25 mm	5-15 mm
Number of cable ports	1 oval	1 oval
Cable ø range	12-25 mm	12-25 mm
Cable type		
Loose tube cable design	x	x
Central core cable design	x	
Minibundle cable design	x	
Article No.	on request	on request
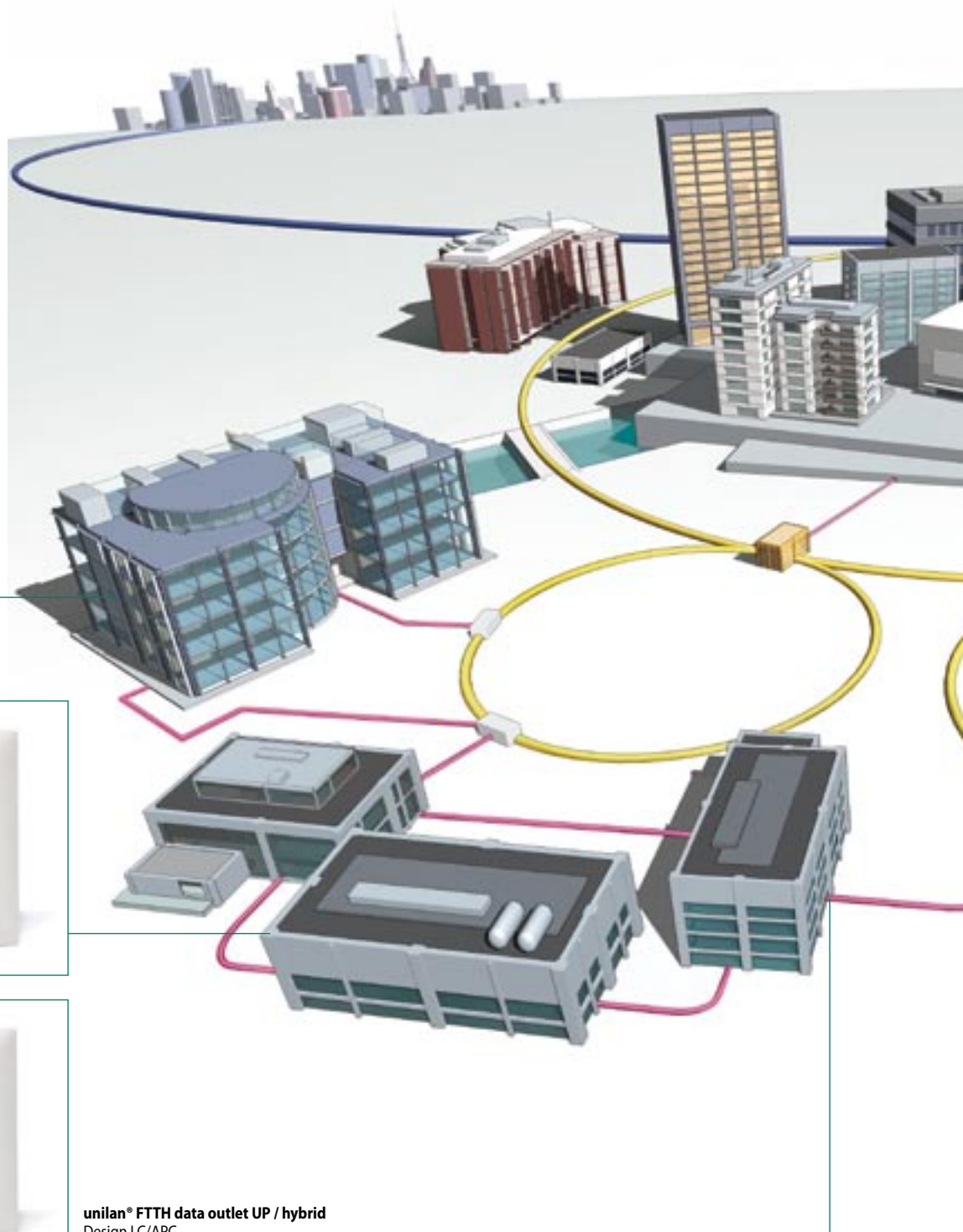
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In-house Cabling Solutions

unilan® FTTH data outlet UP / hybrid
Design LC/APC
for duct mounting
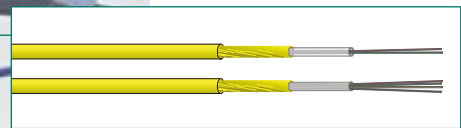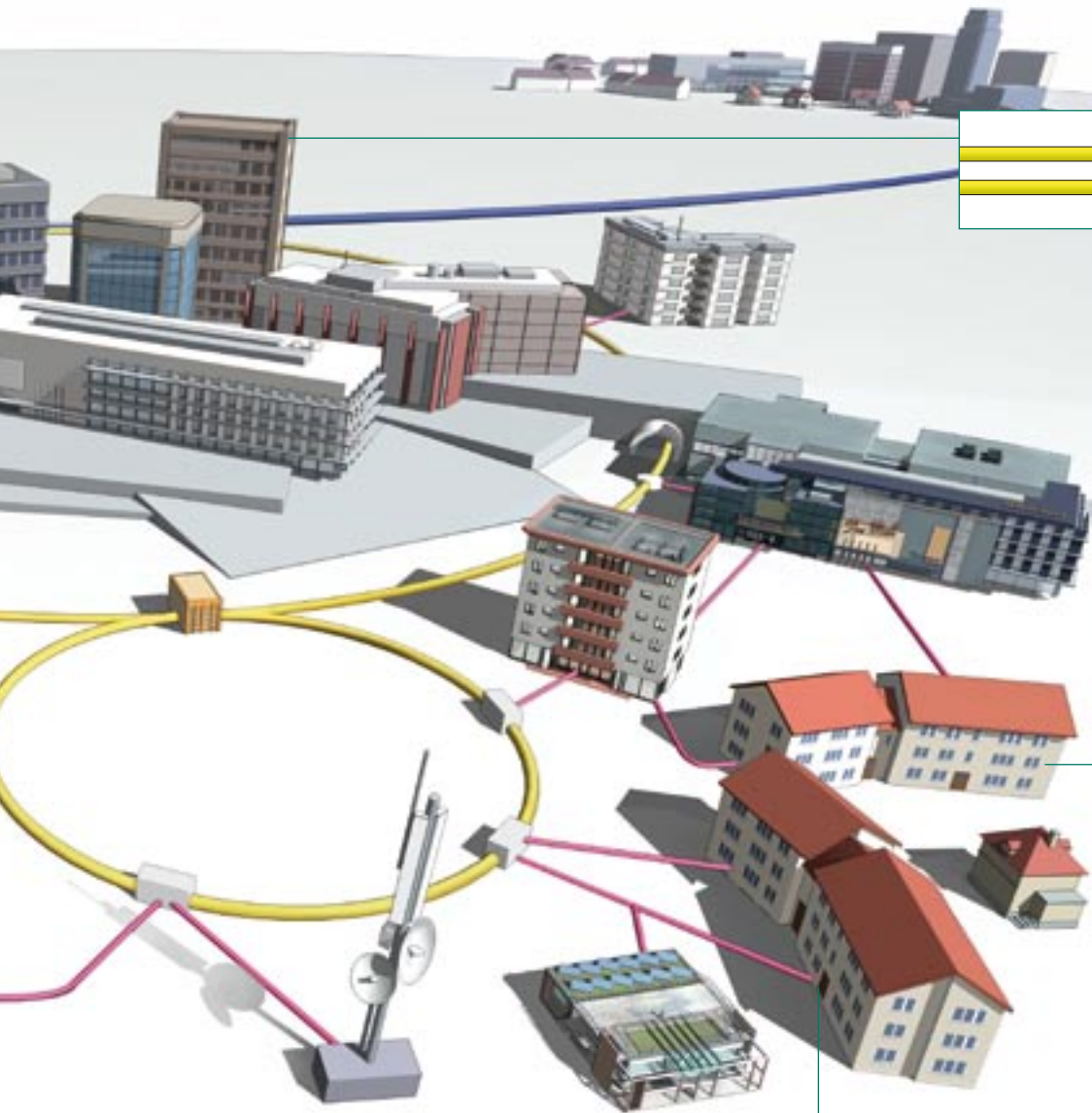
optofil® indoor cable
FTTH cable 2.2 mm, LS0H
page 66

Fibre optic distribution box
page 70

optofil® indoor cable / I-V(ZN)H

FTTH cable 2.2 mm, LS0H
Coating buffer design,
flame retardant according to IEC 60332.1
in accordance to IEC 60794-2-20

DÄTWYLER

| LS0H sheath | aramid yarn | coating-buffer | fibre |
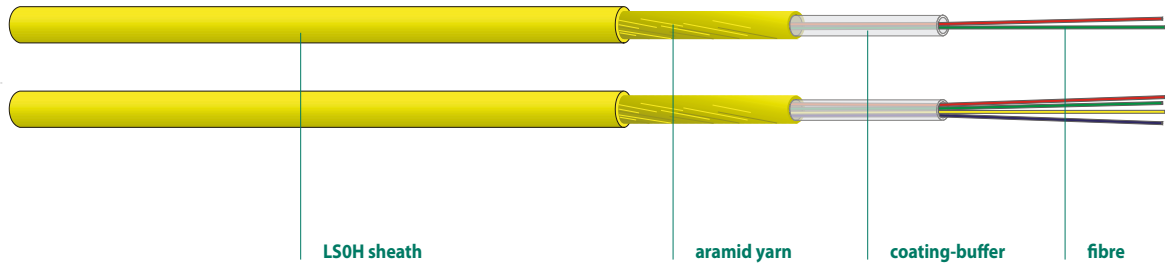
Product information

Features

Easy handling fibre optic indoor cable
Very small outer diameter of 2.2mm in case of innovative coating-buffer
Flame retardant FR/LSOH cable construction with very low fire load
Robust coat for introduction in tubing plants with existing cables

Application

In-house cabling solutions for Fibre to the Home (FTTH) applications
In- house cabling solutions for integrated data network and building automation
Connection cable between building entrance facilities and fibre optic data outlet
Can be laid in cable trays, ducts and vertical shafts
Can be spliced in wall mounted distribution box and in fibre optic data outlet

