

TRAINING COURSES 2024

Drive systems

Electric motors

Geared motors

Variable speed drives

Alternators & Regulators



EDITORIAL

The entire team at the Nidec Leroy-Somer Training Center is pleased to present the 2024 edition of its training catalogue.

In a constantly changing environment, professional training is a major challenge for companies, managers and employees.

Long regarded as a cost whose impact is difficult to quantify, training is now widely recognised as a value-creating investment, essential to the development of companies and their employees.

In addition, technologies are becoming increasingly advanced, particularly in terms of electronic products, which are incorporating more and more functions that require training to ensure they are used in the optimal way.

To offer you maximum flexibility, we propose you virtual classroom training as well as face-to-face courses, because face-to-face contact with the trainer is, and will remain, essential.

Training courses can be run in our training center, in our factories or on your industrial sites, in French or English.

You can access the digital version of this catalog and the most up-to-date training calendar via the link/QR code below.

See you soon at a training course!

Miguel BUERGO
Motors and Drives
Training Manager

Éric BOULAI
Alternators
Training Manager

Scan the QR code
or go to:

www.lrsm.co/leroysomertraining



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VIRTUAL CLASSROOM

Variable speed drives

CV M40031

Commissioning of the UNIDRIVE M400 range
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CV C30032

Commissioning of the COMMANDER C200/C300
range of variable speed drives

CV M70033

Commissioning of the UNIDRIVE M70x range
of variable speed drives

CV F30034

Commissioning of the POWERDRIVE F300 range
of variable speed drives

CV MD SMART35

Commissioning of the POWERDRIVE MD SMART
range of variable speed drives

CVD4&D536

Commissioning of the DIGISTART D4 & D5 range
of starters

The Nidec Leroy-Somer virtual classroom replicates the conditions of traditional classroom training.

Learners can interact, watch presentations and communicate with the presenter.

Under the supervision of the trainer, the learner takes remote control of the equipment to perform assigned tasks (programming of variable speed drives, commissioning, maintenance).

Important: for "Virtual classroom" training courses, the learner must have a computer, an internet connection, a webcam and must be in a quiet place.

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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

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



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

RELATED PRODUCTS

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



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

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:

- Use POWERDRIVE MD SMART variable speed drives (excluding regenerative) MD2R with asynchronous motors and DYNEO+
- Troubleshoot malfunctions 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

- > Understanding the principles of speed regulation
- > Installing and starting up POWERDRIVE MD SMART variable speed drives with asynchronous motors and DYNEO+
- > Saving the settings of the different POWERDRIVE variable speed drives
- > Use the SYSTEMIZ interface
- > Use the different variable speed drive menus
- > Saving and restoring parameters
- > Troubleshoot malfunctions
- > Changing subassemblies of the POWERDRIVE MD SMART

RELATED PRODUCTS

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



OBJECTIVES

After the training, the trainees will be able to:

- Carry out standard simplified commissioning with or without predefined configurations
- Use advanced menus
- Understand how to use the Connect and Machine Control Studio softwares
- Perform accurate diagnostics and replace the electronic control unit

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 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

- > Presentation of the COMMANDER ID300/302 range and options
- > Using documentation: technical catalog, commissioning manual, options manual
- > Reminder of EMC in different environments
- > Standard simplified commissioning, predefined configurations: wiring rules, parameter setting
- > Installing and commissioning options
- > Review of advanced menus and their use
- > Using Connect software: backup, parameter setting
- > Using CT Scope and Machine Control Studio software
- > Diagnostics: identifying safety messages, understanding the problem and resolution
- > Replacing a unit and recommissioning the assembly

RELATED PRODUCTS

- > COMMANDER ID300/302 motor variable speed drive systems



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

CONTROLLING A VARIABLE SPEED DRIVE INSTALLATION

EXP 17 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Understand the environment of an installation when commissioning a variable speed drive system
- Make the necessary checks before commissioning an electronic variable speed drive system
- Apply good practice when installing and wiring an electronic variable speed drive system
- Interpret phenomena involving Electromagnetic Compatibility (EMC)
- Understand the most commonly used fieldbuses
- Locate vibration problems on the machine
- Write a service report

