

RailwayCableSystems

Edition 2011



Next Station: Excellence





Excellence in Connectivity Solutions

HUBER+SUHNER is a leading international supplier of electrical and optical components and connectivity solutions for railway systems. This successful global company unites core competencies in Radio Frequency, Fiber Optic and Low Frequency technologies under one roof and offers a high-quality product range for the communication, transport and industrial markets.

Excellence in railway cable systems

The Railway Cable Systems unit of HUBER+SUHNER is equipped for every task in modern rail traffic, both technologically as well as geographically. HUBER+SUHNER's many years of experience in the railway sector enables multidisciplinary and complex projects, thanks to qualified employees. The worldwide growth rates show that technological leadership is rewarded. Renowned market leaders throughout the world rely on the sophisticated services and benefit from the global production and sales network.

HUBER+SUHNER: Expertise without compromise





Global general contractor

Because the HUBER+SUHNER engineering team specialists have access to the comprehensive know-how of the entire Group, customers worldwide can rely on the cumulative expertise of a general contractor.

The Railway Cable Systems unit develops solutions focussed on specific customer requirements, which ensure a high level of safety and functionality. The holistic approach is repeatedly proven in national and international projects, thanks to the many years of expertise in project management, in system engineering as well as in prototype and series production.

In the field of cables, HUBER+SUHNER provides for constant optimisation of well-positioned products, such as RADOX® railway cables. At the same time the development of new, successful product families is purposefully advanced. Our extensive group-wide knowledge benefits all segments of the railway market: from underground trains and tramways, to locomotives as well as urban and high-speed trains.

The measure of the train constructor

Complete inter-vehicle systems

HUBER+SUHNER supplies complete inter-vehicle systems, which combine Radio Frequency, Fiber Optics and Low Frequency technologies in customised complete solutions. Cables or hybrid cable solutions, pre-assembled units, EMC-optimised solutions and cable systems designed to withstand high dynamic loading, satisfy even the highest demands and also prove their worth under extreme conditions.

