


Control solutions for industry



**Lovato**
electric
100% electricity

Tradition

LOVATO Electric was founded in 1922.



Thanks to its solid tradition of on-going activity, today LOVATO Electric is leader in the manufacture of electromechanical and electronic products for industrial automation.

Innovation

Modern technology for research, development, design and manufacture consent LOVATO Electric to offer products and solutions to enhance efficiency, reliability and safety in industrial and electrical systems.

LOVATO Electric products comply with major international standard requirements.

Manufacturing facilities

LOVATO Electric products are fully designed in the head office of Bergamo, Italy.

The highly qualified technical staff and the continuous technological improvement of the manufacturing facilities ensure the achievement of high quality standards.



LOVATO Electric S.p.A. - Italy



Design



Prototyping



Test and research laboratory



Production of moulds and blanking dies



Quality controls

Customer care service

A team of expert technicians supply information and technical assistance.

Regular training courses about the LOVATO Electric products and their use provide customers with constant updates and efficient support.

International presence

LOVATO Electric presence in the most important world markets is the result of the company's constant international strategy.

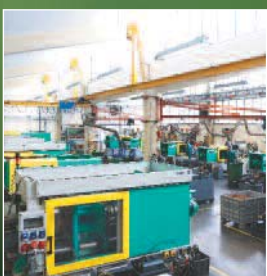
LOVATO Electric Italy, together with the 8 foreign branches and official sales affiliates, represent the reference point for the distribution of the LOVATO Electric products in over 90 countries.

Quality

LOVATO Electric, among the first in Italy, in 1992, to hold the certification of the company's quality management system, in compliance with **ISO 9001** standards, has obtained the **ISO 14001** certification for the environment management system as well.



The company's laboratories are, in addition, qualified and certified to conduct type testing, under **ACAIE** direct control, for the emission of **ACAIE/LOVAG** certifications.



Plastic injection department



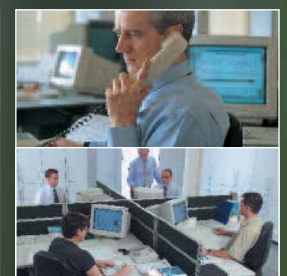
Automatic assembly lines



Automatic assembly lines



Handling



Customer Service

PLANET

Switch



Motor protection circuit breakers

- Wide adjustment range 0.1 to 100A
- Breaking capacity Icu 50kA (400V) up to 100A
- Suitable for isolation
- Comprehensive line of accessories
- Front mount contacts
- Automatic trip indicators
- High reliability and accuracy of tripping
- UL Construction Type E versions.



Switch disconnectors

- 16 to 1250A ratings of three and four-pole switch disconnectors
- Versions for photovoltaic duty
- Versions with NFC, NH and BS fuse holders
- Versions in enclosure
- Three and four-pole changeover switch disconnectors.
- Versions: door coupling, direct operating handle, door mounting and in enclosure.

PLANET

Logic



Metering instruments and current transformers

- Digital voltmeter, ammeter, watt meter, cos-phi meter, and frequency meter, single and three phase
- Digital multimeters for monitoring and measuring of 47 and 251 electrical parameters
- Digital multimeters, expandible, with LCD, for monitoring and measuring of >150 to >590 electrical parameters
- Digital multimeters for distribution and co-generation energy systems, stand-by generating sets and on-board machinery
- Energy counters, single and three phase with or without neutral
- Current transformers, 40 to 1500A primary current ratings.



Soft starters

- 6 to 1200A starter ratings
- Standard and severe-duty types
- Internal by-pass contactor up to 245A rating
- Torque ramp starting
- Total motor protection incorporated
- Real time clock
- RS232 and RS485 serial ports for remote supervision and control
- Modbus®-RTU and proprietary ASCII communication protocols.



Contactors

- Three-pole versions up to 630A for AC3 duty
- Four-pole versions up to 1600A for AC1 duty
- Version for power factor correction up to 60kvar (400VAC)
- Four-pole versions with 2NO+2NC or 4NC main poles
- Versions with AC or DC control
- Versions with low DC consumption
- Extensive choice of add-on blocks and accessories
- Certified by primary international authorities.



Motor protection relays

- Thermal overload relays for currents between 0.09 and 420A
- Phase failure sensitive and non phase failure sensitive versions
- Automatic and/or manual resetting
- Independent or direct mounting on contactor
- Thermistor protection relay.



Electromechanical starters

- Direct-on-line starters in insulated enclosure, complete with or without thermal relay
- Versions with RESET or START/STOP push buttons
- Insulated enclosures for customer-assembled starters
- Reversing and changeover contactor assemblies
- Complete star-delta starters, open frame and in enclosure versions.



AC motor drives

- Single and three-phase versions up to 630kW
- Simple installation and programming
- Compact size
- Automatic tuning function
- Flexible selections including sensorless vector control, wide power ratings, programmable inputs /outputs
- Special function for pump and fan applications
- Active earth leakage protection
- Highly reliable operation in critical conditions.



Automatic power factor controllers

- Microprocessor supervision and control
- Accurate current evaluation with TRMS readings
- Automatic rational adjustment
- Versions with 5, 7, 8 or 12 steps
- Version with static outputs
- Use in co-generation systems
- Communication serial interface
- Modbus®-RTU and Modbus®-ASCII communication protocols.