Optical characteristics

The cables are available with the following types of fibre ITU G.657 A

Mechanical characteristics

temperature range	operation	-20 / +60°C IEC 60794-1-2 F1
tensile performance	IEC 60794-1-2 E1	
crush resistance	IEC 60794-1-2 E3	
impact	IEC 60794-1-2 E4	
repeated bending	IEC 60794-1-2 E6	
torsion	IEC 60794-1-2 E7	
bend	IEC 60794-1-2 E11	

General characteristics
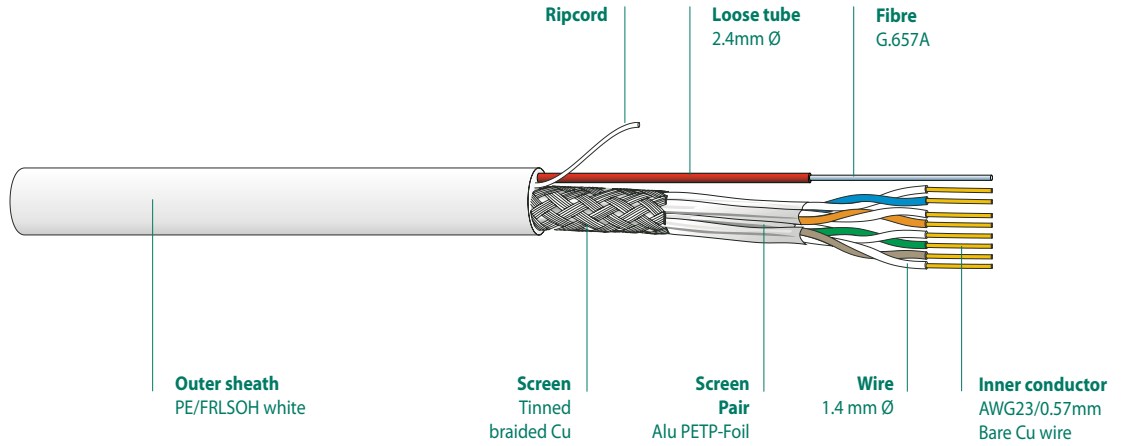
sheath colour	yellow RAL 1021
Printing example	Dätwyler optofil INDOOR FTTH 1X4FS/SM G.657A
	C-no. 10880 2050 m

Zero halogen,
non corrosive gases   IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
Flame propagation   IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
Smoke density   IEC 61034-1/-2, EN 61034-1/-2,
                           VDE 0482-1034-1/-2

description		cable Ø	weight	bending radius	tensile load	crush resistance	Fire load
I-V(ZN)H		mm	kg/km	mm	N	short term N/cm	kWh/km
Optofil-I 2.2, LS0H	1 x 2	2.2	4.0	25	400	50	23
Optofil-I 2.2, LS0H	1 x 4	2.2	4.0	25	400	50	23

Versions

I-V(ZN)H		fibre	Article No.
description		number	ITU G.657 A
Optofil-I 2.2, LS0H	1 x 2	2	191 801
Optofil-I 2.2, LS0H	1 x 4	4	191 800

Subject to technical modification.

DÄTWYLER

optofil® indoor cable / I-V(ZN)H
FTTH cable 2.8 mm, LS0H
Tight buffer design,
flame retardant according to IEC 60332.1
in accordance to IEC 60794-2-20

| LS0H sheath | aramid yarn | tight buffer 600µm | fibre |
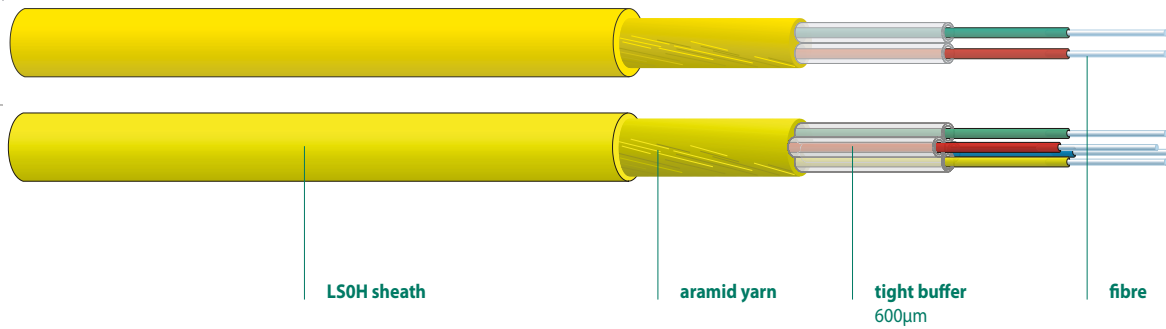
Product information

Features

Easy handling fibre optic indoor cable
Small outer diameter in tight buffer construction with 0.6mm tight buffer
Flame retardant FR/LSOH cable construction with very low fire load
Robust coat for introduction in tubing plants with existing cables.

Application

In-house cabling solutions for Fibre to the Home (FTTH) applications
In-house cabling solutions for integrated data network and building automation
Connection cable between building entrance facilities and fibre optic data outlet
Can be laid in cable trays, ducts and vertical shafts
Direct connector installation
Can be spliced in wall mounted distribution box and in fibre optic data outlet

Optical characteristics

The cables are available with the following types of fibre ITU G.657 A

Mechanical characteristics

temperature range	operation	-20 / +60°C IEC 60794-1-2 F1
tensile performance	IEC 60794-1-2 E1	
crush resistance	IEC 60794-1-2 E3	
impact	IEC 60794-1-2 E4	
repeated bending	IEC 60794-1-2 E6	
torsion	IEC 60794-1-2 E7	
bend	IEC 60794-1-2 E11	

General characteristics

sheath colour	yellow RAL 1021
Printing example	Dätwyler optofil INDOOR FTTH 4X1 FS SM G.657A
	C-no. 10880 2050 m

Zero halogen,
non corrosive gases   IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
Flame propagation   IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
Smoke density   IEC 61034-1/-2, EN 61034-1/-2,
VDE 0482-1034-1/-2

description		cable Ø	weight	bending radius	tensile load	crush resistance	Fire load
I-V(ZN)H		mm	kg/km	mm	N	short term N/cm	kWh/km
Optofil-I 2.8, LS0H	2 x 1	2.8	7.5	25	400	50	41
Optofil-I 2.8, LS0H	4 x 1	2.8	8.0	25	400	50	43

Versions

I-V(ZN)H		fibre	Article No.
description		number	ITU G.657 A
Optofil-I 2.8, LS0H	2 x 1	2	191 803
Optofil-I 2.8, LS0H	4 x 1	4	191 802

Subject to technical modification.

Hybrid cable uninet® 7080 4P+2 G.657A

DATWYLER

Ripcord	**Loose tube** 2.4mm Ø	**Fibre** G.657A

Outer sheath PE/FRLSOH white	**Screen** Tinned braided Cu	**Screen** **Pair** Alu PETP-Foil	**Wire** 1.4 mm Ø	**Inner conductor** AWG23/0.57mm Bare Cu wire

Product information

Features

Electrically and mechanically high-quality Cat. 7 data cable - satisfying the highest demands!
Excellent screen effect due to individual foil screened pairs and overall copper braid.
Compatible with all current connecting hardware to EN 50173-1 and ISO/IEC 11801 2nd Edition.
Guaranteed limit values according to Cat.7: ISO/IEC 11801:2002, EN 50173-1 and EN 50288-4-1.
2 fibres 9/125 µm, according to ITU G.657A, are protected by a loose tube 2,40 mm.

Applications

Data cable for structured premises cabling
For transmission of digital and analogue voice and data signals.
Especially suitable for all Class F applications.
ISDN, Ethernet 10 Base-T, Fast Ethernet 100 Base-T, Gigabit Ethernet 1000 Base-T,
Token Ring 4/16 Mbit/s, TP-PMD/TP-DDI 125 Mbit/s, ATM 155 Mbit/s.
There is a possibility, of transmitting two different communication services
(e.g., EDP + telephony, Ethernet + Token Ring) simultaneously over one cable (cable sharing).

Versions

Article No.	Dimension	Type	Sheath	Sheath Ø	Weight	Cu weight	Fire load		PU
	n x n x mm (AWG)			mm	kg/km	kg/km	kWh/m	MJ/m	
192 180	4 x 2 x 0.57 (AWG 23) + BA 2G657A	GC-5001	PE/ FRNC/LS0H [1]	10,0 x 8,2	90 ,0	301,0	-	-	-

[1] FRNC/LSOH = Flame Retardant Non Corrosive/Low Smoke Zero Halogen

Subject to technical modification.

Electrical Characteristics

Loop resistance		
at 20°C:	140	Ω/km
Mutual capacitance:	42	pF/m
Impedance at 100 MHz:	100	Ω ±5 Ω
Transfer impedance		
at 1/10/30 MHz	< 7/10	mΩ/m
Near end unbalance att.		
LCL at 1/10/100 MHz:	> 40	dB
Delay Skew:	4	ns/100m
NVP:	81	%

Legend:
1 NEXT 7080
2 NEXT EN 50288-4-1
3 Attenuation EN 50288-4-1
4 Attenuation 7080
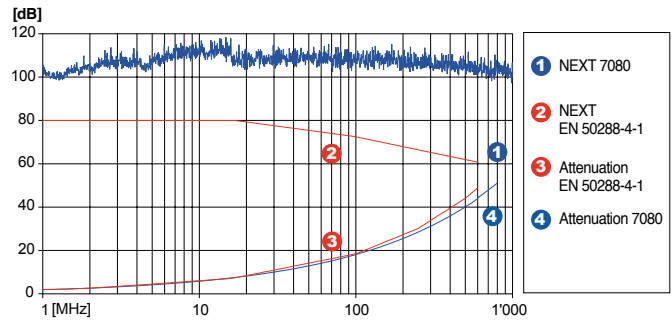
Category					5e	6	6ₐ	7			
Frequency [MHz]	1	4	10	100	250	500	600	800	862	1000	
Attenuation [dB/100m]	1,9	3,7	5,6	17,9	28	41	46	52	54	57	
NEXT [dB]	100	100	100	100	100	92	90	84	83	80	
PS NEXT [dB]	97	97	97	97	97	89	87	81	80	77	
ACR [dB]	98	96	94	82	72	58	44	32	29	23	
PS ACR [dB]	95	93	91	79	69	55	41	29	26	20	
ELFEXT [dB]	98	98	98	78	69	56	45	39	37	33	
PS ELFEXT [dB]	95	95	95	75	66	53	42	36	34	30	
Return loss [dB]	26	30	33	33	28	26	25	23	22	20	

These performance data are typical measured values.

