

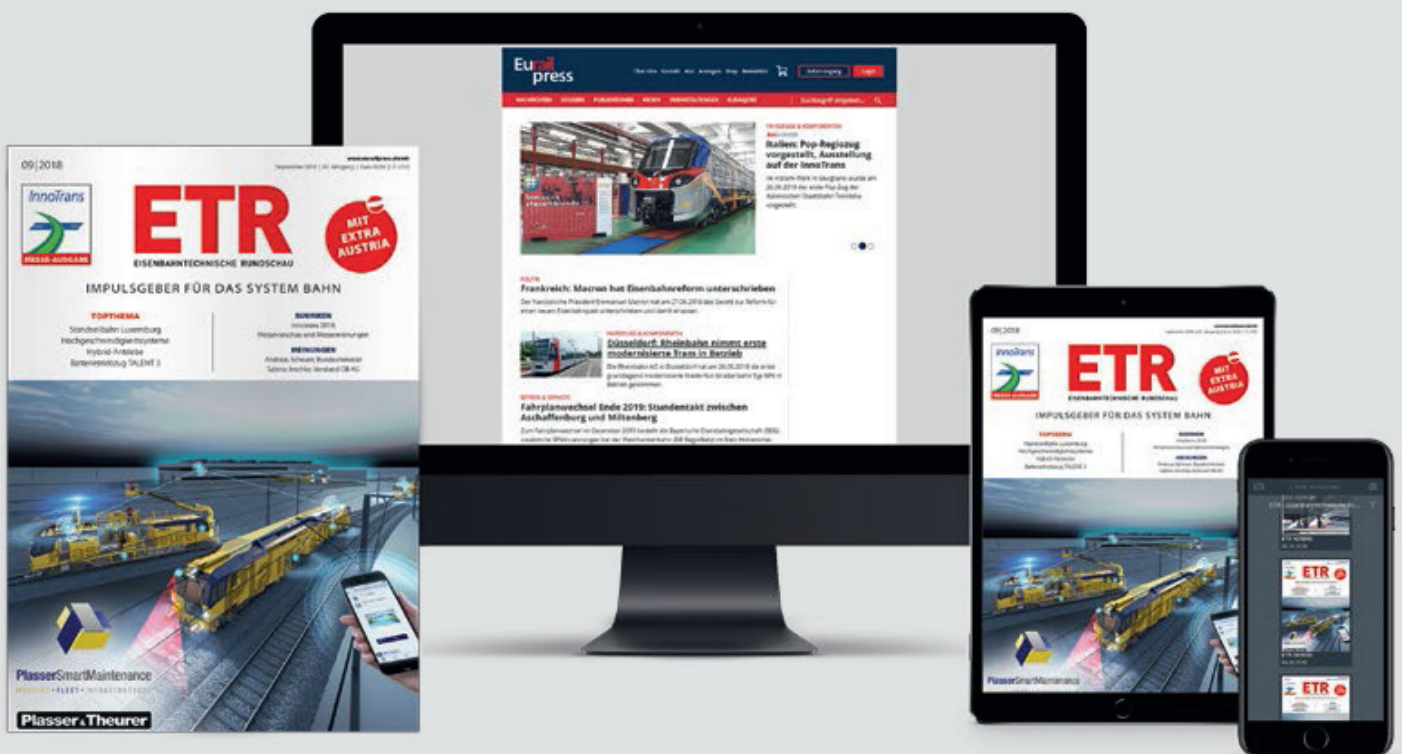
Information for our authors

ETR

EISENBAHNTECHNISCHE RUNDschau

Impulsgeber für das System Bahn

- Author checklist:
Formalities for the preparation of expert contribution
- Author's sheet and copyright
- Notes on the protection of your data



Author checklist

Please send us your complete documents to the fixed date agreed upon

We require in detail:

- Headline 1** max. 90 strokes (characters with spaces).
- Introductory part 2** as introduction into the subject being dealt (extent: max. 400 strokes).
- Text manuscript** as Word document.
- Author information 3** and the author's picture in color with 300 dpi jpg.
- Possible quotations **4** (max. 150 strokes).
- Tables and illustration caption and image source
- Please upload images ("Photos") as jpg, eps, high-resolution pdf or tif (file size min. 300 dpi – images in maximum format) For diagrams and graphics, please use Excel or PowerPoint Please always send all images in separate files, not embedded in a Word document.
- Literature 5** (supplementing and used literature) in the form of a list. For web sources, please indicate the full path including date and time of retrieval.
- Summary 6** (in German for the publisher's translation into English) (max. 500 strokes).
- Any formulas shall be created with the Microsoft Equation Editor and embedded into the Word document. So, we can easily recognize the formula and insert them as new sentences in our layout.

