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Certified Quality
in Automation, Electric and Electronic



DLG

Founded in 1997, DLG is a company that seeks to provide solutions for electrical and industrial process automation for different market segments.

At its headquarters, located in Sertãozinho-SP, projects are developed and assembly of panels, besides the manufacture of electronic instruments.

There are also projects for Total Integration, which begin with the analysis of customer needs, design of electrical projects and automation of manufacturing equipment and panels, installation, commissioning, start-up and ongoing technical assistance.

Has a department of Research and Development and Engineering Applications, involving engineers specialized in electronics, electrical and industrial automation.

DLG is one of the few Brazilian companies that are capable of providing as complete solutions for automation and process control.



Mission

Providing to the market quality, creativity and profitability, innovative products and services for electrical and electronic automation of industrial processes promoting customer satisfaction, the personal and professional growth of members and employees and sustainable development.

View

Be the preferred option of electronics solutions for industrial process automation in Brazil and Latin America.

Values

- Credibility
- Commitment
- Integrity
- Respect for the environment
- Valuing of the People
- Growth and Profitability
- Innovation
- Entrepreneurship

Quality Policy

Provide and implement solutions with innovative products and services for automation, electronics and electrical industrial processes, meeting the requirements and customer satisfaction by continuously improving the effectiveness of Quality Management System, the profitability of the business, professional and personal growth of members , employees and sustainable development.

Certified Quality

The ISO 9001 certification and adherence to CEISE Br Qualifies seal prove DLG's commitment to ensuring the quality of its products and services, seeking continuous growth and greater customer satisfaction.

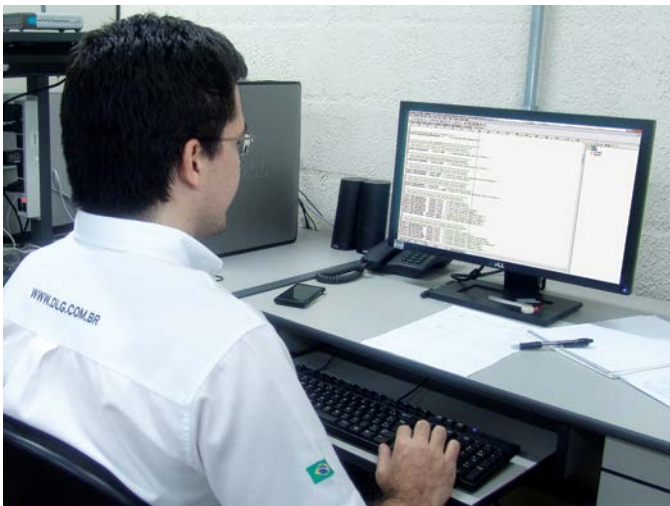


Research and Development

The Research & Development (R & D) of DLG is always in tune with market needs, creating industrial equipment reliable, innovative and high technology embedded. The staff consists of highly skilled engineers and technicians for the development of hardware, firmware and application software, ensuring equipment with proven quality.

Main Technologies used:

- Microsoft .NET
- ARM Processors
- ALTERA PLCD



Electronic Equipment for Automation



- Profibus equipment**
- DP Repeater
 - DP Terminator
 - DP Hub Profibus
 - Modbus / Profibus Gateway



- Modbus and Ethernet equipment**
- Data-Logger
 - Ethernet / Modbus Gateway



- Field Remote**
- Profibus
 - Modbus
 - Ethernet



Calibrators and Simulators



- Control for Steam Turbines**
- Actuators
 - Positioners



Capacitive sensors



**Brix Transmitter
Microprocessed**



- Other Equipment**
- Signal Converter
 - Indicators
 - Sources
 - Special Relays



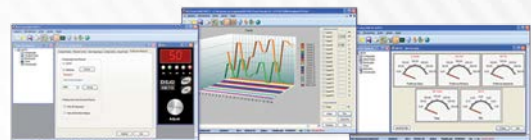
- Precision Agriculture**
- Penetrometer georeferenced



Antifoam Ejection



Softwares



Modbus

Ethernet

Industrial Process Automation

The Application Engineering Department studies the best solutions for the optimization of industrial processes, enabling control forms to facilitate future expansion, better attendance and agility at start-up.

- Flowcharts for Industrial Process (P & I)
- Automation and Instrumentation Projects
- Mechanical Projects
- Automation Master Plans

Schneider Electric Alliance

In partnership with Schneider Electric, DLG develops projects involving complete solutions for SCADA, PLC, Motion Control, Drive and Control Products.