ITU G.657A Fibre		1310 nm	1550 nm	1625 nm
	Attenuation [db/km]	≤ 0,36	≤ 0,22	≤ 0,25
	PMD [ps/√km]		≤ 0,20	

Mechanical Characteristics

Bending radius (flat side)	- during draw-in	≥ 120 mm (ffs)
	- permanently installed	≥ 100 mm (ffs)
Tensile strength		≤ 102 N
Crush resistance		≥ 1000 N/10 cm
Impact		≥ 10 Impacts
Temperature range	- during installation	0°C to + 50°C
	- in operation	-20°C to + 60°C

Environmental conditions

Zero halogen	according to IEC 60754-2
Smoke density	according to IEC 61034

General Characteristics

Wire colour code	white/blue
	white/orange
	white/green
	white/brown
	according to IEC 60189 and IEC 60708

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Cabling Solutions

In-house Cabling Solutions

Management Software Solution

Fibre optic distribution box

DATWYLER

Product information

Application

Distribution box suitable as building entry point

Features

The wall distribution box is designated for indoor use and can accommodate 12/24 fibres. It is suitable for wall-mounting and can be built into a 19" rack using a 1 U adapter panel (to be purchased separately).

Construction

Box:	injection moulding made of halogen-free material (LSZH-1)
Size:	H x W x D 220 x 140 x 35 mm
Cable entry:	2
Cable entry diameter:	3-7 mm
Operating temperature:	-25°C to +70°C
Mounting:	on wall or mounting panel
Degree of prot.:	IP 20
Pre-assembled to accommodate:	12x SC coupler Simplex or
	12x LC coupler Duplex
	24x thermal splice protection
	12x mechanical splice protection

RoHS compliant
Flammability class UL94 V-O
Closure of box with safety srew or seal
Cable inlet from top or bottom possible
An additional cover prevents unauthorised access to patch cords and drop cables
Equipment such as adapters and pigtails etc. to be purchased separately

Article no.	Description	PU
344 701	Box unequipped	1 pc
344 702	Cable clamps for 3 mm Ø	100 pcs
344 703	Cable clamps for 4.2 mm Ø	100 pcs
344 704	Blown fibre cable junction box	1 pc
309 318	LC/APC Duplex adapter	1 pc
309 312	LC/APC pigtail G.657.A1 green	1 pc
1412 753	SC/APC simplex adapter	1 pc
309 316	SC/APC pigtail G.657.A1 green	1 pc

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Communication technology

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Product information

Application	Distribution box suitable as termination point

Features	- Indoor and outdoor installation possible, IP54 degree of protection - Lockable - Up to 4x SC pigtail and couplers or 8x LC pigtail and couplers possible - Standard splice tray - Cable entry (up to 11mm) and 8x patch cord exit - Installation of a gas block connector possible for blown fibre cables

Article no.	Description	PU
344 721	Splice only	1 pc
344 722	4x SC/PC pigtail and adapter	1 pc
344 723	4x SC/APC pigtail and adapter	1 pc
344 724	4x LC/PC pigtail and adapter	1 pc
344 725	4x LC/APC pigtail and adapter	1 pc
344 726	8x LC/PC pigtail and adapter	1 pc
344 727	8x LC/APC pigtail and adapter	1 pc
344 728	Gas seal connector	1 pc

Subject to technical modification.

Fibre optic distribution box
OptoPoint™ TWO

DATWYLER

Product information

Description and Application

Fibre optic distribution box with a wide range of applications.
To be used as access, building and floor distribution box.

Features

- functional, slender and shapely box
- very robust construction (IP 54 and IK 08)
- various sizes (heights 255-1200 mm)
- various range of assembly
- all-purpose cable entry
- cable entry for loop cable
- multiple entry available
- strain relief via cable entry and quick cable installer for bundle cables

Dimensions

Type A: W x H x D 250x255x100 mm max. 144 splices
Type B: W x H x D 250x365x100 mm max. 288 splices
Type C: W x H x D 250x470x100 mm max. 288 splices
Type D: W x H x D 250x615x100 mm max. 576 splices
Type E: W x H x D 250x760x100 mm max. 864 splices

Construction

Mounting style: surface (AP)
Closure: snap fit from cover to rear wall
Rear wall: galvanised steel plate (EVZ) 1.0 mm
Cover: galvanised steel plate (EVZ) 1.0 mm powder-coated RAL 7035
Cap: plastic PUR MG453 RAL 7035
Base: plastic PUR MG453 RAL 7035
Degree of prot.:   IP 54
Shock resistance: IK 08

Article no.	Type	Description	PU
344 731	A	Box with 12 single circuit splice trays without cable guidance	1 pc
344 732	B	Box with 24 single circuit splice trays incl. cable guidance	1 pc
344 733	C	Box with 24 single circuit splice trays incl. cable guidance and fibre module	1 pc
344 734	D	Box with 48 single circuit splice trays incl. cable guidance and fibre module	1 pc
344 735	E	Box with 72 single circuit splice trays incl. cable guidance and fibre module	1 pc

Subject to technical modification.

Fibre optic distribution box
OptoPoint™ TWO

Communication technology

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Management Software Solution

Product information

Technical characteristics	Up to 12 units without cable guidance	Up to 24 units incl. cable guidance	Up to 24 units incl. cable guidance and fibre module	Up to 48 units incl. cable guidance and fibre module	Up to 72 units incl. cable guidance and fibre module
	Type A	**Type B**	**Type C**	**Type D**	**Type E**
WxHxD mm	250 x 255 x 100	250 x 365 x 100	250 x 470 x 100	250 x 615 x 100	250 x 760 x 100
Mounting style	surface (AP)				
Closure	snap fit from cover to rear wall (optional with safety screw or lock)				
Rear wall	galvanised steel plate (EVZ) 1.0 mm				
Cover	galvanised steel plate (EVZ) 1.0 mm powder-coated RAL 7035				
Cap	plastic PUR MG453 RAL 7035				
Base	plastic PUR MG453 RAL 7035				
Degree of prot.	IP 54 (optional IP 65)				
Shock resistance	IK 08				
	2x divisible cable entry max. 22 mm incl. glands				

Option 1:

Cable entry base 1	12x FTTH in-house cable	24x FTTH I in-house cable	24x FTTH in-house cable	48x FTTH in-house cable	72x FTTH in-house cable
	4x micro cable	4x micro cable	4x micro cable	4x micro cable	
	2x divisible cable entry max. 22 mm incl. glands				
	3x M16 cable gland				

Option 2:

Cable entry base 2	12x FTTH in-house cable	24x FTTH in-house cable	24x FTTH in-house cable	48x FTTH in-house cable	72x FTTH in-house cable
	4x micro cable	4x micro cable	4x micro cable	4x micro cable	
Splice tray base II	single fibre management system (Corning)				
	single element or single circuit splice trays for shrink or crimp splice protection (1)				
Number of trays	max. 12 SC	max. 24 SC	max. 24 SC	max. 48 SC	max. 72 SC
	max. 6 SE	max. 12 SE	max. 12SE	max. 24 SE	max. 36 SE
Number of splices	max. 144 splices	max. 288 splices	max. 288 splices	max. 576 splices	max. 864 splices

(1) max. 12 pcs of crimp splice protection per single circuit splice tray
max. 6 pcs of shrink splice protection per single circuit splice tray

Communication technology

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Management Software Solution

FTTH data outlet UP / hybrid
Design LC/APC
for duct mounting

DATWYLER

Pure FTTH data outlet

FTTH in combination with a copper module

Product information

unilan® FTTH data outlet UP / hybrid

Application

Hybrid data outlet suitable as OTO (optical telecommunication outlet) in FTTH networks
and in combination with telephony/xDSL
Suitable for new and old buildings due to data outlet offering.
Flexible configuration and assembly options.

Description

Cover plate with window for labeling tag and safety sticker.
Deposit space for up to 4 fibre pigtails, crimp and shrink splice protection 25 mm
as well as for the cable divider of pre-assembled FTTH cables.
Incl. protecting cover to prevent damage of fibres.
Front dust covers for free FTTH plug-in stations.

Can be equipped with max. 2 LCD/APC couplers with integrated laser protection cover
LC/APC pigtails G.657.A in colours red, green, yellow and blue

Dimensions

Data outlet UP: 88 x 88 mm, installation depth 42 mm
Insert for combinations: 60 x 60 mm, installation depth 42 mm
Data outlet AP / Hybrid: 80 x 80 mm, height 54 mm

Colour

White
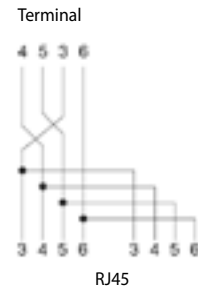
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Communication technology

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BB / DSL

Terminal

RJ45 green   RJ45 blue

Telephony in parallel

Terminal
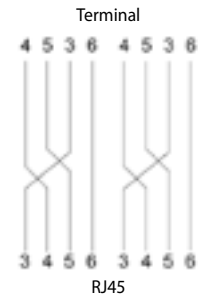
RJ45

Telephony, separate

Terminal
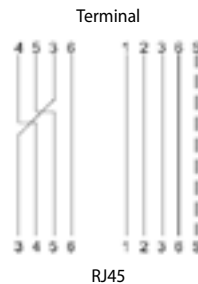
RJ45

Telephony / Fast Ethernet

Terminal

RJ45

Fast Ethernet / Fast Ethernet

Terminal

RJ45

FTTH data outlet UP / hybrid
Design LCD/APC
for duct mounting

DATWYLER
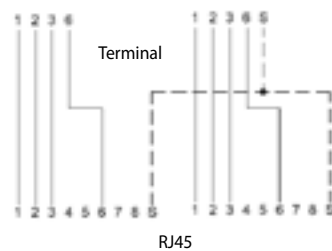
Product information

FTTH data outlet UP hybrid, without copper modules, incl. pigtails with semi-tight conductor 0.6 mm

