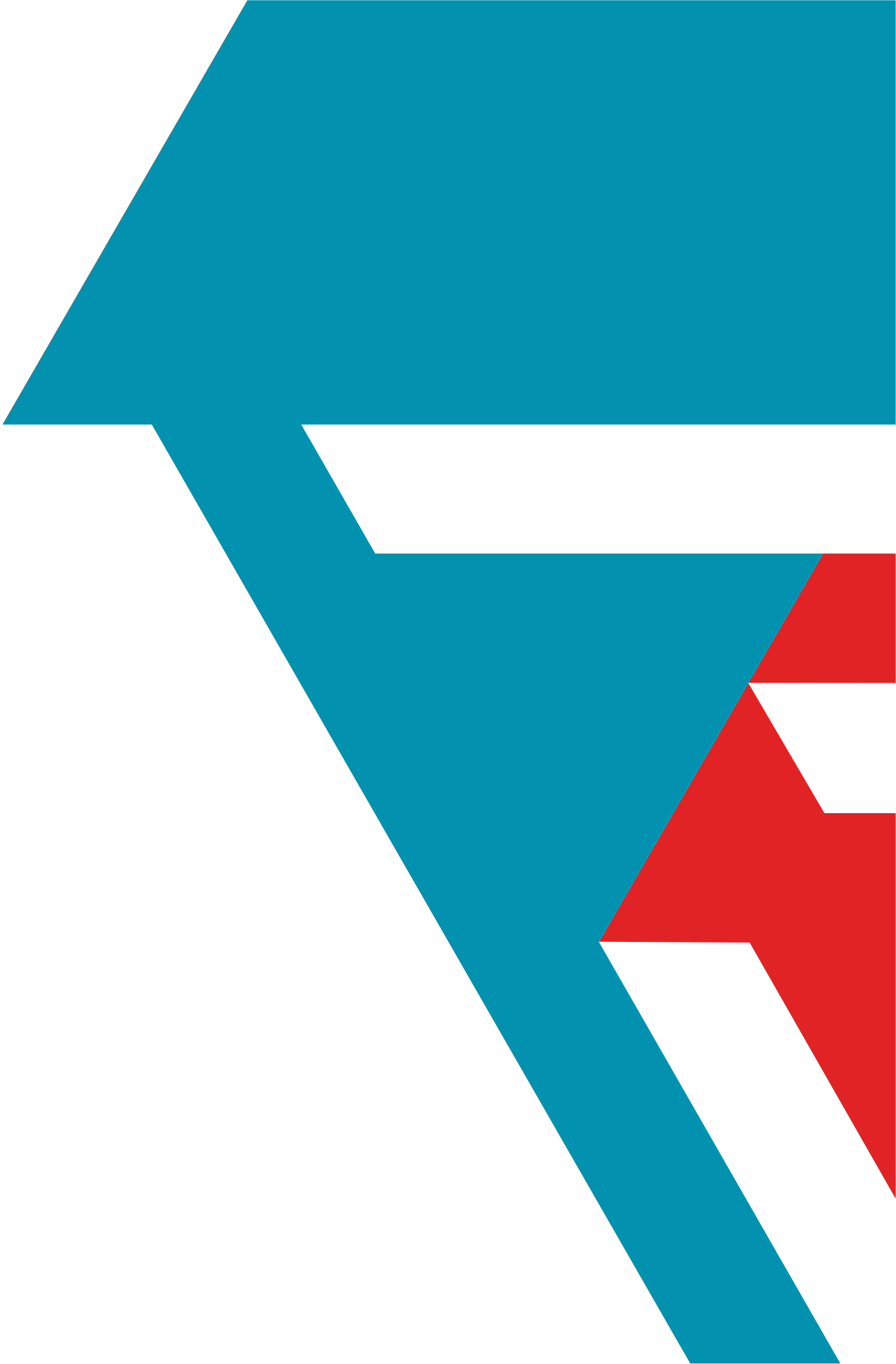
# ELEVATOR CABLING SYSTEMS

Power and data for modern elevators

Cabling Solutions

DATWYLER



# CONTENTS

# DELIVERING EXCELLENCE – EVERY TIME, EVERYWHERE

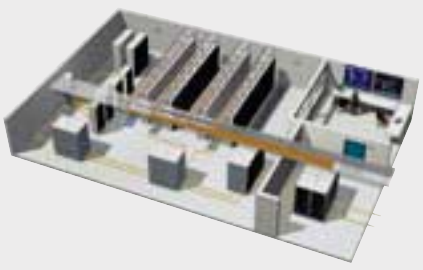
The "lifeblood" of a modern public or commercial building is the functionality and reliability of the system solutions for communications, building automation, power supply, safety and elevator. This is true of any such construction, irrespective of whether it is an office block, hotel, sports stadium,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

**Hotels, hospitals**

**Office blocks**

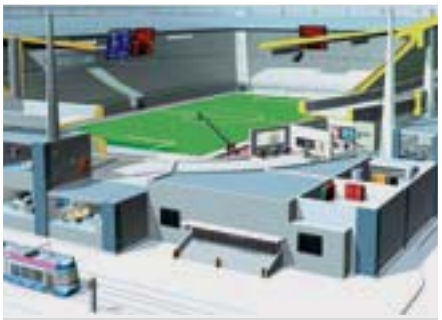
**Government buildings, universities**

**Shopping centres**



**Data centres**

**Tunnels**



**Event arenas**

**FTTx projects**

Datwyler Cabling Solutions is a leading provider of total solutions for the electrical and communications infrastructure of public and commercial buildings and of data centres as well as for Fibre to the home (FTTH) networks.

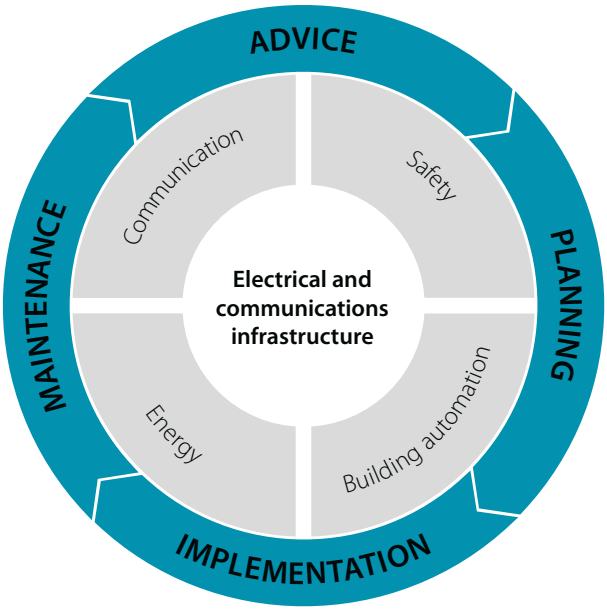
Being a solid, reliable company about to celebrate its 100th year of operation, Datwyler leads the way in innovations for applications such as ICT networks, power supply, fire safety, building automation and elevators.

Datwyler is a one-stop source of customised solutions for all your specific applications – with all the necessary test certificates, authorisations and approvals and with long-term warranties.

Datwyler has successfully acted not only as a supplier of innovative products and system solutions but also as the lead or main contractor who, working in close cooperation with local partners, covers the whole value chain: from site surveys, conception and system engineering through installation, logistics and turnkey supply to documentation and system maintenance.

# TURNKEY INSTALLATIONS

Datwyler Cabling Solutions does not only supply integrated system solutions, but has positioned itself successfully as a turnkey partner: for all manner of purpose-built constructions including multi-site projects, for data cenres 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, our international presence and our globally established partner network.




Our international presence and our worldwide, actively managed and certificated 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 surveys 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.

**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 9001:2008 / ISO 14001:2004 certified.

Our sustainable solutions 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 solutions for all your applications, whatever they are – high-speed communications networks, modern energy distribution, monitoring and control services, 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**

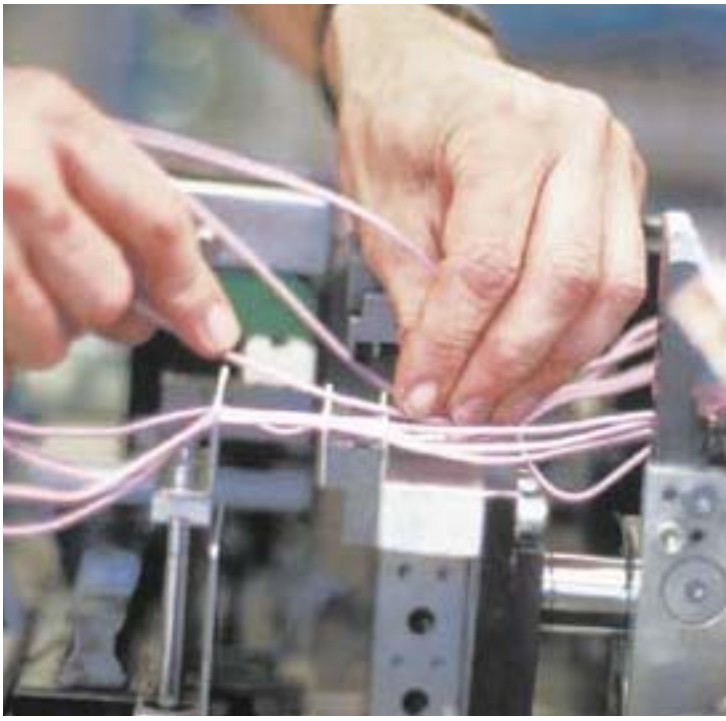
Besides quality and product price, the logistics performance capability of suppliers is a decisive factor in the successful handling of construction projects. This is particularly true of major projects. With its years of experience and high logistics competences, Datwyler can handle even time-critical 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 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 many countries Datwyler works in close co-operation with independent distribution partners. Thus, our 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!**



**POWER AND DATA**
for modern elevators

# ELEVATOR CABLING SYSTEMS

Unnoticed by elevator passengers, elevator cables from Datwyler Cabling Solutions 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.

Spinnaker Tower, Portsmouth

Space in cities is limited. High-rises are being erected around the globe. Elevators with ever greater performance 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 international standards must 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 produce 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.

**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 |
| New World Trade Center | New York | | |

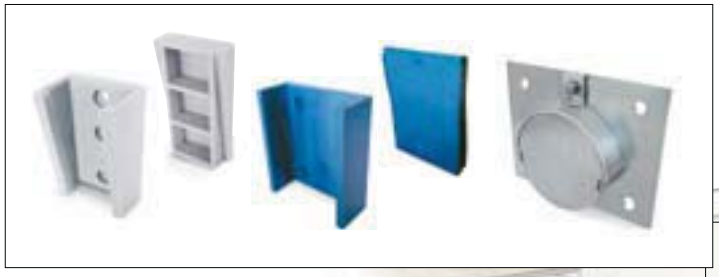
**Diverse applications**

Datwyler elevator cable systems meet every requirement for electrical connections to the elevator cabin. Aside from power cables, high-quality data cables are being increasingly requested. Integral fibre optic cable can easily handle 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.

**Customer value in focus**

Datwyler has developed innovative solutions for all current needs. Comprehensive harnessing and logistics services with modern B2B connectivity round off the service offering.

# PRODUCT OVERVIEW



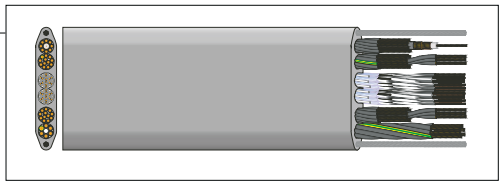
**Suspension devices**
for Datwyler FL, FM, FH

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

**Shaft lighting system**

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

**Flat cables**
FL, FM, FH and module concept, PVC and Low Fire Hazard



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

**Pre-assembled travelling cables (TC)**
for all travelling heights

# QUALITY FROM FIRST TO LAST MILLIMETER

## Datwyler flat elevator cable - a pioneering achievement

Buildings are reaching up to the sky all around the globe. More and more people and goods must be transported faster, more comfortably and more safely in elevators. The "electronic revolution" during the past 30 years has also set entirely new standards in elevator construction. Video cameras monitor the elevator cars. Telephones provide connection with the building service and passengers are accompanied by music on their ascent or descent. What was once futuristic is now reality.

Consequently, modern elevators throughout the world are inconceivable today without well-devised electronic control systems, combined with an absolutely reliable and fault-free signal transmission and energy supply. Datwyler began addressing these requirements many years ago, and since then has clearly signalled the intention to lead the way.

It was always the aim to produce a cable which – with respect to mobility, safety, durability and silent running – was superior to any round cable and satisfied the high technical demands of elevator manufacturers. This has been achieved by the elevator cable specialists at Datwyler in close collaboration with leading elevator manufacturers. A range of flat elevator cables suitable for these applications has meanwhile been produced and proven in practice, backed by pioneering spirit, ambition and intensive research.

## More security thanks to Datwyler flat cables

The unique cable design, the careful choice of high-grade raw materials, the absolutely precise workmanship with the latest production systems and the strict internal quality control guarantee Datwyler flat cable a long and trouble-free service life. This also applies to the appropriate suspension devices, fixing material and accessories. Datwyler is therefore making a decisive contribution towards the security of the entire elevator system, both in PVC as well as in zero-halogen designs.

## Complete cable systems for all elevator shaft heights

Whether simple standard cables or cables with integral data, telephone and video components: Datwyler flat cables are just as versatile and efficient in elevator shafts up to 80 m high as in those up to 150 m or 400 m. In addition, all cable types can be installed very easily and quickly with the appropriate suspension devices, fixing material and accessories. The decisive factors for installation are primarily the type of cable, height of elevator shaft and free suspension length:

| Cable type | Shaft height | Free suspension length | Speed |
|---|---|---|---|
| **FL** | up to 80 m | maximum 45 m | 4 m/s |
| **FM** | up to 150 m | maximum 80 m | 6.3 m/s |
| **FH** | up to 400 m | maximum 220 m | 12 m/s |

In parallel with the development and manufacturing of elevator cables, Datwyler has also played an active role in other fields of cable production: from power supply and safety cables to data cables (copper and fibre optics). In other words: know-how which will certainly benefit you as an elevator manufacturer, particularly where the total electrical package in the elevator shaft is concerned.

