



WITT Solutions GmbH

Smart measurement technology for higher-level protection
systems (DC) voltage – cable – insulation
Monitoring in energy infrastructures and plants

Klaus Gradischek
CEO

Pictures say more than 1000 words
therefore we have brought a video

My contact details

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Sie suchen nach einem Partner der alle Aspekte
der Bahn Gleichstrominfrastruktur sicherstellt?

Sie haben ihn gefunden ...



Solutions GmbH

Smart measurement technology for higher-level protection
systems (DC) voltage – cable – insulation
Monitoring in energy infrastructures and plants

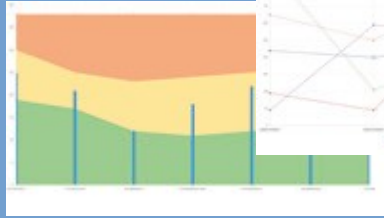


SMART Direct current
measurement technology

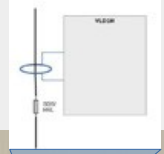
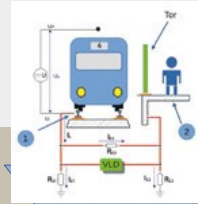
Your challenge, our answer

- The future of urban and metropolitan transport lies on rail (Institute for Mobility Research (ed.) study "Scenarios for the year 2030").
- Each local operator must adapt to the individual needs of its residents in order to successfully establish and expand a mass transit system.
- Governmental, geographic and technical conditions and last but not least technical philosophies are described in requirements by the operator.
- Our answer to these diverse requirements is modularity and efficient adaptation and use of IT systems.

Expert System Miraculum



loweii- Only those who have an overview of everything know where energy flows and can optimize it



Witt Solutions GmbH

Fields of competence

Since 1982 WITT has been building

Viele Namen eine Funktion:

EKS: Earth short-circuiter cluster

VLD: Voltage limiting device

NGD: Negative Grounding Device

AGS: Automatic Grounding Switch

RTG: Rail To Ground

Patent 10 2016 215 769

Reducing a potential difference between ground connections / grounding systems of a railroad network Earth Short Circuiting device ESC

Earthing short-circuiter classes

EN 50526-2 The table includes the classes of voltage limiting devices according to

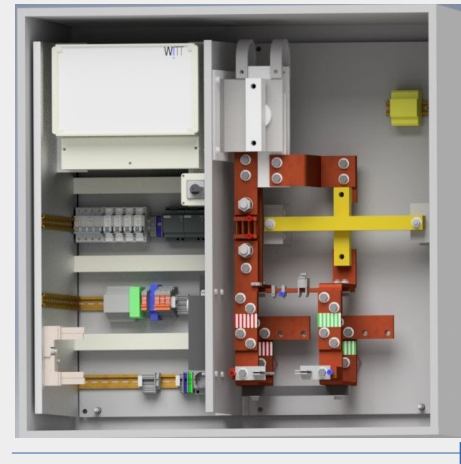
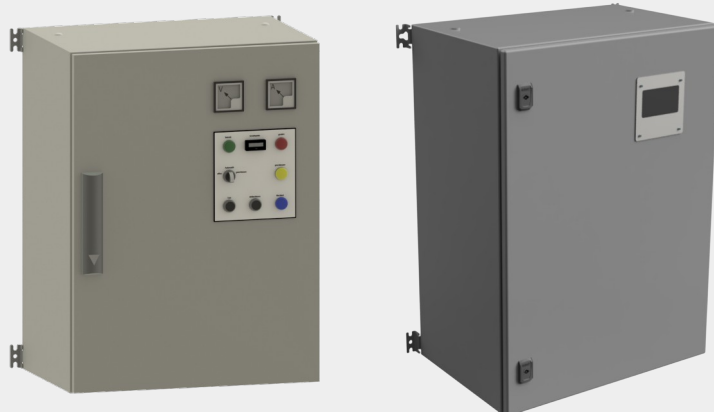
Class	Switching method	steering	WITT - Solutions
1	Welding parts	NOT	VLDM
2	Thyristors	possible	EscS 3
3	Power contactor	possible	EscS 5
4	Combination of thyristors and power contactor	possible	EscS 7