€ **PRICE:** €1090 excl. tax/trainee

🕒 **DURATION:** 2 days

👤 **ATTENDANCE*:** 4 to 6 participants

📍 **LOCATION:** Angoulême, France

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

👤 **PREREQUISITES:** Knowledge of programming variable speed drives

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



AUDIENCE

- > Maintenance technician
- > Service Center technician

CONTENT

- > Variable speed drive system as a whole
- > Appropriate electrical protection
- > Installation and wiring best practices
- > Electromagnetic disturbance and solutions to deal with it
- > Fieldbuses (Ethernet I/P, Profinet & Modbus RTU)
- > Mechanical checks required before commissioning (measure natural frequencies)
- > Service report
- > Technical support available

RELATED PRODUCTS

- > Laptop computers
- > FFT analyser
- > Variable speed drives training benches



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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)

RELATED PRODUCTS

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



SELECTION OF VARIABLE SPEED DRIVE SYSTEMS

FIT 150 PARTNERS Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Master the definition supporting tools (catalogs and configurator)
- Use the partner web portal
- 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

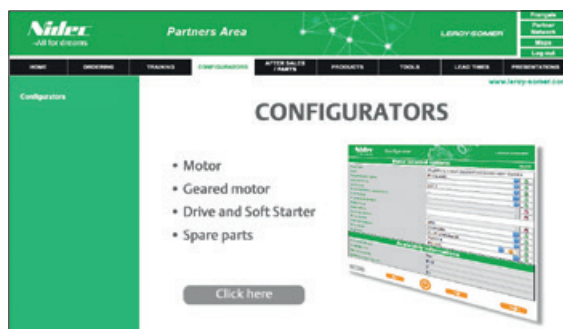
- Sedentary or itinerant sales engineer representative at a dealer or in a Service Center

CONTENT

- Access to the partner web portal
- 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

RELATED PRODUCTS

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



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SELECTION OF VARIABLE SPEED DRIVE SYSTEMS

FIT 150 CUSTOMERS 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 Nidec Leroy-Somer documentation

€ **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

CONTENT

- > Electrical and mechanical basics applied to motors and geared motors
- > Definition of motor and gearbox according to the application
- > Brake motor definition
- > Motor options for a variable speed drive use

RELATED PRODUCTS

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



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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

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, POWERDRIVE F600-H300



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

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

RELATED PRODUCTS

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



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



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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

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

RELATED PRODUCTS

- > Asynchronous and synchronous motors
- > Alternators



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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

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

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

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

RELATED PRODUCTS

- > Synchronous alternators of the Leroy-Somer range



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

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

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

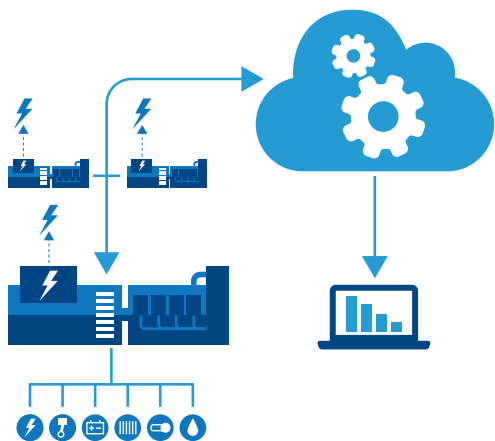
CONTENT

- > Generator electrical parameters (I, U, lex, 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

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.

GENOSYS™



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

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

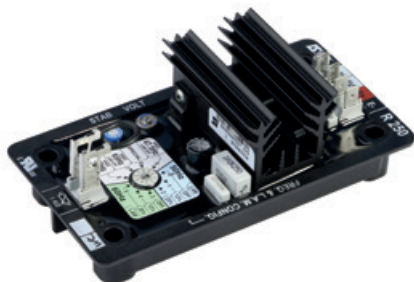
👤 **ATTENDANCE*:** 4 participants minimum

📍 **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

RELATED PRODUCTS

- > Regulators: R220, R250, R438, R450, R449, ...
- > Additional modules: R726, R731

IMPLEMENTATION OF THE D510C DIGITAL REGULATOR FOR LOW VOLTAGE ALTERNATORS

AVR 2 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Connect D510C digital regulator for low voltage range
- Adjust digital regulator
- Diagnose incorrect regulator operation
- Use the Easyreg® 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 the D510C
- > Practical cases of use: voltage regulation, power factor, KVAR, stability parameters and manual mode

RELATED PRODUCTS

- > D510C digital regulator



Training courses in English on demand: contact us.