## We ourselves demand the highest quality

Quality cannot be dictated. Quality can only be achieved by the commitment of employees with a sense of responsibility. Datwyler has done its utmost for many years to encourage this commitment. Because the important function to be fulfilled by Datwyler in practice calls for a high degree of reliability. Every Datwyler product is therefore tested according to strict quality standards before it leaves the factory.

## ISO 9001/ EN 29001

All production processes at Datwyler are integrated in the comprehensive, internationally recognised ISO 9001/ EN 29001 quality assurance system: development, planning, raw material, goods received, computer-controlled manufacture, functional checks and installation instructions.

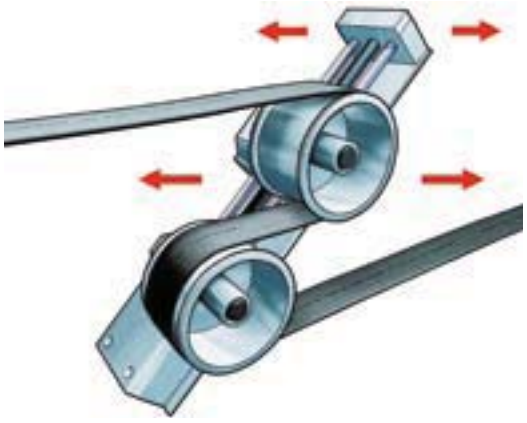
All measures, methods, responsibilities and directives for quality assurance are compiled in a manual, which is considered a "pièce de resistance" by Datwyler.
In addition to general quality assurance Datwyler flat cables are subjected to additional test procedures specific to the application. For these testing procedures Datwyler has developed a whole series of high precision testing systems with the support of qualified specialists which make an exhaustive check of every type of cable. In this way we can ensure that our products comply with the high demands of our customers, with no "ifs and buts".

## ISO 14001 – protecting the environement

Datwyler provides solutions which do not only satisfy the most stringent requirements of technology but are also environmentally friendly and sustainable. The award of the ISO 14001 stamp of quality does not mean an end to our efforts, rather the challenge to continue along the same path and transmit the acquired knowledge, both to our customers and our suppliers.

## Check of dimensions in accordance with EN 60811

This test checks adherence to the wall thicknesses and external dimensions of the cable sheath required by the standard. Measurement is made on the basis of digital picture processing. The sheath profile of flat cables is identified, analysed and measured.



## Alternating flexing test in accordance with EN 50214, HD 21.2

This test checks the flexibility of the elevator cable. The cable is moved back and forth over two metal pulleys within a section of one metre. The transmission capability of the conductors is tested electronically throughout the entire duration of the test.

# PRODUCT FEATURES

The following pictograms show the essential features of our products and give an easy reference to their performance in case of fire.

They are allocated to the articles on the data sheets and provide you with a quick overview

| | | | |
|---|---|---|---|
|  | **Zero halogen, non corrosive gases** | Cables are halogen-free and reduce possible damage to health or material to a minimum. | IEC 60754-1 and IEC 60754-2,<br>EN 50267-2-1, EN 50267-2-2, EN 50267-2-3<br>VDE 0482-267 part 2-1, 2-2 and 2-3 |
|  | **Flame propagation** | Cables use a high-performance, flame retardant material that is self-extinguishing. | IEC 60332-1-2,<br>EN 60332-1-2,<br>VDE 0482-332-1-2 |
|  | **Flame spread** | Cables are flame resistant and prevent the propagation of a fire from one location to another | IEC 60332-3-22 to 25 cat. A-D,<br>EN 60332-3-22 bis 25 cat. A-D,<br>VDE 0482-332-3-22 to 25 cat. A-D |
|  | **Smoke density** | Cables emit minimum smoke in the event of fire.<br>Exit routes and fire brigade access are not restricted. | IEC 61034-1 and IEC 61034-2,<br>EN 61034-1 and EN 61034-2,<br>VDE 0482-1034 part 1 and 2 |

**Environmentally-friendly materials**

The insulation and sheathing material of Datwyler low fire hazard elevator cables contain no PVC and can therefore be disposed of safely.
In this way Datwyler Cabling Solutions makes a significant contribution towards a cleaner and safer environment.

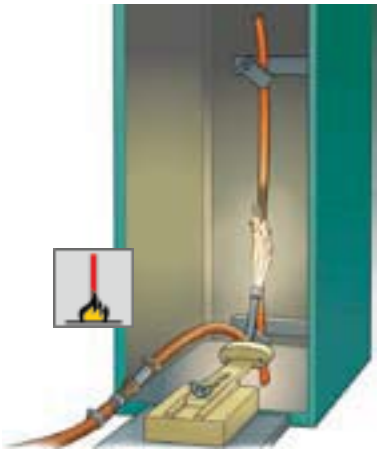
# THE MOST IMPORTANT TEST PROCEDURES AND THEIR FUNCTIONS

## Test on gases evolved during combustion

This test procedure provides information if the insulation material of the cable sheath creates corrosive gases in the event of fire.

Halogen parts or other material in small quantities can be easily identified with this test due to the strong change of pH and conductivity.
The conductivity is < 10mS/mm

**Standards**
- IEC 60754-1 and IEC 60754-2
- EN 50267-2-1, EN 50267-2-2
- EN 50267-2-3
- VDE 0482-267 part 2-1, 2-2 and 2-3



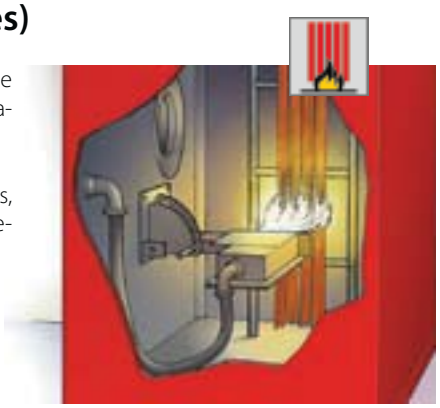
## Test for vertical flame propagation (single insulated wire or cable)

This test method tests a cable sample (length: 60 cm) for burning behaviour.

The flame must extinguish itself, and the burn damage must not reach the upper end of the cable sample.

**Standards**
- IEC 60332-1-2
- EN 60332-1-2
- VDE 0482-332-1-2

## Test for vertical flame spread (bunched wires or cables)



This test method tests a cable bundle (length: 360 cm) with regard to fire propagation.

The flames must extinguish themselves, and burn damage must not exceed a defined height.

**Standards**
- IEC 60332-3-22 up to 25 Cat A-D
- EN 60332-3-22 up to 25 Cat. A-D
- VDE 0482-332-3-22 up to 25 Cat. A-D

## Measurement of smoke density

This test checks smoke development when burning the cable or the impairment of the visibility by burning cables.
The reduction in light transparency is measured in a standard chamber.

**Standards**
- IEC 61034-1 and IEC 61034-2
- EN 61034-1 and EN 61034-2
- VDE 0482-1034 part 1 and 2

# Product overview and selection criteria for Datwyler elevator cables



| Article no. | Type | Control cores: Dimensions in mm² 0.75 | 1.00 | 1.50 | 2.00 | 2.50 | Data elements (see page 36/37): 4 x 2 x AWG 26 | 2 x 0.25 | 2 x 0.34 | 2 x 0.50 | 2 x 0.50 | 2 x 0.50 | 2 x 0.50 | 2 x 0.50 | 2 x 0.75 | 2 x 0.75 | 2 x 0.75 | 4 x 0.25 | 4 x 0.25 | 4 x 0.34 | 4 x 0.50 | 4 x 0.50 | 4 x 0.50 | G50/125 | G62.5/125 | CX 75 Ω | CX 75 Ω | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7702 flex 4P | 7954/2-F | 7345-F | 6651-F | 6651/2-F | 7067/2-F * | 7954/2-F | 6651/3-H | 6651-F | 6651/2-F | 6651/3-F | 7067/2-F * | 7954/2-F | 8607-F | 6347/2-F | 6347/3-F | 8504-F | GF-2314 | GF-2314 | HF-2122-F | HF-2123-F | |
| **FL – PVC flat cable – low rise – unsupported – up to 80 m shaft height** | | | | | | | | | | | | | | | | | | | | | | | | | | | page 18/19 |
| 148775 | 6777-F | 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 148776 | 6777-F | 6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 148777 | 6777-F | 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 155412 | 6777-F | 16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 148779 | 6777-F | 18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 148780 | 6777-F | 20 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 148833 | 6777-F | 24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 173808 | 8555-F | 24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 185282 | 6488-F | 40 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 185283 | 6488-F | 60 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 154413 | 6777/1-F | | 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| 148783 | 6777-F | | 9 | | | | | | | | | | | | | | | | | | | | | | | | |
| 148784 | 6777-F | | 12 | | | | | | | | | | | | | | | | | | | | | | | | |
| 154005 | 6777-F | | 18 | | | | | | | | | | | | | | | | | | | | | | | | |
| 148786 | 6777-F | | 20 | | | | | | | | | | | | | | | | | | | | | | | | |
| 148814 | 6777-F | | 24 | | | | | | | | | | | | | | | | | | | | | | | | |
| **FL – PVC flat cable – low rise – unsupported – up to 80 m shaft height** | | | | | | | | | | | | | | | | | | | | | | | | | | | page 20/21 |
| 181658 | 8304-F | 9 | | 3 | | | | | | 3 | | | | | | | | | | | | | | | | | |
| 185358 | 8798-F | 12 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 155424 | 7747-F | 16 | 4 | | | | | 1 | | | | | | | | | | 2 | | | | | | | | | |
| 167046 | 8326-F | 20 | | | | | | | | 2 | | | | | | | | | | | | | | | | | |
| 184758 | 8387-F | 24 | | | | | | | | | | | | | | | | | 2 | | | | | | | | |
| 184579 | 8798-F | 24 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 167577 | 8506-F | | 2 | 4 | | | | | | | | | | | | | | | | | | 2 | | | | | |
| 182298 | 8822-F | | 12 | | | 4 | | | 2 | | | | | | | | | | | | | | | | | 1 | |
| 185281 | 8304-F | | 12 | | | | | | | 2 | | | | | | | | | | | | | | | | | |
| 181023 | 8606-F | | 14 | | | 3 | | | 4 | | | | | | | | | | | | | | | | | | |
| 173814 | 8548-F | | | 4 | | | | | | | | | | | | | | | | | | 2 | | | | 1 | |
| 167019 | 8216-F | | | 2 | | | | | | 8 | | | | | | | | | | | | | | | | 1 | |
| 167567 | 8447-F | | | | | | | | | | | | 10 | | | | | | | | | | | | | | |
| 173809 | 8580-F | | | | | | | | | | | | 12 | | | | | | | | | | | | | | |
| 191032 | 8867-F | | | | | | 4 | | | | | | | | | | | | | | | | | | | | |
| **FM – PVC flat cable – mid rise – supported – up to 150 m shaft height** | | | | | | | | | | | | | | | | | | | | | | | | | | | page 22/23 |
| 165342 | 6599-F | 20 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 165344 | 6599-F | 24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 156879 | 7770-F | 24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 166618 | 6599-F | | 18 | | | | | | | | | | | | | | | | | | | | | | | | |
| 166505 | 6599-F | | 24 | | | | | | | | | | | | | | | | | | | | | | | | |
| 155425 | 7757-F | 16 | 4 | | | | | 1 | | | | | | | | | | 2 | | | | | | | | | |
| 176877 | 6900-F | | 6 | 6 | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 166612 | 7500-F | | 12 | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 177690 | 8666-F | | 12 | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| 167088 | 7757-F | | 16 | 4 | | | | | | | 2 | 1 | | | | | | | | | | | | | | | |
| 168190 | 8483-F | | 16 | 4 | | | | | | | | 3 | | | | | | | | | | | | | | | |
| 167018 | 8210-F | | | 2 | | | | | | 8 | | | | | | | | | | | | | | | | 1 | |
| 168191 | 8210-F | | | 4 | | | | | | 8 | | | | | | | | | | | | | | | | 2 | |
| 182058 | 8820-F | | | 4 | | | | | | 8 | | | | | | | | | | | | | | | | 2 | |
| 185217 | 8210-F | | | 4 | | | | | | 8 | | | | | | | | | | | | | | | | 4 | |
| 168185 | 8507-F | | | | | | | | | 12 | | | | | | | | | | | | | | | | | |
| 192360 | 8854/3-H | | | | | | | | | | | 4 | | | | | | | | | | | | | | | |
| 191093 | 8512-F | | 14 | | | 3 | | | | 4 | | | | | | | | | | | | | | | | | |
| 192453 | 8884-F | 8 | | | | | | | | | | | | | | | | | | | | | | 4 | | | |

