

TRAINING COURSES 2026



Drive systems

Electric motors, Geared motors
Variable speed drives

Alternators & Regulators



EDITORIAL

The team of the Nidec Training Center is delighted to present you the 2026 edition of its training catalog.

Customized training to develop your skills

As specialists in rotating machines, motors, alternators, and related electronics, we offer training courses designed to meet today's technological challenges. Our programs include variable speed drives, digital regulators, frequency inverters, and much more.

A personalized offer, tailored to your needs

We offer tailor-made training solutions, designed to meet the specific needs of your organization. Our training can be carried out in our training center, within our factories or directly on your industrial sites, provided in French or English, they guarantee optimal flexibility and a perfect match with your operational challenges.

Training: a lever for sustainable development

We strongly believe that training is an essential driver of personal, professional and societal development. Our center is Qualiopi certified, a guarantee of quality and professionalism.

Accessible financing solutions

In France, our training courses are eligible for funding through mutualized professional training funds, thus facilitating investment in the skills of your teams.

Access our digital catalog

Consult now the digital version of the catalog and the updated calendar of our trainings via the link or the QR code below.

We look forward to welcoming you to one of our training courses soon!

Philippe AUTOMNE & Éric BOULAI

Product Training Managers



Scan the QR code
or go to:

www.lrsm.co/leroysomertraining

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 **RÉPUBLIQUE FRANÇAISE**

The certification has been issued
for the following action category:
Training actions

COMMISSIONING OF AN ELECTRONIC VARIABLE SPEED DRIVE FOR DC OR AC MOTOR

EXP 1 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Understand the basics of the different electronic variable speed drive systems
- Perform a basic start-up with an electronic variable speed drive for DC or AC motor

€ PRICE: €1375 excl. tax/trainee

🕒 DURATION: 3 days

👤 ATTENDANCE*: 3 to 6 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 60% practical
40% theoretical

👤 PREREQUISITES: Knowledge electrical basics and electrical risks habilitation

**The course is confirmed once at least 3 inter and/ or intra company participants have signed up.*

AUDIENCE

- > Maintenance technician
- > Design office technician
- > Service Center technician

CONTENT

- > Operating principle of the different technologies of electric motors
- > Operating principle of an electronic variable speed drive for DC motor
- > Operating principle of an electronic variable speed drive for AC motor
- > Simple start-up from the user menu
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > AC and DC motors
- > Variable speed drives for asynchronous motors: POWERDRIVE F300, UNIDRIVE M400 and COMMANDER ID300
- > Variable speed drives for DC motors: MENTOR MP



Training courses in English on demand: contact us.

Registration by phone: +33 (0)6 75 99 96 77

or by e-mail: valerie.barriteau@mail.nidec.com

VARIABLE SPEED DRIVES FOR AC MOTORS

EXP 3 Level: 2

OBJECTIVES

After the training, the trainees will be able to:

- Install and wire asynchronous and synchronous variable speed drive systems
- Configure the variable speed drives inputs and outputs
- Troubleshoot dysfunctions based on safety messages of the variable speed drive
- Produce the backup or restore the settings of the variable speed drives

€ PRICE: €1375 excl. tax/trainee

🕒 DURATION: 3 days

👤 ATTENDANCE*: 3 to 6 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 60% practical
40% theoretical

👤 PREREQUISITES: EXP 1
+ Knowledge electrical basics
and electrical risks habilitation

**The course is confirmed once at least 3 inter and/
or intra company participants have signed up.*



AUDIENCE

- > Maintenance technician
- > Design office technician
- > User, Manufacturer, Dealer, Service Center

CONTENT

- > Operating principle of flow vector control variable speed drives
- > Installing variable speed drives according to EMC guidelines
- > Starting up variable speed drives according to the application
- > Configuring the internal functions of variable speed drives (PID, E.Pot, VP, ...)
- > Configuring the inputs and outputs of variable speed drives
- > Diagnostic from safety messages
- > Backup of the application settings using media or software tools
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Asynchronous and synchronous motors
- > UNIDRIVE M, COMMANDER C200 & C300 variable speed drives



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VARIABLE SPEED DRIVES FOR DC MOTORS

EXP 4 Level: 2

OBJECTIVES

After the training, the trainees will be able to:

- Install and wire DC variable speed drive systems
- Commission the variable speed drives according to the application driven
- Troubleshoot dysfunctions based on safety messages of the variable speed drive
- Produce the backup or reload the settings of the variable speed drives

€ PRICE: €1375 excl. tax/trainee

🕒 DURATION: 3 days

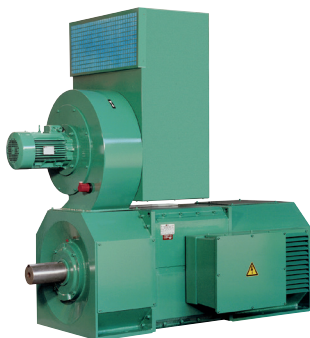
👤 ATTENDANCE*: 3 to 6 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 50% practical
50% theoretical

👤 PREREQUISITES: EXP 1
+ Knowledge electrical basics
and electrical risks habilitation

**The course is confirmed once at least 3 inter and/
or intra company participants have signed up.*



AUDIENCE

- > Maintenance technician
- > Design office technician
- > Service Center technician

CONTENT

- > Operating principles of DC motors and variable speed drives
- > Installation, wiring and start-up
- > Study of internal function blocks
- > Diagnostic from safety messages
- > Using backup media (Smartcard, CTSoft)
- > FXMP25 excitation control option
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > DC motors
- > MENTOR MP variable speed drives
- > Motorization benches



COMMISSIONING OF POWERDRIVE MD SMART VARIABLE SPEED DRIVES WITH ASYNCHRONOUS MOTORS AND DYNEO+

EXP 5 Level: 2

OBJECTIVES

After the training, the trainees will be able to:

- Commission the POWERDRIVE MD SMART variable speed drives (excluding regenerative) MD2R with asynchronous motors and DYNEO+
- Troubleshoot dysfunctions of the variable speed drives
- Replace electronic power elements of the POWERDRIVE MD SMART