Article no.	Description
309 379	1 x LCD/APC coupler / 1 x LC/APC pigtail G.657.A
309 370	1 x LCD/APC coupler / 2 x LC/APC pigtail G.657.A
309 371	2 x LCD/APC coupler / 4 x LC/APC pigtail G.657.A

FTTH data outlet UP hybrid, without copper modules, without pigtails, incl. couplers

Article no.	Description
309 374	1 x LCD/APC coupler Duplex
309 375	2 x LCD/APC coupler Duplex

FTTH data outlet UP hybrid, incl. BB x DSL module, incl. pigtails with semi-tight conductor 0.6 mm

Article no.	Description
309 380	1 x LCD/APC coupler / 1 x LC/APC pigtail G.657.A
309 372	1 x LCD/APC coupler / 2 x LC/APC pigtail G.657.A
309 373	2 x LCD/APC coupler / 4 x LC/APC pigtail G.657.A

FTTH data outlet UP hybrid, incl. BB x DSL module without pigtails, incl. couplers

Article no.	Description
309 376	1 x LCD/APC coupler Duplex
309 377	2 x LCD/APC coupler Duplex

FTTH data outlet UP hybrid, incl. telephony parallel module, incl. pigtails with semi-tight conductor 0.6 mm

Article no.	Description
309 381	1 x LCD/APC coupler / 1 x LC/APC pigtail G.657.A
309 382	1 x LCD/APC coupler / 2 x LC/APC pigtail G.657.A
309 383	2 x LCD/APC coupler / 4 x LC/APC pigtail G.657.A

FTTH data outlet UP hybrid, incl. telephony parallel module, without pigtails, incl. couplers

Article no.	Description
309 384	1 x LCD/APC coupler Duplex
309 385	2 x LCD/APC coupler Duplex

FTTH data outlet UP hybrid, incl. telephony separate module, incl. pigtails with semi-tight conductor 0.6 mm

Article no.	Description
309 386	1 x LCD/APC coupler / 1 x LC/APC pigtail G.657.A
309 387	1 x LCD/APC coupler / 2 x LC/APC pigtail G.657.A
309 388	2 x LCD/APC coupler / 4 x LC/APC pigtail G.657.A

Subject to technical modification.

FTTH data outlet UP / hybrid
Design LCD/APC
for duct mounting

FTTH data outlet UP hybrid, incl. telephony separate module, without pigtails, incl. couplers

Article no.	Description
309 389	1 x LCD/APC coupler
309 390	2 x LCD/APC coupler

FTTH data outlet UP hybrid, incl. telephony / Fast Ethernet module, incl. pigtails with semi-tight conductor 0.6 mm

Article no.	Description
309 391	1 x LCD/APC coupler / 1 x LC/APC pigtail G.657.A
309 392	1 x LCD/APC coupler / 2 x LC/APC pigtail G.657.A
309 393	2 x LCD/APC coupler / 4 x LC/APC pigtail G.657.A

FTTH data outlet UP hybrid, incl. telephony / Fast Ethernet module, without pigtails, incl. couplers

Article no.	Description
309 394	1 x LCD/APC coupler
309 395	2 x LCD/APC coupler

FTTH data outlet UP hybrid, incl. Fast Ethernet / Fast Ethernet module, incl. pigtails with semi-tight conductor 0.6 mm

Article no.	Description
309 396	1 x LCD/APC coupler / 1 x LC/APC pigtail G.657.A
309 397	1 x LCD/APC coupler / 2 x LC/APC pigtail G.657.A
309 398	2 x LCD/APC coupler / 4 x LC/APC pigtail G.657.A

FTTH data outlet UP hybrid, incl. Fast Ethernet / Fast Ethernet module, without pigtails, incl. couplers

Article no.	Description
309 399	1 x LCD/APC coupler
309 407	2 x LCD/APC coupler

Hybrid modules

Article no.	Description
309 408	BB x DSL module (1)
309 409	Telephony parallel module (2)
309 411	Telephony separate module (3)
309 412	Telephony / Fast Ethernet module (4)
309 413	Fast Ethernet / Fast Ethernet module (5)

Couplers

Article no.	Description
309 318	1 x coupler LCD/APC with laser protection cover
1 412 753	1 x coupler SC/APC Simplex with laser protection cover

Pigtails

Article no.	Description
309 311	1 x pigtail LC/APC G.657.A semi-tight conductor 0.6 mm red
309 312	1 x pigtail LC/APC G.657.A semi-tight conductor 0.6 mm green
309 313	1 x pigtail LC/APC G.657.A semi-tight conductor 0.6 mm yellow
309 314	1 x pigtail LC/APC G.657.A semi-tight conductor 0.6 mm blue
309 315	1 x pigtail SC/APC G.657.A semi-tight conductor 0.6 mm red
309 316	1 x pigtail SC/APC G.657.A semi-tight conductor 0.6 mm green

Surface mounting box

Article no.	Description
309 447	AP mounting box, 54mm, white, incl. assembly frame

Subject to technical modification.

unilan®

Communication technology

Central Office/PoP Solutions

Cabling Solutions

In-house Cabling Solutions

Management Software Solution

FTTH data outlet AP
Design SC/APC or LCD/APC
for surface mounting

DÄTWYLER

unilan® FTTH data outlet AP (surface mounting)

Product information

unilan® FTTH data outlet AP (surface mounting)

Description

FTTH data outlet for up to 4 fibres, set consisting of metallic mounting plate, box with integrated deposit space for connecting cable and pigtail fibre.
Splice comb for ANT and shrink splicing.
Available with 2 x SC/APC Simplex or 2 x LCD/APC coupler, incl. pigtails.
Couplers with integrated laser protection cover.
Box equipped with integrated dust covers for couplers.

Dimensions

standard size: 88 x 88 x 23 mm

Colour

white

Article no.	Description	
309317	FTTH data outlet, 2x LCD coupler, 4x LC/APC pigtail G.657.A	incl. faceplate
309278	FTTH data outlet, 1x LCD coupler, 2x LC/APC pigtail G.657.A	incl. faceplate
309276	FTTH data outlet, 2x SC coupler, 2x SC/APC pigtail G.657.A	incl. faceplate
309277	FTTH data outlet, 1x SC coupler, 1x SC/APC pigtail G.657.A	incl. faceplate
309341	FTTH data outlet, 2x LCD coupler, 4x LC/APC pigtail G.657.A	without faceplate
309342	FTTH data outlet, 1x LCD coupler, 2x LC/APC pigtail G.657.A	without faceplate
309343	FTTH data outlet, 2x SC coupler, 2x SC/APC pigtail G.657.A	without faceplate
309344	FTTH data outlet, 1x SC coupler, 1x SC/APC pigtail G.657.A	without faceplate

Other configurations on request.

DATWYLER

Fibre optic patch cord armoured
Customer connection cables
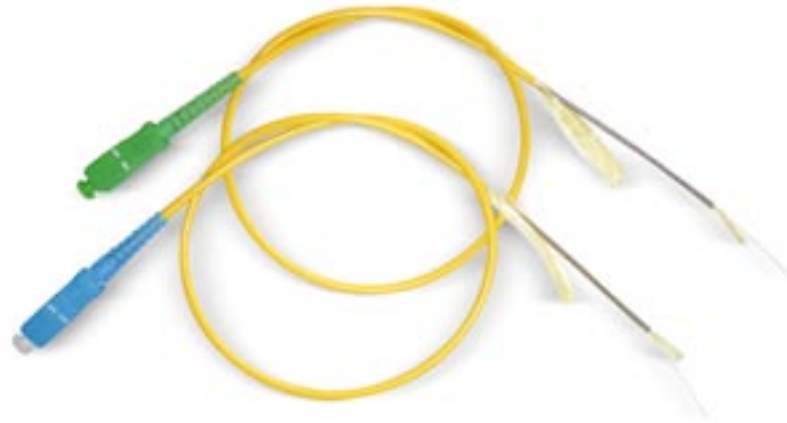
Application

Ideal solution for connecting the customer network terminals

Features

- Steel-armoured flexible patch cord for fibre protection
- Pull- and bend-resistant
- Designated breaking points prevent damage on other devices

Parameters

Insertion loss	≤ 0.3 dB (max.)
Return loss	≥ 45 dB (PC polishing)
	≥ 60 dB (APC polishing)
Temperature range	operation -20°C °~ +75°C
	storage -40°C ~ +75°C

Type of connector		Type of fibre	Length		
Side A	Side B		1 m	2 m	3 m
LC/APC	SC/PC	G.657.A1	344 751	344 752	344 753
SC/APC	SC/PC	G.657.A1	344 754	344 755	344 756

Subject to technical modification.

79

Fibre optic simplex patch cord

Product information

Application	Fibre optic simplex patch and adapter cable

Parameters		
Insertion loss	≤ 0.2 dB (max.)	
Return loss	≥ 45 dB (PC polishing)	
	≥ 65 dB (APC polishing)	
Temperature range	operating	-20°C °~ +70°C
	storage	-40°C ~ +70°C

Type of connector		Type of fibre	Length		
Side A	Side B		1 m	2 m	3 m
LC/APC	SC/PC	G.657.A1	344 781	344 782	344 783
SC/APC	SC/PC	G.657.A1	344 784	344 785	344 786

Subject to technical modification.

Panorama
Management Software Solution

Support of universal building, technology and network management

Optimal planning by comprehensive function modules

Panorama
a Datwyler solution

Infrastructure mapping	Planning by workflows

functions

- complete documentation of all recorded objects
- infrastructure visualisation and management

- overview from initial layout to roll-out
- set-up of processes by ITIL
- coordination of resources
- assignment of activities/tasks

objects

sites | buildings | technologies | networks | processes | resources | control centre

cockpit

realtime monitoring of all current values

Panorama is an universal management software, optimised for networks, technologies and buildings. The software can be deployed in many industries such as telecommunications, electrical engineering and finance.

Panorama supports the documentation of all objects to be recorded and the visualisation of all processes and workflows to manage these objects – including any generation of activities and assignment of tasks around the service and maintenance management as well as fault and alarm management.