Automatic battery chargers

- 1 charging level
- Versions for lead-acid batteries, 2.5 to 12A ratings for 12VDC and 24VDC output
- Charging current limitation selectable.



Control and signalling units

- Metal and plastic series Ø22mm actuators:
 - Quick and easy installation
 - Standard front IP65 degree of protection
- Signal towers Ø70mm
- Signal beacons Ø62mm.



Limit, micro and foot switches

- Limit switches:
 - Dimensions to EN 50047 (bottom entry)
 - Dimensions compatible to EN 50047 (side entry)
 - Dimensions to EN 50041
 - Direct opening operation of NC contacts
 - Interchangeable and orientation adjustable heads
 - Removable and interchangeable auxiliary contacts.
- Prewired limit switches
- Micro switches
- Foot switches:
 - Single or double pedal version (plastic and metal housing)
 - Version with or without cover.



Rotary cam switches

- GX series up to 40A, GN series up to 125A ratings
- Suitable for circuit connection, changeover, switching on and off as well as motor starting
- Possibility of special switch configurations
- IP65 (GX) or IP40 (GN) front degree of protection
- 2-screw panel fixing
- Wide range of features.



Automatic transfer switch controllers

- Supervision of two three-phase supply lines
- Emergency demand supervision for stand-by generating set
- Contactors, motorised circuit breakers or motorised changeover switches management
- Event logging
- TRMS measures of voltage values
- Microprocessor remote control and supervision
- RS232 and RS485 ports
- Modbus®-RTU and Modbus®-ASCII communication protocols
- Real time clock.



Programmable logic relays

- 10, 12 and 20 input-output base units
- Expansion modules with 4 inputs and 4 outputs
- Maximum configuration: 44 inputs/outputs
- RS232 serial interface port for PC or program back-up memory connection
- On-board programming languages: Italian, English, Spanish, French, German, Portuguese and Chinese
- PC programming languages: Italian, English and Spanish.



Switching power supplies

- Single phase, 12 or 24VDC (5 to 480W)
- Two phase, 24VDC (100W)
- Three phase, 24VDC (120 to 960W)
- Versions: modular or 35mm DIN rail mount.



Modular contactors

- Two, three and four-pole versions, 20 to 63A
- Very silent during operation or control phase
- Operation flag indicator
- Add-on auxiliary contacts.



Time relays

- Modular version for consumer switchboards
- DIN mount industrial version
- Plug-in or flush-mount version
- Vast range of functions and time scales
- Reliable time and repeat accuracy.



Protection relays

- Versions: modular, plug in, 35mm DIN rail and flush mount
- Minimum and maximum voltage monitoring relays for single and three phase systems, with or without neutral
- Voltage asymmetry, phase sequence and phase failure control relays
- Minimum and/or maximum current monitoring relays
- Pump protection relays
- Phase shift relays
- Frequency monitoring relays.



Level control relays

- Level monitoring for electrically conductive liquids
- Versions: modular or plug-in
- Adjustable 2.5-200k Ω sensitivity
- Startup priority change relays
- Single and three-pole electrodes.



Earth leakage relays

- Modular, flush and internal panel mount version, with or without flag indicator, configurable prealarm indication and fail-safe operation
- Versions with automatic toroid connection control
- Choice of supply voltage ranges
- Adjustable fault current $I_{\Delta n}$
- Choice and adjustment of tripping range both for fault current and delay time.



Distributors in:

AFRICA

ALGERIA, ANGOLA, BOTSWANA, COTE D'IVOIRE, EGYPT, ETHIOPIA, GHANA, KENYA, LIBYA, MADAGASCAR, MAURITIUS, MOROCCO, MOZAMBIQUE, NAMIBIA, NIGERIA, SOUTH AFRICA, SUDAN, TANZANIA, UGANDA, ZAMBIA, ZIMBABWE.

ASIA

BAHRAIN, BANGLADESH, CHINA, INDIA, IRAN, ISRAEL, KUWAIT, LEBANON, MALAYSIA, MALDIVES, OMAN, QATAR, PAKISTAN, SAUDI ARABIA, SINGAPORE, SRI LANKA, SYRIA, THAILAND, UNITED ARAB EMIRATES, YEMEN.

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ALBANIA, AUSTRIA, BELARUS, BELGIUM, BULGARIA, CROATIA, CYPRUS, CZECH REPUBLIC, DENMARK, ESTONIA, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY, ITALY, LATVIA, LITHUANIA, MACEDONIA, MALTA, NETHERLANDS, POLAND, PORTUGAL, ROMANIA, RUSSIA, SERBIA, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, SWITZERLAND, TURKEY, UKRAINE, UNITED KINGDOM.

NORTH AMERICA

UNITED STATES, CANADA.

CENTRAL AMERICA

COSTA RICA, EL SALVADOR, GUATEMALA, HONDURAS, MEXICO, PANAMA, TRINIDAD AND TOBAGO.

SOUTH AMERICA

ARGENTINA, BRAZIL, CHILE, COLOMBIA, ECUADOR, PARAGUAY, PERU, URUGUAY, VENEZUELA.

OCEANIA

AUSTRALIA, NEW ZEALAND.

The products described in this publication are subject to be revised or improved at any moment. Catalogue descriptions and details, such as technical and operational data, drawings, diagrams and instructions, etc., do not have any contractual value. In addition, products should be installed and used by qualified personnel and in compliance with the regulations in force for electrical systems in order to avoid damages and safety hazards.



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