* unshielded





DATWYLER

# Product overview and selection criteria for Datwyler elevator cables

| Article no. | Type | Control cores: 0.75 | 1.00 | 1.50 | 2.00 | 2.50 (Dimensions in mm²) | Data elements (see page 36/37): 4 x 2 x AWG 26 | 2 x 0.25 | 2 x 0.34 | 2 x 0.50 | 2 x 0.50 | 2 x 0.50 * | 2 x 0.50 | 2 x 0.50 | 2 x 0.75 | 2 x 0.75 | 2 x 0.75 | 4 x 0.25 * | 4 x 0.25 | 4 x 0.34 | 4 x 0.50 | 4 x 0.50 | 4 x 0.50 | G50/125 | G62.5/125 | CX 75 Ω | CX 75 Ω | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7702 flex 4P | 7954/2-F | 7345-F | 6651-F | 6651/2-F | 7067/2-F * | 7954/2-F | 6651/3-H | 6651-F | 6651/2-F | 6651/3-F | 7067/2-F * | 7954/2-F | 8607-F | 6347/2-F | 6347/3-F | 8504-F | GF-2314 | GF-2314 | HF-2122-F | HF-2123-F | | | | | | |
| **FH – PVC flat cable – high rise – supported – up to 400 m shaft height** | | | | | | | | | | | | | | | | | | | | | | | | | | | | page 24/25 |
| 157219 | 7877-F | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 185284 | 7877-F | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 161448 | 8292-F | 40 | | | | | | | | | | | | | | | | | | 2 | | | | | | 1 | | |
| 176846 | 8490-F | | 30 | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| 184645 | 8846-F | | 30 | | | | | | | | | | | | | 2 | | | | | | | | | | | | |
| 192528 | 8893-F | 12 | | | | | | | | | 20 | | | | | | | | | | | | | | | 1 | | |
| **FH Module Concept – PVC flat cable – supported – up to 400 m shaft height** | | | | | | | | | | | | | | | | | | | | | | | | | | | | page 26/27 |
| 184646 | 8847-F | | 16 | 7 | | 5 | | | | | 4 | | | | | | | | | | | | | 2 | 2 | | | |
| 185372 | 8847-F | | 18 | | | 10 | | | | | 12 | | | | | | | | | | | | | | 2 | | | |
| 177860 | 8687-F | | 40 | | | | | | | 8 | | | | | | | | | | 3 | | | | | | | | |
| 187125 | 8847-F | | 16 | 7 | | 5 | | | | | 4 | | | | | | | | | | | | | 4 | | | | |
| 186276 | 8858-F | | 30 | | 12 | | | | | 7 | | | | | | | | | | | 3 | | | | | | | |
| 187102 | 8687-F | | 30 | | | 5 | | | | | 8 | | | | | | | | | 3 | | | | | | | | |
| 188337 | 8680-F | | 20 | | | 10 | | | | | 4 | | | | | | | | | | | | | | | | | |
| 192527 | 8892-F | 24 | 6 | | | 20 | | | | | | | | | | | | | | | | | | | 4 | | | |
| **FL – Low Fire Hazard – unsupported – up to 80 m shaft height** | | | | | | | | | | | | | | | | | | | | | | | | | | | | page 28/29 |
| 191110 | 8511-F | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 191111 | 8636-F | 12 | | | | | | | | 3 | | | | | | | | | | | | | | | | | | |
| 185125 | 8511-F | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 191112 | 8511-F | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 182205 | 8827-F | | 14 | | | 3 | | | 4 | | | | | | | | | | | | | | | | | | | |
| 191113 | 8582-F | | 24 | | | | | | | | 3 | | | | | | | | | | | | | | | | 1 | |
| 190491 | 8582-F | | | 2 | | | | | | 8 | | | | | | | | | | | | | | | | | 1 | |
| **FM – Low Fire Hazard – supported – up to 150 m shaft height** | | | | | | | | | | | | | | | | | | | | | | | | | | | | page 30/31 |
| 185127 | 8622-F | | 12 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 185124 | 8696-F | | 12 | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 184674 | 8849-F | | | | | | | | | 12 | | | | | | | | | | | | | | | | | | |
| 191094 | 8872-F | | 14 | | | 3 | | | | 4 | | | | | | | | | | | | | | | | | | |
| **FH – Low Fire Hazard – supported – up to 400 m shaft height** | | | | | | | | | | | | | | | | | | | | | | | | | | | | page 32/33 |
| 185126 | 8585-F | | 30 | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 192313 | 8880-F | 12 | | | | | | | | | | | | | 24 | | | | | | | | | | | | 1 | |
| **FH Module Concept – Low Fire Hazard – up to 400 m shaft height** | | | | | | | | | | | | | | | | | | | | | | | | | | | | page 34/35 |
| 191114 | 8859-F | | 30 | | 12 | | | | | 7 | | | | | | | 3 | | | | | | | | | | | |
| 191483 | 8866-F | | 6 | 7 | | 10 | | | | | 12 | | | | | | | | 4 | 2 | | | | | | | | |
| 192314 | 8881-F | 24 | 6 | | | 20 | | | | | | | | | | | | | 4 | | | | | | | | | |
| 192236 | 8839-F | | | | | 35 | | | | | | | | | | | | | | | | | | | | | | |
| 192342 | 8866-F | 42 | | | | | | | | | 12 | | | | | | | | 6 | | | | | | | | | |

**Standards:** EN 50214; JIS C 3408

* unshielded

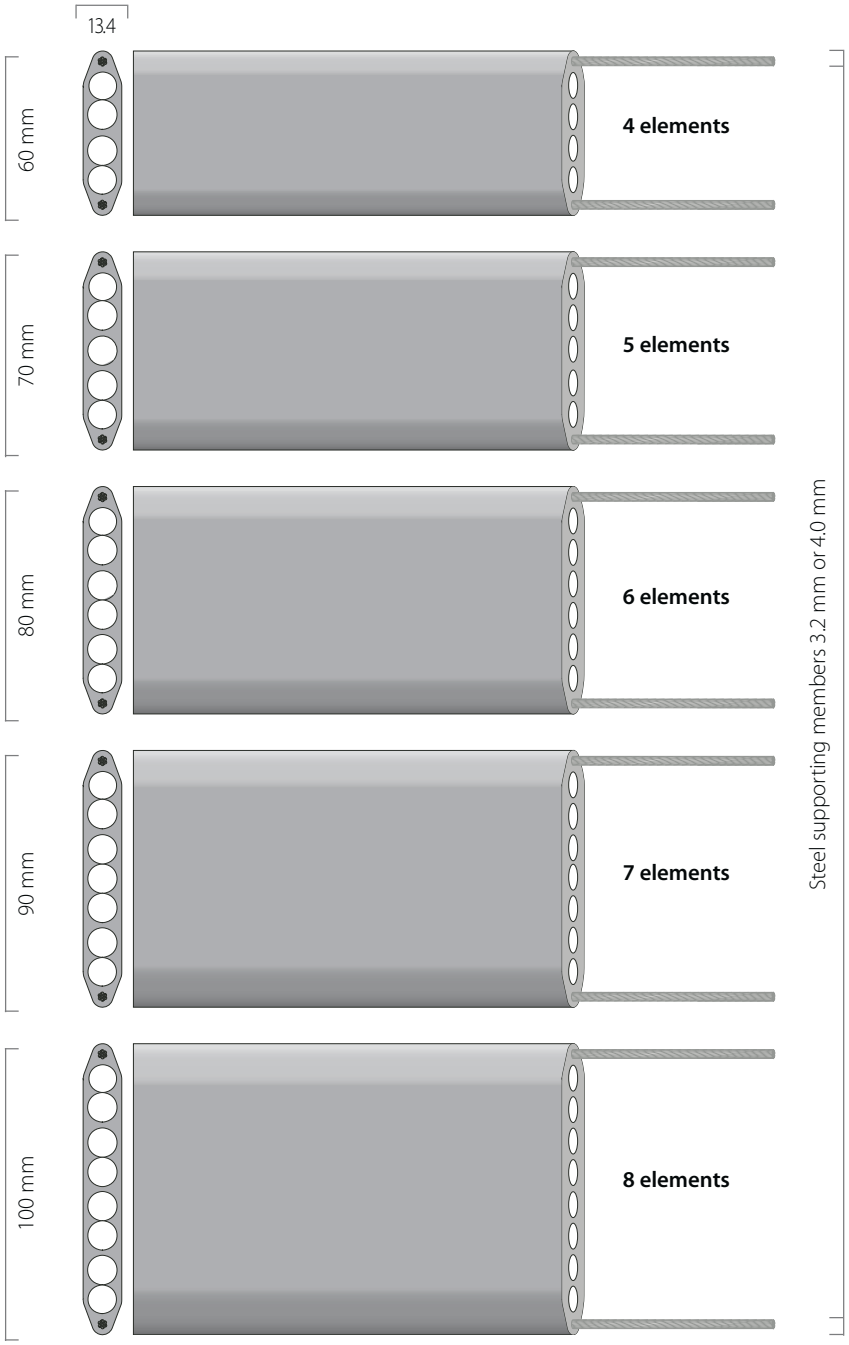
# Datwyler FH Module Concept

## Innovative Datwyler module concept

**for the simplest, safest and best choice of cable for shaft heights up to 400 metres**

Datwyler offers the best conditions for a choice of a functionally suitable cable with the new and unique module concept: quick, individual and economical.

## Datwyler basic modules (4 to 8 bundle elements)




**Module concept**

PVC or LFH
(Safety - Low Fire Hazard)

For a range of active constructions see page 26/27 and 34/35

**Advantages:**

- Only one or maximum two cables are required even for the most complex functions
- Shorter installation times
- Less logistics expenditure
- Customized solutions



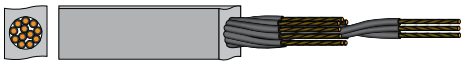
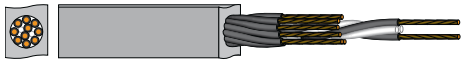
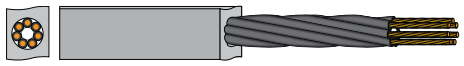
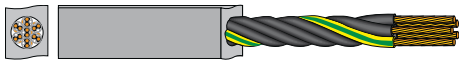
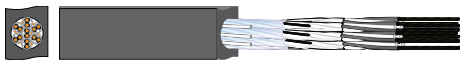
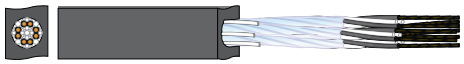
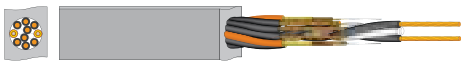
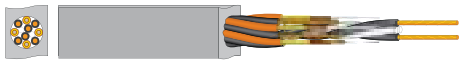
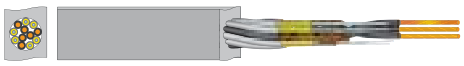
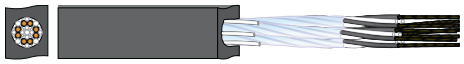




DATWYLER

# Innovative Datwyler module concept

## Possible elements

| Module type | | Possible elements (international) | Dimensions | Integrated data elements |
|---|---|---|---|---|
| **M1** |  | CH-N05V-F **6240-F** CH-N05Z-F **8570-F** | 12 x 0.75 $mm^2$ | |
| **M2** |  | CH-N05V-F **6240-F** CH-N05Z-F **8570-F** | 10 x 1.00 $mm^2$ | |
| **M3** |  | CH-N07V-F **6240-F** CH-N07Z-F **8570-F** | 7 x 1.50 $mm^2$ | |
| **M4** |  | CH-N07V-F **6240-F** CH-N07Z-F **8570-F** | 6 x 2.0 $mm^2$ | |
| **M5** |  | CH-N07V-F **6240-F** CH-N07Z-F **8570-F** | 5 x 2.50 $mm^2$ | |
| **M6** |  | CH-N03EC4-F **8667/2-F** | 3 x 4 x 0.34 $mm^2$ | 8607-F STQ |
| **M7** |  | CH-N03EC7-F **8061/2-F** | 3 x 4 x 0.50 $mm^2$ | 6347/3-F STQ |
| **M8** |  | CH-N03EA7-F **8662/2-F** | 7 x 2 x 0.50 $mm^2$ | 6651/2-F FTP |
| **M9** |  | CH-N03EA7-F **8662/2-F** | 4 x 2 x 0.75 $mm^2$ | 6651/2-F FTP |
| **M10** |  | CH-N05V-Z **8811-Z** CH-H05Z-Z **8823/2-Z** | 8 x 1.00 $mm^2$ + 2 x optical fibre | GF-2314 50 µm GF-2314 62.5 µm |
| **M11** |  | CH-N05V-Z **8811-Z** CH-H05Z-Z **8823/2-Z** | 6 x 1.00 $mm^2$ + 4 x optical fibre | GF-2314 50 µm GF-2314 62.5 µm |
| **M12** |  | CH-N05V-Z **8811-Z** CH-H05Z-Z **8823/2-Z** | 6 x 0.75 $mm^2$ + 6 x optical fibre | GF-2314 50 µm GF-2314 62.5 µm |
| **M13** |  | CH-N03EA7-F **8662/2-F** | 4 x 2 x 0.50 $mm^2$ | 6651/2-F FTP |
| **M14** |  | CH-N03EC7Z1-F **8871-F** | 3 x 4 x 0.50 $mm^2$ | 6347/3-F STQ |
| **M15** |  | CH-N03EA7Z1-F **8870-F** | 7 x 2 x 0.50 $mm^2$ | 6651/2-F FTP |

**Note:** This is a selection of possible module elements. Please refer to manufacturer to verify feasibility of your requested combination of elements.