Stromversorgung auf Güterwagen – Aktuelle Bemühungen zur Standardisierung

1. Einleitung

Die Notwendigkeit einer Stromversorgung auf Güterwagen als Voraussetzung für weitestgehende Innovationen im Schienenpersonenverkehr ist in der Branche bekannt. Im kleinen Maßstab ist Strom auf dem Güterwagen zur Versorgung von Telematiksystemen bereits etabliert. Diese werden sich wenige Male am Tag mit einem Standard und etabliert so beispielsweise Programmen der Anlaufzeit. Mit bis zu vier Meldungen pro Stunde können bei den aktuellen Systemen schon nicht nur in die Ertragsfähigkeit heran. Solche Lösungen basieren auf langjährig erprobten in Verbindung mit einer auf minimalen Stromverbrauch optimierten Elektronik.

Über Telematik hinausgehende Anforderungen sind auf diesem Weg aber nicht erweiterbar. Sobald Abzug oder aufwändiger Service und Kommunikationsnetzwerk benötigt werden, ist ein Betrieb auf dem Güterwagen Voraussetzung. Neben einer ausreichenden Leistungsfähigkeit muss dieses Heranzusteuert gewährleistet. Dies erfordert Standards. In einer Expertenrunde der VDE wurde die aktuelle Regeln der Technik hat sich der VDE-Technische Ausschuss (TAC) dieser Herausforderung gestellt. Der Fachbereich Bahntechnik im VDE hat dazu einen Ausschuss gegründet, der bis Sommer 2020 den Vorentwurf einer VDE-Richtlinie zu wesentlichen Eigenschaften von Bordstromsystemen für Güterwagen verfassten wird. Bestehende sind in der Regel als Stromspeicher und eine „Intelligenz“, die permanent einen Austausch zwischen Energiegebern und Verbrauchern und dem Energiegeber der Quellen herstellt. Die Richtlinie wird für die Kompatibilität unter-

2. Funktionale Beschreibung des Systems

Die Richtlinie wird neben Referenzen auf weitere Normen und Richtlinien zu diesen Themen vor allem Empfehlungen zur Systemgestaltung beinhalten.

2.1. Grundlegende Systemparameter

Zu den wichtigsten festzulegenden Systemparametern gehört die Bordnetzspannung. Die Diskussion im Ausschuss zu diesem Thema konvergiert in Richtung 24 VDC. Wichtige Argumente sind Kompatibilität und Isolationsaufwand. 24 VDC ist Standard im Bereich der Automatisierung und erscheidet ein großes Feld preisgünstiger Industriekomponenten. Gleichstrom unterhalb 60V gelten als Schutzkreisspannung gemäß IEC 60449. Sie werden als damit verbundenen Bestimmung für Erweichung auch bei feuchter Umgebung als nicht befriedigend empfunden.

Eine weitere festzulegende Systemgröße ist das Taktenband der Spannung. Abseht wird über die Frage diskutiert, ob eine so weite Toleranz, wie sie die DIN EN 50155 nicht vorgeschrieben ist. Mit Vereinbarungen zu Spannungshöhe und -toleranz werden zukünftig lediglich elektrische Geräte zu entwickeln und zu vermarkten, die auf jedem Güterwagen mit einem der Richtlinie entsprechenden Bordnetz Verwendung finden können. So unterstützt die Richtlinie die Schaffung eines Massenmarktes.

Weitere Eigenschaften und Parameter des Bordstromsystems, wie zum Beispiel Batterietechnologien, Kapazitäten und Energiequellen beeinflussen nicht die technische Kompatibilität mit Verbrauchern. Sie beeinflussen aber sehr stark die Verfügbarkeit und die Zuverlässigkeit des Gesamtsystems.

2.2. Welcher elektrischer Leistung sind nicht Bestandteil...

Welcher elektrischer Leistung sind nicht Bestandteil des in der Richtlinie behandelten Bordstromsystems. Im Folgenden sollen dabei nur exemplarisch einige mögliche elektrische Geräte auf dem Güterwagen und deren Anforderungen aufgelistet werden. Zum aktuellen Zeitpunkt sind die einzigen im herkömmlichen Güterverkehr anzutreffenden elektrischen Verbraucher auf Güterwagen Telematikgeräte. Sie zeichnen sich durch einen geringen Dauerstrombedarf aus, müssen aber zuverlässig auch bei abgefahrenen Wagen versorgt werden.