Earthing short-circuiter – System (EscS)

Patent 10 2016 215 769

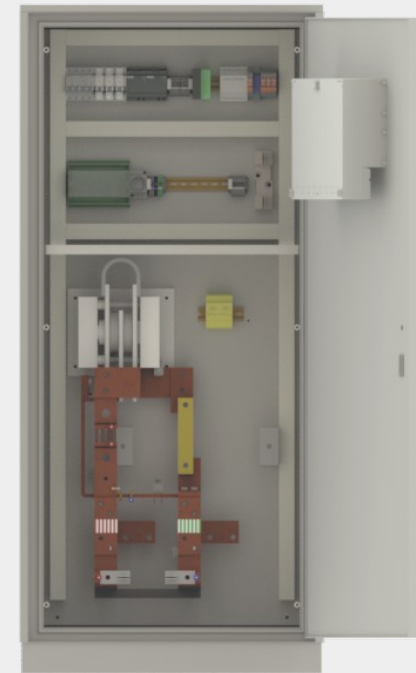
Reducing a potential difference between ground connections
/ grounding systems of a railroad network Earth Short Circuiting device ESC

Image similar



Horizontal construction

Vertical construction



Certified

Federal Railroad
Agency

Vattenfall

WITT-Bridge as individual as your measurement and control task

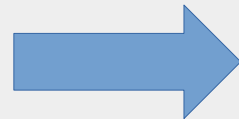
- Developed for rail-bound traffic
- Safe measurement in disturbed environments
- Measurement of high powers and voltages