€ PRICE: €1375 excl. tax/trainee

🕒 DURATION: 3 days

👤 ATTENDANCE*: 3 to 4 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 60% practical
40% theoretical

👤 PREREQUISITES: EXP 1
+ Knowledge electrical basics
and electrical risks habilitation

**The course is confirmed once at least 3 inter and/or intra company participants have signed up.*



AUDIENCE

- > Maintenance technician
- > Design office technician
- > Service Center technician

CONTENT

- > Understand the principles of speed regulation
- > Install and start up POWERDRIVE MD SMART variable speed drives with asynchronous motors and DYNEO+
- > Save the settings of the different POWERDRIVE variable speed drives
- > Use the SYSTEMIZ interface
- > Use the different variable speed drive menus
- > Save and restore parameters
- > Troubleshoot malfunctions
- > Changing subassemblies of the POWERDRIVE MD SMART
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > POWERDRIVE MD SMART variable speed drives
- > Asynchronous and synchronous magnets motors



COMMISSIONING OF PUMP DRIVE F600 VARIABLE SPEED DRIVES DEDICATED TO PUMPING APPLICATIONS

EXP 12 Level: 2

OBJECTIVES

After the training, the trainees will be able to:

- Install and wire PUMP DRIVE F600 variable speed drives
- Commission the PUMP DRIVE F600 variable speed drives with asynchronous motors and DYNEO+
- Troubleshoot dysfunctions of the variable speed drives

€ PRICE: €1375 excl. tax/trainee

🕒 DURATION: 3 days

👥 ATTENDANCE*: 3 to 6 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 50% practical
50% theoretical

👤 PREREQUISITES: EXP 1
+ Knowledge electrical basics and electrical risks habilitation

**The course is confirmed once at least 3 inter and/ or intra company participants have signed up.*

AUDIENCE

- > Maintenance technician
- > Design office technician
- > Service Center technician

CONTENT

- > Understand the principles of speed regulation
- > Discover the different pumping modes (single-pump, cascade, and multi-leader) and the specific functions (no flow, pump cleaning, timer, etc.)
- > Discover the different available options
- > Install and start up the PUMP DRIVE F600 with asynchronous motors and DYNEO+
- > Use the CONNECT software
- > Save and restore parameters
- > Troubleshoot malfunctions

RELATED PRODUCTS

- > PUMP DRIVE F600 variable speed drives
- > Asynchronous motors



UNIDRIVE M70X RANGE OF VARIABLE SPEED DRIVES

EXP 40 Level: 3

OBJECTIVES

After the training, the trainees will be able to:

- Install and wire the UNIDRIVE M70x
- Commission variable speed drives
- Use variable speed drives advanced features to achieve simple axis synchronization or positioning applications
- Troubleshoot variable speed drive system based on safety messages
- Save and reload settings of an application

€ PRICE: €1375 excl. tax/trainee

🕒 DURATION: 3 days

👥 ATTENDANCE*: 3 to 6 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 50% practical
50% theoretical

👤 PREREQUISITES: EXP 3
+ Knowledge electrical basics
and electrical risks habilitation

**The course is confirmed once at least 3 inter and/or intra company participants have signed up.*



AUDIENCE

- > Maintenance technician
- > Design office technician
- > Service Center technician

CONTENT

- > Operation of the vector control, open loop, closed loop, operation of synchronous motors
- > Performance with standard motors and adapted motors
- > Presentation of UNIDRIVE M70x variable speed drives
- > Principle for starting up UNIDRIVE M70x variable speed drives
- > Using variable speed drive menu diagrams (motor control, variable speed drive configuration, synchronization, Ethernet, Easymode, AMC)
- > Messages: operating status, alarms, securing
- > Backup and restoring settings with backup media and software (Connect)
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > UNIDRIVE M70x universal variable speed drives
- > CT Scope, Connect, Machine Control Studio software tools



SELECTION OF VARIABLE SPEED DRIVE SYSTEMS

FIT 150 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Master the definition supporting tools (catalogs and configurator)
- Define and select a fixed speed drive system using the configurator

€ **PRICE:** €1375 excl. tax/trainee

🕒 **DURATION:** 2 days

👥 **ATTENDANCE*:** 3 to 8 participants

📍 **LOCATION:** Angoulême, France

% **DISTRIBUTION:** 30% exercises
70% theoretical

👤 **PREREQUISITES:** None

**The course is confirmed once at least 3 inter and/ or intra company participants have signed up.*

AUDIENCE

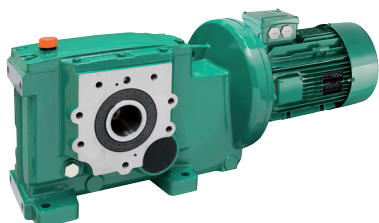
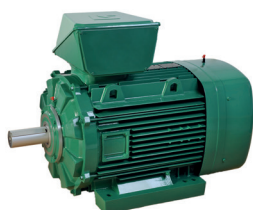
- > Sedentary or itinerant sales engineer representative at a dealer or in a Service Center

CONTENT

- > Presentation of the configurator
- > Electrical and mechanical basics applied to motors and geared motors
- > Selection and configuration of an asynchronous motor or brake motor using the configurator
- > Selection and configuration of a geared motor using the configurator
- > Motor options for a variable speed drive use
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Asynchronous motors
- > Geared motors: Compabloc, Multibloc, Orthobloc and Manubloc



SELECTION OF ELECTRONIC VARIABLE SPEED DRIVES FOR ASYNCHRONOUS OR SYNCHRONOUS MOTORS

FAT 161 Level: 2

OBJECTIVES

After the training, the trainees will be able to:

- Define variable speed drive systems according to the driven application (Motor & Variable speed drive)
- Select an electronic variable speed drive according to the application and customer needs
- Use the determination tools

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 days

👤 ATTENDANCE*: 3 to 6 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 20% exercises
80% theoretical

👤 PREREQUISITES: FIT 150

**The course is confirmed once at least 3 inter and/ or intra company participants have signed up.*

AUDIENCE

- > Design office technician
- > Sedentary or itinerant sales engineer representative