# FL – PVC – unsupported

**Low rise - travelling height maximum 80 m**

Drawing according to article number 148779 – Type 6777-F

## PRODUCT INFORMATION



| | | |
|---|---|---|
| **APPLICATION** | Elevator suspension cable for indoor and panoramic elevators. | |
| **INSTALLATION** | To comply with the correct installation procedures please refer to the Datwyler installation manual which is available separately. | |
| **CONSTRUCTION** | Core flexible: | class 5 |
| | Core insulation: | PVC |
| | Data elements: | none |
| | Supporting members: | none |
| | Outer sheath: | PVC |
| **ELECTRICAL PROPERTIES** | Rated voltage Uo/U: | according to table |
| **MECHANICAL PROPERTIES** | Free suspension length: | maximum 45 m |
| | Travelling height: | maximum 80 m |
| | Running speed: | maximum 4 m/s |
| | Acceleration: | < 0.8 $m/s^2$ |
| | Operating temperature: | -15 to +70 °C |
| | Recommended loop diameter: | according to table, tolerance -50/+100 mm |
| **COLOUR CODE** | Core: | black, white numbered,<br>G = with green-yellow core(s),<br>JIF compliant types with different colours |
| | Outer sheath: | grey |
| **STANDARD** | EN 50214 | |
| | JIS C 3408 | |





DATWYLER

# FL – PVC – unsupported

## Low rise - travelling height maximum 80 m

| Article no. | Type | Cross sectional area | Rated voltage | Overall dimensions approx. [w x h] | Data elements | Weight approx. | Copper content | Supporting members | Loop | Suspension device | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | [n x mm²] | Uo/U [V] | [mm x mm] | | [kg/100m] | [kg/km] | | [mm] | | |
| 148775 | 6777-F | 4 G 0.75 | 300/500 | 13.0 x 4.5 | none | 8.9 | 29 | none | 300 | LZ 1006 | |
| 148776 | 6777-F | 6 G 0.75 | 300/500 | 18.7 x 4.3 | none | 13.6 | 43 | none | 300 | LZ 1006 | |
| 148777 | 6777-F | 12 G 0.75 | 300/500 | 34.0 x 4.3 | none | 25.8 | 87 | none | 300 | LZ 1006 | |
| 155412 | 6777-F | 16 G 0.75 | 300/500 | 44.7 x 4.3 | none | 34.2 | 115 | none | 300 | LZ 1006 | |
| 148779 | 6777-F | 18 G 0.75 | 300/500 | 49.3 x 4.3 | none | 38.0 | 130 | none | 300 | LZ 1006 | |
| 148780 | 6777-F | 20 G 0.75 | 300/500 | 55.2 x 4.3 | none | 42.5 | 144 | none | 300 | LZ 1009 | |
| 148833 | 6777-F | 24 G 0.75 | 300/500 | 65.6 x 4.3 | none | 50.9 | 173 | none | 300 | LZ 1009 | |
| 173808 | 8555-F | 24 x 0.75 | 300/300 | 55.2 x 4.0 | none | 41.6 | 173 | none | 300 | LZ 1009 | |
| 185282* | 6488-F | 40 x 0.75 | 300/500 | 57.2 x 9.4 | none | 94.8 | 309 | none | 450 | LZ 1009 | |
| 185283* | 6488-F | 60 x 0.75 | 300/500 | 79.9 x 10.5 | none | 145.7 | 446 | none | 500 | LZ 1010 | |
| 154413 | 6777/1-F | 7 G 1.00 | 300/500 | 23.2 x 4.7 | none | 19.8 | 67 | none | 300 | LZ 1006 | |
| 148783 | 6777-F | 9 G 1.00 | 300/500 | 27.8 x 4.4 | none | 22.6 | 86 | none | 300 | LZ 1006 | |
| 148784 | 6777-F | 12 G 1.00 | 300/500 | 35.3 x 4.4 | none | 29.2 | 115 | none | 300 | LZ 1006 | |
| 154005 | 6777-F | 18 G 1.00 | 300/500 | 51.1 x 4.4 | none | 43.2 | 173 | none | 300 | LZ 1006 | |
| 148786 | 6777-F | 20 G 1.00 | 300/500 | 57.6 x 4.4 | none | 48.3 | 192 | none | 300 | LZ 1009 | |
| 148814 | 6777-F | 24 G 1.00 | 300/500 | 68.4 x 4.4 | none | 57.8 | 230 | none | 300 | LZ 1009 | |

*Bundle construction G = with green-yellow core(s)

Further dimensions on request

# FL – PVC – unsupported

**Low rise - travelling height maximum 80 m**

Drawing according to article number 167046 - Type 8326-F

## PRODUCT INFORMATION

| | | |
|---|---|---|
| **APPLICATION** | Elevator suspension cable for indoor and panoramic elevators. | |
| **INSTALLATION** | To comply with the correct installation procedures please refer to the Datwyler installation manual which is available separately. | |
| **CONSTRUCTION** | Core flexible: | class 5 |
| | Core insulation: | PVC |
| | Data elements: | details according to page 36/37 |
| | Supporting members: | none |
| | Outer sheath: | PVC |
| **ELECTRICAL PROPERTIES** | Rated voltage Uo/U: | according to table |
| **MECHANICAL PROPERTIES** | Free suspension length: | maximum 45 m |
| | Travelling height: | maximum 80 m |
| | Running speed: | maximum 4 m/s |
| | Acceleration: | < 0.8 m/s$^2$ |
| | Operating temperature: | -15 to +70 °C |
| | Recommended loop diameter: | according to table, tolerance -50/+100 mm |
| **COLOUR CODE** | Core: | black, white numbered,<br>G = with green-yellow core(s),<br>JIS compliant types with different colours |
| | Pair/quad: | various colours or black with white numbers |
| | Coaxial : | grey |
| | Outer sheath: | grey |
| **STANDARD** | EN 50214 | |
| | JIS C 3408 | |

# FL – PVC – unsupported

## Low rise - travelling height maximum 80 m

| Article no. | Type | Cross sectional area | Rated voltage | Overall dimensions approx. [w x h] | Data elements | Weight approx. | Copper content | Supporting members | Loop | Suspension device | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | [n x mm²] | Uo/U [V] | [mm x mm] | | [kg/100m] | [kg/km] | | [mm] | | |
| 181658 | 8304-F | 3 G 1.50 | 450/750 | | | | | | | | |
| | | + 9 x 0.75 | 300/500 | | | | | | | | |
| | | +3 x 2 x 0.50 | 300/300 | 48.6 x 5.5 | 6651-F | 44.3 | 143 | none | 350 | LZ 1006 | |
| 185358 | 8798-F | 12 G 0.75 | 300/500 | | | | | | | | |
| | | + 1 x CX 75 Ω | | 42.3 x 6.5 | HF-2122-F | 43.8 | 111 | none | 400 | LZ 1006 | |
| 155424 | 7747-F | 4 G 1.00 | 300/500 | | | | | | | | |
| | | + 16 x 0.75 | 300/500 | | | | | | | | |
| | | + 2 x 4 x 0.25 | 250/250 | | 7067/2-F | | | | | | |
| | | + 1 x 2 x 0.25 | 250/250 | 67.3 x 5.0 | 7954/2-F | 58.2 | 187 | none | 350 | LZ 1009 | |
| 167046 | 8326-F | 20 x 0.75 | 300/300 | | | | | | | | |
| | | + 2 x 2 x 0.50 | 300/300 | 52.0 x 5.3 | 6651-F | 46.9 | 169 | none | 350 | LZ 1006 | |
| 184758 | 8387-F | 24 G 0.75 | 300/500 | | | | | | | | |
| | | + 2 x 4 x 0.25 | 300/300 | 73.0 x 5.5 | 7954/2-F | 69.7 | 216 | none | 350 | LZ 1009 | |
| 184579 | 8798-F | 24 x 0.75 | 300/500 | | | | | | | | |
| | | + 1 x CX 75 Ω | | 72.3 x 6.8 | HF-2122-F | 77.8 | 197 | none | 400 | LZ 1009 | |
| 167577 | 8506-F | 4 x 1.50 | 450/750 | | | | | | | | |
| | | + 2 x 1.00 | 300/500 | | | | | | | | |
| | | + 2 x 4 x 0.50 | 300/500 | 34.1 x 7.6 | 8504-F | 43.4 | 141 | none | 400 | LZ 1006 | |
| 182298 | 8822-F | 4 G 2.50 | 450/750 | | | | | | | | |
| | | + 12 x 1.00 | 300/500 | | | | | | | | |
| | | + 2 x 2 x 0.34 | 300/300 | | 7345-F | | | | | | |
| | | + 1 x CX 75 Ω | | 67.7 x 6.5 | HF-2122-F | 77.8 | 254 | none | 400 | LZ 1009 | |
| 185281 | 8304-F | 12 G 1.00 | 300/500 | | | | | | | | |
| | | + 2 x 2 x 0.50 | 300/300 | 46 x 5.4 | 6651-F | 42.2 | 140 | none | 350 | LZ 1006 | |
| 181023 | 8606-F | 3 G 2.50 | 450/750 | | | | | | | | |
| | | + 14 x 1.00 | 300/500 | | | | | | | | |
| | | + 4 x 2 x 0.34 | 300/300 | 72.0 x 5.7 | 7345-F | 72.6 | 244 | none | 350 | LZ 1009 | |
| 173814 | 8548-F | 4 x 1.50 | 450/750 | | | | | | | | |
| | | + 2 x 4 x 0.50 | 300/300 | | 8504-F | | | | | | |
| | | + 1 x CX 75 Ω | | 32.9 x 7.4 | HF-2122-F | 41.1 | 146 | none | 400 | LZ 1006 | |
| 167019 | 8216-F | 2 x 1.50 | 450/750 | | | | | | | | |
| | | + 8 x 2 x 0.50 | 300/300 | | 6651-F | | | | | | |
| | | + 1 x CX 75 Ω | | 46.3 x 7.0 | HF-2122-F | 50.5 | 149 | none | 400 | LZ 1006 | |
| 167567 | 8447-F | 10 x 2 x 0.75 | 300/300 | 46.2 x 6.4 | 6651-F | 43.6 | 171 | none | 400 | LZ 1006 | |
| 173809 | 8580-F | 12 x 2 x 0.75 | 300/300 | 51.6 x 6.3 | 6651-F | 50.8 | 205 | none | 400 | LZ 1006 | |
| 191032 | 8867-F | 4 x 4 x 2 x AWG26 | 300/300 | 29.4 x 8.4 | 7702 flex 4P | 31.5 | 71 | none | 500 | LZ 1006 | |
| | | G = with green-yellow core(s) | | | | | | | | | |

Further dimensions on request

# FM – PVC – supported

**Mid rise - travelling height maximum 150 m**

Drawing according to article number 177690 - Type 8666-F

## PRODUCT INFORMATION

**APPLICATION**

Elevator suspension cable for indoor and panoramic elevators.

**INSTALLATION**

To comply with the correct installation procedures please refer to the Datwyler installation manual which is available separately.

**CONSTRUCTION**

| | |
|---|---|
| Core flexible: | class 5 |
| Core insulation: | PVC |
| Data elements: | details according to page 36/37 |
| Supporting members: | HTF = High tensile fibre,<br>ST = Steel, diameter in [mm] |
| Outer sheath: | PVC |

**ELECTRICAL PROPERTIES**

| | |
|---|---|
| Rated voltage Uo/U: | according to table |

**MECHANICAL PROPERTIES**

| | |
|---|---|
| Free suspension length: | maximum 80 m |
| Travelling height: | maximum 150 m |
| Running speed: | maximum 6.3 m/s |
| Acceleration: | < 1.2 $m/s^2$ |
| Operating temperature: | -15 to +70 °C |
| Recommended loop diameter: | according to table, tolerance -50/+100 mm |

**COLOUR CODE**

| | |
|---|---|
| Core: | black, white numbered,<br>G = with green-yellow core(s) |
| Pair/quad: | various colours or black with white numbers |
| Coax: | grey |
| Outer sheath: | grey |

**STANDARD**

EN 50214

# FM – PVC – supported

## Mid rise - travelling height maximum 150 m

| Article no. | Type | Cross sectional area | Rated voltage | Overall dimensions approx. [w x h] | Data elements | Weight approx. | Copper content | Supporting members | Loop | Suspension device | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | [n x mm²] | Uo/U [V] | [mm x mm] | | [kg/100m] | [kg/km] | | [mm] | | |
| 165342 | 6599-F | 20 G 0.75 | 300/500 | 62.8 x 4.3 | none | 46.5 | 144 | HTF | 300 | LZ 1009 | |
| 165344 | 6599-F | 24 G 0.75 | 300/500 | 73.1 x 4.3 | none | 54.9 | 173 | HTF | 300 | LZ 1009 | |
| 156879 | 7770-F | 24 G 0.75 | 300/500 | 73.2 x 4.3 | none | 59.0 | 173 | ST Ø 2.5 | 400 | LZ 1009 | |
| 166618 | 6599-F | 18 G 1.00 | 300/500 | 58.6 x 4.4 | none | 47.3 | 173 | HTF | 300 | LZ 1009 | |
| 166505 | 6599-F | 24 G 1.00 | 300/500 | 75.4 x 4.4 | none | 63.0 | 230 | HTF | 300 | LZ 1009 | |
| 155425 | 7757-F | 4 G 1.00 | 300/500 | | | | | | | | |
| | | + 16 x 0.75 | 300/500 | | | | | | | | |
| | | + 2 x 4 x 0.25 | 250/250 | | 7067/2-F | | | | | | |
| | | + 1 x 2 x 0.25 | 250/250 | 74.8 x 5.0 | 7954/2-F | 65.9 | 187 | ST Ø 2.5 | 450 | LZ 1009 | |
| 176877 | 6900-F | 6 G 1.50 | 450/750 | | | | | | | | |
| | | + 6 x 1.00 | 300/500 | | | | | | | | |
| | | + 1 x 4 x 0.50 | 300/300 | 53.0 x 6.4 | 6347/3-F | 59.6 | 173 | HTF | 400 | LZ 1006 | |
| 166612 | 7500-F | 12 G 1.00 | 300/500 | | | | | | | | |
| | | + 1 x CX 75 Ω | | 50.9 x 6.4 | HF-2122-F | 53.0 | 139 | HTF | 400 | LZ 1006 | |
| 177690 | 8666-F | 12 G 1.00 | 300/500 | | | | | | | | |
| | | + 1 x 4 x 0.34 | 300/300 | 50.9 x 6.4 | 8607-F | 52.5 | 142 | HTF | 400 | LZ 1006 | |
| 167088 | 7757-F | 4 G 1.50 | 450/750 | | | | | | | | |
| | | + 16 x 1.00 | 300/500 | | | | | | | | |
| | | + 2 x 2 x 0.50 | 300/300 | | 7067/2-F | | | | | | |
| | | + 1 x 2 x 0.50 | 300/300 | 78.5 x 5.8 | 7954/2-F | 84.3 | 250 | ST Ø 2.5 | 450 | LZ 1009 | |
| 168190 | 8483-F | 4 G 1.50 | 450/750 | | | | | | | | |
| | | + 16 x 1.00 | 300/500 | | | | | | | | |
| | | + 3 x 2 x 0.50 | 300/500 | 79.7 x 6.1 | 7954/2-F | 89.6 | 275 | ST Ø 2.5 | 450 | LZ 1010 | |
| 167018 | 8210-F | 2 x 1.50 | 450/750 | | | | | | | | |
| | | + 1 x CX 75 Ω | | | HF-2122-F | | | | | | |
| | | + 8 x 2 x 0.50 | 300/300 | 54.1 x 7.1 | 6651-F | 58.0 | 149 | HTF | 450 | LZ 1006 | |
| 168191 | 8210-F | 4 x 1.50 | 450/750 | | | | | | | | |
| | | + 2 x CX 75 Ω | | | HF-2122-F | | | | | | |
| | | + 8 x 2 x 0.50 | 300/300 | 64.3 x 7.0 | 6651-F | 71.6 | 201 | HTF | 450 | LZ 1009 | |
| 182058 | 8820-F | 4 x 1.50 | 450/750 | | | | | | | | |
| | | + 2 x CX 75 Ω | | | HF-2122-F | | | | | | |
| | | + 8 x 2 x 0.50 | 300/300 | 64.3 x 7.0 | 6651-F | 74.5 | 201 | ST Ø 2.5 | 500 | LZ 1009 | |
| 185217 | 8210-F | 4 x 1.50 | 450/750 | | | | | | | | |
| | | + 4 x CX 75 Ω | | | HF-2122-F | | | | | | |
| | | + 8 x 2 x 0.50 | 300/300 | 72.8 x 7.0 | 6651-F | 82.5 | 249 | HTF | 450 | LZ 1009 | |
| 168185 | 8507-F | 12 x 2 x 0.50 | 300/300 | 54.1 x 5.6 | 6651-F | 44.9 | 147 | HTF | 400 | LZ 1006 | |
| 192360 | 8854/3-H | 4 x 2 x 0.50 | 300/300 | 28.0 x 9.0 | 6651/3-H | 31.1 | 56 | ST Ø 2.5 | 450 | LZ 1006 | |
| 191093 | 8512-F | 3 G 2.50 | 450/750 | | | | | | | | |
| | | + 14 x 1.00 | 300/500 | | | | | | | | |
| | | + 4 x 2 x 0.50 | 300/300 | 79.0 x 5.7 | 6651-F | 80.6 | 232 | ST Ø 2.5 | 400 | LZ 1009 | |
| 192453 | 8884-F | 8 x 0.75 | 300/500 | | | | | | | | |
| | | + 4 x FO G50/125 | | 40.8 x 4.3 | GF-2314 | 30.2 | 58 | ST Ø 2.5 | 400 | LZ 1006 | |

