

Technology under Control

DEUTA AMERICA

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DEUTA AMERICA Corp.

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DEUTA AMERICA 

»Our mission: to realize visions together with you.«



Welcome to DEUTA America!

DEUTA is an international market leader in carborne electronic products for the rail industry with more than 110 years of experience in Europe, Asia, the Middle East, and the Americas. True to our slogan „Technology under control“ we make new technologies easier to control and therefore safer.

The privately held German company produces safety-relevant indicators, terminals, recorders, and sensors for use on transit and freight rail operations. DEUTA is distinguished from other suppliers by our high level of vertical integration - clear product and process competencies which produce the highest quality products.

DEUTA AMERICA Corp. follows ISO 9001 requirements with the goal of consistent quality management across all processes and responding flexibly to customer requirements.

Our parent company, DEUTA-WERKE GmbH, is also certified in ISO 9001:2008, IRIS, ISO 14001:2015.

Deuta's portfolio for the North American market include FRA and IEEE-compliant recorders and various peripheral electronics to support PTC, CBTC, and a variety of other transit and freight applications.

DEUTA America is your local partner for products, system consultation, commissioning, training and maintenance services. As of 2017 DEUTA America is also providing FRA Buy America requirements compliant products, including event recorders and multi-functional terminals, for rolling stock procurements as required by U.S. standards and legislation. DEUTA America is your U.S. service partner at all levels for commissioning and maintenance services. Our engineers find the perfect solution for each individual application.

»Technology under Control.

Our mission for over 110 years.«

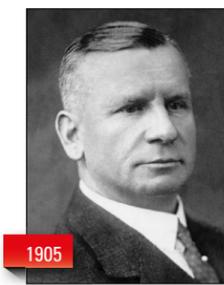
There has been a central theme characterizing the company's history since it was founded in 1905: the spirit of innovation.

It all began with the development of the first speedometer for vehicles which functioned in real time and with an incomparable level of accuracy.

This invention subsequently spread throughout the world and initiated further developments in a variety of industrial sectors. Due to the expertise of its staff and the reliability of its products Deuta engineers have been asked to take part in a number of international working groups concerned with standardisation and specifications.

Then and now the name DEUTA is synonymous with precision and durability. Deuta supplies components and systems for monitoring and controlling speed. The best example of this is the modular driver's console display which has been in active service on trains all over the world for the last four decades.

Today DEUTA generates over \$40M of annual revenue and operative results are heavily re-invested in the company, providing for the liquidity to invest heavily in innovation and product enhancements.



1905
Foundation 1905
Georg Rensch - Co-Founder
of Deutsche Tachometer-
werke in Berlin, Germany



1937
WR 2 - First recording
tachometer in railway
traffic



1962
ER 4 - Electric incident
recorder



1980
KWR 1 - First data
recorder based on
micro processor
technology in railway
traffic



1996
DRS 05 Doppler radar
sensor mounted under
the superstructure of a
rail vehicle



2001
DF 16 Axle mounted
incremental sensor



2010
IconTrust® Terminals
with Safety Integrity
Level up to SIL 3



2012
DEUTA REDBOXsafe
with Safety Integrity
Level up to SIL 4



2013
REDBOXstar
for PTC
requirements



2017
PMU26
Crash Hardened
Memory 256GB



1905
DEUTA tachometers - the
basis for the company's
world-wide recognition



1905
Basis for success:
The 1905 tachometer patent



1962
EFI 50: Electric remote
transmitter



1971
BM/BO: Non contacting hall
sensors



1979
MFA 8 - Modular Driver's
Console Indicator



1988
ZWG - Speed and distance unit



2007
DRS 05S1 - Doppler Radar
DRS 05S1, High Protection



2012
PMU 24
Crash-hardened Memory
Module - for PTC



2017
US production of
Multi-Functional Terminal
MFT 5/2

»Our products are based above all on one thing:

customized solutions.«

The products illustrated below are already used on North American railways or bought from North American customers for global railway projects.

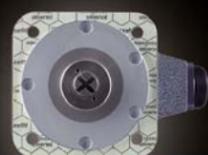
Because technology today is more demanding than ever, system safety assumes particular importance in addition to functionality and economic viability. In order to develop customized solutions in the railway area, highly specialized expertise, decades of experience and a visionary global view are required.

Attributes which have always characterized DEUTA and which DEUTA America continues to demonstrate. The focal point of our work has always been people. Safe human-machine systems are our goal.