CONTENT

- > The different applications and their needs
- > Presentation of the variable speed drive range
- > Presentation of technical catalogs and configurator
- > Exercises to size the motor dimensioning with its variable speed drive according to the applications
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Asynchronous, synchronous and DC motors
- > Variable speed drive for DC motors
- > Variable speed drives for AC motors: UNIDRIVE M, COMMANDER S100, POWERDRIVE MD2-MD3, PUMP DRIVE F600 and HVAC DRIVE H300



BEARING ASSEMBLY CHANGE, FROM BALL BEARING TO ROLLER BEARING ON STANDARD MOTOR

FAT 162 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Know how to transform the mounting of bearings for standard range motors

€ PRICE: €820 excl. tax/trainee

🕒 DURATION: 1 day

👤 ATTENDANCE*: 3 to 8 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 50% exercises
50% theoretical

👤 PREREQUISITES: None

**The course is confirmed once at least 3 inter and/ or intra company participants have signed up.*

AUDIENCE

- > Technician assembly or service center
- > Technical advisor

CONTENT

- > Analysis of existing bearing assemblies
- > Identification of the modifications kits
- > Disassembly process
- > Analysis of NU assemblies on the different ranges of motors
- > Reassembly process
- > Equipment required for the intervention
- > Assembly precaution
- > End of intervention tests
- > Practical training in the workshop
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > LSES - LSHRM motors



OBJECTIVES

After the training, the trainees will be able to:

- Initiate an energy optimization approach on a motorized application
- Select the type of motorization based on the application and its return on investment
- System analysis

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 days

👤 ATTENDANCE*: 3 to 8 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 20% exercises
80% theoretical

👤 PREREQUISITES: None

**The course is confirmed once at least 3 inter and/or intra company participants have signed up.*



AUDIENCE

- > Energy manager
- > Responsible for improving the energy efficiency of systems and drives

CONTENT

- > Fundamental knowledge and concepts (energy transfer, efficiency, active/reactive power)
- > Different drive system technologies: high efficiency asynchronous motors, synchronous motors, gear motors electronic speed controllers
- > Understanding and analysis of the whole system: diagnosis, prioritize potential systems, choice of technology, return on investment
- > Definition of motors and variable speed drives
- > Work on practical cases
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Synchronous and asynchronous motors



WORKSHOP REPAIR OF EQUIPMENT RUNNING IN AN EXPLOSIVE ATMOSPHERE - Ineris Saqr-Atex initial

FMT 16 Level: Initiation

OBJECTIVES

After the training, the trainees will be able to:

- Recognize the different Atex explosive zones (Gas / Dust)
- Apply the Saqr-Atex baseline
- Master the rules of intervention on Atex products
- Issue a report

€ PRICE: €1375 excl. tax/trainee

🕒 DURATION: 3 days

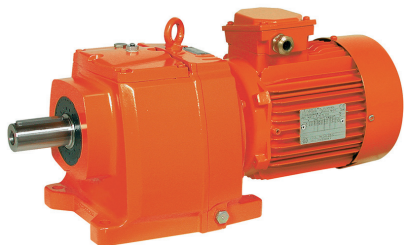
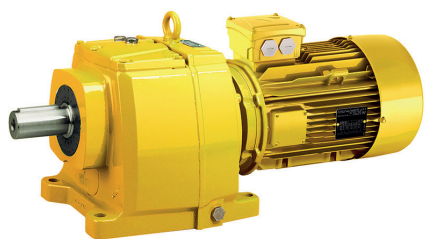
👤 ATTENDANCE*: 4 to 8 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 100%
theoretical

👤 PREREQUISITES: None

**The course is confirmed once at least 4 inter and/ or intra company participants have signed up.*



AUDIENCE

- > Service Center technician

CONTENT

- > Different types of explosive atmosphere:
 - Gas atmosphere
 - Dust atmosphere
- > Currently enforced regulations and standards
- > Protection modes: electrical and non-electrical ; " d, e, p, lpxx, t, nA, h, c, b, k "
- > Saqr-Atex baseline:
 - Organisation diagram
 - Traceability of interventions
 - Marking and certification
- > Rules and limits of intervention
- > Visit to an Atex motors production workshop
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Asynchronous motors and geared motors designed for running in explosive atmospheres



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WORKSHOP REPAIR OF EQUIPMENT RUNNING IN AN EXPLOSIVE ATMOSPHERE - Ineris Saqr-Atex recycling

FMT 19 Level: Recycling

OBJECTIVES

After the training, the trainees will be able to:

- Know the status of the legislation
- Apply the Saqr-Atex baseline
- Master the rules of intervention on Atex products

€ **PRICE:** €788 excl. tax/trainee

🕒 **DURATION:** 1 day

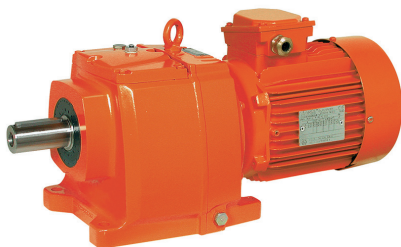
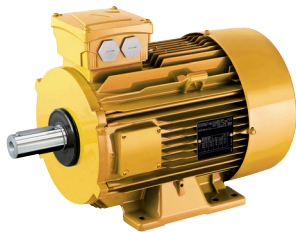
👥 **ATTENDANCE*:** 4 to 8 participants

📍 **LOCATION:** Angoulême, France

% **DISTRIBUTION:** 100% theoretical

👤 **PREREQUISITES:** Electrical authorization Saqr-Atex

**The course is confirmed once at least 4 inter and/ or intra company participants have signed up.*



AUDIENCE

- > Service Center people "authorized" or "responsible" with Atex training of less than 3 years

CONTENT

- > Know the status of the enforced regulations and standards
- > Different types of explosive atmosphere
- > Protection modes: electrical and non-electrical ; " d, e, p, lpxx, t, nA, h, c, b, k "
- > Saqr-Atex baseline
- > Adaptation to participants' needs
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Asynchronous motors and geared motors designed for running in explosive atmospheres