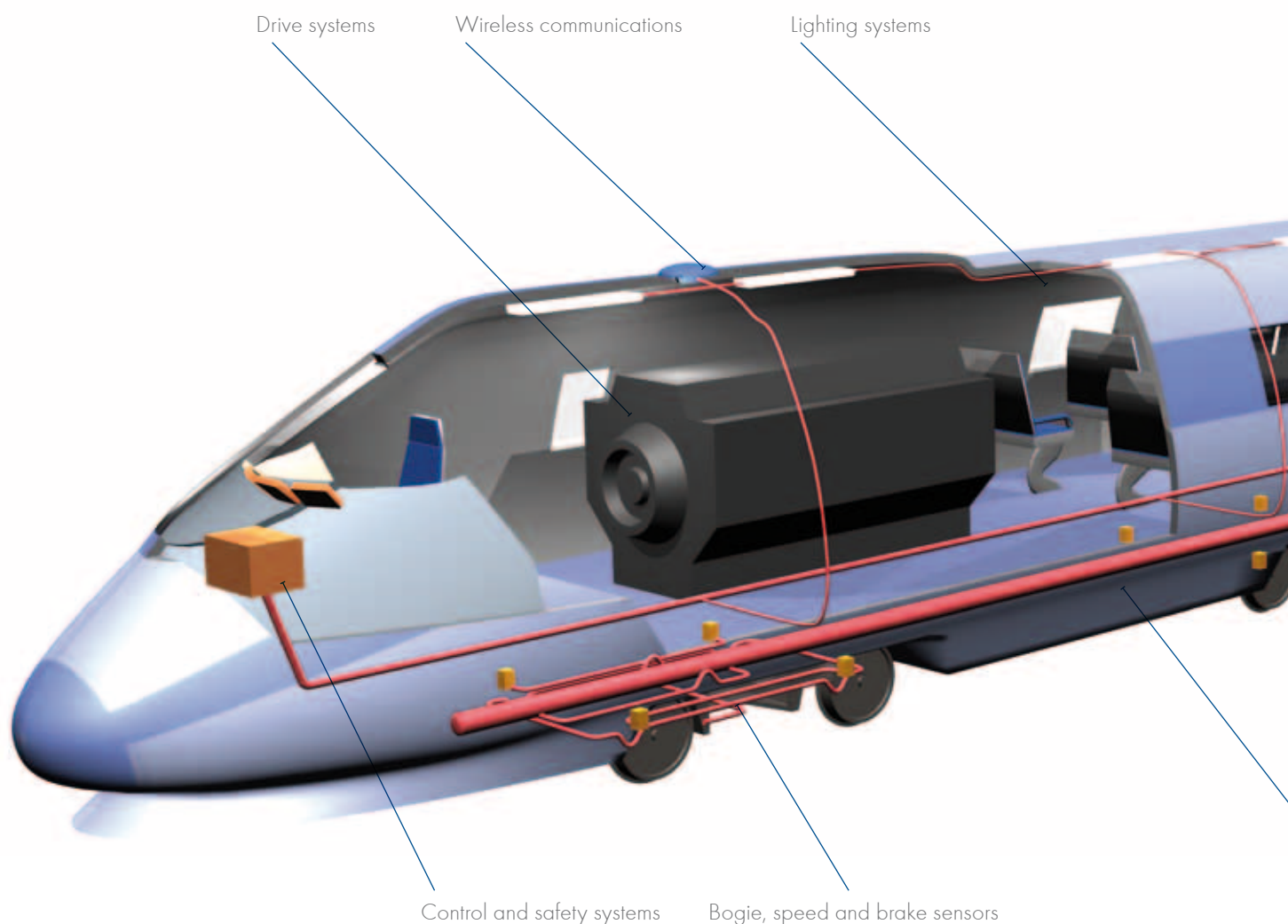
Cable systems for bogies

Applications with increased requirements in the field of bogies have employed our innovative cable and cable system solutions for many years.

Carriage cabling systems

From cable assemblies to complex cable harnesses incorporating power, signal and communication lines: HUBER+SUHNER supplies everything from a single source. Optimised and certified processes ensure smooth project flows from development, sourcing and prototyping to series production.

Cables and cable systems for:



Railcar and locomotive cabling

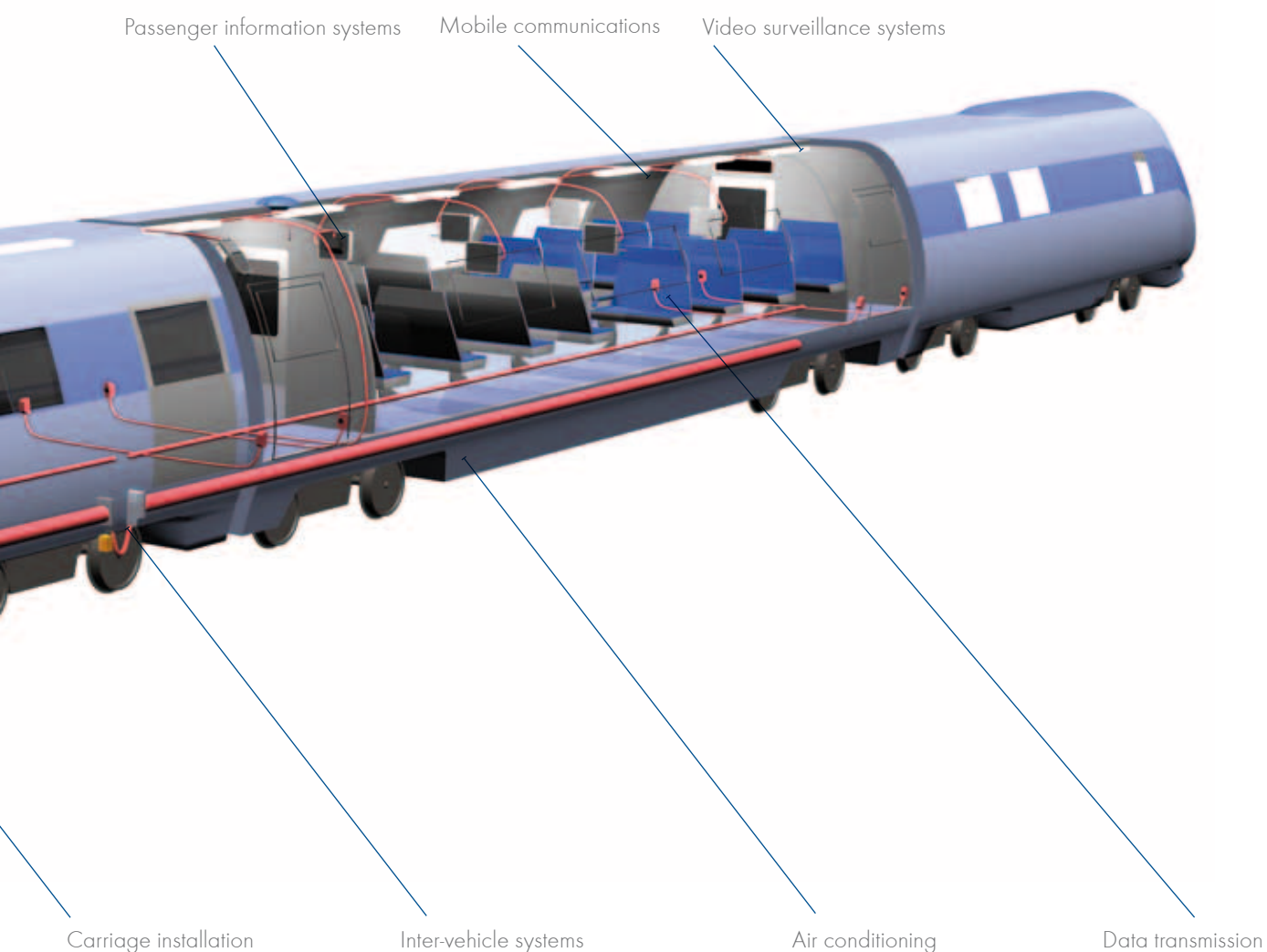
Solutions developed on the basis of build-to-print or together with our customer's specialists satisfy customer requirements the world over.

Cabling of control and safety systems

HUBER+SUHNER takes charge of complete implementation, from procurement to the ready-to-connect and tested installation.

Switchgear cabinets

Customised, rail-worthy switchgear and distribution cabinets according to customer specifications form part of our comprehensive product portfolio.



Thoroughly convincing

High performance in every core

Public railway transport services are increasingly expected to offer networks with an ever-higher level of service and higher speeds, in the areas of both passenger and goods traffic. As a consequence, carriers and system integrators are permanently seeking new, more powerful solutions. The Railway Cable Systems unit is one of these solutions: locally developed, competently produced and delivered just in time.

Competitive edge through technology

Equipped with a range of advanced solutions from the HUBER+SUHNER product portfolio, the Railway Cable Systems unit ensures that its customers around the world maintain their edge in the marketplace. Innovative services ranging from cable assembly to the development of new products generate the added value that customers need to maintain their competitive edge in a highly competitive environment.

Success through qualified employees

Experienced engineers and project management specialists form the backbone of our organisation. In order to maintain its leadership, the HUBER+SUHNER is committed to its employees. Top performance has enabled the Group to rise to the illustrious circle of top employers in a number of countries. Examples include the distinction as Top Employers 2008 – Shanghai Region and the Top Job seal of quality in Germany.