For example, in train technology: we not only view the information chain – from data acquisition using sensors and camera recordings through to visualisation – we also facilitate qualification processes and help with the relevant U.S. standards.



Crash-Hardened Memory Module:
PMU 24 (DOT certified)



Axle-Mounted Sensor
DF 16



Doppler Radar Sensor
DRS 05/2



Digital Double Indicating Unit
DQA 14



Compact Digital Indicating Unit
BDA 4



Digital Single Indicating Unit
BQA 9



Multi-Functional Terminal
MFT



Multi-Functional Recorder
DEUTA REDBOXstar

»You can depend on it.

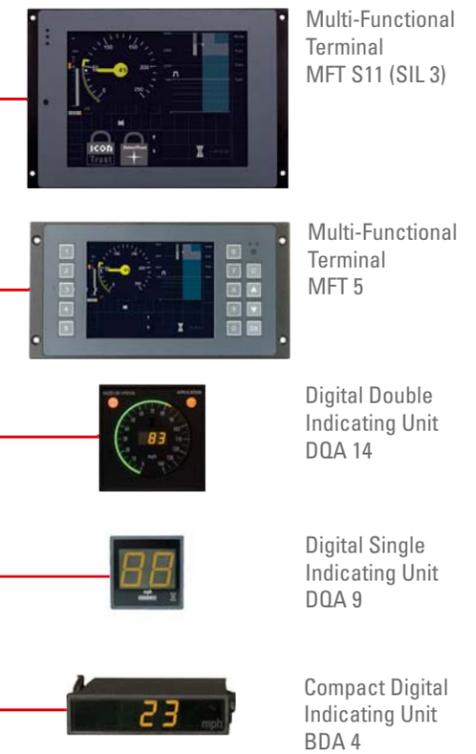
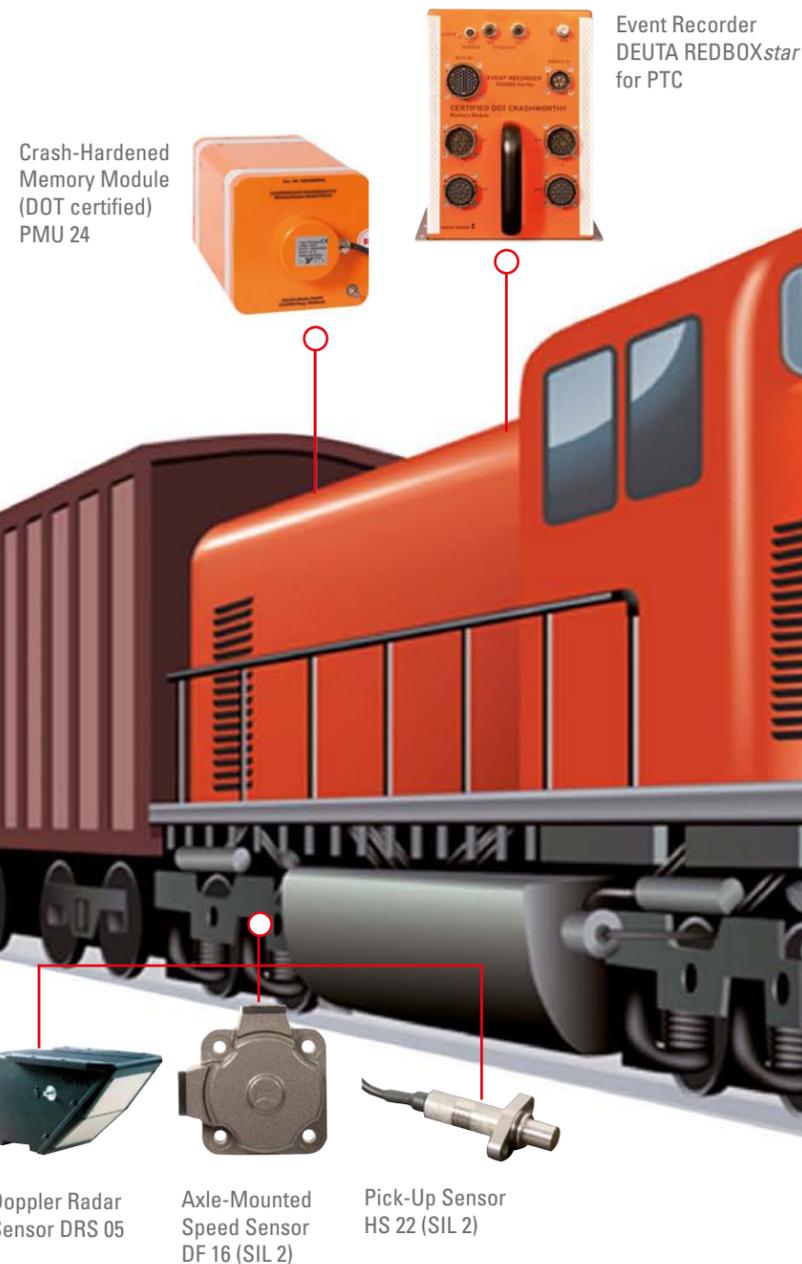
Today and tomorrow.«