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WINDING OF DC AND AC MACHINES

FMT 20 Level: Advanced

OBJECTIVES

After the training, the trainees will be able to:

- Recognize a winding, plot its diagram according to the technical data
- Master the motor dismantling and refitting process
- Master the intervention process to avoid damaging the technical characteristics

€ PRICE: €2468 excl. tax/trainee

🕒 DURATION: 2 x 4 days

👤 ATTENDANCE*: 5 to 8 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 20% practical
80% theoretical

👤 PREREQUISITES: Practice of motor winding

**The course is confirmed once at least 5 inter and/ or intra company participants have signed up.*



AUDIENCE

- > Winder in a Service Center

CONTENT

Direct current:

- > Calculating the coordinates of an embedded, rippled armature
- > Representation and plotting of diagrams
- > Representation of partial diagrams

Alternating current:

- > Calculating the coordinates of diagrams according to polarities
- > Plotting diagrams 2, 4, 6, 8 and 12 poles, with hoist, embedded, with concentric or equal windings
- > Internal winding connections
- > Marking and connecting to the plate and coupling according to voltages
- > Single phase winding
- > 2-speed winding (DAHLANDER)
- > Winding with 2 bundles per notch in polar or offset pitch
- > Construction of irregular windings

Technology:

- > Calculating notch filling
- > Changing winding wires
- > Changing winding, changing voltage
- > Insulation class, thermal protection
- > Components
- > Impact of the different operations on the technical characteristics of the motor

Practical improvement:

- > Motor dismantling/refitting
- > Winding tips



OBJECTIVES

After the training, the trainees will be able to:

- Recognize a winding, plot its diagram according to the technical data
- Master the motor dismantling and refitting process
- Master the intervention process to avoid damaging the technical characteristics

€ **PRICE:** €1850 excl. tax/trainee

🕒 **DURATION:** 2 x 3 days

👤 **ATTENDANCE*:** 5 to 8 participants

📍 **LOCATION:** Angoulême, France

% **DISTRIBUTION:** 20% practical
80% theoretical

👤 **PREREQUISITES:** Practice of motor winding

**The course is confirmed once at least 5 inter and/or intra company participants have signed up.*



AUDIENCE

- > Winder in a Service Center

CONTENT

Alternating current:

- > Calculating the coordinates of diagrams according to polarities
- > Plotting diagrams 2, 4, 6, 8 and 12 poles, with hoist, embedded, with concentric or equal windings
- > Internal winding connections
- > Marking and connecting to the plate and coupling according to voltages
- > Single phase winding
- > 2-speed winding (DAHLANDER)
- > Winding with 2 bundles per notch in polar or offset pitch
- > Construction of irregular windings

Technology:

- > Calculating notch filling
- > Changing winding wires
- > Changing winding, changing voltage
- > Insulation class, thermal protection
- > Components
- > Impact of the different operations on the technical characteristics of the motor

Practical improvement:

- > Motor dismantling/refitting
- > Winding tips



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EXPERTISE OF ASYNCHRONOUS MOTOR AND A GEARED MOTOR OUT OF SERVICE ON CUSTOMER SITE OR IN WORKSHOP

FMT 170 | Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Identify the root causes of motor and geared motor failure

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 days

👤 ATTENDANCE*: 3 to 6 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 20% exercises
80% theoretical

🎓 PREREQUISITES: None

**The course is confirmed once at least 3 inter and/ or intra company participants have signed up.*

AUDIENCE

- > Sedentary or itinerant sales engineer representative
- > Maintenance technician
- > Service Center technician

CONTENT

- > Phenomena leading to failure of motors and geared motors
- > Be able, after observation, to trace back to the root cause
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Asynchronous motors
- > Geared motors: Compabloc, Multibloc, Orthobloc and Manubloc



VIBRATION AND NOISE ANALYSIS ON A ROTATING MACHINE

FMT 300 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Identify the terms of the vibration analysis and their applications
- Analyze a specification sheet relating to noise and vibrations
- Perform a pre-analysis based on a vibration measurement report

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 days

👤 ATTENDANCE*: 3 to 4 participants

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 30% practical
70% theoretical

🎓 PREREQUISITES: None

**The course is confirmed once at least 3 inter and/or intra company participants have signed up.*



AUDIENCE

- > Maintenance technician
- > Service provider
- > Electromechanical technician
- > Workshop supervisor

CONTENT

- > Definitions, measurement units, measurement points and associated standards in vibration
- > Spectral analysis, definitions, examples and settings
- > Diagnostic process from spectrums in vibration and noise
- > Resonance: definition, measurement and calculation
- > Definitions, measurement units, measurement points and associated standards in acoustics
- > Measuring methodology
- > Case studies on application with motor/alternator
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Asynchronous and synchronous motors
- > Alternators



DEFINITION AND SELECTION OF ALTERNATORS

ALT 1 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Understand the operation of an alternator (mechanical constructions and configurations)
- Identify the excitation and regulation principles of the alternators
- Select an alternator

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 days

👤 ATTENDANCE*: 4 participants minimum

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 100% theoretical

👤 PREREQUISITES: None

**The course is confirmed once at least 4 inter and/or intra company participants have signed up.*



AUDIENCE

- > Design office technician
- > Sales engineer
- > Genset manufacturer, Installer, Maintenance technician, Business manager

CONTENT

- > Reminder of the electricity basics of alternators
- > Excitation systems
- > Regulation modes and parallel running
- > Basics of electrical engineering applied to alternators
- > Main mechanical aspects: construction (IM), protection (IP), cooling (IC)
- > Presentation of the Leroy-Somer™ range: design and manufacturing
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Synchronous alternators of the Leroy-Somer™ range



DEFINITION AND SELECTION OF ALTERNATORS

ALT 2 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Understand the excitation and regulation principles of the alternators
- Identify the details of the electrical parameters and mechanical configurations
- Select an alternator according to a specification sheet

€ PRICE: €1375 excl. tax/trainee

🕒 DURATION: 3 days

👤 ATTENDANCE*: 4 participants minimum

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 30% practical
70% theoretical