G = with green-yellow core(s)

# FH – PVC – supported

**High rise - travelling height maximum 400 m**

Drawing according to article number 161448 - Type 8292-F

## PRODUCT INFORMATION

| | | |
|---|---|---|
| **APPLICATION** | Elevator suspension cable for indoor and panoramic elevators. | |
| **INSTALLATION** | To comply with the correct installation procedures please refer to the Datwyler installation manual which is available separately. | |
| **CONSTRUCTION** | Core flexible: | class 5 |
| | Core insulation: | PVC |
| | Data elements: | details according page 36/37 |
| | Supporting members: | ST = Steel, diameter in [mm] |
| | Outer sheath: | PVC |
| **ELECTRICAL PROPERTIES** | Rated voltage Uo/U: | according to table |
| **MECHANICAL PROPERTIES** | Free suspension length: | maximum 220 m |
| | Travelling height: | maximum 400 m |
| | Running speed: | maximum 12 m/s |
| | Acceleration: | < 1.2 m/s$^2$ |
| | Operating temperature: | -15 to +70 °C |
| | Recommended loop diameter: | according to table, tolerance -50/+100 mm |
| **COLOUR CODE** | Core: | black, white numbered,<br>G = with green-yellow core(s) |
| | Pair/quad: | various colours or black with white numbers |
| | Coax: | grey |
| | Outer sheath: | grey |
| **STANDARD** | EN 50214 | |

# FH – PVC – supported

## High rise - travelling height maximum 400 m

| Article no. | Type | Cross sectional area | Rated voltage | Overall dimensions approx. [w x h] | Data elements | Weight approx. | Copper content | Supporting members | Loop | Suspension device | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | [n x mm²] | Uo/U [V] | [mm x mm] | | [kg/100m] | [kg/km] | | [mm] | | |
| 157219 | 7877-F | 40 x 0.75 | 300/500 | 69.0 x 9.4 | none | 111.4 | 309 | ST Ø 2.5 | 550 | LZ 4001 | |
| 185284 | 7877-F | 60 x 0.75 | 300/500 | 89.3 x 10.5 | none | 161.0 | 446 | ST Ø 3.2 | 550 | LZ 4001 | |
| 161448 | 8292-F | 40 G 0.75 | 300/500 | | | | | | | | |
| | | +2 x 4 x 0.50 | 300/300 | | 6347/2-F | | | | | | |
| | | + 1 x CX 75 Ω | | 81.6 x 9.6 | HF-2122-F | 138.1 | 400 | ST Ø 3.2 | 550 | LZ 4001 | |
| 176846 | 8490-F | 30 G 1.00 | 300/500 | | | | | | | | |
| | | + 1 x CX 75 Ω | | 64.8 x 9.8 | HF-2122-F | 112.3 | 332 | ST Ø 2.5 | 550 | LZ 4001 | |
| 184645 | 8846-F | 30 G 1.00 | 300/500 | | | | | | | | |
| | | + 2 x 2 x 0.75 | 300/300 | 64.3 x 9.9 | 6651/3-F | 103.7 | 343 | ST Ø 2.5 | 550 | LZ 4001 | |
| 192528 | 8893-F | 12 G 0.75 | 300/500 | | | | | | | | |
| | | + 20 x 2 x 0.75 | 300/300 | | 6651/2-F | | | | | | |
| | | + 1 x CX 75 Ω | | 86.6 x 13.4 | HF-2122-F | 164.9 | 462 | ST Ø 4.0 | 550 | LZ 4001 | |
| | | G = with green-yellow core(s) | | | | | | | | | |

Further dimensions on request

# FH Module Concept – PVC

**High rise - travelling height maximum 400 m**

Drawing according to article number 185372 - Type 8847-F

## PRODUCT INFORMATION



| | | |
|---|---|---|
| **APPLICATION** | Elevator suspension cable for indoor and panoramic elevators. | |
| **INSTALLATION** | To comply with the correct installation procedures please refer to the Datwyler installation manual which is available separately. | |
| **CONSTRUCTION** | Core flexible: | class 5 |
| | Core insulation: | PVC |
| | Data elements: | details according to page 36/37 |
| | Supporting members: | ST = Steel, diameter in [mm] |
| | Outer sheath: | PVC |
| **ELECTRICAL PROPERTIES** | Rated voltage Uo/U: | according to table |
| **MECHANICAL PROPERTIES** | Free suspension length: | maximum 220 m |
| | Travelling height: | maximum 400 m |
| | Running speed: | maximum 12 m/s |
| | Acceleration: | < 1.2 m/s$^2$ |
| | Operating temperature: | -15 to +70 °C |
| | Recommended loop diameter: | approx. 600 mm, Tolerance -50/+150 mm |
| **SUSPENSION DEVICE** | LZ 4001 | |
| **COLOUR CODE** | Core: | black, white numbered,<br>G = with green-yellow core(s) |
| | Pair/quad: | various colours or black with white numbers |
| | Coax: | grey |
| | Optical fibres: | orange 50 µm, grey 62.5 µm |
| | Outer sheath: | grey |
| **STANDARD** | EN 50214 | |

# FH Module Concept – PVC

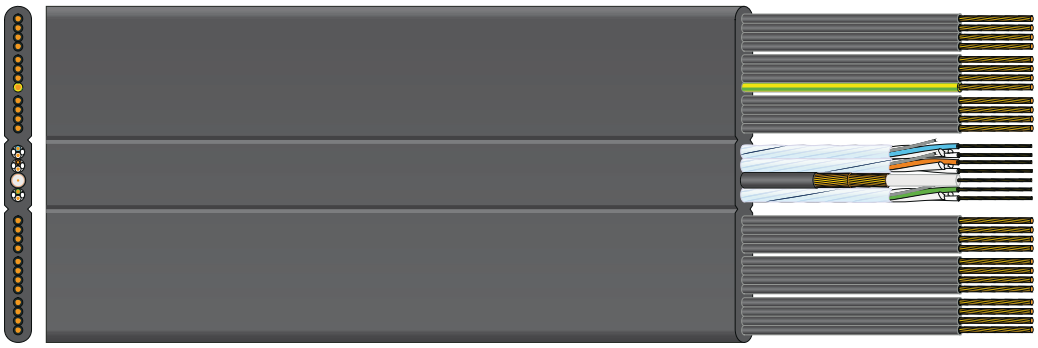
## High rise - travelling height maximum 400 m

| Article no. | Type | Cross sectional area [n x mm²] | Rated voltage Uo/U [V] | Bundle type p. 17 | No. of elements | Data elements | Overall dimensions approx. [w x h] [mm x mm] | Supporting members | Weight approx. [kg/100m] | Copper content [kg/km] | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 184646 | 8847-F | 5 G 2.50 | 450/750 | | | | | | | | |
| | | + 7 x 1.50 | 450/750 | | | | | | | | |
| | | + 16 x 1.00 | 300/500 | | | | | | | | |
| | | + 4 x 2 x 0.75 | 300/300 | M5, | | 6651/2-F | | | | | |
| | | + 2 x FO G50/125 | | M2, M9, | | GF-2314 | | | | | |
| | | + 2 x FO G62.5/125 | | M11, M3 | 5 | GF-2314 | 70.0 x 13.4 | ST Ø 4.0 | 152.5 | 448 | |
| 185372 | 8847-F | 10 G 2.50 | 450/750 | M5, M2 | | | | | | | |
| | | + 18 x 1.00 | 300/500 | M9, M9 | | | | | | | |
| | | + 12 x 2 x 0.75 | 300/300 | M9, M10, | | 6651/2-F | | | | | |
| | | + 2 x FO G62.5/125 | | M5 | 7 | GF-2314 | 90.0 x 13.4 | ST Ø 4.0 | 198.7 | 629 | |
| 177860 | 8687-F | 40 G 1.00 | 300/500 | M2, M2, M13, | | | | | | | |
| | | + 8 x 2 x 0.50 | 300/300 | M6, M13, | | 6651/2-F | | | | | |
| | | + 3 x 4 x 0.34 | 300/300 | M2, M2 | 7 | 8607-F | 86.6 x 13.4 | ST Ø 3.2 | 175.0 | 578 | |
| 187125 | 8847-F | 5 G 2.50 | 450/750 | | | | | | | | |
| | | + 7 x 1.50 | 450/750 | | | | | | | | |
| | | + 16 x 1.00 | 300/500 | M5, | | | | | | | |
| | | + 4 x 2 x 0.75 | 300/300 | M2, M9, | | 6651/2-F | | | | | |
| | | + 4 x FO G50/125 | | M11, M3 | 5 | GF-2314 | 70.0 x 13.4 | ST Ø 4.0 | 150.9 | 448 | |
| 186276 | 8858-F | 12 G 2.00 | 450/750 | M4 | | | | | | | |
| | | + 30 x 1.00 | 300/500 | M2, M8 | | | | | | | |
| | | + 7 x 2 x 0.50 | 300/300 | M2, M7, | | 6651/2-F | | | | | |
| | | + 3 x 4 x 0.50 | 300/300 | M2, M4 | 7 | 6347/3-F | 88.7 x 13.4 | ST Ø 4.0 | 196.8 | 698 | |
| 187102 | 8687-F | 5 G 2.50 | 450/750 | M5, | | | | | | | |
| | | + 30 G 1.00 | 300/500 | M2, M9, | | | | | | | |
| | | + 8 x 2 x 0.75 | 300/300 | M6, M9, | | 6651/2-F | | | | | |
| | | + 3 x 4 x 0.34 | 300/300 | M2, M2 | 7 | 8607-F | 87.6 x 13.4 | ST Ø 4.0 | 188.0 | 638 | |
| 188337 | 8680-F | 10 G 2.50 | 450/700 | M5, | | | | | | | |
| | | + 20 x 1.00 | 300/500 | M2, M9, | | | | | | | |
| | | + 4 x 2 x 0.75 | 300/300 | M2, M5 | 5 | 6651/2-F | 70.0 x 13.4 | ST Ø 4.0 | 155.7 | 513 | |
| 192527 | 8892-F | 20 G 2.50 | 450/750 | M5, M5, | | | | | | | |
| | | + 6 x 1.00 | 300/500 | M1, M11, | | | | | | | |
| | | + 24 x 0.75 | 300/300 | M1, M5, M5 | | | | | | | |
| | | + 4 x FO G62.5/125 | | | 7 | GF-2314 | 90.0 x 13.4 | ST Ø 4.0 | 199.3 | 730 | |
| | | G = with green-yellow core(s) | | | | | | | | | |

Further dimensions on request

# FL – Low Fire Hazard – unsupported

**Low rise - travelling height maximum 80 m**



Drawing according to article number 191113 - Type 8582-F

## PRODUCT INFORMATION

| | | |
|---|---|---|
| **APPLICATION** | Elevator suspension cable for indoor and panoramic elevators. | |
| **INSTALLATION** | To comply with the correct installation procedures please refer to the Datwyler installation manual which is available separately. | |
| **CONSTRUCTION** | Core flexible: | class 5 |
| | Core insulation: | low fire hazard |
| | Data elements: | details according to page 36/37 |
| | Supporting members: | none |
| | Outer sheath: | low fire hazard |
| **ELECTRICAL PROPERTIES** | Rated voltage Uo/U: | according to table |
| **MECHANICAL PROPERTIES** | Free suspension length: | maximum 45 m |
| | Travelling height: | maximum 80 m |
| | Running speed: | maximum 4 m/s |
| | Acceleration: | < 0.8 m/s$^2$ |
| | Operating temperature: | -15 to +70 °C |
| | Recommended loop diameter: | according to table, tolerance -50/+100 mm |
| **COLOUR CODE** | Core: | black, white numbered,<br>G = with green-yellow core(s) |
| | Pair/quad: | various colours or black with white numbers |
| | Coax: | black |
| | Outer sheath: | black |
| **STANDARD** | EN 50214 | |