Prinzip of WITT-Bridge

Signale Ihrer Infrastruktur



Change of DC tension using the example of sinusoidal wave



Voltage

up to 3.000 Vdc / 2.100 Vac

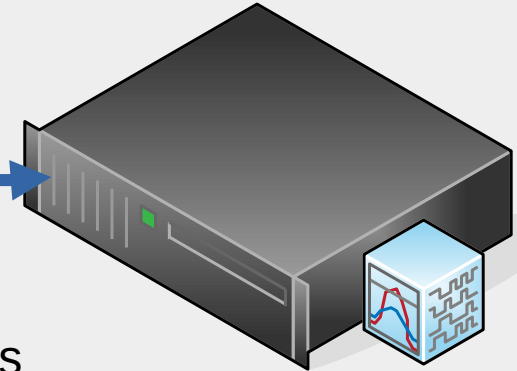
Current

up to 80.000 Ah

Galvanic isolation

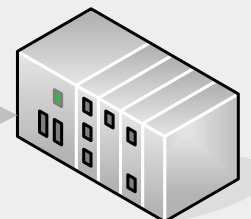
up to 6.000 Vdc

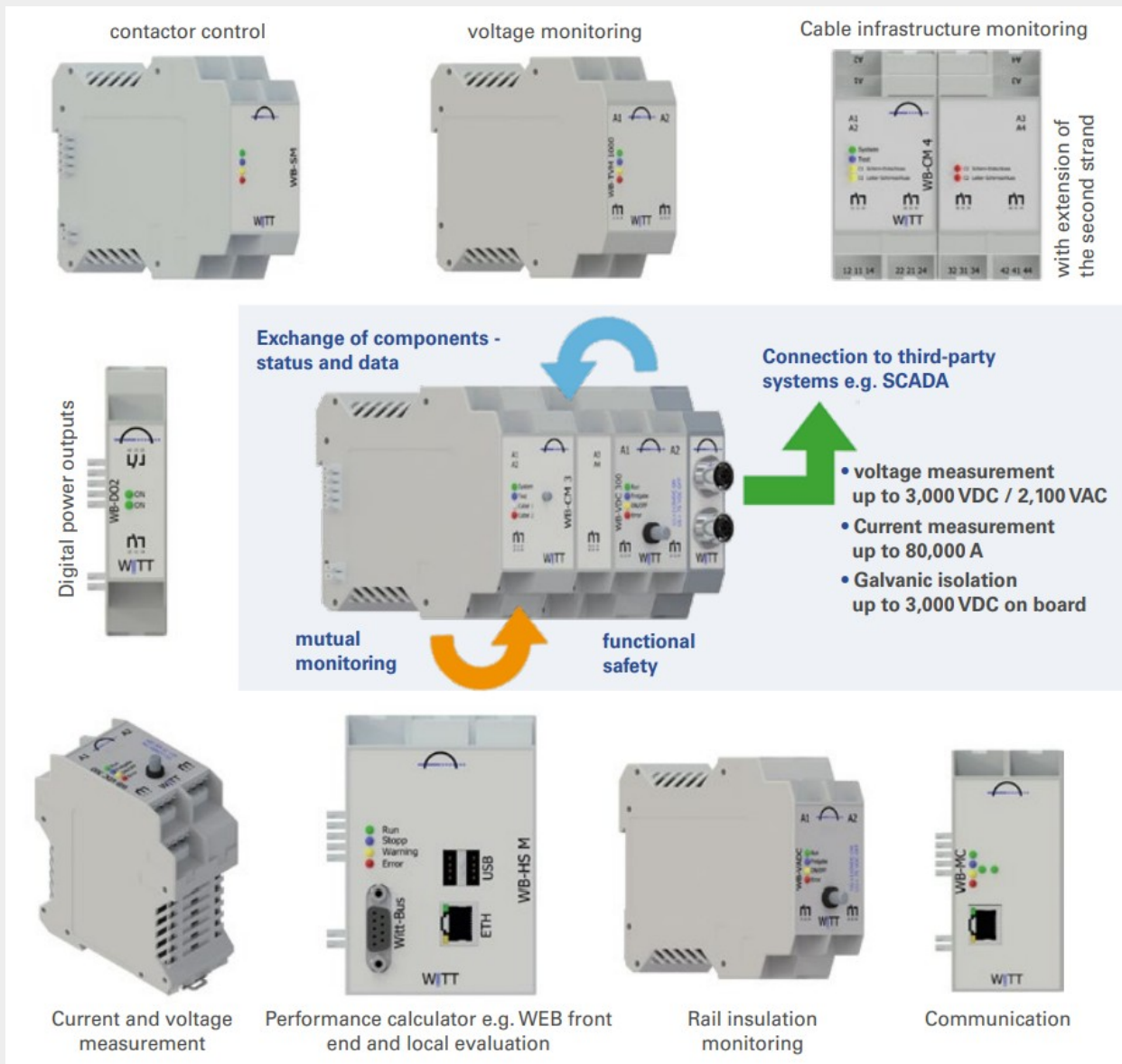
Via Protokoll
Messdaten
Systemstatus
Update