📖 PREREQUISITES: Knowledge electrical engineering (basics)

**The course is confirmed once at least 4 inter and/or intra company participants have signed up.*



AUDIENCE

- Design office technician
- Sales engineer
- Genset manufacturer, Installer, Maintenance technician, Business manager

CONTENT

- Reminder of the basics of the different excitation systems
- Presentation of the operating modes and parallel running
- Presentation of help options: LAM, U/F, equalisation, AREP, ...
- Presentation of the basics of electrical engineering on alternators (insulation, temperature rises, harmonics, neutral point, reactance, PQ diagram, IEEE diagram, curves, ...)
- Presentation of mechanical aspects: construction (IM), protection (IP), cooling (IC), main bearings and terminal box
- Study of real cases based on trainee experiences
- Formative evaluation by Quiz

RELATED PRODUCTS

- Synchronous alternators of the Leroy-Somer™ range



Training courses in English on demand: contact us.

Registration by phone: +33 (0)6 75 99 96 77

or by e-mail: valerie.barriteau@mail.nidec.com

MAINTENANCE OF ALTERNATORS AND REGULATORS

ALT 3 Level: 2

OBJECTIVES

After the training, the trainees will be able to:

- Understand the excitation and regulation principles of the alternators
- Identify the details of the electrical parameters and mechanical configurations: nameplate reading
- Identify the parameters required for the analog and digital regulators in the Leroy-Somer™ range
- Carry out commissioning and maintenance of the alternator

€ PRICE: €1375 excl. tax/trainee

🕒 DURATION: 3 days

👥 ATTENDANCE*: 4 participants minimum

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 30% practical
70% theoretical

🎓 PREREQUISITES: Knowledge electrical engineering (basics)

**The course is confirmed once at least 4 inter and/ or intra company participants have signed up.*

AUDIENCE

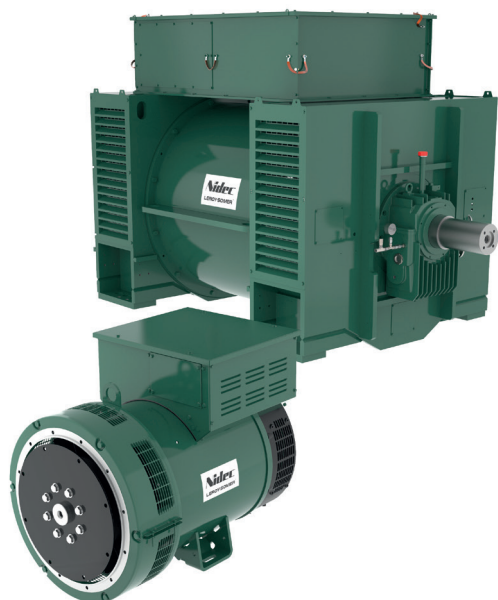
- > Design office technician
- > Sales engineer
- > Genset manufacturer, Installer, Maintenance technician, Business manager

CONTENT

- > Presentation of the operation of alternators in the LSA low voltage range
- > Reminder of the basics and presentation of the excitation systems, PMG, AREP, AREP+ and SHUNT
- > Islanded and network parallel operation
- > Presentation of mechanical aspects: construction (IM), protection (IP), cooling (IC), main bearings and terminal box
- > Range of Leroy-Somer™ regulators, analog and digital, exercises on software for digital resistor regulators D350 and D550
- > Alternator maintenance actions: insulation check, resistance measurement, diode check, visual inspection, first level regulator diagnosis
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Alternator available in our workshop



CONNECTED SOLUTION FOR PREDICTIVE MAINTENANCE GENOSYS™ FOR ALTERNATORS

ALT 4 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Understand GenOSys™ architectures and operations
- Configure alerts on the web portal GenOSys during commissioning and according to the applications specificities
- Understand alternator diagnostic algorithms, and know how to analyze and respond to alerts during day-to-day system operation

€ PRICE: €788 excl. tax/trainee

🕒 DURATION: 1 day

👤 ATTENDANCE*: 4 participants minimum

📍 LOCATION: Angoulême or Orléans, France

% DISTRIBUTION: 20% practical
80% theoretical

👤 PREREQUISITES: ALT 1 and/or AVR 1 recommended

**The course is confirmed once at least 4 inter and/or intra company participants have signed up.*

AUDIENCE

Trainees profile :

- > Technician/Engineer
- > Sales engineer
- > Technical manager

Entities:

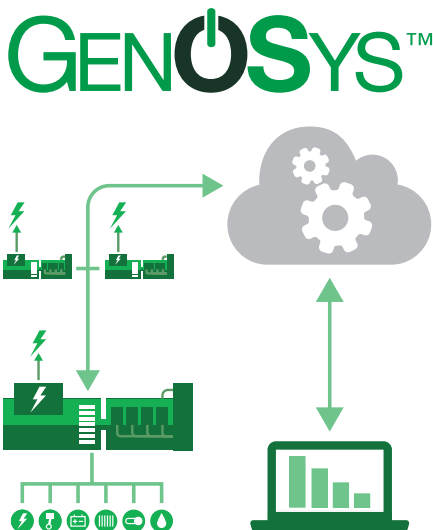
- > User/Operator
- > Genset manufacturer
- > Service Center
- > After-sales or maintenance department

CONTENT

- > Generator electrical parameters (I, U, I_{ex}, power factor, ...)
- > Basics on mechanics (vibrations, orbital, ...)
- > Basics on partial discharges
- > Predictive maintenance and alerts thresholds
- > Use and configuration of the GenOSys™ web portal
- > Case study based on already deployed solutions
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Online connected solution for electric power generation systems equipped with one or several generators. This is applicable for low, medium and high voltage.