# FL – Low Fire Hazard – unsupported

## Low rise - travelling height maximum 80 m

| Article no. | Type | Cross sectional area | Rated voltage | Overall dimensions approx. [w x h] | Data elements | Weight approx. | Copper content | Supporting members | Loop | Suspension device | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | [n x mm²] | Uo/U [V] | [mm x mm] | | [kg/100m] | [kg/km] | | [mm] | | |
| 191110 | 8511-F | 12 G 0.75 | 300/500 | 34.3 x 4.4 | | 26.0 | 87 | none | 300 | LZ 1006 | |
| 185125 | 8511-F | 18 G 0.75 | 300/500 | 49.4 x 4.4 | | 38.4 | 130 | none | 300 | LZ 1006 | |
| 191112 | 8511-F | 24 G 0.75 | 300/500 | 66.7 x 4.4 | | 51.4 | 173 | none | 300 | LZ 1009 | |
| 191111 | 8636-F | 12 G 0.75 | 300/500 | | | | | | | | |
| | | + 3 x 2 x 0.50 | 300/300 | 47.4 x 5.4 | 6651-F | 42.7 | 123 | none | 400 | LZ 1006 | |
| 182205 | 8827-F | 3 G 2.50 | 450/750 | | | | | | | | |
| | | + 14 x 1.00 | 300/500 | | | | | | | | |
| | | + 4 x 2 x 0.34 | 300/300 | 72.3 x 5.8 | 7345-F | 75.4 | 244 | none | 400 | LZ 1009 | |
| 191113 | 8582-F | 24 G 1.00 | 300/500 | | | | | | | | |
| | | +3 x 2 x 0.75 | 300/300 | | 6651-F | | | | | | |
| | | + 1 x CX 75 Ω | | 87.3 x 6.5 | HF-2123-F | 97.4 | 306 | none | 400 | LZ 1010 | |
| 190491 | 8582-F | 2 x 1.50 | 450/750 | | | | | | | | |
| | | + 8 x 2 x 0.50 | 300/300 | | 6651-F | | | | | | |
| | | + 1 x CX 75 Ω | | 47.8 x 7.1 | HF-2123-F | 54.0 | 149 | none | 450 | LZ 1006 | |
| | | G = with green-yellow core(s) | | | | | | | | | |

Further dimensions on request

# FM – Low Fire Hazard – supported

**Mid rise - travelling height maximum 150 m**

Drawing according to article number 185124 - Type 8696-F



## PRODUCT INFORMATION

| | | |
|---|---|---|
| **APPLICATION** | Elevator suspension cable for indoor and panoramic elevators. | |
| **INSTALLATION** | To comply with the correct installation procedures please refer to the Datwyler installation manual which is available separately. | |
| **CONSTRUCTION** | Core flexible: | class 5 |
| | Core insulation: | low fire hazard |
| | Data elements: | details according to page 36/37 |
| | Supporting members: | HTF = High tensile fibre |
| | Outer sheath: | low fire hazard |
| **ELECTRICAL PROPERTIES** | Rated voltage Uo/U: | according to table |
| **MECHANICAL PROPERTIES** | Free suspension length: | maximum 80 m |
| | Travelling height: | maximum 150 m |
| | Running speed: | maximum 6.3 m/s |
| | Acceleration: | < 1.2 m/s$^2$ |
| | Operating temperature: | -15 to +70 °C |
| | Recommended loop diameter: | according to table, tolerance -50/+100 mm |
| **COLOUR CODE** | Core: | black, white numbered,<br>G = with green-yellow core(s) |
| | Pair/quad: | various colours or black with white numbers |
| | Coax: | black |
| | Outer sheath: | black |
| **STANDARD** | EN 50214 | |

# FM – Low Fire Hazard – supported

## Mid rise - travelling height maximum 150 m

| Article no. | Type | Cross sectional area [n x mm²] | Rated voltage Uo/U [V] | Overall dimensions approx. [w x h] [mm x mm] | Data elements | Weight approx. [kg/100m] | Copper content [kg/km] | Supporting members | Loop [mm] | Suspension device | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 185127 | 8622-F | 12 G 1.00 | 300/500 | | | | | | | | |
| | | + 1 x CX 75 Ω | | 48.4 x 6.0 | HF-2123-F | 49.8 | 139 | HTF | 400 | LZ 1006 | |
| 185124 | 8696-F | 12 G 1.00 | 300/500 | | | | | | | | |
| | | + 1 x 4 x 0.34 | 300/300 | 48.4 x 6.0 | 8607-F | 50.1 | 142 | HTF | 400 | LZ 1006 | |
| 184674 | 8849-F | 12 x 2 x 0.50 | 300/300 | 55.8 x 5.6 | 6651-F | 49.6 | 116 | HTF | 400 | LZ 1009 | |
| 191094 | 8872-F | 3 G 2.50 | 450/750 | | | | | | | | |
| | | + 14 x 1.00 | 300/500 | | | | | | | | |
| | | + 4 x 2 x 0.50 | 300/300 | 79.0 x 5.7 | 6651-F | 83.8 | 232 | HTF | 400 | LZ 1009 | |
| | | G = with green-yellow core(s) | | | | | | | | | |

Further dimensions on request

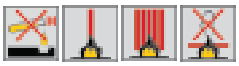
# FH – Low Fire Hazard – supported

**High rise - travelling height maximum 400 m**

Drawing according to article number 185126 - Type 8585-F



## PRODUCT INFORMATION



**APPLICATION**

Elevator suspension cable for indoor and panoramic elevators.

**INSTALLATION**

To comply with the correct installation procedures please refer to the Datwyler installation manual which is available separately.

**CONSTRUCTION**

| | |
|---|---|
| Core flexible: | class 5 |
| Core insulation: | low fire hazard |
| Data elements: | details according to page 36/37 |
| Supporting members: | ST = Steel, diameter in [mm] |
| Outer sheath: | low fire hazard |

**ELECTRICAL PROPERTIES**

| | |
|---|---|
| Rated voltage Uo/U: | according to table |

**MECHANICAL PROPERTIES**

| | |
|---|---|
| Free suspension length: | maximum 220 m |
| Travelling height: | maximum 400 m |
| Running speed: | maximum 12 m/s |
| Acceleration: | < 1.2 $m/s^2$ |
| Operating temperature: | -15 to +70 °C |
| Recommended loop diameter: | according to table, tolerance -50/+100 mm |

**COLOUR CODE**

| | |
|---|---|
| Core: | black, white numbered,<br>G = with green-yellow core(s) |
| Pair/quad: | various colours or black with white numbers |
| Outer sheath: | black |

**STANDARD**

EN 50214

# FH – Low Fire Hazard – supported

## High rise - travelling height maximum 400 m

| Article no. | Type | Cross sectional area [n x mm²] | Rated voltage Uo/U [V] | Overall dimensions approx. [w x h] [mm x mm] | Data elements | Weight approx. [kg/100m] | Copper content [kg/km] | Supporting members | Loop [mm] | Suspension device | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 185126 | 8585-F | 30 G 1.00 | 300/500 | | | | | | | | |
| | | + 1 x 4 x 0.34 | 300/300 | 61.8 x 9.7 | 8607-F | 106.8 | 335 | ST Ø 2.5 | 550 | LZ 4001 | |
| 192313 | 8880-F | 12 G 0.75 | 300/500 | | | | | | | | |
| | | + 24 x 2 x 0.75 | 300/300 | | 6651/2-F | | | | | | |
| | | + 1 x CX 75 Ω | | 98.5 x 14.5 | HF-2123-F | 188.3 | 532 | ST Ø 4.0 | 550 | LZ 4001 | |
| | | G = with green-yellow core(s) | | | | | | | | | |

Further dimensions on request

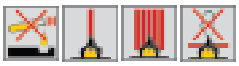
# FH Module Concept – Low Fire Hazard

**High rise - travelling height maximum 400 m**

Drawing according to article number 191114 - Type 8859-F



## PRODUCT INFORMATION



| | | |
|---|---|---|
| **APPLICATION** | Elevator suspension cable for indoor and panoramic elevators. | |
| **INSTALLATION** | To comply with the correct installation procedures please refer to the Datwyler installation manual which is available separately. | |
| **CONSTRUCTION** | Core flexible: | class 5 |
| | Core insulation: | low fire hazard |
| | Data elements: | details according to page 36/37 |
| | Supporting members: | ST = Steel, diameter in [mm] |
| | Outer sheath: | low fire hazard |
| **ELECTRICAL PROPERTIES** | Rated voltage Uo/U: | according to table |
| **MECHANICAL PROPERTIES** | Free suspension length: | maximum 220 m |
| | Travelling height: | maximum 400 m |
| | Running speed: | maximum 12 m/s |
| | Acceleration: | < 1.2 m/s$^2$ |
| | Operating temperature: | -15 to +70 °C |
| | Recommended loop diameter: | approx. 650 mm, tolerance -50/+150 mm |
| **SUSPENSION DEVICE** | LZ 4001 | |
| **COLOUR CODE** | Core: | black, white numbered,<br>G = with green-yellow core(s) |
| | Pair/quad: | various colours or black with white numbers,<br>bundle with black sheath |
| | Coax: | black |
| | Optical fibres: | orange 50 µm, grey 62.5 µm |
| | Outer sheath: | black |
| **STANDARD** | EN 50214 | |

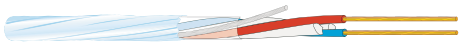
# FH Module Concept – Low Fire Hazard

## High rise - travelling height maximum 400 m

| Article no. | Type | Cross sectional area [n x mm²] | Rated voltage Uo/U [V] | Bundle type p. 17 | No. of elements | Data elements | Overall dimensions approx. [w x h] [mm x mm] | Supporting members | Weight approx. [kg/100m] | Copper content [kg/km] | Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 191114 | 8859-F | 12 G 2.00 | 450/750 | M4, | | | | | | | |
| | | + 30 x 1.00 | 300/500 | M2, M15, | | | | | | | |
| | | + 7 x 2 x 0.50 | 300/300 | M2, M14, | | 6651/2-F | | | | | |
| | | + 3 x 4 x 0.50 | 300/300 | M2, M4 | 7 | 6347/3-F | 90.7 x 14.0 | ST Ø 4.0 | 199.8 | 698 | |
| 191483 | 8866-F | 10 G 2.50 | 450/750 | | | | | | | | |
| | | + 7 x 1.50 | 450/750 | M3 | | | | | | | |
| | | + 6 x 1.00 | 300/500 | M5, M9 | | | | | | | |
| | | + 12 x 2 x 0.75 | 300/300 | M5, M9 | | 6651/2-F | | | | | |
| | | + 4 x FO G50/125 | | M11, M9 | 7 | GF-2314 | 94.0 x 14.0 | ST Ø 4.0 | 215.5 | 616 | |
| 192314 | 8881-F | 20 G 2.50 | 450/750 | M5, M5, | | | | | | | |
| | | + 6 x 1.00 | 300/500 | M1, M11, | | | | | | | |
| | | + 24 x 0.75 | 300/500 | M1, M5, | | | | | | | |
| | | + 4 x FO G50/125 | | M5 | 7 | GF-2314 | 90.0 x 13.4 | ST Ø 4.0 | 201.6 | 730 | |
| 192236 | 8839-F | 35 G 2.50 | 450/750 | M5, M5, M5, | | | | | | | |
| | | | | M5, M5, M5, | | | | | | | |
| | | | | M5 | 7 | | 90.0 x 13.4 | ST Ø 4.0 | 214.5 | 860 | |
| 192 342 | 8866-F | 42 G 0.75 | 300/500 | M1, M1, | | | | | | | |
| | | + 12 x 2 x 0.75 | 300/500 | M9, M9, M9, | | 6651/2-F | | | | | |
| | | + 6 x FO G50/125 | | M12, M1 | 7 | GF-2314 | 90.5 x 14.8 | ST Ø 4.0 | 178.7 | 522 | |
| | | G = with green-yellow core(s) | | | | | | | | | |

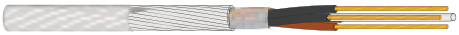
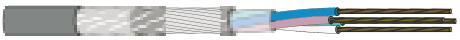
Further dimensions on request

# Data elements for Datwyler travelling cables

| | Data elements | Cross section | Colour code | Construction |
|---|---|---|---|---|
| 1 |  **7702 flex 4P** | 4 x 2 x AWG26 S/FTP | white/blue, red/orange, black/green, yellow/brown | PE cores<br>Al/PETP foil per pair<br>Overall tinned Cu wire braid<br>PVC sheath |
| 2 |  **7954/2-F** | 2 x 0.25 STP | white/blue | PE cores<br>PE filler (2x)<br>PETP tape<br>Tinned Cu wire spiral<br>PETP tape |
| 3 |  **7345-F** | 2 x 0.34 FTP | various colours | PE cores<br>PP filler (2x)<br>PETP tape<br>Tinned Cu drain wire<br>Al/PETP foil |
| 4 |  **7067/2-F (unshielded)** | 2 x 0.50 UTP | various colours | PE cores<br>PP filler (2x)<br>PETP tape |
| 5 |  **6651-F** | 2 x 0.50 FTP | various colours | PE cores<br>Tinned Cu drain wire with PP centre<br>PP filler<br>Al/PETP foil |
| 6 |  **6651/2-F** | 2 x 0.50 FTP | black, white numbered | PE cores<br>Tinned Cu drain wire with PP centre<br>PP filler<br>Al/PETP foil<br>PP tape |
| 7 |  **6651/3-H** | 2 x 0.50 FTP | black, white numbered | PE cores<br>Tinned Cu drain wire with PP centre<br>PP filler<br>Al/PETP foil<br>PP tape |
| 8 |  **7954/2-F** | 2 x 0.50 STP | various colours | PE cores<br>PE filler (2x)<br>PETP tape<br>Tinned Cu wire spiral<br>PETP tape |
| 9 |  **6651-F** | 2 x 0.75 FTP | various colours | PE cores<br>Tinned Cu drain wire with PP centre<br>PP filler<br>Al/PETP foil |
| 10 |  **6651/2-F, 6651/3-F** | 2 x 0.75 FTP | black, white numbered | PE cores<br>Tinned Cu drain wire with PP centre<br>PP filler<br>Al/PETP foil<br>PP tape |