Individual solutions by deploying Panorama functional modules

Sites
- graphic and alphanumerical site management
- visualisation of imported CAD, GIS and Google Earth data
- area management information such as utilisation, energy consumption and cost data
- calculation and evaluation of site data

Buildings
- technical and commercial building management
- visualisation of imported CAD, GIS and Google Earth data
- facility management information such as heating systems, cabling infrastructures, climate and access control
- calculation of lease/additional costs
- visualisation of consumption data
- maintenance and service management by processes and workflows
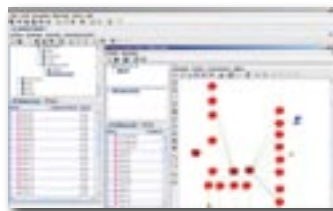
Technologies
- facilities and devices visualisation and documentation
- device/array layout, configuration and operation via remote monitoring and remote control
- reports support fault management, deficiency analysis and asset management

Networks
- management and visualisation, from cable trays up to single optical fibre
- illustration of infrastructure including all logical connections
- workflow and task instructions for patch panel moves, adds, changes

Customised solutions

Processes, workflows
- processes and workflows for layout, installation and roll-out: support of maintenance and service intervals, fault and alarm management, IT Infrastructure Library (ITIL), et cetera

Resources
- coordination of staff, tools, equipment, machinery
- planning of maintenance and service activities
- free definition of resources and intervals

Control centre
- control centre function for building control, transportation and energy systems, production lines and further applications
- remote monitoring and remote control enable control of heterogeneous technology
- visualisation and monitoring of technical processes (Supervisory Control and Data Acquisition, SCADA)
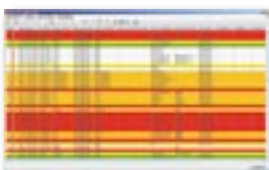
Fault management and alarm systems
- incoming alarms ordered by priorities
- individually defined workflows enable to send emails, to create pop-up screens and to start assignments of tasks and processes

Development of individual solutions for technical and commercial building management

Some examples are:
- collection of metering data
- connection to facility management system
- benchmarking
- calculation and billing

Project approach to implement Panorama

Analysis	Design	Imple-mentation	Roll-out
• needs/requirements • feasibility • concept • user requirement specifications	• technical specifications • statement of work • interface definitions	• software adaptation • interface adjustment • system check	• roll-out to user
User requirement specifications	**Statement of work**	**Acceptance procedure**	**Going live**

Optional Datwyler support
- economic efficiency calculation
- project management, quality management
- training, documentation
- user support, maintenance, hosting

Datwyler services

Datwyler takes responsibility for all necessary services:

- implementation of Panorama software
- operation of Panorama software
- management of physical infrastructure based on an SLA

ICT Networks

Leading know-how

As a provider of total solutions for information and telecommunication networks, Datwyler possesses extensive know-how accumulated over decades:

· Almost 100 years of experience in cable production.
· Leading material, production and process know-how in the fabrication of copper and fibre-optic cables and components.
· Solid electro-technical competency.
· Close collaboration with renowned technical universities, international standards committees, and independent testing institutes.
· Broad systems competence.

Diverse applications

In the field of ICT networks Datwyler concentrates on communication infrastructures for public and commercial buildings and for FTTx networks.
Some examples are:

· Office, industrial and exposition buildings
· Data centres
· Hotels and hospitals
· Stadiums, theatres, concert halls
· Airports and train stations
· FTTx projects of public utility companies and energy supply companies

In these market segments we can also flexibly meet individual customer requirements – up to and including turnkey and multi-site projects – with our cost-effective, modular system solutions and compehensive services.

System solutions from a single source

Yangshan Deepwater Port administration centre, Shanghai

Allianz Arena, Munich

Selected reference projects

Airrail Center	Frankfurt a.M.	Crane House South	Cologne
Party school campus	Hangzhou	Dubai Motor City	Dubai
Kunming Airport	Kunming	Swisscom IT Services	Zollikofen
UBI Banca (1964 branch offices)	Bergamo	UBS central administration, Flurhof	Zurich
Swiss parliament building	Berne	Allianz Arena	Munich
Dexia BIL	Luxembourg	KPMG German headquarters	Berlin

Complete system solutions

· unilan®: screened and unscreened copper system solutions (categories 3 to 7_A) for the transmission of voice, data, video, CATV, control signals and remote power (power over Ethernet, PoE).
· optofil®: innovative fibre-optic system solutions with single-mode and multimode optical fibres for indoor and outdoor applications, from LAN backbones to FTTH in-house cabling.
· Software solution for building, technology and network management.
· Extensive services ranging from consulting and planning via prefabrication, logistics and installation to system maintenance.
· Established worldwide, actively managed and certificated partner network.
· Rigorous training and certification programme to guarantee optimal installation quality of our systems and solutions.
· 20-year warranty covering the entire system.

Focus on customer value

Datwyler stands for more than just the fabrication and distribution of products. For your ICT networks we offer future-proof, modular, customised one-source solutions for all your specific applications – as a uniquely attractive overall package, with all the necessary test certificates, authorizations and certificates and with long-term warranties.

The interaction of these elements creates added value. As a customer you benefit from maximum network availability and high investment protection, even with regard to future applications, expansions and changes.

Product Overview

Integrated, future-proof cabling solutions for ultimate reliability in Voice, Data, Video and CATV applications

More than just products

With the complete packages offered by Datwyler you are opting for comprehensive application-neutral and provider-independent system solutions encompassing the communication infrastructure for office and industry environments (unilan®) and for FTTx projects.

For Datwyler quality testing and quality management begin during the cable production process. Here relevant electrical and mechanical data are recorded online and automatically compared with the predefined specifications. Mostly these specifications considerably exceed current standards and drafts.

Datwyler follows the same procedure for the production of connection components, e.g. data outlets, patch panels and patch cables for copper and fibre-optic systems.

Marking of individual components ensures that data measured up to the time of production can be called up at any point in the future. This gives users or investors a high degree of certainty that the products used and manufactured provide the durability demanded by them.

**unilan®
patch cords**
PS-TERA™/RJ45

unilan® faceplate
for PS-TERA™ module

unilan® module
PS-TERA™ 1/8 Cat.7

unilan® faceplate
for MS-K Plus 1/8 modules

unilan® RJ45 module
MS-K Plus 1/8 Cat.6$_A$

unilan® Industrial
data outlet IP67
for MS 1/8 module

unilan® Industrial
REG adapter MS IP20
for MS 1/8 module

**unilan®
Industrial**
patch cord PUR

unilan®
copper patch cord

**unilan®
data outlets**
CSD Plus 2/8 K,
CSD Plus 2/8 U
Cat.6$_A$ (IEC)

unilan® patch panel
CSA 24/8 Plus Cat. 6$_A$

unilan®
patch panel
MPS 12x, 16x, 24x, 32x
for MS 1/8 or PS-TERA™
modules
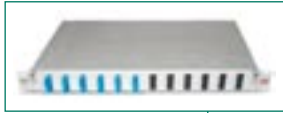
unilan®
FO patch panel OV-A

unilan®
FO data outlet

unilan®
FO patch panel
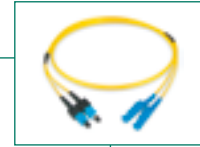
unilan®
FO wall-mounted
distribution box OV-W

optofil® FO indoor cable

optoversal® FO in- and outdoor cable
optofil® Safety FO outdoor cable

**uninet® installation/
flexible cable**
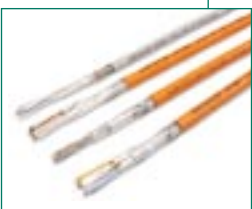
e.g.:
Cat.6$_A$: 7060 4P
Cat.7: 7080 4P
better than Cat.7$_A$:
7150 4P

unilan® Multimedia
catTV-Balun, active balun up to
862 MHz for the distribution of
CATV signals
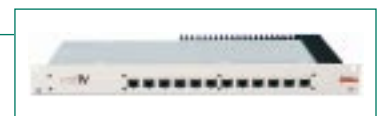
unilan® Multimedia
catTV-Panel, active distributor field up to
862 MHz for the distribution of CATV signals

Product Overview

Copper		Fibre optic	
Cables screened / unscreened	**Connection** shielded / unshielded	**Cables**	**Connection**
uninet® installation/flexible cable	**unilan® modules**	**optofil® indoor cable**	**Fibre optic adapters and couplers**
unilan® copper patch cords	**unilan® patch panels**	**optofil® outdoor cable** **optofil® Safety**	**Fibre optic patch panels**
Multiple cable, high flexibel pre-assembled copper data cables	**unilan® faceplates**	**unilan® fibre optic patch-** **and adapter cable**	**Fibre optic faceplates**
Multiple cable pre-assembled copper data cables	**Floor-box cable solutions**	**unilan® fibre opti multiple cable**	**Fibre opti wall mounted** **distribution boxes**
Measurement cable	**Accessories**	**unilan® fibre opti multiple cable** BreakOut system	**Accessories**

Are you looking for a building, technology and network management software which enables effective planning, management, documentation and control of all objects and processes around your infrastructure? Feel free to ask for details about "Panorama"!

High Density		Wireless	Active
MHD **Modular high density cabling system**	**Network/Server racks**	**Wi-Fi** **Powerful Wireless Fidelity**	**Multimedia and switching**

MHD housings

unilan® network rack

Wi-Fi arrays

catTV-Panel
active distributor field up to 862 MHz for the distribution of CATV signals

MHD copper distribution cartridges

unilan® server rack

Transformers

catTV-Balun
active balun up to 862 MHz for the distribution of CATV signals

MHD multiple cable
pre-assembled copper data cables

unilan® wall chassis

Access points

Network cameras

MHD FO distribution cartridges

unilan® minirack

Management system

Video monitoring system

MHD multiple cable
pre-assembled FO data cables

Accessories

Wi-Fi array accessories

Switches

Safety cable systems

Leading know-how

As a provider of total solutions for safety cable systems, Datwyler possesses comprehensive know-how accumulated over decades:

· Co-development of extended functional integrity tests in collaboration with renowned testing institutes in the early 1990s.
· Sound knowledge of safety engineering and building codes and standards.
· Leading material, production and process know-how in the fabrication of safety cables incorporating patented and proven ceramic technology.
· Development of the first metal-free fibre-optic cable with E30 extended functional integrity through combining existing technical competence in data and safety engineering.
· Broad systems competence.
· Collaboration with renowned technical universities, international standard committees and independent testing institutes.