Locally present, globally networked

The Railway Cable Systems unit of HUBER+SUHNER has an unique worldwide network with the most modern production and assembly sites as well as a customer-oriented sales organisation. The group companies and sales outlets guarantee local presence, whereby another approximately 100 qualified partners worldwide contribute to the optimisation of customer contact. The production and assembly sites for cable systems are located in Switzerland, Denmark, Poland, United Kingdom, China and India. This is supplemented by qualified partner companies, which strengthen the global presence.

Impressive products in three technologies

Low frequency

- RADOX® control and power cables
- RADOX® data bus cables
- RADOX® JUMPER cables

Radio frequency

- SENCITY® Rail antennas for trains including underground and suburban applications
- SENCITY® Avant antennas for trams and buses
- Trackside antennas
- Flame retardant train antennas
- Coaxial cables

Fiber optics

- Rail FO
- Masterline hybrid

Co-Design: the first choice for transport technologies

The comprehensive service package makes Railway Cable Systems simpler, quicker and more innovative

With five steps, HUBER+SUHNER accelerates the development and production process and thereby enables cost savings and additional innovations.



Step 1: Our expertise from the beginning

We are competent and understand the market requirements.

- Development of solution concepts
- Cable recommendations for the application
- Optimisation of cable routing
- Recommendation for the connection technology



Step 2: Efficient planning

We prepare your concepts for implementation like transforming 3D in 2D data.

- Overview and detail drawings
- Operating material lists
- Cable lists



Step 3: High-quality production

We impress with quality and in-house cable production.

- Wide diversity of products
- Made-to-order cable solutions available
- Compliance with international standards regarding fire protection
- Comprehensive testing



Step 4: Intelligent assembly

We consolidate the technological edge.

- Incorporation of company-owned international production sites
- Consistently high quality thanks to automated test systems
- Processing of internal and external logistics



Step 5: On-site installation

We comprehensively integrate the cable systems into the vehicles.

- Implementation on site through qualified personnel
- Transfer of knowledge to integration partners throughout the world

Quality from the concept through to production

Development and project planning

In an early project phase, Engineering and Project Management for the cable system are already integrated into the team together with our Sales. With this integrative approach, HUBER+SUHNER ensures that, right from the outset, customer specifications are correctly interpreted and implemented as desired.

In the concept phase, the following points are determined:

- Project goals and requirements as well as the associated documentation and project planning
- Milestones and gate reviews are fixed for verification and validation measures
- Monitoring cycles for tests and their acceptance criteria

In the process design phase, the production processes and the production control plans are established to ensure a reliable product quality. In addition, activities are continuously harmonised with the customer. This also includes a transparent communications and change management.

Sourcing

Suppliers are systematically selected and proactively developed. All partners work according to comparable quality principles. In addition, they are regularly audited according to the HUBER+SUHNER quality system. Careful component selection by Engineering and global product and component sourcing at attractive purchasing terms ensure optimised added value.

Production and testing

The global production sites of HUBER+SUHNER produce top quality and are certified to ISO 9001, ISO 14001 and IRIS. Our customers can rely on qualified teams who, with their expertise, tools and measuring instruments, provide for a high degree of customer satisfaction. For this purpose, HUBER+SUHNER relies on a consistent process-oriented production:

- Identification of the process steps
- Identification of the risks by FMEA
- Training modules and work instructions
- Monitoring on the basis of key figures
- Continuous improvement of processes through Continuous Improvement Process (CIP) and Corrective Action Tracking System (CATS)
- Skill management

Delivery

HUBER+SUHNER accompanies the customer from the first contact through to acceptance of the cable system. This means that, even in the early project phases, the customers are already very familiar with the new solution and benefit from a continuous transfer of knowledge.

Environmental policy

HUBER+SUHNER is committed to environmentally-friendly business activities and undertakes to continuously improve environmental performance.

- Reduced power consumption despite increased production
- Investments in building technologies in order to reduce emissions
- Improved waste recycling
- Permanent elimination of hazardous substances from existing products
- Development of innovative new products

Excellent practical connections

STADLER Rail AG

Services from HUBER+SUHNER.