IMPLEMENTATION OF ANALOG REGULATORS FOR LOW VOLTAGE ALTERNATORS

AVR 1 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Connect regulators (regulators range for low voltage alternators)
- Adjust analog regulators
- Diagnose incorrect regulator operation

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 days

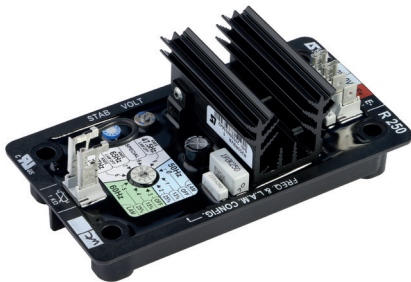
👤 ATTENDANCE*: 4 participants minimum

📍 LOCATION: Angoulême, France

% DISTRIBUTION: 50% practical
50% theoretical

👤 PREREQUISITES: ALT1 recommended + Knowledge electrical basics and electrical risks habilitation

**The course is confirmed once at least 4 inter and/ or intra company participants have signed up.*



AUDIENCE

- > Maintenance technician
- > Design office technician
- > After-sales department technician
- > Service Center technician
- > User/Operator
- > Genset manufacturer

CONTENT

- > Details of the excitation systems
- > Presentation, parameter details, connections of the regulators
- > Presentation of regulators and additional modules
- > Practical cases of use: voltage regulation, power factor, KVAR and stability parameters
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > Regulators: R220, R250, R438, R449, R450, R120, R150, R180
- > Additional modules: R726, R731



IMPLEMENTATION OF THE D700 DIGITAL REGULATOR FOR LOW, MEDIUM AND HIGH VOLTAGE ALTERNATORS

AVR 6 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Connect and adjust D700 digital regulator for low, medium and high voltage
- Configure the digital regulator using its EasyReg® Advanced software
- Diagnose incorrect regulator operation

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 days

👤 ATTENDANCE*: 4 participants minimum

📍 LOCATION: Angoulême or Orléans, France

% DISTRIBUTION: 50% practical
50% theoretical

👤 PREREQUISITES: ALT1 recommended + Knowledge electrical basics and electrical risks habilitation

**The course is confirmed once at least 4 inter and/ or intra company participants have signed up.*



AUDIENCE

- > Maintenance technician
- > Design office technician
- > After-sales department technician
- > Service Center technician
- > User/Operator
- > Genset manufacturer

CONTENT

- > Details of the excitation systems
- > Presentation of the digital regulators range
- > Parameters and connections of the regulators
- > Operation of the software
- > Practical cases of use: voltage regulation, power factor, KVAR and stability parameters
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > D700 digital regulator for low, medium and high voltage alternators

IMPLEMENTATION OF THE D350 AND D550 DIGITAL REGULATORS FOR LOW VOLTAGE ALTERNATORS

AVR 7 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Connect D350 and D550 digital regulators
- Adjust digital regulators
- Diagnose incorrect regulators operation
- Use the Easyreg[®] Advanced software

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 days

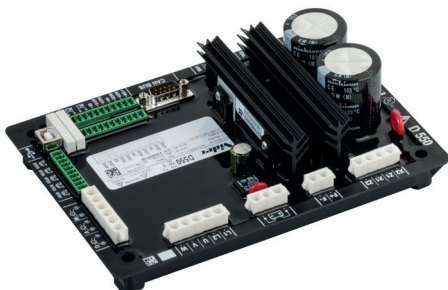
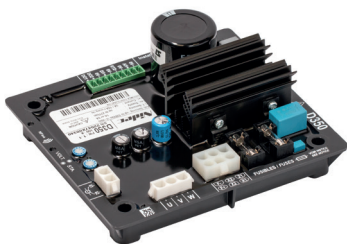
👤 ATTENDANCE*: 4 participants minimum

📍 LOCATION: Angoulême or Orléans, France

% DISTRIBUTION: 50% practical 50% theoretical

👤 PREREQUISITES: ALT1 recommended + Knowledge electrical basics and electrical risks habilitation

**The course is confirmed once at least 4 inter and/ or intra company participants have signed up.*



AUDIENCE

- > Maintenance technician
- > Design office technician
- > After-sales department technician
- > Service Center technician
- > User/Operator
- > Genset manufacturer

CONTENT

- > Details of the excitation systems
- > Presentation, parameter details, connections of D350 and D550
- > Practical cases of use: voltage regulation, power factor, KVAR, stability parameters and manual mode
- > Formative evaluation by Quiz

RELATED PRODUCTS

- > D350 and D550 digital regulators



IMPLEMENTATION OF THE R700 ANALOG REGULATOR FOR LOW, MEDIUM AND HIGH VOLTAGE ALTERNATORS

AVR 8 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Understand the excitation and regulation principles of the alternators
- Identify in detail the electrical parameters of an alternator's operation
- Carry out commissioning of an alternator equipped with an R700
- Use the R700 regulator

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 days

👤 ATTENDANCE*: 4 participants minimum

📍 LOCATION: Orléans, France

% DISTRIBUTION: 50% practical
50% theoretical

👤 PREREQUISITES: Knowledge electrical engineering (basics)

**The course is confirmed once at least 4 inter and/or intra company participants have signed up.*



AUDIENCE

- > Design office technician
- > Sales engineer
- > Genset manufacturer

CONTENT

- > Reminder of the basics of the excitation systems
- > Presentation of the operating modes and parallel running
- > Details on the use of the R700 regulator
- > First level regulator diagnosis
- > PowerPoint presentations
- > Laboratory test bench manipulation

RELATED PRODUCTS

- > R700 analog regulator for low, medium and high voltage alternators



CUSTOMIZED TRAININGS

.....

To meet your specific needs, we organize personalized face-to-face training for the following Leroy-Somer™ product ranges:

- Alternators and regulators
- AC motors
- DC motors
- Brake motors
- Geared motors
- Electronic soft-starters
- AC variable speed drives
- DC variable speed drives
- Applications: positioning, winding-unwinding, lifting and synchronization

These trainings are tailor-made for groups of 8 people maximum, at the Nidec Training Center or in your premises.

STANDARD CATALOG TRAINING COURSES IN ENGLISH ARE PLANNED ACCORDING TO DEMAND



To contact us, see the registration details on page 31.

PRACTICAL INFORMATION AND REGISTRATION

.....