Alliance integration partner
with

Schneider
Electric

Siemens Solution Developer

DLG is a business integrator Accredited by Siemens for the entire line of PLCs, Supervisory and HMI's.

SIEMENS

3D Supervision Systems



Other PLCs configured by DLG

- GE Fanuc
- Matsushita / Panasonic
- Smar
- Altus
- Rockwell
- Among other



Configuring Supervision Systems:



Solutions in Industrial Management

- Asset Management
- Implementation of PIMS / KPI
- Implementation of MES

Electrical Projects

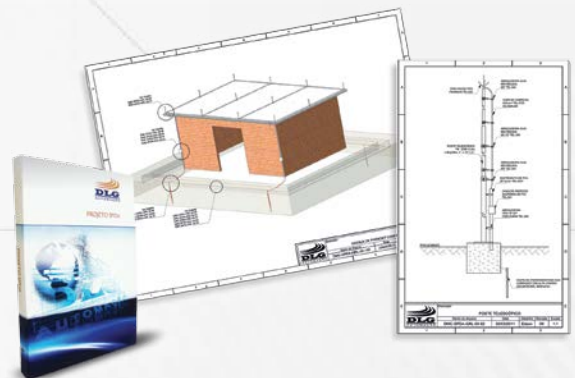
With a team of experienced Electrical Engineers and dedicated software, DLG conducts a survey technician with its customers to develop projects according to their actual needs, always seeking maximum protection and system reliability. The DLG Automation Panel Project and MCCs are designed with the most modern tools: Caddy++ Electrical.



PSAD (SPDA) Projects

The PSAD projects - Protection System against Atmospheric Discharges are made in a judicious manner and with a high degree of detail, including:

- Risk Analysis
- Executive Project
- Complete List of Materials
- Typical Installation Drawings



Electrical Calculations

Seeking to provide the most useful information to customers and the good progress of projects, DLG elaborates its single-line diagrams, using the most advanced software for electrical calculations, ETAP, delivering to its customers:

- Detailed Single-line Diagram
- Load Flow Calculation
- Power Factor Correction
- Calculation of short circuit
- Determination of Load Cables
- Calculation of Incident Energy ("Arc-Flash")
- Determination of ATPV



Mounting of Electrical and Automation Panels

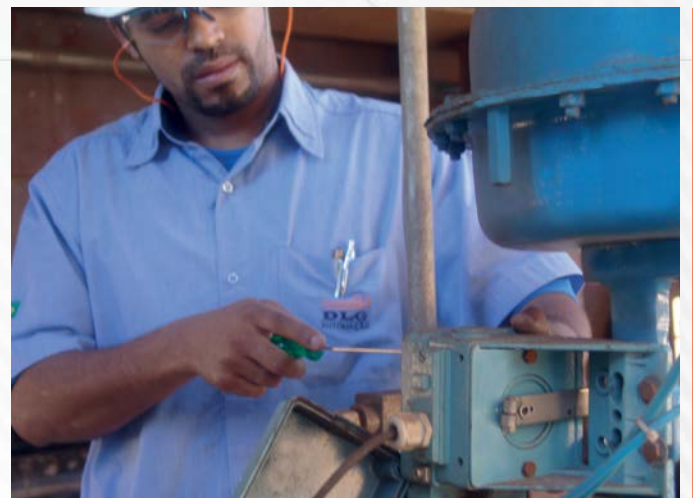
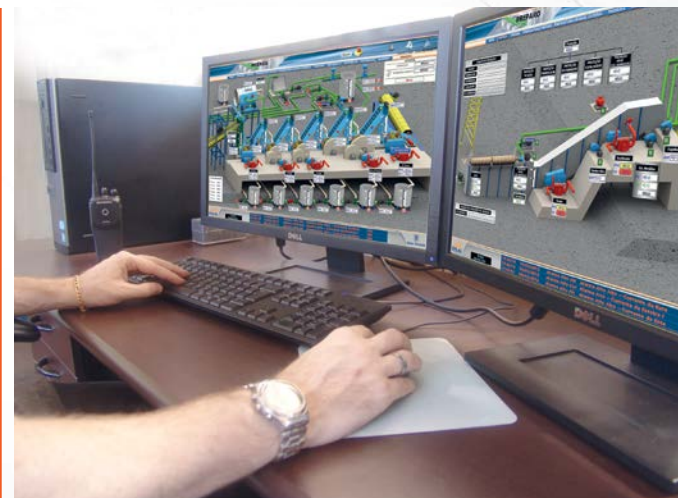
In almost two decades of activities, DLG adds experience, technology and a group of technicians specialized in assembling electrical and automation panels, in accordance with the technical standards required for different applications:

- MCC - Conventional / Intelligent Motor Control Centers
- PTTA Panels - Panel Partially Tested according to NBR IEC 60439.1
- LVGF (QGBT) - Low Voltage General Framework
- Frame Fixed and Mobile Plugs
- Automation Panels
- Data Processing (informatics) Racks (IOC)
- Capacitor Banks
- Medium Voltage Panels (15kV)



Field Technical Assistance

Ready to attend emergencies, maintains a team of engineers and technicians trained by DLG, Siemens, Schneider and other brands to troubleshoot processes and equipment, especially in HART and Profibus protocols.