- Project evaluation
- Development
- Production
- Logistics

Added value for STADLER Rail AG

- Customer-specifically developed RADOX® railway cables
- Tested and optimised solutions
- Quick responses to project changes
- Low project risks
- Just in time delivery



ALSTOM Transport

Services from HUBER+SUHNER.

- Development
- Production
- Logistics

Added value for ALSTOM Transport

- Customer-specifically developed RADOX® railway cables according to NFF standards
- Tested and optimised solutions
- Quick responses to project changes
- Low project risks
- Just in time delivery



BOMBARDIER Transportation

Services from HUBER+SUHNER.

- Development
- Production
- Logistics

Added value for BOMBARDIER Transportation

- Perfectly-coordinated HUBER+SUHNER products
- Tested and optimised solutions
- Cost-effective pre-assembled solutions
- Low project risks
- Just in time delivery
- Global production and sales network



SIEMENS AG

Services from HUBER+SUHNER.

- Development
- Production
- Logistics

Added value for SIEMENS AG

- Customer-specifically developed RADOX® railway cables
- Tested and optimised solutions
- System cable solutions for carriage transitions
- Low project risks
- Just in time delivery



Next stop: RailwayCableSystems

AUSTRALIA

HUBER+SUHNER (Australia) Pty Ltd
Unit 6, 4 Skyline Place Frenchs Forest
AU-Sydney NSW 2086
Tel +61 (0)2 8977 1200
Fax +61 (0)2 9972 7549
info.au@hubersuhner.com

AUSTRIA

HUBER+SUHNER GmbH
Regional office
Concorde Business Park 1/B6/103
2320 Schwechat, Austria
Tel +43 (0)1 706 83 03
Fax +43 (0)1 706 83 04
info.de@hubersuhner.com

BRAZIL

HUBER+SUHNER
América Latina Ltda
Rodovia Presidente Dutra, Km 154,7
Limoeiro - São José dos Campos - SP
Prédio 04 - CEP 12240-420
Tel +55 12 3946 9500
Fax +55 12 3946 9528
info.br@hubersuhner.com

CANADA

HUBER+SUHNER (Canada), Ltd.
19 Thompson Drive
Essex Jct., VT 05452 / USA
Tel +1 866 482 3778
Fax +1 802 878 9880
info.na@hubersuhner.com

CHINA

HUBER+SUHNER (Hong Kong) Ltd
Unit 1101 & 1121, Level 11, Tower 1
Grand Central Plaza
No. 138 Shatin Rural Committee Road
Shatin, N.T., HK-Hong Kong
Tel +852 2866 6600
Fax +852 2866 6313
webenq.hk@hubersuhner.com

HUBER+SUHNER (Shanghai) Co., Ltd
Part B 2-3, 2/F
333 Fu Te Xi Yi Road Waigaoqiao
CN-Shanghai 200131, P.R. China
Tel +86 21 5899 3808
Fax +86 21 5899 1860
info.shanghai@hubersuhner.com

HUBER+SUHNER (Shanghai)
Transmission & Communication
Manufacture Co., Ltd
1330, Jin Hu Road
Jin Qiao, Pu Dong New District
CN-Shanghai 201206, P.R. China
Tel +86 21 5899 3808
Fax +86 21 5899 1860
info.shanghai@hubersuhner.com

HUBER + SUHNER
Electrical Equipment Manufacture
(Shanghai) Co., Ltd.
5001 Hua Dong Road, Jinqiao
Export Processing Zone (South Area),
Pudong New District,
Shanghai, 201201, P.R. China
Tel +86 21 58993808
Fax +86 21 51010006

DENMARK

HUBER+SUHNER A/S
Kirke Vaerløsevej 14
DK-3500 Vaerløse
Tel +45 48 100 500
Fax +45 48 100 555
info.dk@hubersuhner.dk