**Note:** All data elements on page 36/37 are semi-finished products and not available for individual sale.

# Data elements for Datwyler travelling cables

| | Data elements | Cross section | Colour code | Construction |
|---|---|---|---|---|
| 11 |  **7067/2-F (unshielded)** | 4 x 0.25<br>UTQ | various colours | PP centre<br>PE cores<br>PETP tape |
| 12 |  **7954/2-F** | 4 x 0.25<br>STQ | various colours | PP centre<br>PE cores<br>PETP tape<br>Tinned Cu wire spiral<br>PETP tape (2x) |
| 13 |  **8607-F** | 4 x 0.34<br>STQ | various colours | PE cores<br>PP foam tape<br>Tinned Cu wire braid<br>PP tape |
| 14 |  **6347/2-F** | 4 x 0.50<br>STQ | various colours | PE cores<br>PP tape<br>Tinned Cu wire spiral<br>PP tape |
| 15 |  **6347/3-F** | 4 x 0.50<br>STQ | various colours | PE cores<br>PP tape<br>Tinned Cu wire spiral<br>PP tape (2x) |
| 16 |  **8504-F** | STQ | various colours | PE cores<br>PETP tape<br>Tinned Cu wire spiral<br>PETP tape<br>PVC sheath |
| 17 |  **HF-2122-F (Coaxial cable 75 Ω)** | n/a | grey | Bare Cu strand<br>PE dielectric<br>Al/PETP foil<br>Tinned Cu wire braid<br>PVC sheath |
| 18 |  **HF-2123-F (Coaxial cable 75 Ω)** | n/a | black | Bare Cu strand<br>PE dielectric<br>Al/PETP foil<br>Tinned Cu wire braid<br>Low fire hazard sheath |
| 19 |  **GF-2314 (G50/125)** | n/a | orange | Multimode fibre G50/125 µm OM2<br>Tight buffer<br>Aramid yarn<br>Low fire hazard sheath |
| 20 |  **GF-2314 (G62.5/125)** | n/a | grey | Multimode fibre G62.5/125 µm OM1<br>Tight buffer<br>Aramid yarn<br>Low fire hazard sheath |

# Suspension devices
**for FL and FM cables**

Figure 1:
Suspension device LZ 1006

Figure 2:
Suspension device LZ 1009

Figure 3:
Suspension device LZ 1010



## PRODUCT INFORMATION

**APPLICATION**

Suspension devices for Datwyler FL and FM elevator travelling cables.

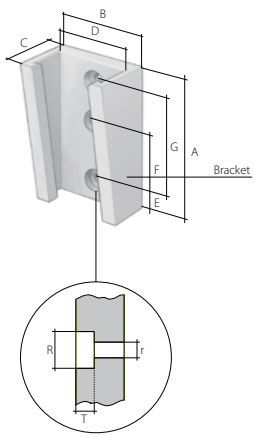
The cable width, number of cables (cable combinations) to be mounted and travelling height determine the selection of the correct cable suspension device(s).

To this end, please note the maximum clamping thickness of the individual suspension parts.

**MATERIAL**

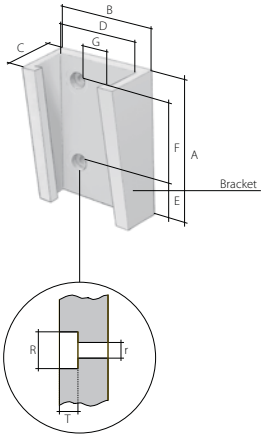
| | | | |
|---|---|---|---|
| Nylon PA6 | | LZ 1006 / LZ 1009 | grey |
| Aluminium | | LZ 1010 | blue anodised |

**DIMENSIONS**



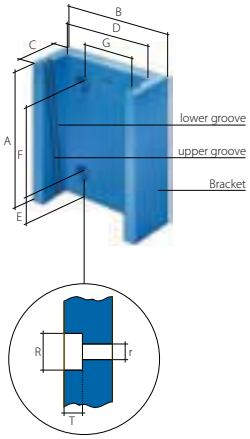

**LZ 1006**

A = 100 mm
B = 65 mm
C = 47 mm
D = 55 mm
E = 13.5 mm
F = 43 mm
G = 73 mm
R = Ø 13.9 mm
r = Ø 6.45 mm
T = 5.2 mm




**LZ 1009**

A = 120 mm
B = 92 mm
C = 51.5 mm
D = 79 mm
E = 27 mm
F = 73 mm
G = 40 mm
R = Ø 13.9 mm
r = Ø 6.45 mm
T = 5.2 mm




**LZ 1010**

A = 140 mm
B = 120 mm
C = 50 mm
D = 100 mm
E = 22 mm
F = 96 mm
G = 60 mm
R = Ø 15.0 mm
r = Ø 9.0 mm
T = 6.0 mm

| Article no. | Type | Colour | Cable clamping range maximum [mm] | Width of cable ≤ [mm] | Screw holes | Figure |
|---|---|---|---|---|---|---|
| 179813 | LZ 1006 | grey | 3 - 12 mm | ≤ 55 mm | 3 | 1 |
| 179814 | LZ 1009 | grey | 3 - 15 mm | ≤ 56 - 79 mm | 4 | 2 |
| 163354 | LZ 1010 | blue | 3 - 22 mm | ≤ 80 -100 mm | 4 | 3 |





DATWYLER

# Installation of suspension devices / FL and FM elevator travelling cables

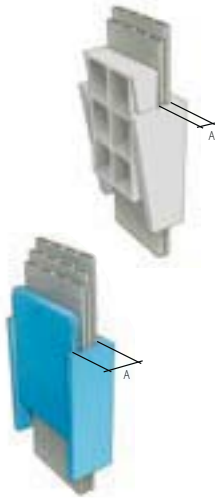
## 1 Maximum clamping thickness of suspension device

Maximum 3 cables

**LZ 1006 (grey)**
Clamping range A = 3 - 12 mm
Width of cable ≤ 55mm

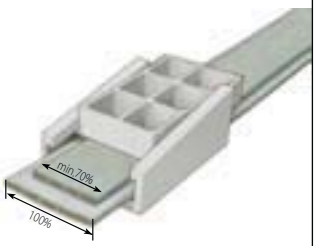
**LZ 1009 (grey)**
Clamping range A = 3 - 15 mm
Width of cable ≤ 56 - 79 mm

**LZ 1010 (blue)**
Clamping range A = 3 - 22 mm
Width of cable ≤ 80 - 100 mm




## 2 Cable combination for FL

Maximum 3 cables
Different cable widths are possible




## 3 Cable combination for FM

Maximum 3 cables
Combinations only with equal cable widths

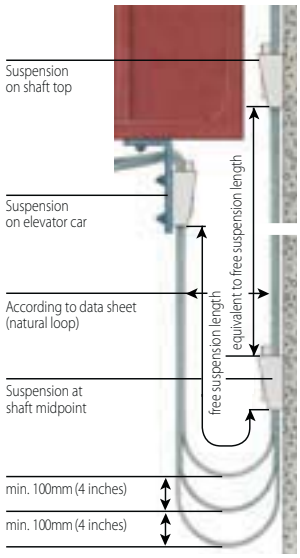

## 4 Fixing several adjacent suspension devices

Spacing A =
minimum 50 mm


## 5 Installation positions of suspension devices for FL and FM cables

| | FL | FM |
|---|---|---|
| Maximum travelling height | 80 m (260 feet) | 150 m (490 feet) |
| Maximum free suspension length (m) | 45 m (150 feet) | 80 m (260 feet) |

A third suspension device is required at shaft midpoint if the actual **travelling height** is higher than the **free suspension length**.




## 6 Minimum loop spacing for cable combination

Distance between loops min. 100 mm (4 inches): thickest cable on bottom, thinnest cable on top

## 7 Installation below machine room

Only one cable per suspension device.

Diameter for fixed loop = minimum 14x cable thickness t.

Loop cable back on itself.

Printing to shaft wall

# Suspension device
**for FH cables**

Figure 1:
Suspension device LZ 4001
for FH cables

Figure 2:
Screw set M12x40
for car/counter weight

Figure 3:
Hilti HSL-3 M8/20
for shaft wall



## PRODUCT INFORMATION

**APPLICATION**

Steel suspension device for a maximum of two Datwyler FH elevator travelling cables.

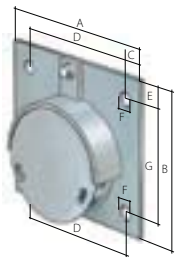
**INSTALLATION**

The following installation screw sets are available for LZ 4001:

Elevator car or counter weight: 4 bolts M12x40 including spring-washer, washer and nut (see figure 2), bolt: property class 8.8/8 (nut)

Shaft wall: 4 Hilti HSL-3 M8/20 (see figure 3), (minimum concrete strength required: $b_w$=30 N/mm²)

**DIMENSIONS**




**LZ 4001**

A = 220 mm
B = 170 mm
C = 30 mm
D = 160 mm
E = 25 mm
F = Ø13 mm
G = 120 mm
thickness of ground plate = 5 mm

**CRIMPING SLEEVE**

For recommended crimping sleeves see "Installation Tools" (page 42).

Suspension device LZ 4001 for FH cables

| Article no. | Type | Figure |
|---|---|---|
| 184606 | LZ 4001 | 1 |

Installation kits

| Article no. | Type | Application | Figure | PU |
|---|---|---|---|---|
| 185214 | Screw set M12x40 | for fixing to elevator car or counter weight | 2 | 2 pcs. |
| 185215 | Hilti HSL-3 M8/20 | for fixing to shaft wall | 3 | 2 pcs. |

# Installation of suspension device / FH elevator travelling cables

## 1 Forming a loop

Draw other end of steel wire rope through second sleeve. Use tape for parallel fixation

Alternative to crimping sleeves:
3x Crospy clips G-450 each side
or cable grip according to DIN 1142

Compress sleeve according table

| Ø Steel wire (mm) | Sleeve article no. | Type | Sleeves per loop | Crimps per crimping | Section of tool (inch) |
|---|---|---|---|---|---|
| 2.5 | 166668 | SL 2–3 | 1+1 | 2 | 3/32 |
| 3.0 | 166669 | SL 2–4 | 1+1 | 2 | 1/8 |
| 3.2 | 166669 | SL 2–4 | 1+1 | 2 | 1/8 |
| 4.0 | 182059 | SL 2–5 | 2+2 | 3 | 5/32 |
| 5.0 | 182060 | SL 2–6 | 2+2 | 3 | 3/16 |
| 6.0 | 182061 | SL 2–7 | 2+2 | 3 | 3/16 |

## 2 Preparation for cable installation

A1 / A2 = Spacing distance between steel wire ropes

A1 ≤ 50 mm = L min. 500 mm
A2 > 50 mm = L min. 300 mm


## 3 Combination with different cable widths

Cable with bigger dimension should be outside


## 4 Installation of multiple suspension devices side by side

Spacing A = minimum 160 mm (concrete strength required bw = 30 N/mm²)

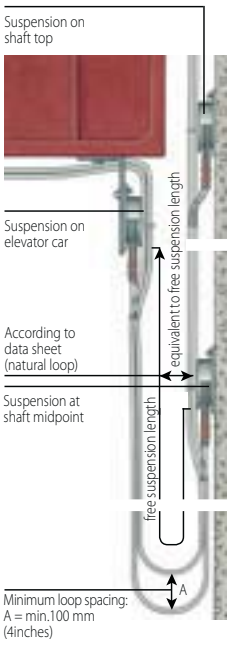
Hilti HSL-3 M8/20 for shaft wall

## 5 Installation position of suspension device for FH cables

Maximum travelling height = 400 m (1312 feet)

Maximum free suspension length = 220 m (722 feet)

A third suspension device is required at shaft midpoint if the actual **travelling height** is higher than the **free suspension length**.




## 6 Installation below machine room

Add a distance filler between LZ 4001 and shaft wall. Cable from below behind the LZ 4001.

Cable must be looped back on itself and free of tension. Diameter for fixed loop = minimum 14x cable thickness t

Printing to shaft wall

# Installation tools

Fig. 1: AV 150

Fig. 2: AV 400

Fig. 3: FH tool box (Fig. 2-11: contents)


# PRODUCT INFORMATION

**DESCRIPTION**

**AV 150 and AV 400 installation aid**
Datwyler flat cables are most easily and quickly drawn in using the AV installation aid.
The AV 150 is suitable for elevator shaft heights up to 150 m.
The AV 400 is suitable for elevator shaft heights up to 400 m.
The AV 400 indispensable component is also part of the FH tool box (article no. 179278) which contains all the tools and accessories necessary for installing Datwyler FH cables.

**Professional FH tool box**
with indispensable tools and accessories for installation of FH cables

| | | |
|---|---|---|
| Contents: | 4. Wire rope cutter big | cuts steel wire ropes up to diameter of 8 mm |
| | 5. Wire rope cutter small | cuts steel wire ropes up to diameter of 4 mm |
| | 6. Stripping knife | special knife to commence the removal of the cable jacket |
| | 7. Crimping tool | tool for splicing of steel wire ropes |
| | 8. Crimping sleeves small | for rope diameters of 2.5 mm, set of 10 pieces |
| | 8. Crimping sleeves large | for rope diameters of 3.2 mm, set of 10 pieces |
| | 2. 2x auxiliary device AV 400 | for elevator shaft heights up to 400 m |
| | 9. Cutter | |
| | 10. Universal scissors | |
| | 11. Steel wire ropes | |

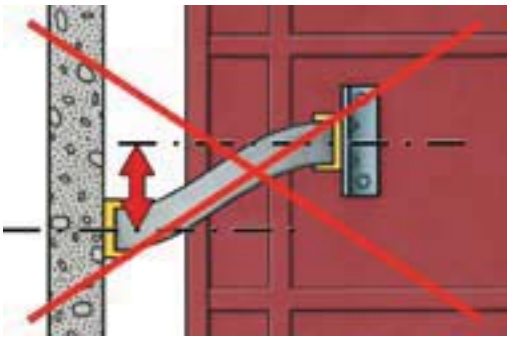
**Cutters, crimping tool, crimping sleeves, etc.**
The above mentioned accessories are also available seperately.