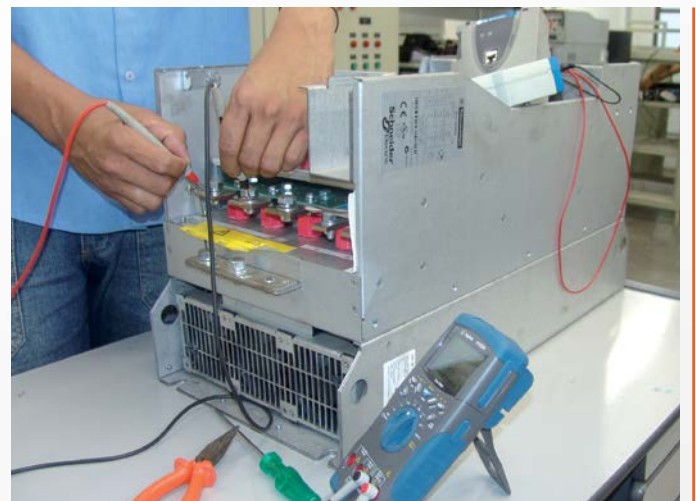
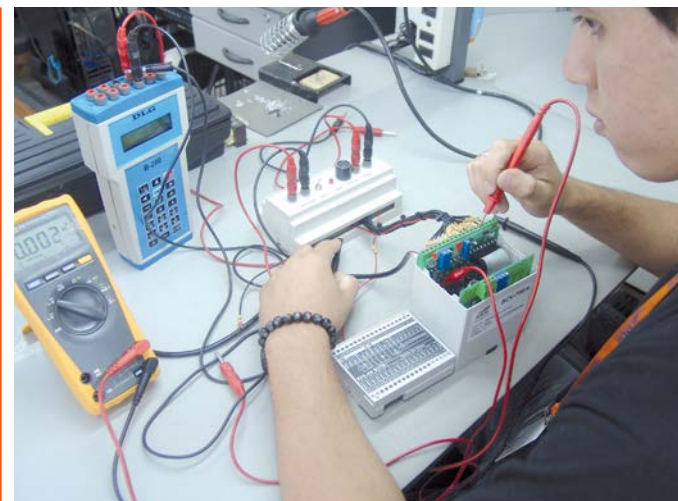


Maintenance

With a team of trained technicians to carry out maintenance on DLG, Schneider equipments and other brands.

Technical Assistance for Drivers

DLG is a SAS - Schneider Authorized Service in equipment of Schneider Electric, especially on drives and soft-starters.

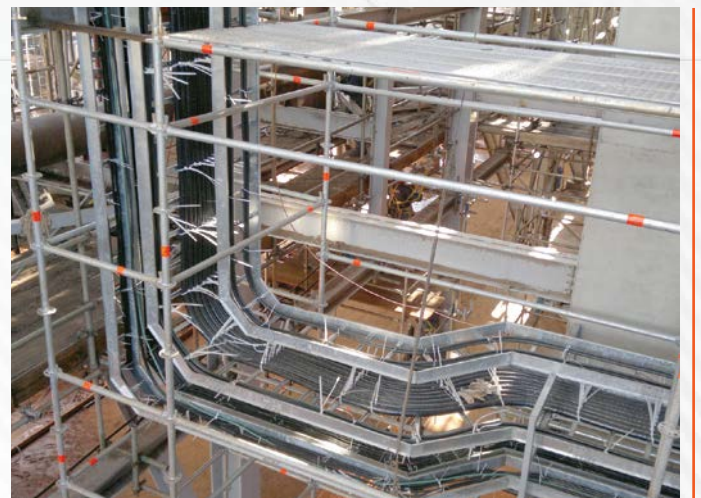


Electrical and Instrumentation Field Assembly

DLG provides field assemblies for electrical and automation areas.