Innovative, patented, reliable - There are many terms describing DEUTA products. From individual solutions to a complete system – DEUTA offers you a broad spectrum of technically advanced solutions, all based on the solid foundations of innovation, safety and cost-effectiveness.

It is hardly surprising, that DEUTA's solutions are in use all over the world and have proven themselves in tough everyday applications over many years – regardless of whether it is just a simple indicator, a multi-functional terminal, a sensor, a recorder, or a complete system.

DEUTA REDBOX^{star} variants offer with its flexible configuration and compact dimension the ideal platform for new vehicle equipment, retrofit and PTC applications in freight locomotives, high-speed trains and mass transit vehicles.

- Patented
- Robust
- Economical
- Trendsetting



»Abstract of our US-references: for safe and reliable transport.«

| Project | DEUTA Product | Application |
|--------------|--------------------------------|------------------------------------|
| Locomotive | Event Recorder | REDBOXstar 2 PTC |
| | Axle-Mounted Sensor | DF 16 ATC |
| | Crash-Hardened Memory Module | PMU 24 PTC |
| | Multi-Functional Terminal | MFT 3/1 PTC, Brake Interface |
| | Multi-Functional Terminal | MFT 6/2 Traction and Brake Control |
| | Digital Double Indicating Unit | DQA 14 Locomotive |
| Mass Transit | Event Recorder | REDBOXstar 2 PTC |
| | Axle-Mounted Sensor | DF 16 People mover, Metro |
| | Axle-Mounted Sensor | DF 17 People mover, Metro |
| | Multi-Functional Terminal | MFT 5/1 Metro, Lightrail |
| | Digital Indicating Unit | BDA 4 Metro, PTC |
| | Digital Single Indicating Unit | DQA 9 Metro |
| | Radar Sensor | DRS 05 Commuter |
| | Pick-Up Sensor | HS 22 Commuter |