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

IMPLEMENTATION OF THE R600 ANALOG REGULATOR FOR MEDIUM AND HIGH VOLTAGE ALTERNATORS

AVR 3 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Connect R610 & R630 analog regulators for medium and high voltage
- Adjust analog regulators
- Diagnose incorrect regulator operation

€ **PRICE:** €1145 excl. tax/trainee

🕒 **DURATION:** 2 days

👤 **ATTENDANCE*:** 4 participants minimum

📍 **LOCATION:** 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 analog regulators range
- > 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

RELATED PRODUCTS

- > Regulators: R220, R250, R438, R450, R449, ...
- > Additional modules: R726, R731

IMPLEMENTATION OF THE D600 DIGITAL REGULATOR FOR MEDIUM AND HIGH VOLTAGE ALTERNATORS

AVR 4 Level: 1

OBJECTIVES

After the training, the trainees will be able to:

- Connect and adjust D610 & D630 digital regulators for medium and high voltage
- Configure digital regulators with SUPD600
- Diagnose incorrect regulator operation

€ PRICE: €1145 excl. tax/trainee

🕒 DURATION: 2 days

👤 ATTENDANCE*: 4 participants minimum

📍 LOCATION: 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 SUPD600 software
- > Practical cases of use: voltage regulation, power factor, KVAR and stability parameters

RELATED PRODUCTS

- > Digital regulators of the D600 range (D610 & D630) for medium and high voltage alternators



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

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

RELATED PRODUCTS

- > D350 and D550 digital regulators



COMMISSIONING OF THE UNIDRIVE M400 RANGE OF VARIABLE SPEED DRIVES

CV M400 Level: 1



OBJECTIVES

After the training, the trainees will be able to:

- Commission the UNIDRIVE M400 range of variable speed drives
- Understand the main variable speed drives safety messages
- Save application settings on SD card or using CONNECT software
- Discover variable speed drive automatic configurations

€ PRICE: €410 excl. tax/trainee

🕒 DURATION: 3h30

📍 LOCATION: Remotely

% DISTRIBUTION: 40% practical
60% theoretical

👤 PREREQUISITES: Have a computer, a webcam and an internet connection

AUDIENCE

- Maintenance technician
- Service Center technician
- Sales engineer

CONTENT

- Beginning of training evaluation Quiz
- Presentation of the operating principle of UNIDRIVE M400 variable speed drives
- Installation and wiring of variable speed drives (presentation of technical documents for each drive)
- Commissioning UNIDRIVE M400 variable speed drives with an asynchronous motor for a simple application
- Presentation of UNIDRIVE M400 variable speed drives automatic configurations
- Presentation of CONNECT software tool
- Backup methods with SD card or CONNECT software
- Interpretation of the main variable speed drive safety messages
- Variable speed drive setting exercises (either remotely or on the setting sheet)
- End of training evaluation Quiz

RELATED PRODUCTS

- Software allowing the remote programming of the variable speed drive
- Video monitoring of equipment commissioning

PROVIDED DOCUMENTS

- Course materials accessible on a digital platform
- Certificate of achievement



COMMISSIONING OF THE COMMANDER C200/C300 RANGE OF VARIABLE SPEED DRIVES

CV C300 Level: 1



OBJECTIVES

After the training, the trainees will be able to:

- Commission the **COMMANDER C200/C300** range of variable speed drives
- Understand the main variable speed drives safety messages
- Save application settings on SD card or using **CONNECT** software
- Discover variable speed drive automatic configurations