Einer anderen im innovativen Güterverkehr ohne Hauptbahnbetriebung gesteuert ist, diese beinhalten elektronische Steuerungen für die Ladung verbundene Bordstromsysteme.

Elektronisch betriebene H-Endstufen und Betriebsleistungsrichter

Elektronische Verstärker von Lastaufnahmen

Elektronische Verriegelung von Ladungsgeräten

Alarmanlagen

Bildschirmen

Elektrische Zugschlüssel

Sehr weitgehende Vorschläge zur Gestaltung des Güterwagens der Zukunft beinhalten auch Rangierantriebe oder Konzepte mit leistungsstarken Vorklimageneratoren für Lebenserhaltungssysteme (H2, Sauerstoff-Systeme).

5

6

ETR structures numerically with a maximum of two headline hierarchies 1; 1.1 Headlines should have max 75 characters.

Images, tables, literature and footnotes should always be mentioned in the text and numbered consecutively.

Please do only use abbreviations, if they are usual. Technical terms, if they occur currently in the text, are used with their abbreviation after the first reference.

Your article should not exceed the number of five printed pages.

With a text/image ratio of 2/3 to 1/3, an article would comprise max. 12 manuscript pages. (Limit: 15,000 characters plus max. 3 to 6 images).

We are also happy to publish short articles (from 9,000 characters plus 1 to 3 images). You are welcome to provide short notes for our news section.

After editing technical articles and interviews by the editorial staff and layout and before printing, you will receive a proof sheet as pdf. by mail for print approval.

Files suitable for publishing

We use data in the operating systems Windows or Mac Os.

For Windows, please send us texts in Word data files (*.doc, *.docx).

Your images should best be presented as *.jpg, *.tif, *.eps (300 dpi, maximum format) or as a high-resolution pdf.

We prefer PowerPoint, Excel or high-resolution PDF for Windows graphics.

Please, do not define automatic pagination.

Enter your text in ragged margin, i.e. without line feed. Mark paragraphs by return key and please, avoid automatic hyphenation.

The further processing in the pre-print stage, takes place with Apple Macintosh (Mac-OS Software: InDesign CS6, Photoshop CS6, Illustrator CS6).

For any further inquiry, please do not hesitate to contact:

Frau Ursula Hahn, DVV Media Group | Eurailpress
Redaktionsleitung ETR
Neckarstr. 3A, D-68542 Heddeshheim
Telephone: +49 (0) 62 03 661 96 20
Email: ursula.hahn@dvvmedia.com
www.eurailpress.de

Author's sheet

Please, sign and return to: ursula.hahn@dvvmedia.com



Publishing rights

Articles are all editorial services in text, image, sound, video, graphics and illustration. Within the scope of the contract, the author confers to DWV a utilizable and exclusively right of use without limit of time and space for all types of use of his contribution and the associated copyright and performance protection rights for all types of use in the national and international media of DWV. The granting for rights shall include the authorization of DWV to edit, store, reproduce, translate into foreign languages, archive and to reproduce the article in Germany and abroad in physical or non-physical form notwithstanding of the respective transmission technology in particular

- in print media (e.g. journals, newspapers, newsletters, studies, special publications, magazines, books)
- in communication and information services (e.g. internet, Social-Media platforms, SMS, MMS, archives, data bases, applications, webTV, e-paper, secure-paper, flash-pdf),
- for offline media (e.g. CD-Rom, DVD, Apps)
- in advertisings and for advertising materials (e.g. posters, commercials, POS-advertising forms) in and for DWV products

DWV shall have the right to edit the contribution with due consideration to the author's interests. DWV is entitled to allow these rights to be used in Germany or abroad also by affiliated companies to DWV of DWV Media Group with the conferral of the appropriate rights of use and exploitation and/or granting these rights of use and exploitation to affiliated companies to DWV of DWV Media Group. The Parties agree that the transfer of the aforementioned rights of use and exploitation have been settled. German Copyright Act §§111 sentence2, 32a remains unaffected. The author confirms the existence of the aforementioned rights to DWV as well as they are not encumbered by any rights of third parties. The author does not accept any warranty claims for any possible advertising exploitation. DWV is not obliged to exploit the rights conferred. German Copyright Act §41 remains unaffected.

All authors ensure and confirm with their signature that through their work and contribution as well as through the external contributions they procure, they do not infringe rights of third parties. This applies in particular for contributions and images such as of third parties by the author. The authors take care that possible employees enter the commitment.