Diverse applications

Datwyler safety cable systems with extended functional integrity are used wherever stringent fire-safety requirements must be met and people and property could be at risk due to fire and smoke:

· Airports, train stations, metro stations
· Hotels and hospitals
· Sports stadiums, theatres and concert halls
· Office and exhibition buildings, public buildings
· Tunnels for road and rail

Added value for fire-safety systems

Crystal Plaza Towers, United Arab Emirates

Galeria Krakowska, Krakow

Selected reference projects

Allianz Arena	Munich	Trade Fair	Stuttgart
Dexia BIL	Luxembourg	Reichstag	Berlin
International Airport	Frankfurt	Subway	Munich
World Trade Center	Dubai	Metro	Prague
Galeria Krakowska	Krakau	Gotthard motorway tunnel	Gotthard
New main station (Lehrter Bahnhof)	Berlin	Mercedes Benz Museum	Stuttgart
Crystal Plaza Towers	United Arab Emirates		

System solutions

· The pyrofil® cable line includes halogen-free, low-smoke emission and flame resistant safety cables with circuit integrity and functional integrity.
· The pyrosys® product line includes support systems, mounting components and appropriate accessories to ensure functional integrity.
· optofil® Safety is the first metal-free fibre-optic cable with E30 extended functional integrity in accordance with DIN 4102-12.
· Fire protection seminars and special calculation programmes offer engineers and installers valuable support
· Comprehensive services up to and including turnkey and multi-site projects

Customer value in focus

Datwyler stands for more than the production and distribution of products. For your safety cabling systems we provide everything from one source: modular system solutions with high-quality cables and components, with all the necessary test certificates and authorisations and with long-term warranties. You can rely on our expert support for all aspects of our supply – beginning with planning, consultancy, through logistics, installation and ending with system maintenance. The interaction of these elements creates added value. As a customer you benefit from cost-effective installation thanks to our innovative installation methods, sign-off without any difficulties, low insurance rates, and dependable transmission of power and data even in the event of fire.

Safety concepts
for building applications

Safety with pyrofil® cables and pyrosys® systems

Datwyler is the first European manufacturer to develop a system solution – pyrofil® and pyrosys® – that meets the demands of today's industry for reliable power supply and data transmission in the event of a fire. pyrofil® and pyrosys® is the result of many years of intensive development in coordination with the relevant standardisation bodies.

Selected raw materials and special compounds in combination with unique installation methods are what give pyrofil® and pyrosys® its high quality and maximum guaranty of safety in the event of a fire.

pyrofil® and pyrosys® is used wherever people, machinery and equipment are endangered by fire and smoke emission: in buildings with high density of occupants as well as in facilities containing large concentrations of valuable property.

pyrofil® safety cables and pyrosys® systems have to be highly reliable when it comes to practical operations. This is why Datwyler measures each and every product against strict quality standards before it leaves the company. Specifically, this means that all processes are integrated into the comprehensive management system according to ISO 9001 and ISO 14001. Beyond this, additional application-specific inspection and test methods ensure that pyrofil® cables and pyrosys® systems exceed the requirements of our customers as well as the stringent standards specified by the various countries in which our products are used.

pyrosys®
steel conduits
and halogen-free
plastic conduits

pyrosys®
gas concrete
plugs F90

pyrosys®
fire protection plugs F90
installation depth 30mm

pyrosys®
screws F90

pyrosys®
single clamps
type SAS
spacing ≤600mm

pyrosys®
strap clamps
without trough type B
spacing ≤800mm

pyrosys®
strap clamps
with trough type B
spacing ≤800mm

pyrosys®
identification signs

pyrosys®
firestop systems S90/S120
plates/mortar/bricks/plugs

pyrofil®
safety cable
E90 Keram

pyrofil®
WUM, support measure

dynofil®
modular shaft lighting
system

pyrofil®
safety cables
E90 Keram

pyrofil®
safety cables
E30-E60 Keram

EXIT

pyrosys®
emergency lighting
for escape routes

ecobus®
flat form cable with integrated
data bus

pyrosys®
cable joints E30
and E90 for
all dimensions

dynofil®
elevator travelling
cables

optofil®-Safety
fibre optic life safety
cable, according to
DIN 4102-12, 30 Min.

pyrosys®
distribution box E30-E90
type "Hercules"

pyrosys®
cable trays and
cable ladders E30/E90
spacing ≤1500mm
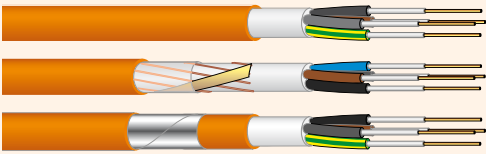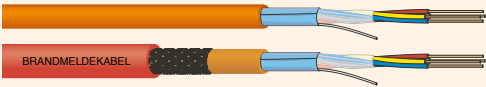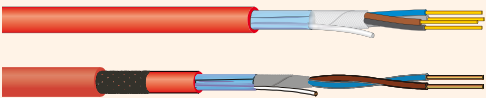
pyrosys®
connection/terminal box
E30-E90

pyrosys®
multi cable support
"Hermanschelle" E30/E90
spacing ≤600/800mm

Cable technology for highest safety requirements

Cable	Applications	Product range/Standards
Safety cables with extended functional integrity		
Low voltage cables up to 0.6/1 kV **E30-E90; FE180; BS 6387 CWZ; PH30-120, Rf-1 1$^1/_2$** with mechanical protection	Safety cables with circuit integrity and extended functional integrity to maintain power supplies to sprinkler systems, emergency lighting, smoke and heat extraction systems, emergency lift supplies and fire fighting lifts.	Single core cables from 1.5 to 630 mm^2 Multi core cables from 1.5 to 300 mm^2 Also available with mechanical protection **Standards/Approvals** IEC, EN, CENELEC, BS, DIN VDE, SEV, NBN, VKF, VdS, GOST-R, Ukraine
Wiring and Fire alarm cables up to 225 V **E30-E90; FE180; BS 6387 CWZ; PH30-120, Rf-1 1$^1/_2$** BRANDMELDEKABEL with mechanical protection	Safety cables with circuit integrity and extended functional integrity to maintain power supplies and data transmission to fire alarm systems, public address and voice alarm systems.	Single or multi pair cables, individually or collectively screened. Also available as fire alarm cable and with mechanical protection. **Standards/Approvals** IEC, EN, CENELEC, DIN VDE, SEV, NBN, GOST-R
optofil®-Safety fibre-optic safety cables according to DIN 4102-12 30 Min. (E30); IEC 60331-25	Universal fibre-optic cables for indoor and outdoor applications.	Loose tube construction with up to 60 SM-/MM-fibres with non-metallic rodent protection. **Standards/Approvals** IEC, EN, CENELEC, DIN VDE
Safety cables with circuit integrity		
Fire alarm cables 300/500 V **BS 6387 CWZ; FE180; PH30-120; BS 8434-1/-2** with mechanical protection	Safety cables with circuit integrity to maintain power supplies and data transmission to fire alarm systems, emergency lighting, public address and voice alarm systems.	Screened multi core cables from 1.0 mm^2 to 4 mm^2. Also available with mechanical protection. **Standards/Approvals** BS, EN, CENELEC, LPCB, GOST-R
Safety cables with improved characteristics in case of fire		
Low voltage cables up to 0.6/1 kV	Safety cables with improved characteristics in case of fire – an alternative to traditional PVC cables, where no circuit integrity is required.	Single core cables from 1.5 to 630 mm^2 Multi core cables from 1.5 to 300 mm^2 Also available with mechanical protection and as flexible, oil resistant version. **Standards/Approvals** IEC, EN, CENELEC, DIN VDE, SEV, GOST-R

System compatible installation components

System components	Application

Single clamps, multi cable supports

Single clamps to install single cables or cable bundles conforming to common practice.

Multiple cable supports for a cost effective installation of several cables.

These components facilitate the quick and easy retrospective/subsequent installation of cables.

Support systems

Special support systems to install several cables conforming to common practice.
Approved for ceiling and wall mounting with possibility of easy retrospective/subsequent installation of cables.

Corresponding fixing devices, such as fire safety dowels, installation screws and setting tools are available for all support systems.

Connecting technology

Cable joints to connect pyrofil® safety cables with circuit and extended functional integrity.

Distribution boxes with extended functional integrity E30-E90.
Also available as fire resistant covers to protect standard connections or junction blocks.

Distribution boxes with circuit integrity for high- and low-voltage cables.

Firestop systems

Firestop systems S90/S120
- Firestop coated board S100 P
- Intumescent firestop paint S100 D
- Intumescent firestop mastic S100 SM-K
- Firestop bricks TS 90
- Firestop plugs TS 90

Seminars

For further information please visit: www.daetwyler-cables.com

Datwyler is setting new standards.
pyrofil® safety cables combined with pyrosys® system components make up the perfect and cost effective safety solution.

Datwyler regularly holds seminars on cabling systems with integrated circuit and extended functional integrity as well as on firestop systems.

Find our products for safety cable systems in the respective catalogue.

www.daetwyler-cables.com

ecobus® Building Automation

The modular product portfolio for optimised system integration

System ECO-B
products for the decentral,
modular integration

System ECO-C
products for the central,
clear integration

System ECO-D
products for the decentralised,
fast integration

System ECO-E
products for simple,
economic integration

System ECO-F
products for flexible,
efficient integration

System ECO-M
products for
Smart Metering

System ECO-S
software

System ECO-T
SIP door communication

Modern office and administration buildings require future-proof, adaptable electrical systems. Users are no longer willing to be restricted by non-flexible solutions. They demand 'plug-and-play' in the form of flexible control and automation of virtually every technical function of the building. With ecobus® KNX building automation by Datwyler, many building functions and systems such as HVAC, lighting, security and load management can be easily integrated. Control tasks can be done centrally, decentrally or automatically.

Maximum flexibility in installation

Leading know-how

As a provider of total solutions for the electrical and communications infrastructure of public and commercial buildings, Datwyler possesses leading know-how acquired over decades. Applying our competence in materials, production and processing in the fabrication of flat and round cables, we have developed the ecobus® system, a comprehensive solution combining flexible power distribution with control and automation of all building functions.

Complete system solutions

Decentral, modular and pluggable – with ecobus®, Datwyler offers sustainable system solutions tailored to changing customer needs, upcoming technologies and energy-efficient operation. Thus, ecobus® system solutions ensure high operational reliability and low operational costs.