€ **PRICE:** €410 excl. tax/trainee

🕒 **DURATION:** 3h30

📍 **LOCATION:** Remotely

% **DISTRIBUTION:** 40% practical
60% theoretical

👤 **PREREQUISITES:** Have a computer, a webcam and an internet connection

AUDIENCE

- > Maintenance technician
- > Service Center technician
- > Sales engineer

CONTENT

- > Beginning of training evaluation Quiz
- > Presentation of the operating principle of **COMMANDER C200/C300** variable speed drives
- > Installation and wiring of variable speed drives (presentation of technical documents for each drive)
- > Commissioning **COMMANDER C200/C300** variable speed drives with an asynchronous motor for a simple application
- > Presentation of **COMMANDER C200/C300** variable speed drives automatic configurations
- > Presentation of **CONNECT** software tool
- > Backup methods with SD card or **CONNECT** software
- > Interpretation of the main variable speed drive safety messages
- > Variable speed drive setting exercises (either remotely or on the setting sheet)
- > End of training evaluation Quiz

RELATED PRODUCTS

- > Software allowing the remote programming of the variable speed drive
- > Video monitoring of equipment commissioning

PROVIDED DOCUMENTS

- > Course materials accessible on a digital platform
- > Certificate of achievement



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

COMMISSIONING OF THE UNIDRIVE M70x RANGE OF VARIABLE SPEED DRIVES

CV M700 Level: 1



OBJECTIVES

After the training, the trainees will be able to:

- Commission the UNIDRIVE M70x range of variable speed drives
- Understand the main variable speed drives safety messages
- Save application settings on Smartcard, SD card or using CONNECT software
- Learn gain adjustment method using CT Scope software

€ PRICE: €410 excl. tax/trainee

🕒 DURATION: 3h30

📍 LOCATION: Remotely

% DISTRIBUTION: 40% practical
60% theoretical

👤 PREREQUISITES: Have
a computer, a webcam and
an internet connection

AUDIENCE

- > Maintenance technician
- > Service Center technician
- > Sales engineer

CONTENT

- > Beginning of training evaluation Quiz
- > Presentation of the operating principle of UNIDRIVE M70x variable speed drives
- > Installation and wiring of variable speed drives (presentation of technical documents for each drive)
- > Commissioning UNIDRIVE M70x variable speed drives with an asynchronous motor in open loop and closed loop
- > Commissioning UNIDRIVE M70x variable speed drives with a brushless motor
- > Presentation of CONNECT and CT Scope software tools
- > Backup methods with Smartcard, SD card or CONNECT software
- > Interpretation of the main variable speed drive safety messages
- > Variable speed drive configuration setting and control loops gain exercises (either remotely or on the setting sheet)
- > End of training evaluation Quiz

RELATED PRODUCTS

- > Software allowing the remote programming of the variable speed drive
- > Video monitoring of equipment commissioning

PROVIDED DOCUMENTS

- > Course materials accessible on a digital platform
- > Certificate of achievement



COMMISSIONING OF THE POWERDRIVE F300 RANGE OF VARIABLE SPEED DRIVES

CV F300 Level: 1



OBJECTIVES

After the training, the trainees will be able to:

- Commission the POWERDRIVE F300 range of variable speed drives with an asynchronous motor in open loop
- Understand the main variable speed drives safety messages
- Save application settings on Smartcard, SD card or using CONNECT software

€ PRICE: €410 excl. tax/trainee

🕒 DURATION: 3h30

📍 LOCATION: Remotely

% DISTRIBUTION: 40% practical
60% theoretical

👤 PREREQUISITES: Have a computer, a webcam and an internet connection

AUDIENCE

- > Maintenance technician
- > Service Center technician
- > Sales engineer

CONTENT

- > Beginning of training evaluation Quiz
- > Presentation of the operating principle of POWERDRIVE F300 variable speed drives
- > Quick presentation of the POWERDRIVE F300 range with its options
- > Installation and wiring of variable speed drives (presentation of technical documents for each drive)
- > Commissioning POWERDRIVE F300 variable speed drives with an asynchronous motor in open loop
- > Presentation of CONNECT software tool
- > Backup methods with Smartcard, SD card or CONNECT software
- > Interpretation of the main variable speed drive safety messages
- > Variable speed drive configuration setting exercises (either remotely or on the setting sheet)
- > End of training evaluation Quiz

RELATED PRODUCTS

- > Software allowing the remote programming of the variable speed drive
- > Video monitoring of equipment commissioning