ACCESS & SERVICES NIDEC TRAINING CENTER



Boulevard Marcellin Leroy - CS 10015 - 16915 Angoulême Cédex 9 - France

GPS coordinates: 45.644966, 0.140397



Our training courses are accessible to hearing impaired or physically disabled people. For any other type of disability, please contact us.



Our training center has its own restaurant. Please book and inform us in advance if you have any special requirements (allergies, diet, accessibility, etc.).

ACCOMMODATION



Around Angoulême

Hôtel Ibis Rouge* - Angoulême Nord
46 rue des Meneaux - 16430 Champniers
Tel.: +33 (0)5 45 69 16 16

Hôtel Ibis Styles* - Angoulême Nord
122 rue des Meneaux - 16430 Champniers
Tel.: +33 (0)5 45 68 53 22

Hôtel Ibis Budget* - Angoulême Nord
172 rue des Meneaux - 16430 Champniers
Tel.: +33 (0)8 92 70 09 41

Hôtel Kyriad* - Angoulême Nord
184 rue des Platanes - 16430 Champniers
Tel.: +33 (0)5 45 68 03 22

B&B Hotel
4 rue de la Croix Blanche - 16160 Gond-Pontouvre
Tel.: +33 (0)8 90 10 67 04



Downtown

Hôtel Mercure*
1 place des Halles - 16000 Angoulême
Tel.: +33 (0)5 45 95 47 95

Hôtel du Palais*
4 place Francis Louvel - 16000 Angoulême
Tel.: +33 (0)5 45 92 54 11

Citotel Europeen*
1 place Gérard Pérot - 16000 Angoulême
Tel.: +33 (0)5 45 92 06 42

Hôtel Ibis Budget* - Angoulême Centre
179 avenue Gambetta - 16000 Angoulême
Tel.: +33 (0)8 92 68 31 78

Hôtel Saint Antoine*
2 rue du Gond - 16000 Angoulême
Tel.: +33 (0)5 45 68 38 21

* Special rates have been agreed for anyone attending Nidec training courses.



HOW TO BOOK A TRAINING SESSION?

- **Phone:** +33 (0)6 75 99 96 77
- **Email:** valerie.barriteau@mail.nidec.com / trainingcenter.ials@mail.nidec.com
- **Website:** www.leroy-somer.com

GENERAL CONDITIONS OF TRAINING

I- SCOPE OF APPLICATION

The Moteurs Leroy-Somer training centre (referred to hereinafter as the "Centre") designs, offers and conducts intercompany and intracompany training courses with a classroom-based learning or E-Learning format.

The Centre also offers companies audit and operational advisory services. These services are collectively referred to as the "Centre's Service Offer".

II- PURPOSE

These General Terms of Sale of Training Services (referred to hereinafter as the "Terms of Sale") apply to all the Centre's Service Offers pertaining to orders placed with the Centre by any professional customer (referred to hereinafter as the "Customer").

By placing an order, the Customer fully and unreservedly accepts these Terms of Sale.

The Customer acknowledges that he has received sufficient information and advice from the Centre to be able to form a decision as to whether the Service Offer meets his needs.

III- TRAINING SERVICES

1- Enrolment on any training course will only be recorded after the Centre has received a signed training agreement. The Centre will process enrolment applications in their order of receipt until the course is full. When a training course is intended for accredited electricians, the trainees must provide proof of accreditation before the start of the course in order to be able to work on live electrical equipment. The Centre reserves the right to prohibit any trainee who has failed to prove accreditation from working on live electrical equipment; the Centre will not accept liability under any circumstances, in particular for any physical accident.

2- For each training course a training agreement will be sent in duplicate, which must be signed and returned to the Centre. The Customer will receive an attendance certificate on completion of the training course. The Centre reserves the right to modify the content of a training course at any time without advance notice, in which case no compensation will be payable.

3- When a training course is to be covered by a professional training funding body (*organisme paritaire collecteur agréé*), the Customer must apply for funding before the start of the course and confirmation of funding must be enclosed with the training agreement. If a course is partially funded, the Customer will be responsible for paying the balance. If confirmation of funding is not received by the training course start date, the Centre will charge the Customer the full amount.

4- Postponement by the Centre. If an insufficient number of trainees sign up for a course, the Centre reserves the right to postpone the course before the start date, in which case no compensation will be payable.

Cancellation or postponement of training by the Customer: If the Customer cancels or postpones a scheduled training course he must compensate the Centre on the following basis: i) postponement or cancellation more than 30 days before the start date: no compensation; ii) postponement or cancellation within 30 days and more than 15 days before the start date: 30% of the cost of the training will be charged; iii) postponement or cancellation within 15 days of the start date: the Customer will be charged 70% of the cost of the training.

IV- ORDERS

The Centre will detail its training offer and prices in a Service Offer, which will remain valid for one month after receipt of the Offer. On receipt of the order or signature of the order form included in the Offer, the Centre will draw up a training agreement.

V- PRICE-PAYMENT

Prices are stated exclusive of VAT and are valid for the term of the Offer or until a new catalogue is issued.

If training takes place outside the Centre, all associated costs such as travel expenses incurred by consultants and trainers, room rental costs, the cost of documentation and of and the rental of training equipment (such as video recorders), etc. will be charged in addition.

Invoices are payable cash by bank draft or truncated bill of exchange, on receipt and within 30 (thirty) days of the end of the month in which the invoice was issued.

A formal demand for payment will be sent in the event of non-payment of any invoice on its due date; if payment is still not forthcoming the Centre will charge:

- a late-payment penalty calculated from the due date on the basis of the total amount owed including VAT (if VAT is payable),
- compensation for collection costs of at least €40, and all current services will be suspended.

The late-payment penalty will correspond to the most recent European Central Bank refinancing rate plus 10 points.

If legal proceedings are necessary to collect payment, the outstanding amount will be increased by 15% (fifteen percent) or by at least €500 (five hundred euros) excluding VAT, plus any applicable taxes.

VI- CONFIDENTIALITY

Both parties undertake to treat as confidential all technical, commercial, financial and other information received from the other party by word-of-mouth, in writing or by any other means of communication during the negotiation and/or fulfillment of any order.