DRS 5/1



DF 16



DF 17/1



HS 22



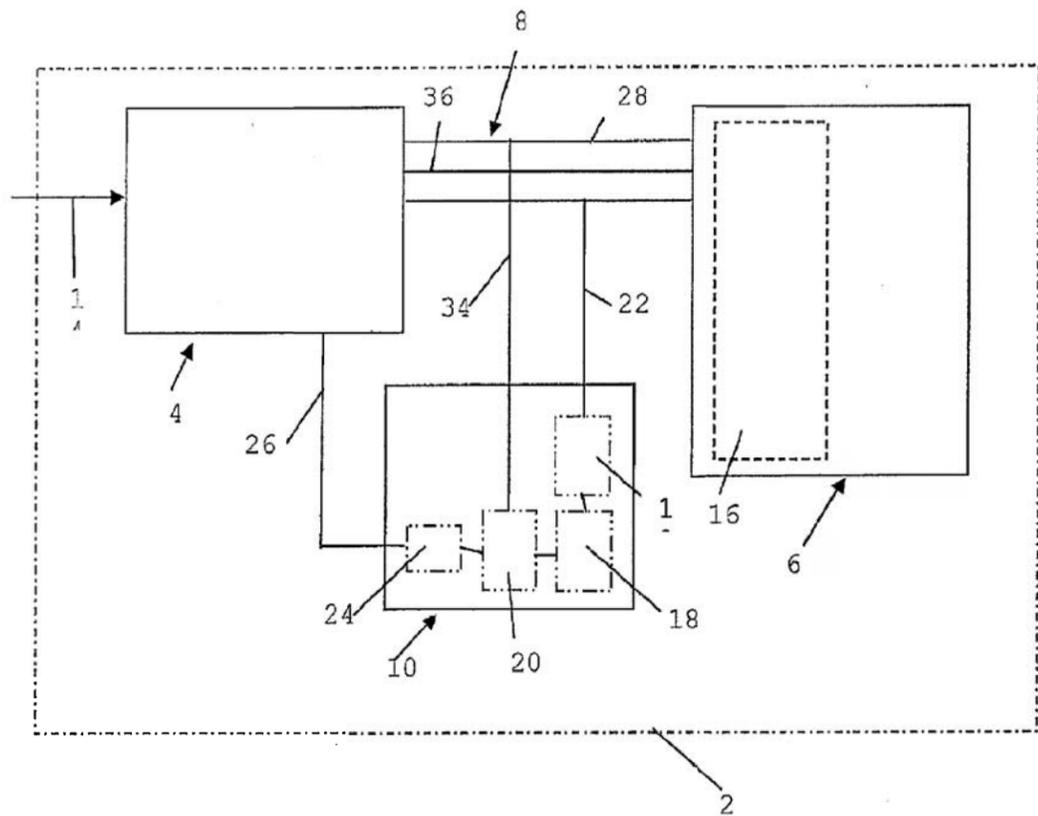


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 Manz et al. (43) **Pub. Date: Apr. 26, 2012**

(54) **METHOD FOR REPRESENTATION OF SAFETY-RELEVANT INFORMATION ON A DISPLAY AND APPARATUS FOR THE APPLICATION OF THE METHOD** **Publication Classification**
 (51) **Int. Cl.** *G06T 1/00* (2006.01)
 (52) **U.S. Cl.** **345/522**
 (57) **ABSTRACT**
 A method to ensure the dependable representation of a safety-related information includes: entry of at least one input parameter into a processor, computerized processing of the input parameter transforming it into a sequence of image data that represents the input parameter, transmittance of the sequence of image data on to a display and representing the sequence of image data on the display. It is proposed to feed the sequence of image data and to a test unit and to perform a safety test in the form of computerized generation of a test code for the sequence of image data, comparing the test code with several existing reference codes, assigning the identified reference code to a corresponding possible value of the input parameter and comparing it with the value of the input parameter to generate either a positive or negative test result to initiate a safety-focused reaction.

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 (73) **Assignee:** **DEUTA-WERKE GMBH**, Bergisch-Gladbach (DE)
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»Qualified, Certified & Patented.

For the U.S. Market«

Customer satisfaction is the measure of all things at DEUTA. The guarantee for this is our Total Quality Management, which embraces all business processes – from advice to concept right through to realization. This depends particularly on reacting in a flexible way to specific customer requirements. At DEUTA quality always means: development of solutions based on concretization of requirement profiles in conjunction with the customer.

for, among others, Alstom, Bombardier, Siemens, DB AG, Thales Canada and Quester Tangent.

A further milestone in our successful collaboration with the rail industry is the qualification according to 'International Railway Industry Standard' (IRIS). This standard complements the ISO 9001:2008 introducing rail specific requirements.

Certified quality and first class references. Resulting from our high quality standards come business relationships which are characterized by trust, continuity and optimal cost-efficiency. That is why we are qualified suppliers

In addition, DEUTA's quality assurance always includes compliance with relevant environmental protection requirements according to ISO 14001:2004. Ecologically-oriented production with minimal damage to the environment is a given in our factories.



DEUTA-WERKE:
International Railway Industry Standard - IRIS



DEUTA-WERKE:
ISO 14001:2004
Ecologically oriented production



DEUTA AMERICA:
ISO 9001:2015



DEUTA-WERKE:
Qualified supplier:
DB AG, Germany



DEUTA-WERKE:
Supplier excellence
award: Quester Tangent

»Modern facilities.

And one to one support.«

Board production: As a supplier of operator and display devices with long-term delivery commitments, DEUTA has been producing boards for nearly 15 years. From printed circuit layout to logistics, all our milestones are part of the ISO 9000:2001 Certification and IRIS processes. As an active member of the Component Obsolescence Group - COG Germany, our quality management extends over the entire life cycle of each individual component.

Product Qualification: DEUTA products stand for 'high-end' quality. Product development is therefore reliably supported by our accredited test laboratory. Our lab's modern facilities correspond to the highest technical

requirements and offer a variety of test possibilities, e.g. for electromagnetic tolerance or climatic and mechanical influences including testing for electromagnetic compatibility and resistance to climatic and mechanical effects.

Commissioning: Our competent service staff is available worldwide to help commission your new product solutions for the first time. All service employees are experienced rail industry specialists who implement our products individually in your vehicle environment, ensuring your vehicle gets off to a good start. Upon request you can combine the commissioning with a product training as well.