PROVIDED DOCUMENTS

- > Course materials accessible on a digital platform
- > Certificate of achievement



COMMISSIONING OF THE POWERDRIVE MD SMART RANGE OF VARIABLE SPEED DRIVES

CV MD SMART Level: 1



OBJECTIVES

After the training, the trainees will be able to:

- Commission the POWERDRIVE MD SMART range of variable speed drives with an asynchronous and synchronous motor (LSHRM DYNEO+ range)
- Understand the main variable speed drives safety messages
- Save application settings using the MDX-Soft software

€ PRICE: €410 excl. tax/trainee

🕒 DURATION: 3h30

📍 LOCATION: Remotely

👤 PREREQUISITES: Have a computer, a webcam and an internet connection

AUDIENCE

- > Maintenance technician
- > Service Center technician
- > Sales engineer

CONTENT

- > Beginning of training evaluation Quiz
- > Presentation of the operating principle of POWERDRIVE MD SMART variable speed drives
- > Installation and wiring of variable speed drives
- > Commissioning POWERDRIVE MD SMART variable speed drives with an LSHRM asynchronous and synchronous motor
- > Presentation of the SYSTEMIZ interface
- > Backup methods
- > Interpretation of the main variable speed drive safety messages
- > End of training evaluation Quiz

PROVIDED DOCUMENTS

- > Course materials accessible on a digital platform
- > Certificate of achievement



COMMISSIONING OF THE DIGISTART D4 & D5 RANGE OF STARTERS

CV D4 & D5 Level: 1



OBJECTIVES

After the training, the trainees will be able to:

- Commission the DIGISTART D4 & D5 range of starters
- Understand the main starters safety messages
- Save application settings on USB support and/or using DIGISTART SOFT software
- Know the different possibilities/functions of the product

€ PRICE: €410 excl. tax/trainee

🕒 DURATION: 3h30

📍 LOCATION: Remotely

👤 PREREQUISITES: Have a computer, a webcam and an internet connection

AUDIENCE

- > Maintenance technician
- > Service Center technician
- > Sales engineer

CONTENT

- > Beginning of training evaluation Quiz
- > Presentation of the operating principle of a starter
- > Presentation of the DIGISTART D4 & D5 range with its options
- > Presentation of the different start and stop control modes
- > Commissioning, wiring and parameter setting
- > Presentation of the different menus and their functions
- > Presentation of the USB support (backup and restoration of parameters)
- > Presentation of the DIGISTART SOFT software tool
- > Presentation of the DIGISTART mobile application
- > Interpretation of the main starter safety messages
- > End of training evaluation Quiz

PROVIDED DOCUMENTS

- > Course materials accessible on a digital platform
- > Certificate of achievement



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

CUSTOMIZED TRAININGS

.....

To meet your specific needs, we organize personalized face-to-face or virtual classroom training for the following Nidec 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 Leroy-Somer training center or in your premises.

**i STANDARD CATALOG
TRAINING COURSES IN
ENGLISH ARE PLANNED
ACCORDING TO DEMAND**

To contact us, see the registration details on page 38.

PRACTICAL INFORMATION AND REGISTRATION

ACCESS TO THE NIDEC LEROY-SOMER 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.