This confidentiality obligation will apply throughout the fulfilment of the order and for a further 5 (five) years after its expiry or termination, irrespective of the reason.

VII- INTELLECTUAL PROPERTY

The Centre is the owner of the intellectual property rights to the training courses it offers. All the materials and content used by the Centre, irrespective of their form, shall remain the sole property of the Centre. The Customer is not entitled to use, reproduce, transform, or exploit the training materials within or outside of its company without the Centre's prior written agreement. The Customer also undertakes not to duplicate the training by dispensing it to another person, unless expressly authorized to do so.

VIII- DATA PROCESSING


Moteurs Leroy-Somer may process your personal data for the purposes of training.

The data collected is necessary for this processing and will be used by Moteurs Leroy-Somer, its service providers and its subcontractors. The data will be retained for 6 years from the date on which it is collected. This processing is based on a legitimate interest of Moteurs Leroy-Somer to conduct training. In accordance with applicable law, you have the right to examine, to access, to have corrected, to have erased, to restrict and/or to object to the processing of your personal data; as well as the right to the portability of your personal data and the right to give instructions on what happens to your personal data after your death by sending an email to InformatiqueetLibertes.IALS@mail.nidec.com accompanied by a document verifying your identity.

IX- DISPUTES

THIS CONTRACT IS GOVERNED BY FRENCH LAW.

IF THE PARTIES FAIL TO REACH AN AMICABLE AGREEMENT, AND NOTWITHSTANDING ANY CLAUSE TO THE CONTRARY, ANY DISPUTE RELATING TO THE INTERPRETATION AND/OR FULFILMENT OF AN ORDER SHALL BE REFERRED TO THE COURTS WITH JURISDICTION IN ANGOULEME (FRANCE), NOTWITHSTANDING THE INTRODUCTION OF THIRD PARTIES OR THE EXISTENCE OF MULTIPLE DEFENDANTS.



processus certifié
RÉPUBLIQUE FRANÇAISE

Certificat

Certificate

N° 2020/89194.3

AFNOR Certification certifie que l'organisme :
AFNOR Certification certifies that the company:

MOTEURS LEROY SOMER

N° de déclaration d'activité : 54160003516
N° SIREN : 338567258

pour les activités suivantes :
for the following activities:

**REALISATION DE PRESTATIONS DE :
- ACTIONS DE FORMATION**

sur le(s) site(s) suivant(s) :
on the following location(s):

BOULEVARD MARCELLIN LEROY FR - 16915 ANGOULEME CEDEX 9

a été évalué et jugé conforme aux exigences requises par :
has been assessed and found to meet the requirements of:



- le décret n°2019-564 du 6 juin 2019 relatif à la qualité des actions de la formation professionnelle
- le décret n° 2019-565 du 6 juin 2019 relatif au référentiel national sur la qualité des actions concourant au développement des compétences, mentionné à l'article L.6316-3 du code du travail
- l'arrêté du 6 juin 2019 relatif aux modalités d'audit associées au référentiel national mentionné à l'article D. 6316-1-1 du code du travail
- l'arrêté du 24 juillet 2020 portant modification des arrêtés du 6 juin 2019 relatifs aux modalités d'audit associées au référentiel national qualité et aux exigences pour l'accréditation des organismes certificateurs
- le décret n°2020-984 du 22 juillet 2020 portant diverses mesures en matière de formation professionnelle
- l'arrêté du 31 mai 2023 portant diverses mesures en matière de certification qualité des organismes de formation
- le programme de certification AFNOR Certification - CERTI A 1814

Ce certificat est valable à compter de (année/mois/jour)
This certificate is valid from (year/month/day)

2024-12-09

Jusqu'à
Until

2027-11-25


Ce document est signé électroniquement et constitue un original électronique à valeur probante.
This document is electronically signed and constitutes an original electronic with probative value.

Julien NIZRI
Directeur Général d'AFNOR Certification
Managing Director of AFNOR Certification

Seul le certificat électronique, consultable sur www.afnor.org, fait foi en matière de la certification de l'organisme.
The only certificate with probative value is the electronic certificate, accessible on the website of the certifier.
Auteur du certificat: D. S. 02020, Certification de Qualité et de Sécurité, France République, est un organisme
Certifié par l'Association Française de Normalisation (AFNOR) - Comité de Certification, France République, est un organisme
AFNOR Certification est une marque déposée. AFNOR Certification is a registered trademark. CERTI A 1814 - 06/2020

Flasher ce QR
Code pour vérifier la
validité du certificat

11 rue Francis de Pressensé - 93271 La Plaine Saint-Denis Cedex - France - T: +33 (0)1 41 63 80 00 - F: +33 (0)1 48 17 90 00
SAS au capital de: 16 187 000 € - 479 076 002 RCS Bobigny - www.afnor.org





MANAGEMENT SYSTEM CERTIFICATE

Certificate no.:
C852806

Initial certification date:
07 June 2012

Valid:
08 June 2024 - 05 June 2027


This is to certify that the management system of
NIDEC LEROY-SOMER HOLDING
Boulevard Marcellin Leroy, 16015, ANGOULEME, France
and the sites as mentioned in the appendix accompanying this certificate


has been found to conform to the Environmental Management System standard:
ISO 14001:2015

This certificate is valid for the following scope:
Design, manufacturing, sales and after sales services of : electric motors, brake motors, gear motors, safety brake elevators motors, variable speed drives, electrical cabinets, voltage regulators, cast iron parts and aluminium parts, servo motors, alternators.

Place and date:
Barendrecht, 31 May 2024

For the issuing office:
DNV - Business Assurance
Zwolsweg 1, 2994 LB Barendrecht,
Netherlands





Erie Koek
Management Representative



Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV Business Assurance B.V., Zwolsweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102922689 - www.dnv.com/assurance



www.leroy-somer.com

Connect with us at:



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Moteurs Leroy-Somer SAS. Headquarters: Bd Marcellin Leroy, CS 10015, 16915 Angoulême Cedex 9, France. Share Capital: 32,239,235 €, RCS Angoulême 338 567 258.