FRANCE

HUBER+SUHNER France
21 E, rue Jacques-Cartier
FR-78960 Voisins-le-Bretonneux
Tel +33 1 61 37 25 55
Fax +33 1 30 64 73 68
info.fr@hubersuhner.com

GERMANY

HUBER+SUHNER GmbH
Mehlbeerenstr. 6
DE-82024 Taufkirchen
Tel +49 (0)89 612 01 0
Fax +49 (0)89 612 01 162
info.de@hubersuhner.com

INDIA

**HUBER+SUHNER Electronics
Private Limited**
682, Udyog Vihar, Phase V
IN-Gurgaon 122 016, Haryana
Tel +91 124 4526100/200
Fax +91 124 410 27 04
info.in@hubersuhner.com

MALAYSIA

**HUBER+SUHNER
(Malaysia) Sdn. Bhd.**
No. 2, Jalan Pensyarah U1/28
HICOM Glenmarie Industrial Park
40150 Shah Alam
Selangor, Malaysia
Tel +60 3 7628 0202
Fax +60 3 7628 0303
info.my@hubersuhner.com

POLAND

HUBER+SUHNER Sp. z o.o.
Ul. Baldowska 26
PL-83-110 Tczew
Tel +48 58 560 2100
Fax +48 58 560 2172
info.pl@hubersuhner.com

RUSSIA

HUBER+SUHNER AG
Representative Office
Leninski Prospekt 113/1
Office C 404
117198 Moscow, Russia
Tel +7 495 775 66 53
Fax +7 495 775 77 94
info.ru@hubersuhner.com

SINGAPORE

HUBER+SUHNER (Singapore) Pte Ltd
11 Chang Charn Road
#05-02 Shriro House
SG-Singapore 159640
Tel +65 6473 5500
Fax +65 6473 5522
info.sg@hubersuhner.com

SWEDEN

HUBER+SUHNER AB
Knarrarnäsgatan 7
Box 1247
SE-164 28 Kista
Tel +46 8 447 5200
Fax +46 8 447 5201
info.se@hubersuhner.com

SWITZERLAND

HUBER+SUHNER AG
CH-9100 Herisau
Tel +41 71 353 41 11
Fax +41 71 353 44 44
info@hubersuhner.com

HUBER+SUHNER AG
CH-8330 Pfäffikon ZH
Tel +41 44 952 22 11
Fax +41 44 952 24 24
info@hubersuhner.com

THAILAND

HUBER + SUHNER (Thailand) Co., Ltd.
896/3 SV City Office Tower 1
4th Floor, Rama III road,
Kwaeng Bangpongpan, Khet Yannawa
Bangkok 10120, Thailand
Tel +66 2 682 6868
Fax +66 2 682 6669
info.th@hubersuhner.com

UNITED KINGDOM

HUBER+SUHNER (UK) Limited
Telford Road
GB-Bicester
Oxfordshire OX26 4LA
Tel +44 1 869 364 100
Fax +44 1 869 249 046
info.uk@hubersuhner.com

UAE & MIDDLE EAST

HUBER + SUHNER
Middle East Trading LLC
European Business Center (EBC)
Office 156
Green Community
Dubai Investments Park
P.O. Box 75843
Dubai, United Arab Emirates
Tel +971 50 515 84 62
info.me@hubersuhner.com

USA

HUBER+SUHNER, Inc.
19 Thompson Drive
Essex Jct., VT 05452, USA
Tel +1 866 482 3778
Fax +1 802 878 9880
info.na@hubersuhner.com

HUBER+SUHNER is certified to
ISO 9001 and ISO 14001.

Please note

We provide our customers with product guarantees as regards technical function and suitability for certain purposes exclusively in written agreements. The information in this document has been collected to the best of our knowledge; it serves, first and foremost, as a source of information.



HUBER+SUHNER AG
Cable Systems
Tumbelenstrasse 20
8330 Pfäffikon, Switzerland
Tel. +41 44 952 2211
info@hubersuhner.com