ACCOMMODATION



Around Angoulême

Hôtel Ibis Rouge* - Angoulême Nord

46 rue des Meneaux - 16430 Champniers
Tél. : +33 (0)5 45 69 16 16

Hôtel Ibis Styles* - Angoulême Nord

122 rue des Meneaux - 16430 Champniers
Tél. : +33 (0)5 45 68 53 22

Hôtel Ibis Budget* - Angoulême Nord

172 rue des Meneaux - 16430 Champniers
Tél. : +33 (0)8 92 70 09 41

Hôtel Kyriad* - Angoulême Nord

184 rue des Platanes - 16430 Champniers
Tél. : +33 (0)5 45 68 03 22

B&B Hotel

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



Close to the train station

Brit Hotel Confort Terminus*

1 place de la gare - 16000 Angoulême
Tél. : +33 (0)5 45 92 39 00



Downtown

Hôtel Mercure*

1 place des Halles - 16000 Angoulême
Tél. : +33 (0)5 45 95 47 95

Hôtel du Palais*

4 place Francis Louvel - 16000 Angoulême
Tél. : +33 (0)5 45 92 54 11

Citotel Europeen*

1 place Gérard Péro - 16000 Angoulême
Tél. : +33 (0)5 45 92 06 42

Hôtel Ibis Budget* - Angoulême Centre

179 avenue Gambetta - 16000 Angoulême
Tél. : +33 (0)8 92 68 31 78

Hôtel Saint Antoine*

2 rue du Gond - 16000 Angoulême
Tél. : +33 (0)5 45 68 38 21

* Special rates have been agreed for anyone attending Nidec Leroy-Somer 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

As of 1st July 2017, Nidec Leroy-Somer complies with the 6 regulatory criteria defined by decree no. 2015-790 of 30 June 2015 relating to the quality of continuing vocational training activities. This law allows your financial organisation to take responsibility for 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 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.



Certificat

Certificate

N° 2020/89194.1

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

MOTEURS LEROY SOMER

N° de déclaration d'activité : 54160003516

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°2020-584 du 22 juillet 2020 portant diverses mesures en matière de formation professionnelle
- le programme de certification AFNOR Certification - CERTI A 1814

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

2020-11-26 Jusqu'au 2024-11-25
Unit




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

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afnor
CERTIFICATION



MANAGEMENT SYSTEM CERTIFICATE

Certificate no:
20005-2018-ANG-FRA-COFRA-C

Initial certification date:
11 December 2008

Valid:
06 June 2021 - 01 June 2024

This is to certify that the management system of

NIDEC LEROY-SOMER HOLDING


Boulevard Marcelin Leroy - 16015 ANGOULEME - France

and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:
ISO 9001:2015

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.

Price and date:
Gross: 12 July 2021



For the issuing office:
DNV - Business Assurance
Place Coeuron, 14 Rue Marcel Desnais,
95145 Levallois, France



Eric Antoine
Management Representative



Link of fullment of conditions as set out in the Certification Agreement may never be Certificate issued.
ACCORD-1801-0107 - DNV Business Assurance France SAS, Place Coeuron, 14 Rue Marcel Desnais, 95145 Levallois Cedex - France - T: +33 4 70 00 01 40 - www.dnv.fr



CHARTRE QUALITÉ DES CENTRES DE FORMATION

DES ENTREPRISES ADHÉRENT À LA FIEEC

L'entreprise : **LEROY SOMER**

s'engage à :

- Mettre en œuvre une démarche d'assurance et d'amélioration de la qualité, vérifiée lors d'audits périodiques.
- Concevoir des formations bénéficiant des relations privilégiées à l'intérieur de l'entreprise.
- Assurer des cours animés par des professionnels de l'industrie, formateurs qualifiés et experts dans leur domaine.
- Utiliser les moyens pédagogiques et les matériels de travaux pratiques adaptés avec leur documentation associée.
- Maintenir une grande réactivité par rapport aux évolutions des produits, et capitaliser les savoir-faire.
- Accueillir les participants au moyen d'une logistique adaptée.
- Personnaliser la formation pour répondre aux attentes spécifiques de chaque client.
- Mesurer et analyser la satisfaction des clients.
- Prendre des mesures concrètes réduisant l'impact environnemental de l'activité Formation
- Participer aux réunions organisées par la FIEEC et réaliser les visites périodiques des centres de formation adhérent à la charte.

L'INDUSTRIEL ENGAGE, DANS LES ACTIONS DE FORMATION, LA RESPONSABILITÉ DE SA MARQUE.

Pour la FIEEC
le 21/11/2021



Gilles SCHNEPP
Président de la Fédération des
Industries électriques, électroniques
et de communication

Pour LEROY SOMER
le 21/11/2021



Eric ANTOINE
Directeur du Centre de Formation

FÉDÉRATION DES INDUSTRIES ÉLECTRIQUES, ÉLECTRONIQUES ET DE COMMUNICATION
11-17, rue Humelin - 75783 PARIS CEDEX 16 - FRANCE

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LEROY-SOMERTM

www.leroy-somer.com



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