- Electric Low and Medium Voltage Assembly
- Instrumentation Assembly
- Profibus Network Specialist
- Hazardous Area (Ex) Assembly

PROFITech
Installer
Competence in PROFIBUS network installation

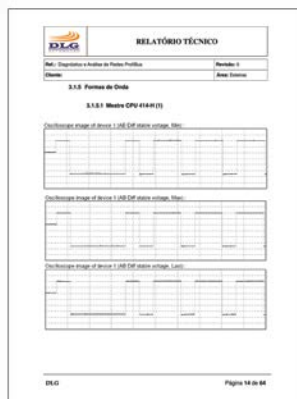
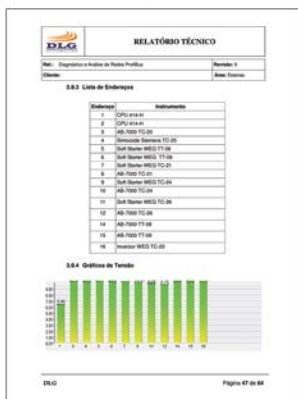
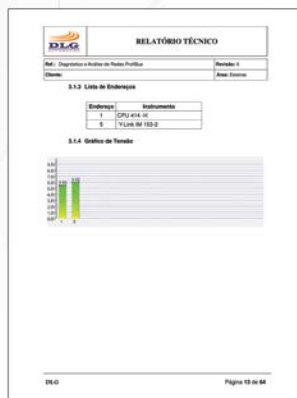


Profibus PA / DP / AS-i Networks Diagnostic

Affiliated to Profibus Association, DLG has certified professionals PI (Profibus International), which are trained to identify errors and propose corrective actions. The process of network analysis is divided into four steps:

- Physical Inspection Network
- Protocol Analysis
- Oscillographic Analysis
- Topology Analysis

Aiming to ensure quick and accurate diagnoses are been used the most modern tools available in the market.



CASES

Client: Raízen - Barra Bonita

Project: Implementation of 100 MW Cogeneration

Year: 2010/2011

Automated sectors:

IOC - Cogeneration Integrated Operations Center

TCG - Thermoelectric Central Generation

Bagasse Conveyors

Reception Chopped cane

Milling

WTP - Water Treatment Plant

Demineralized - Demineralization of Water

Sugar Bags Counter

Employed Technology:

Ethernet, Profibus DP, Profibus PA

PLC: Siemens

Supervisory: Indusoft

Manufactured Panels:

Cogeneration Automation

IOC Rack and Servers

WTP / Demineralized Automation

Automation of Bagasse Conveyors

LVGF Sugar Factory

Aerovento MCC

Sludge Filters MCC

Services:

Electrical and Automation Projects

Automation Installation

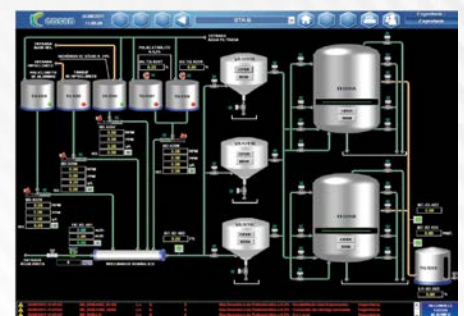
Lighting Installation

PLC Configuration

Supervisory Configuration

Commissioning and Start-Up

Profibus Network Diagnostics



CASES

Client: Raízen - Ipaussu

Project: Factory Expansion and Implementation of 50 MW Cogeneration

Year: 2011

Automated sectors:

Cogeneration
Milling
Evaporation
Juice Treatment
Sugar Factory
Distillery
Fermentation
Cane Sampling

Employed Technology:

Ethernet, Profibus DP, Profibus PA, AS-i

PLC: Siemens

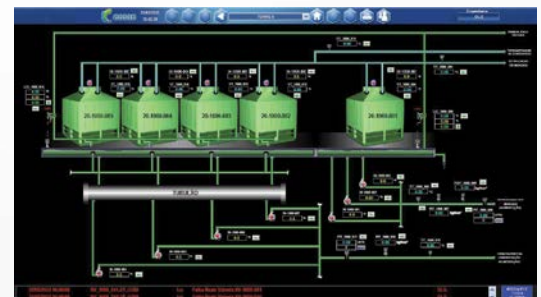
Supervisory: Indusoft

Manufactured Panels:

TCG Automation - Thermoelectric Central Generation
Milling area Automation
Juice Treatment and Evaporation Automation
Distillery and Fermentation Automation
Sugar Factory MCC
Hilo MCC
Decaners MCC
Sludge Filters MCC
White Sugar Factory MCC
Sugar Plant LVGF

Services:

Automation Projects
Automation Installation
PLC Configuration
Supervisory Configuration
HMI Configuration
Commissioning and Start-up
Profibus Network Diagnostics



Client: Central Energética Vicentina

Project: Establishment of New Unit
Year: 2010

Automated sectors:

Diffuser
Fermentation
Distillery
Boiler
Evaporation

Employed Technology:

Ethernet, Modbus

CLP: Schneider

Supervisory: Vijeo Citect

Manufactured Panels:

Diffuser Automation
Fermentation Automation
Boiler Automation
Evaporation Automation

Services:

Automation Projects
PLC Configuration
Supervisory Configuration
Commissioning and Start-up



Client: Petrobras - Estaleiro Rio Grande

Project: Implementation of the Shipyard
Year: 2010

Automated Sectors: Shipyard Pumping

Employed Technology: Ethernet, Modbus

PLC: Schneider

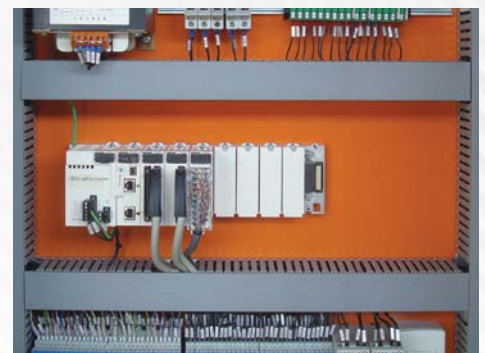
Supervisory: Vijeo Citect

Manufactured Panel:

Automation of Pumping Shipyard

Services:

Automation Projects
PLC Configuration
Supervisory Configuration
HMI Configuration
Commissioning and Start-up



CASES

Client: PAGRISA

Project: Process Automation
Year: 2009 / 2012

Automated sectors:

Juice Treatment
Milling
Sugar Factory
Boilers

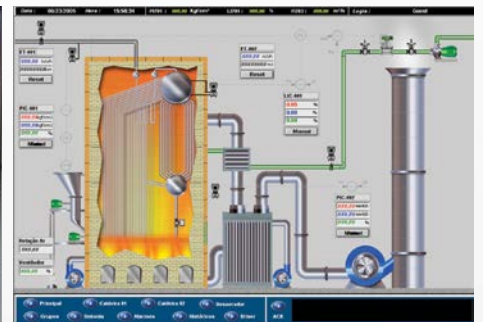
Employed Technology: Ethernet, Modbus
PLC: Rockwell, Schneider
Supervisory: Indusoft

Manufactured Panels:

Boiler Automation 1
Boiler Automation 2
Juice Treatment
Sugar Factory
Milling Turbine Panels

Services:

Electrical and Automation Projects
PLC Configuration
Supervisory Configuration
HMI Configuration
Instrumentation Installation
Electrical Installation
Commissioning and Start-up



Client: Fátima do Sul Agro Energética

Project: Establishment of New Unit
Year: 2011

Automated sectors:

Milling
Juice Treatment
Fermentation
Boiler
IOC - Integrated Operations Centre

Employed Technology: Ethernet, Modbus

PLC: Schneider

Supervisory: Vijeo Citect

Manufactured Panels:

Milling Automation
Fermentation Automation
Juice Treatment Automation
Boiler Automation
IOC Servers Rack

Services:

Automation Projects
PLC Configuration
Supervisory Configuration
Commissioning and Start-up



Client: Usina Batatais S.A.

Project: Milling Automation
Year: 2011

Automated sectors:

Milling

Employed Technology: Ethernet, Modbus

PLC: Schneider Redundant

Supervisory: Vijeo Citect

Manufactured Panels:

Main Automation
Remote MCC
Temperature Remote

Services:

Automation Project
PLC and Supervisory Configuration
Assembly Supervision
Commissioning and Start-up



CASES

Client: Raízen - Gasa

Project: Factory Expansion and Implementation

of 100 MW Cogeneration

Year: 2008

Automated sectors:

Distillery

Fermentation

Juice Treatment

Cogeneration Cooling Towers

Employed Technology:

Ethernet, Profibus DP, Profibus PA, AS-i

PLC: Siemens

Supervisory: Indusoft

Manufactured Panels:

Distillery Automation

Fermentation Automation

Milling Automation

Juice Treatment Automation

Cogeneration Cooling Towers MCC

Services:

Electrical and Automation Projects

PSAD Project

Management Assembly Work

PLC Configuration

Supervisory Configuration

Instrumentation Installation

Electrical Installation

Lighting Installation

Profibus Network Diagnostics

Commissioning and Start-up





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