

Deutsche Akkreditierungsstelle Technik (DATech) e.V.
Signatory of the Multilateral Agreement of EA and ILAC for the mutual recognition

represented in the

Deutschen AkkreditierungsRat



Accreditation

The **German Accreditation Body Technology (DATech) e.V.** certifies that the Testing Laboratory

**ABB AG – Power Technologies Division
Calor Emag Medium Voltage Products
Oberhausener Str. 33**

D-40472 Ratingen

is competent under the terms of DIN EN ISO/IEC 17025 to carry out testing in the fields

**High-Voltage Switchgear and Controlgear,
Low-Voltage Switchgear and Controlgear Assemblies,
Current and Voltage Transformers,
Power transformers and Busbar Systems**

according to the annexed list of standards and specifications.

The accreditation is valid until: **October 14th, 2008**

The annex is deemed part of this certificate and comprises **2** pages.

DAR-Registration No.: **DAT-P-032/93-02**

Frankfurt/Main, July 29th, 2005


I.V. Dipl.-Ing. (FH) R. Egner
Head of the Accreditation Body

Member in EA, ILAC, IAF

Inhaber der Akkreditierungsurkunde:
Holder of this accreditation certificate:

**ABB AG – Power Technologies Division
 Calor Emag Medium Voltage Products
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Der Geltungsbereich der Akkreditierung erstreckt sich auf die nachstehend genannten Gebiete und zugehörigen Prüfbereiche:

The scope of this accreditation indicates:

Norm	Definition
IEC 60044-1	Instrument transformers – Part 1: Current transformers
IEC 60044-2	Instrument transformers – Part 2 : Inductive voltage transformers
IEC 60044-3	Instrument transformers – Part 3: Combined transformers
IEC 60060-1	High-voltage test techniques – Part 1: General definitions and test requirements
IEC 60060-2	High voltage test techniques – Part 2: Measuring systems (ohne Anhang A)
IEC 60068-2-11	Basic environmental testing procedures – Part 2: Tests. Test Ka: Salt mist
IEC 60068-2-14	Basic environmental testing procedures – Part 2: Tests. Test N: Change of temperature
IEC 60076-5	Power transformers – Part 5: Ability to withstand short-circuit
IEC 60137	Insulating bushings for alternating voltages above 1000 V
IEC 60265-1	High-voltage switches – Part 1: Switches for rated voltages above 1 kV and less than 52 kV
IEC 60265-2	High-voltage switches – Part 2: High-voltage switches for rated voltages of 52 kV and above
IEC 60270	High-voltage test techniques – Partial discharge measurements
IEC 60282-1	High-voltage fuses – Part 1: Current-limiting fuses
IEC 60282-2	High-voltage fuses – Part 2: Expulsion fuses
IEC 60289	Reactors
IEC 60439-1	Low-voltage switchgear and controlgear assemblies – Part 1: Type-tested and partially type-tested assemblies
IEC 60466	A.C. insulation-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 38 kV
IEC 60470	High-voltage alternating current contactors and contactor-based motor-starters
IEC 60529	Degrees of protection provided by enclosures (IP Code)
IEC 60660	Insulators - Tests on indoor post insulators of organic material for systems with nominal voltages greater than 1 000 V up to but not including 300 kV
IEC 60694	Common specifications for high-voltage switchgear and controlgear standards
IEC 60726	Dry-type power transformers
IEC 60832	Insulating poles (insulating sticks) and universal tool attachments (fittings) for live working

Norm	Definition
IEC 60859	Cable connections for gas-insulated metal-enclosed switchgear for rated voltages of 72,5 kV and above - Fluid-filled and extruded insulation cables - Fluid-filled and dry type cable-terminations
IEC 60932	Additional requirements for enclosed switchgear and controlgear from 1 kV to 72.5 kV to be used in severe climatic conditions
IEC 60947-1	Low-voltage switchgear and controlgear – Part 1: General rules
IEC 60947-2	Low-voltage switchgear and controlgear – Part 2: Circuit-breakers
IEC 60947-3	Low-voltage switchgear and controlgear – Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units
IEC 61230	Live working – Portable equipment for earthing or earthing and short-circuiting
IEC 61233	High-voltage alternating current circuit-breakers - Inductive load switching
IEC 61330	High-voltage/low voltage prefabricated substations
IEC 62271-100	High-voltage switchgear and controlgear – High-voltage alternating current circuit-breakers
IEC 62271-102	High-voltage switchgear and controlgear – High-voltage alternating current disconnectors and earthing switches
IEC 62271-105	High-voltage alternating current switch-fuse combinations
IEC 62271-200	Hochspannungs-Schaltgeräte und Schaltanlagen - Teil 200: Metallgekapselte Wechselstrom-Schaltanlagen für Bemessungsspannungen über 1 kV bis einschließlich 52 kV
IEC 62271-203	Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 203: Gasisolierte metallgekapselte Schaltanlagen für Bemessungsspannungen von 52 kV und darüber
DIN 50017	Klimate und ihre technische Anwendung; Kondenswasser-Prüfklimate
DIN 50018	Prüfung im Kondenswasser-Wechselklima mit schwefeldioxidhaltiger Atmosphäre
DIN 50021	Sprühnebelprüfungen mit verschiedenen Natriumchlorid-Lösungen
DIN VDE 0532	Transformatoren und Drosselspulen
ANSI C37.04	IEEE Standard Rating Structure for AC High-Voltage Circuit Breakers
ANSI C37.06	American National Standard, AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis - Preferred Ratings and Related Required Capabilities
ANSI C37.09	IEEE Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis
ANSI C37.54	American National Standard For Indoor Alternating Current High-Voltage Circuit Breakers Applied as Removable Elements in Metal-Enclosed Switchgear - Conformance Test Procedures
ANSI C37.60	An American National Standard, IEEE Standard Requirements for Overhead, Pad mounted, Dry Vault, and Submersible Automatic Circuit Reclosers and Fault Interrupters for AC Systems

Für die fachliche Richtigkeit der Prüfberichte verantwortlich:

Technical responsibility for the test reports:

Dipl.-Ing. Alexander Steffens, Dr.-Ing. Horst Günther, Dipl.-Ing. Uwe Köster
 Dipl.-Ing. Arno Meier, Dipl.-Ing. Martin Wember

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