Diverse applications

In recent years Datwyler has extended its proven ecobus® portfolio to include eight product groups for building automation based on the KNX standard. These product groups are used in system solutions for basic infrastructure as well as tenant improvements, including a wealth of applications such as responsive lighting, intelligent shading, HVAC, connections to third party systems, visualisation, power data metering and door communication via SIP. The product groups have a modular structure and can be deployed in any combination. This makes it possible to achieve a cost-effective solution for every project. Combined with ecobus® flatform cable systems for power distribution and data transmission and with Datwyler´s control and visualisation software which makes various systems available on one platform, the ecobus® product portfolio meets all requirements of intelligent building automation.

Customer value in focus

Datwyler stands for more than the production and distribution of high-quality products. For your technical building systems we provide modular total solutions from one source, including consulting, support, logistics, warranty and turnkey responsibility if required.

Integrating these elements into sophisticated attractive overall packages creates added value. As a customer you benefit from:
- drastically reduced cabling
- the use of factory-ready modules
- easier planning and documentation
- reduced installation time
- high flexibility, rapid changeability and adaptability
- higher safety due to lower fire loads
- cost-saving operation
- lower power consumption
- cost-effectiveness due to customized total solutions
- long-term investment protection

Sony Center, Berlin

Selected reference projects

MDR	Erfurt	Daimler Chrysler	Stuttgart
NBV UGA	Herongen	Frankfurt Stock Exchange	Frankfurt
Petronas Towers	Kuala Lumpur	Sony Center	Berlin

ecobus® Product Overview

System description

Modern building services installation calls for control and automation of the widest possible range of functions. Whereas conventional electrical building services installation merely distributes power and could be switched if necessary, the ecobus® system meets the higher standards demanded of modern building services.

Compared with conventional electrical installation, modern building management using ecobus® features a minimum of cable expenditure, rapid adaptability, and flexible use of space. This guarantees that your investment will retain its value for decades to come.

ecobus® enables the problem-free linking of a very wide variety of building services functions and facilities that have been strictly separated to date – such as heating, air conditioning, ventilation, lighting, building surveillance, and load management. Open and closed-loop control operations can be centralised or decentralised.

The flatform cables and appropriate pre-assembled plug-in and screw components make insulation stripping unnecessary and considerably reduce installation time. The installations can be modified or extended without any major planning effort.

The modular ecobus® product portfolio enables optimised system integration. The portfolio ranges from pre-configured plug-and-play solutions for decentralised systems, to cost-effective semi-centralised room solutions – e.g. for hotels, hospitals and office buildings – to total solutions for centralised building automation systems.

System ECO-C
products for the central, clear integration
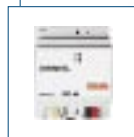
System ECO-E
products for simple, economic integration

ecobus® Data flatform cable with ecobus® Data Adapter
outgoing circuit without insulation stripping for inter-connecting the sensors with flatform data transmission cables

ecobus® Combi Adapter 5x2.5+2x0.5
combined data and power output circuit for ecobus® Combi flatform cables

ecobus® Power 5x10 flatform power cable 5x10mm²
e.g. for power supplies
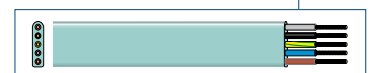
ecobus® Power I Adapter
power in- and output
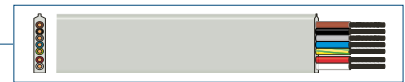
ecobus® Power I 7x2,5+5x16mm²
for damp location, flatform power cable system
for engine rooms and industrial applications

ecobus® Combi
combined data and power flatform cable,
e.g. for lighting supply and switching operations

System ECO-D
compact, plug-in KNX actuators with ecobus®
connection technology for fast, error-free assembly
in intermediate floors or suspended ceilings

ecobus® Patch
pre-assembled patch cables
to connect consumers and to supply
office actuators

System ECO-B
products for the
decentral, modular
integration

**KNX IR
Remote Control**
ECO-E ZN1IR

**ecobus® Power 5x10
with ecobus® Power 5x10 Adapter out**
power output circuit for ecobus® Power
5x10mm² e.g. pre-assembled with floor
boxes and output circuit fuse

KNX sensing device
twofold, fourfold
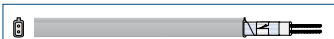
ecobus® Data data cable
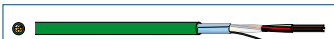
ecobus® Data-R data cable

Flatform cable systems and accessories

CABLE	IN- AND OUTPUT	OUTPUT
ecobus® Combi **PVC** 5x2,5 mm² + 2x1,5 mm² Art.No.187 028 **FR/LSOH** 5x2,5 mm² + 2x1,5 mm² Art.No.187 034	**ecobus® Combi Adapter-S** 5x Energy+Bus Art.No.1300 235 **ecobus® Combi Adapter-S** 5x Energy Art.No. 1300 236 **ecobus® Combi Adapter-S** Bus Art.No. 1300 237	**ecobus® Combi Adapter** 3x Energy+Bus EIB/KNX Art.No. 1300 282 **ecobus® Combi Adapter** 3x Energy+Bus Art.No. 1300 282 **ecobus® Combi Adapter** 3x Energy Art.No. 1300 350
ecobus® Data **PVC** 2x1,5 mm² Art.No. 179 669 / 175 475 **FR/LSOH** 2x1,5 mm² Art.No.179 679 / 176 900	**ecobus® Data Adapter** EIB/KNX Art.No. 1300 286 **ecobus® Data Adapter** Art.No. 1300 353 **ecobus® Data Adapter Quick** Art.No. 1300 303	
ecobus® Power 5x2,5 mm² **PVC** 5x2,5 mm² Art.No. 187 048 **FR/LSOH** 5x2,5 mm² Art.No. 187 053	**ecobus® Power Adapter-S** 5x Energy Art.No. 1301 076	**ecobus® Power Adapter** 3x Energy Art.No. 1301 075 **ecobus® Power Adapter** 5x Energy Art.No. 1301 077
ecobus® Power 5x10 mm² **PVC** 5x10 mm² Art.No. 187 014 **FR/LSOH** 5x2,5 mm² Art.No. 187 022	**ecobus® Power 10 Adapter** 5x Energy Art.No.. 1300 295	**ecobus® Power Adapter** 5x Energy Art.No. 1300 302
ecobus® Power I 7x2,5 mm² IP67 **PVC** 7x2,5 mm² Art.No. 187 039 **FR/LSOH** 7x2,5 mm² Art.No. 187 059	**ecobus® Power I Adapter** for screw-tightened connection 7x2,5 InOut Art.No.1301 325	**ecobus®** **Power I cable glands** for Power I Adapter Ø 9-16 Art.No. 1301 318 Ø 13-18 Art.No. 1301 319 Ø 11-20,5 Art.No. 1301 320 Blind-gland Art.No. 1301 322
ecobus® Power I 5x16 mm² IP65 **PVC** 5x16 mm² Art.No. 187 045 **FR/LSOH** 5x16 mm² Art.No.187 025	**ecobus® Power I Adapter** for screw-tightened connection 5x16 InOut Art.No.1301 316	**ecobus®** **Power I cable glands** for Power I Adapter Ø 9-16 Art.No. 1301 318 Ø 13-18 Art.No. 1301 319 Ø 11-20,5 Art.No. 1301 320 Ø 20-26 Art.No. 1301 317 Blind-gland Art.No. 1301 322

	FIXING DEVICE	**ACCESSORIES**	**ENDING DEVICE**
ecobus® Combi Adapter EIB/KNX 5x Energy+Bus EIB/KNX Art.No. 1300 284 **ecobus® Combi Adapter** 5x Energy+Bus Art.No. 1300 351 **ecobus® Combi Adapter** 5x Energy Art.No. 1300 283	**ecobus® Uni Fix** Art.No. 1300 290 **ecobus® Fix** Art.No. 1300 239	**ecobus® Tape** Art.No. 1300 169 **ecobus®** **Combi Tool** stripping tool Art.No. 1300 240	**ecobus®** **Combi End** Art.No. 1300 238
	ecobus® Uni Fix Art.No. 1300 290 / 182 181 **ecobus® Fix** Art.No. 1300 239	**ecobus®** **Combi Tool** stripping tool Art.No. 1300 240	**ecobus®** **Data End** Art.No. 1300 287
	ecobus® Uni Fix Art.No. 1300 290 / 182 181 **ecobus® Fix** Art.No. 1300 239	**ecobus® Tape** Art.No. 1300 169 **ecobus®** **Combi Tool** stripping tool Art.No. 1300 240	**ecobus®** **Power End** Art.No. 1300 875
	ecobus® **Power Fix** Art.No. 1300 289	**ecobus® Tape** Art.No. 1300 169 **ecobus®** **Power 10 Tool** cable stripper Art.No. 1300 306	**ecobus®** **Power 10 End** Art.No. 1300 354
ecobus® Power I Adapter socket 7x2,5 Art.No. 1301 326 **ecobus® Power I Plug IP67** Art.No. 1301 327 **ecobus® Power I Adapter** 7x2,5 InOut Art.No.1301 325	**ecobus® Fix** Art.No. 1300 239	**ecobus® Tape** Art.No. 1300 169	**ecobus® Power I End 7x2,5**
ecobus® Power I Adapter screw-tightened connection 5x16 Out for single and double branch connection up to 5x6mm² Art.No.1301 315 **ecobus® Power I Adapter** screw-tightened connection 5x16 InOut Art.No.1301 316	**ecobus® Fix** Art.No. 1300 239	**ecobus® Tape** Art.No. 1300 169	**ecobus® Power I End 5x16** Art.No. 1301 321

KNX Building Automation

Mounting and installation	System ECO-B	System ECO-C	System ECO-D
	Products for the decentral, modular integration Project-specific optimised installation box for mounting in false ceilings or raised floor. Use of the pre-assembled ecobus® patch cables to connect consumers and to supply the box.	**Products for the central, clear integration** System devices, IP and DALI devices and multi-channel KNX sensors and actuators, to centralised and decentralised installation in electrical distributors, and in rooms.	**Products for the decentralised, fast integration** Compact, plug-in KNX actuators with the ecobus® connection technology for fast, error-free assembly in intermediate floors or suspended ceilings.
decentralised mounting **project-specific configured** **modular devices** **plug-in connections**	**KNX Basic Module combined with up to 4 Sub-modules e.g.:** Switching Actuator 4 x 16 A DALI-Actuator 2 x 8-fold Dimmer 2 x 250 VA Blind Actuator 2-fold Binary Input 8-fold Seminconductor Switch 4-fold EnOcean-Gateway 16-fold		
decentralised mounting **flat size** **plug-in connections directly to the ecobus® Combi Cabel**			Switching Actuator 4 x 16 A Switching Actuator 6 x 16 A Switching/ Dimming Actuator 2-fold Blind Actuator 2-fold Combi Actuator 1 x Switch + 2 x Blinds EnOcean Gateway 56-fold + 4 x 16 A
centralised mounting **for distribution boards**		**KNX Power supply** **KNX/USB interface** **KNX/IP interface/router** **KNX/DALI Gateway** Binary Input 8 to 16-fold Binary Output 8 to 16-fold Load Switch 8 to 12-fold Blind Actuator 4 to 8-fold	
decentralised mounting **flush- or wall-mounting devices**		**KNX push button interface** 2-fold/4-fold **KNX presence detector** with constant light dimming **KNX touch panel** **EnOcean RF push button**	
optional products and accessories	EnOcean Aerial		EnOcean Aerial

System ECO-E

Products for simple, economic integration

Highly functional, but easy to-integrate KNX products with innovative features for central room functions.