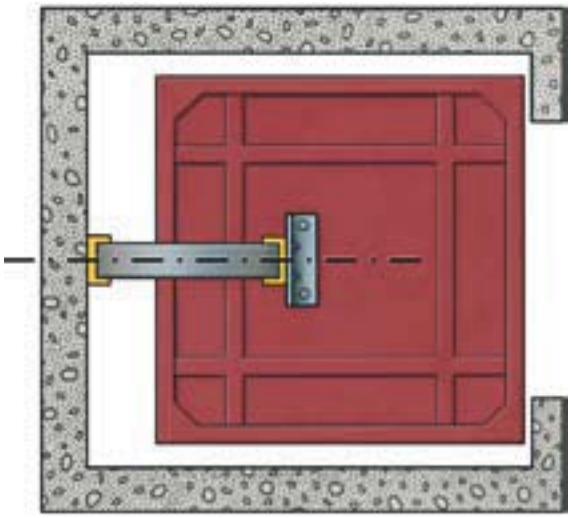
| Article no. | Figure | Type | Description | |
|---|---|---|---|---|
| 176812 | 1 | AV 150 | for elevator shaft heights up to 150 m | |
| 176811 | 2 | AV 400 | for elevator shaft heights up to 400 m | |
| 179278 | 3 | FH tool box | | |
| 184575 | 4 | Wire rope cutter big | cuts steel wire ropes up to diameter of 8 mm | |
| 166670 | 5 | Wire rope cutter small | cuts steel wire ropes up to diameter of 4 mm | |
| 163358 | 6 | Stripping knife | special knife to commence the removal of the cable jacket | |
| 166667 | 7 | Crimping tool | tool for splicing of steel wire ropes | |
| 166668 | 8 | Crimping sleeves SL 2-3 | for rope diameter of 2.5 mm | Set of 10 pieces |
| 166669 | 8 | Crimping sleeves SL 2-4 | for rope diameter of 3.0 mm | Set of 10 pieces |
| 166669 | 8 | Crimping sleeves SL 2-4 | for rope diameter of 3.2 mm | Set of 10 pieces |
| 182059 | 8 | Crimping sleeves SL 2-5 | for rope diameter of 4.0 mm | Set of 10 pieces |
| 182060 | 8 | Crimping sleeves SL 2-6 | for rope diameter of 5.0 mm | Set of 10 pieces |
| 182061 | 8 | Crimping sleeves SL 2-7 | for rope diameter of 6.0 mm | Set of 10 pieces |
| 179473 | 9 | Cutter | | |
| 179472 | 10 | Universal scissors | | |

## Installation instructions for all travelling heights

### 1 Installation position on shaft and car floor

Positions must be aligned.





### 2 Paying out of cables into the shaft

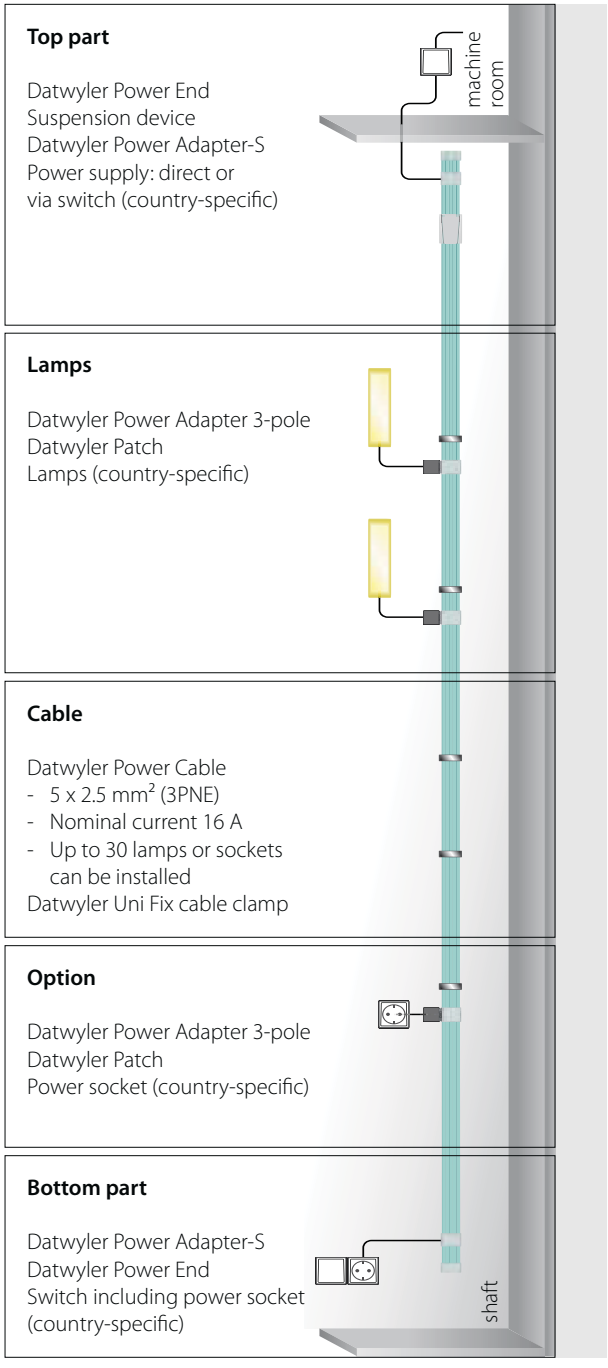
Direction of the cable:
parallel to drum flanges.
No twisting.
Cable printing > to shaft wall.

Use of guiding pulleys:
Minimum Ø 28x cable thickness t .

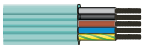
# Shaft lighting system

**Elevator shaft lighting system with reference to EN 81 and Annex I of Directive 98/37/EC and 95/16/EC of the European Parliament.**

**Features and advantages:**
- Fast and easy installation
- Flexible in mounting of lamps, adapter and switch elements
- Order per commission
- 2.5 mm² wires, low voltage drop on serial connectors
- Low total costs




## Shaft lighting system
**Components**

| Cable plus | Description | Article no. |
|---|---|---|
|  | **Datwyler Power Cable** 5x2.5mm² | 187048 |
|  | **Datwyler Uni Fix cable clamp** | 1300290 |
|  | **Suspension device LZ 1006** | 179813 |

| Option | Description | Article no. |
|---|---|---|
|  | **Datwyler Patch 3x1.5 MC (L = 1 m)** | 1300511 |
|  | **Datwyler Combi Tool cable stripper** | 1300240 |
|  | **Datwyler Power Adapter-S (250V)** | 1301076 |
|  | **Datwyler Power Adapter 3-pole (250V)** | 1300972 |
|  | **Datwyler Power End** | 1300875 |

**Customised solutions available on request!**







DATWYLER

## We provide the following services:

- **Harnessing**
- **Logistics**
- **Consulting and engineering**

## Harnessing

**Solutions for elevator manufacturers (100% tested, ready for plug and play):**

- Paper-free CIM-production
- Shaft wiring/cabling
- Machine room/drive cables
- Cabin terminal boxes
- Travelling cables
- Shaft lighting system
- Additional components: door cables, bells, horns, position tracking systems

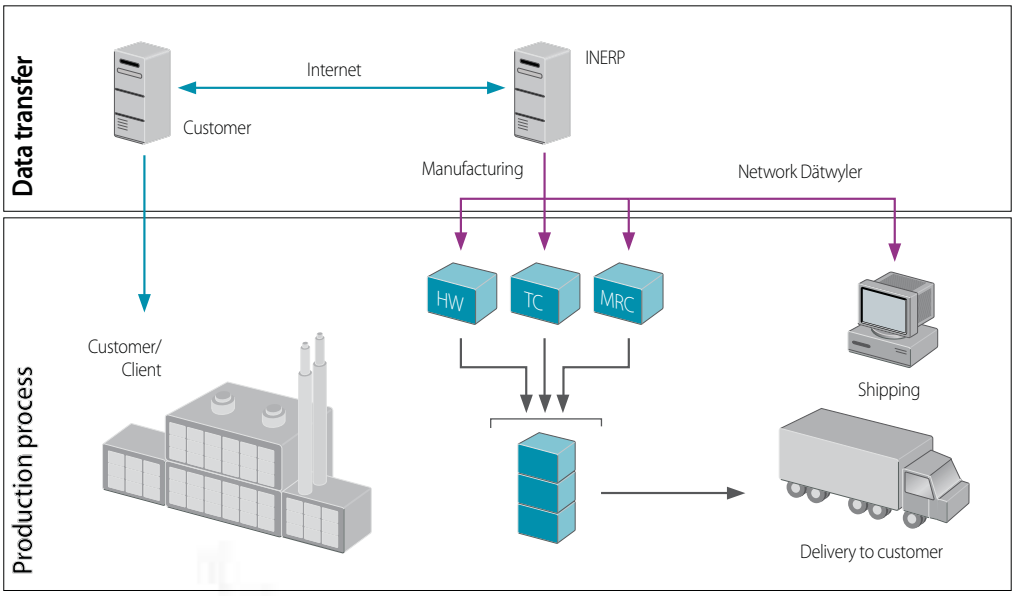
**Solutions for industry:**
Paper-free CIM-production,
single cables, cable groups, complex cabling

We can provide a suitable system solution for most applications. With harnessing plants in different locations we are in the position to offer small, medium and large production runs at very competitive prices.

## Logistics

### Communication
Order transmission and order confirmation by B2B via Internet.

### Example of elevator B2B process




HW: Hoistway TC: Travellingcable MRC: Machine room cabling

### Our services include
- Comprehensive consulting and engineering in harnessing
- EDI order communication B2B via Internet
- Procurement and inclusion of additional components
- Complete packing and dispatch logistics

### Logistics
Component packing
Barcode labels
Loose parts commissioned
Just-in-time delivery world-wide

# FURTHER DATWYLER PRODUCT LINES

Are you interested in Datwyler´s high-quality products and solutions?
Then please visit our home page at www.cabling.datwyler.com.
Use our contact form to order the latest edition of our product catalogues!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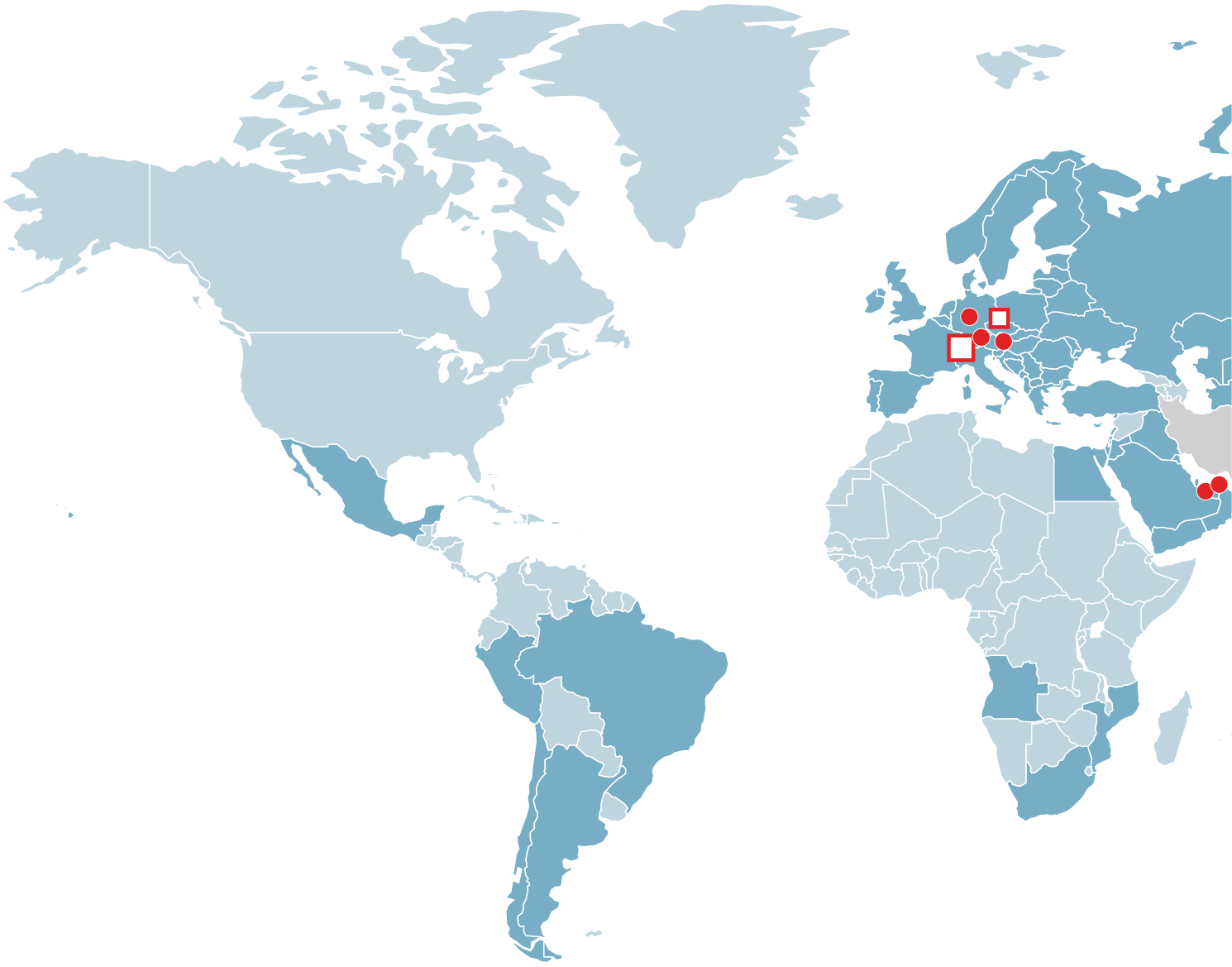
Safety cables and systems from a professional


**Catalogue**

**FTTH - FIBER TO THE HOME**
Cutting-edge total solutions for superfast fibre-optic broadband networks

# GLOBAL MARKET COMPETENCE



- Datwyler Headquarters and Manufacturing Plant
- Datwyler Manufacturing Plants
- Datwyler Offices
- Active Market Presence by Datwyler and its Distribution Partners

Are you searching for a distribution partner in our export markets?
**Please visit www.cabling.datwyler.com for details of our partners**
or contact our relevant branches.

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