After publication, the publishing house automatically sends each author a specimen copy of the printed edition and a pdf. file of the contribution free of charge. Publishing of the pdf. file is allowed in in-house media and on your website, if the source and link to <https://www.eurailpress.de/etr> is given.

For processing your contribution, we kindly request the following information:

- First publication/Post title _____
- Academic degree _____
- First name and Family name _____
- Currently acting as _____

- Address _____
(also for document shipment)

- Telephone: _____ Mobile: _____
- Email: _____

Date

Signature

For any question, please do not hesitate to contact us.

For the editorial office
Ursula hn
ursula.hahn@dvvmedia.com



INFORMATION FOR THE PROTECTION OF YOUR DATA

Information in accordance with the EU General Data Protection Regulation (GDPR) art. 13,14 and 21

With the following information we would like to give you an overview on the collection and processing of your personal data by us and your rights arising with the legal requirements of data protection.

1. WHO IS RESPONSIBLE FOR PROCESSING THE DATA?

This data protection information is liable for processing my personal data by:

DVV Media Group GmbH
Heidenkampsweg 73-79
20097 Hamburg

Managing Director: Martin Weber

2. HOW CAN YOU CONTACT THE RESPONSIBLE DATA PROTECTION OFFICER?

You can contact the competent company data protection officer as follows:

Rheinisch-Bergische Verlagsgesellschaft mbH
Datenschutzbeauftragter
Zülpicher Straße 10 – 40196 Düsseldorf

as well as by email via: datenschutz@dvvmedia.com
and by telephone: 0211/505-0

3. WHEREFORE DO WE PROCESS YOUR DATA (PURPOSE OF PROCESSING) AND ON WHICH LEGAL BASE?

We process personal data in accordance with the provisions of the European General Data Protection Regulation (GDPR) and the Federal Data Protection Act (BDSG)

- To fulfill contractual obligations (GDPR Article 6 para. 1b)

This processing is carried out in order to provide our services within the framework of the contract with our authors. The purpose of data processing is primarily due to the specifically commissioned services. Further details to data processing purposes can be obtained from the underlying order and/or contract documents as well as in our General Terms and Conditions.

- Within the framework of the balancing of interests (GDPR Article 6 para. 1f)

Where required, we process personal data beyond the actual fulfilment of the contract for safeguarding justified interests by us or third parties. This concerns the establishment of legal claims and the defense of legal claims as well as for protective measures to safeguard the rights of use granted for copyrighted content according to German Copyright Act §95 a.

4. WHO ARE THE RECIPIENTS OR CATEGORIES OF RECIPIENTS TO WHOM THE DATA CAN BE DISCLOSED TO?

To meet our contractual and legal obligations, customer data can be disclosed to other group companies or external services. These might be, e.g.:

Printing and logistics services

IT-service companies

- Service, hosting and data center
- Data management

Billing and collection services:

- Auditing
- Corporate Accounting, Collection, Controlling

5. IS THE DATA TRANSFERRED INTO A THIRD COUNTRY OR TO AN INTERNATIONAL ORGANIZATION?

The transfer of personalized data to recipients in third countries or international organizations does not take place at present and is not provided for the future.

6. HOW LONG IS THE DATA STORED?

If your data is not subject to retention and documentation obligations (this might arise, inter alia, from the German Commercial Code (HGB) and amount up to 10 years), it is deleted with the discontinuation of the purpose. Thus, after termination of a contract, work is usually still required for the execution of the contract or storage is required until the expiry of the respective statutory (according to German Civil Code §§ 195 et seq., usually 3 years, but in certain cases up to 30 years) or contractual limitation periods.

7. WHAT RIGHTS DO YOU HAVE AS A DATA SUBJECT?

As a data subject you may exercise the following rights:

- information concerning the data stored in relation to your person
- correction, deletion as well as limitation on processing your data
- objecting to the processing of your data
- transfer of the data provided by you
- in case the processing of your data is based on your consent, you have the right to cancel the consent at any time

8. WHAT RIGHTS OF APPEAL DO YOU HAVE?

You have the right to complain to the competent data protection supervisory authority. The competent authority for this is:

Der Hamburgische Beauftragte für Datenschutz
und Informationsfreiheit
Kurt-Schumacher-Allee 4
20097 Hamburg
Telephone: +49 (0) 40 428 54 – 4040

The provision of your personal data is stipulated in the contract or required for the conclusion of a contract. Without the required data, an order/ contract relationship cannot come about.

If the responsible authority intends to further process your personal data for a purpose other than that for which the personal data were collected, the responsible authority shall provide you with information about this other purpose and any other relevant information prior to such further processing.