System ECO-F

Products for flexible, efficient integration

High-quality user interfaces with touch-sensitive tactile zone and multitouch function.
Standard push-button sensor, KNX touch panel and EnOcean Wireless sensors.

System ECO-M

Products for Smart Metering

Meters for electrical energy with standardised communication interface, network coupler and versatile temperature sensors for different applications.

System ECO-T

Products for IP door communication

SIP Module System and SIP Doorstations for door communication via IP network.

Door Camera Steel

SIP Door Module ECO and Maxi

Push Button Modules

SIP Door Station IP54

SIP Door Station IP54 Video

KNX Power Supply

Multi-functional Actuator 4 x 10 A

Multi-functional Actuator 6 x 10 A

Multi-functional Actuator 4 x 16 A

Universal Dimming Unit 400 VA

3-Phase Energy Meter Direct- and Transformer-connection Communication Interface e.g. KNX, M-Bus, et al.

KNX 3-Phase Energy Meter

KNX 3-Phase Energy Meter

KNX Network Interface

KNX Touch Display

Analog/Digital Input 4-fold

RS232 Interface (Pronto)

Air Conditioner Controller

KNX Sentido Interface KNX Push Buttons EnOcean RF Push button

KNX Room Temperature Sensor

KNX Contact Temperature Sensor

KNX Data Logger

Frames and Housings for the Module System

IR Remote Control

NTC temperature sensor

Touch sensitive Sentido 2-fold

Touch sensitive Sentido 4-fold

Optical reading device

M-Bus reading software

LAN Secure Adapter

Find our ecobus® Building Automation products and solutions in the respective catalogue.   **www.daetwyler-cables.com**

Elevator cable systems

Unnoticed by elevator passengers, elevator cables by Datwyler do their job around the world every day. They reliably transfer power and data between the elevator cabin and the control system. Withstanding great mechanical stress, they provide faultless operation round the clock. No wonder Datwyler elevator cables are installed in the fastest elevators and the highest buildings in the world.

Power and data for modern elevators

Space in cities is limited. High-rises are being erected around the globe. Elevators with ever greater per-formance are providing rapid access to the upper floors of these tall buildings. And so the requirements for the materials used are becoming increasingly tougher. As a leading manufacturer of elevator cable systems, Datwyler knows the needs. Not only must international standards be met, but knowledge of customers' specific needs is essential. Our reliable elevator cable systems are known for smooth operation that adds significant comfort to the ride.

Leading know-how

Using various test methods, some of which were developed by Datwyler, we develop elevator cables for service under the toughest conditions. Our specialists define materials and designs that even under permanent dynamic loading show no signs of fatigue. We also offer halogen-free materials for special fire-safety concepts.

Diverse applications

Datwyler elevator cable systems meet every requirement for electrical connections to the elevator cabin. Aside from power cables, high-grade data transfer cables are being increasingly requested. Integral fibre optic cable can easily handle integral large volumes of data. These modern system solutions connect the elevator cabin to the controls and to the local data network – so passengers can enjoy television and video services in the elevator.

System solutions

dynofil® is our total system solution (including services) for electrical installations for elevators.

Customer value in focus

Datwyler has developed innovative system solutions for electrical installations for elevators. Comprehensive harnessing and logistics services with modern B2B connectivity round off the service offering of Datwyler.
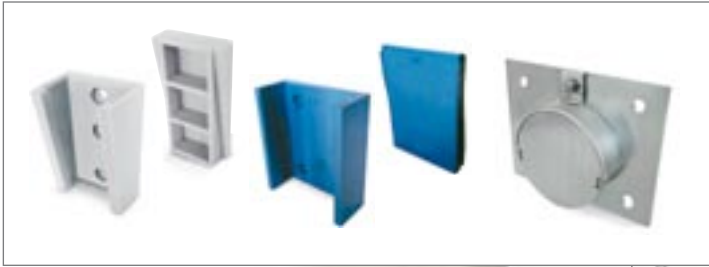

Spinnaker Tower, Portsmouth

Selected reference projects

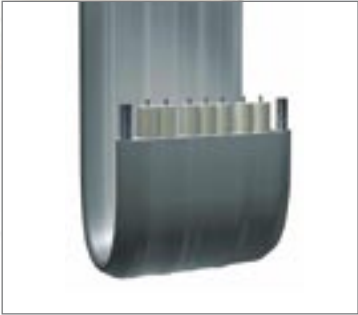|			
Shanghai Oriental Pearl Tower	Shanghai	Post Tower, German Post headquarters	Bonn
Canary Wharf	London	Torre Major	Mexiko City
Capital Towers	Dubai	Spinnaker Tower	Portsmouth

Suspension devices
for dynofil® FL, FM, FH,
module concept and
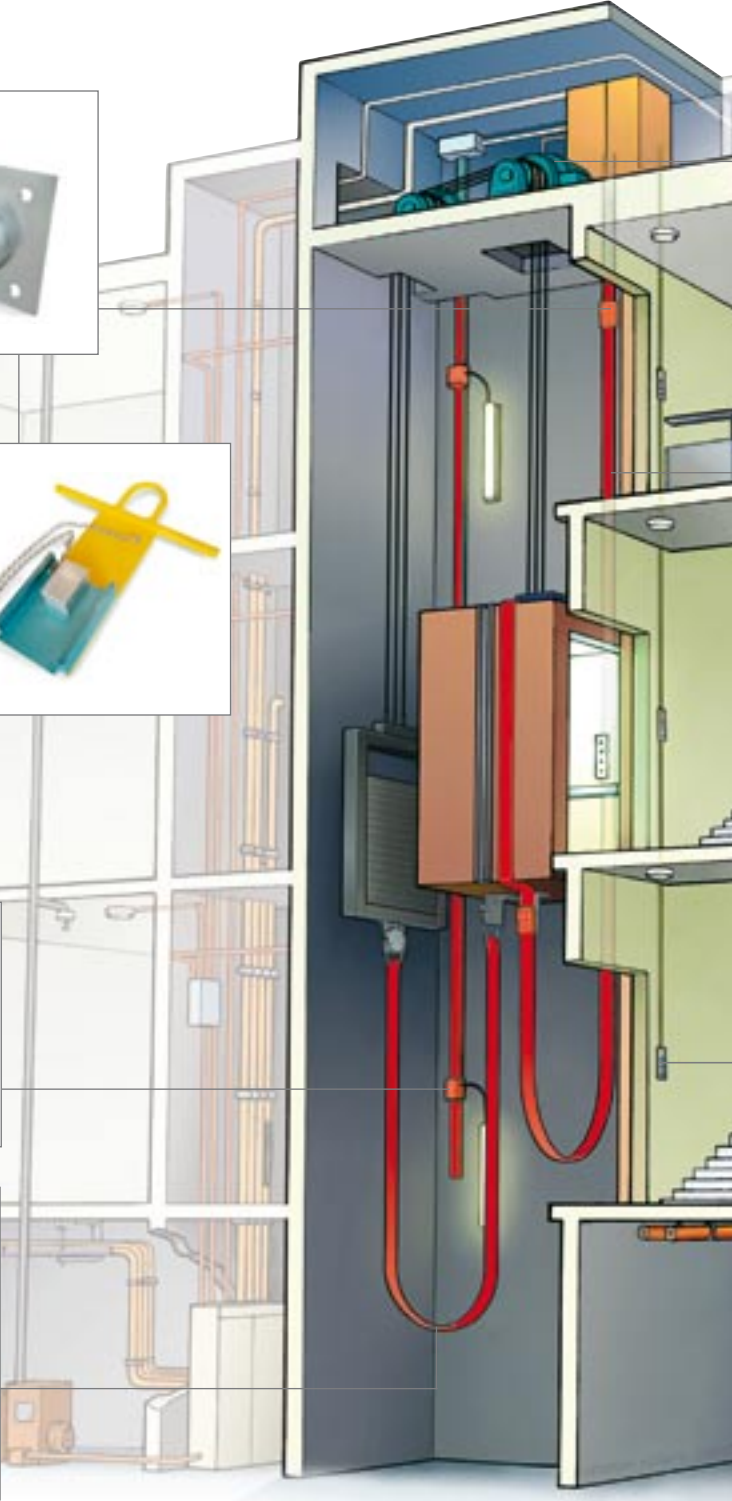compensation weight

Installation tools
for simple installation
of FL, FM and FH
dynofil® cables

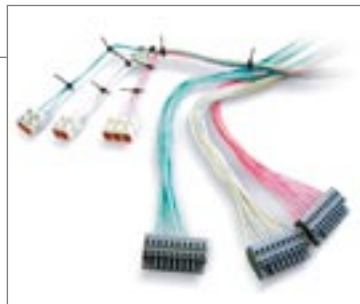**Shaft lighting system**

Compensation weight

Pre-assembled machine room cabling (MRC)
ready for installation

Flat cables
FL, FM, FH and
module concept
PVC and zero-halogen

Pre-assembled hoistway cables/wires (HW)
ready for connection

Pre-assembled travelling cables (TC)
for travelling heights up to 400m
Services see

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