Lokale Messung und Bewertung
Schwellwerte bis Komplexe

Digitalsignal 1 / 0





Lokale Messung und Bewertung Schwellwerte bis Komplexe

- Kabelüberwachung
- Isolation
- Qualität der Spannung
- Qualität der Ströme

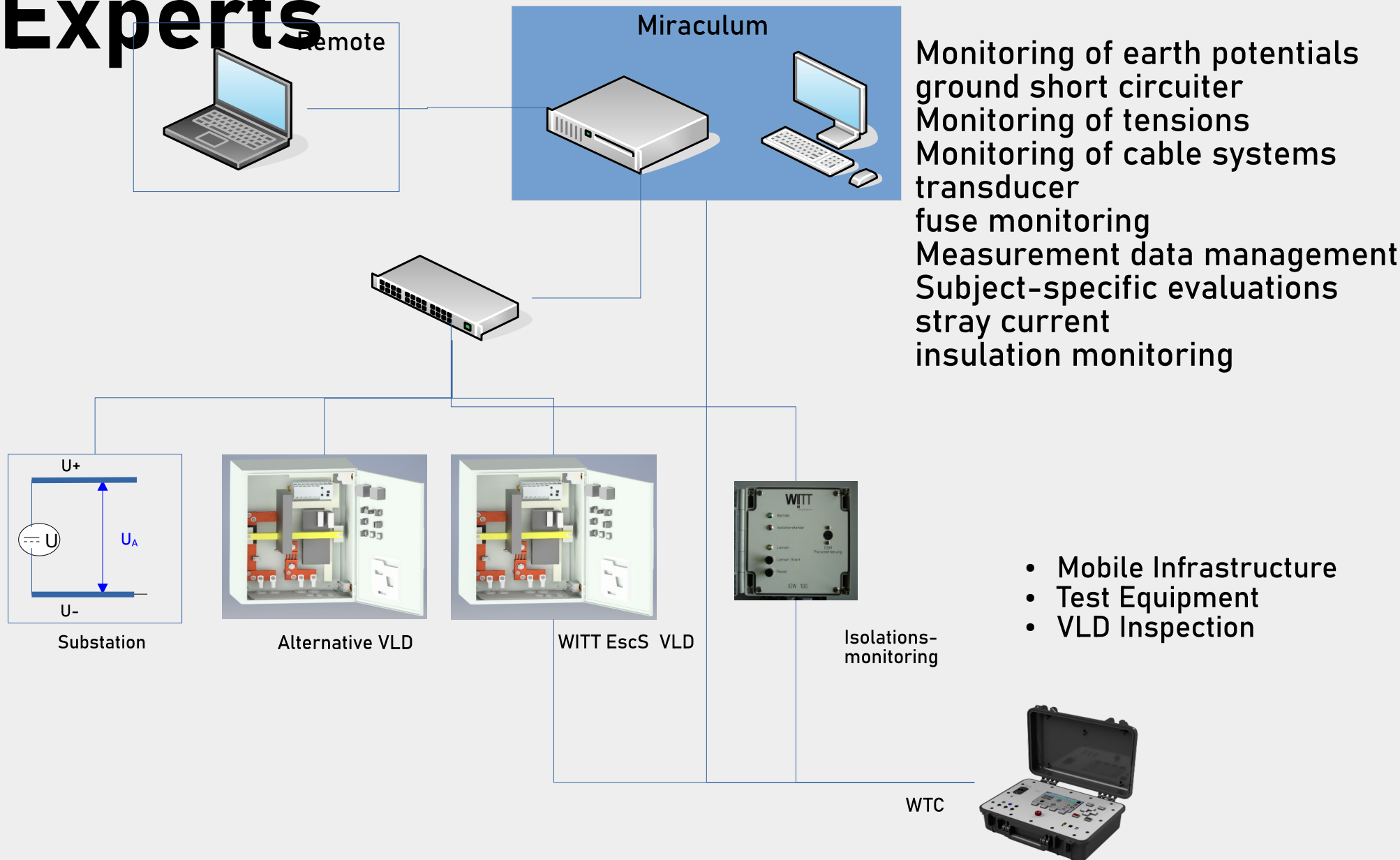
- Mittels dieser Plattform bauen wir Ihre Individuelle Lösung.
- Produzieren diese in Stückzahl 1
- Automatische Test (HIL) nach Vereinbarten Normen

Unsere Messtechnik Mobil WITT Test Case

- Testing of VLD / earth short-circuiters
- Automatic measurement
- Generation of measurement protocols
- Data logger
- Testing of DC, AC and AC/DC



Miraculum, Master tool für Experts



Credentials

A selection



Netz
Energie
InfraGo AG



Istanbul Metro



Rhein-Neckar-Verkehr



St. Petersburg



AGENCE MÉTROPOLITAINE
DE TRANSPORT



(Austria)



Questions?

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