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# NEW PRODUCTS



## TRANSFORMER PROTECTION CIRCUIT BREAKERS SM1RT TYPE

SM1RT circuit breakers are designed for controlling transformers. The circuit breakers have the same structure of the SM1R motor protection circuit breakers, but with a higher magnetic tripping threshold compared to motor protection version, in order to avoid any unwanted tripping. This is due to the fact that transformers usually have high inrush currents (magnetisation). Except for the magnetic switching threshold, the SM1RT transformer protection circuit breakers have the same functional features and share identical accessories with the SM1R motor protection circuit breakers.

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## CONTACTORS 265A TO 400A AC-3 BF SERIES

These are very compact units: 140mm wide for the three-pole versions and 185mm for the four-pole versions; motor current at 400V from 265 to 400A and Ith thermal current from 450 to 600A. The control coil operates in both AC and DC with electronic control and a wide supply voltage range. The AC/DC coil also features low power consumption, only closes at the correct supply voltage and has a built-in surge suppressor. A wide range of accessories is available, including front- and side-mounting auxiliary contacts, mechanical interlocks, power terminal protection and connection kits for configuration of star-delta starters or changeover switches.

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## SAFETY CONTACTORS BFS TYPE

In the field of safety applications, BFS contactors are fully compliant with the requirements "MIRROR CONTACTS" according to the IEC/EN 60947-4-1 standard and "MECHANICALLY LINKED CONTACTS" according to the IEC/EN 60947-5-1 standard. These contactors are therefore suitable for applications which need a high safety level according with the requirements of the ISO 13849-1 (Safety of machinery – Safety-related parts of control systems) and IEC/EN 62061 (Safety of machinery – Functional safety of safety-related control systems) standards. BFS contactors cover motor control current values from 9A to 38A AC-3 at 400V.

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## ELECTRONIC MOTOR STARTERS ME SERIES

A new series of compact starters in a 22.5mm wide enclosure for applications requiring a high number of starts and space savings inside the panel. They are built with hybrid technology, combining the advantage of the long life of a wear-free semiconductor device with the high robustness and low consumption of a mechanical relay. The range includes direct starters and reversing starters for motors up to 2.4 or 7A for systems up to 500VAC. All models are powered by 24VDC and integrate motor thermal protection. Versions with STO (Safe Torque Off) also feature an emergency stop function with SIL3 and PLe safety levels.

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## SOFT STARTERS ADXT SERIES

ADXT is a soft starter with three-phase control for the gradual starting of three-phase asynchronous motors. It is mainly used for controlling heavy loads, thanks to the high torque available during startup, which allows overcoming the inertia of applications such as crushers, fans, conveyors, screw compressors, centrifuges, propellers, mills, band or circular saws, shredders and many others. The entire range from 34 to 554A is cULus approved and integrates a bypass contactor for the reduction of consumptions and the heating generated once the ramp is complete. ADXT is suitable for installations with voltages from 380 to 690V and can be installed either with traditional in-line connection or inside delta connection. With advanced features for motor control and protection, it is the ideal soft starter for applications requiring high performance, reliability and robustness.

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## SINGLE-PHASE VARIABLE SPEED DRIVES VLB1 SERIES

They expand the range of variable speed drives VLB series with 4 power sizes, from 0.4 to 2.2kW, with single-phase 200...240VAC power supply. They are provided with built-in EMC suppressor and braking chopper. The compatibility with the optional accessories of the three-phase VLB3 series, such as logic units with fieldbus, communication modules and the STO (Safe Torque Off) safety module, along with integrated advanced functionalities, realizes a single-phase drive with high-performance for the control of applications with medium-to-high complexity.

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### LOGIC UNITS FOR VARIABLE SPEED DRIVES VLB SERIES

The series of accessories for VLB series variable speed drives is expanded with three new logic units: VLBXL07 is the version without communication port, designed for applications that do not require interfacing with intelligent devices or supervision networks via fieldbus. VLBXL08 allows equipping the variable speed drives VLB series with an Ethernet port using Modbus-TCP protocol, a more modern and flexible solution compared to serial communication, to achieve speeds up to 100Mbps. Finally, VLBXL09 is the logic unit with IO-Link protocol, a standardized technology (IEC 61131-9) for communication between sensors and actuators, now extended to more complex devices such as motor drives.

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### SOLID STATE RELAYS HS SERIES

The solid state relays HS series further extend the range of LOVATO Electric products for controlling electric loads. Although the relays are especially suitable for resistive loads, they are also able to control inductive loads, including small electric motors. These devices are frequently used in the field of packaging machinery and food industry equipment. Solid state relays offer an electrical life that is theoretically infinite, they can support ultra-high operation frequencies, they generate no electric arcing and their operation is noiseless. The values range from 25A to 130A. Versions are available either with or without heat sink. The solid state relays are UL, CSA and VDE-certified.

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### DOUBLE CONTACT ELEMENTS PLATINUM SERIES

Double contact elements include two contacts in the size of a single contact element, allowing for increasingly compact solutions in terms of overall dimensions inside the panel and higher numbers of contacts per operator. The new double contact elements are available in the following versions: 2NO, 2NC and 1NO+1NC. Additionally, new double contact elements can be used in plastic control stations of the LPZ type.

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### THREE-PHASE VARIABLE SPEED DRIVES VLG3 SERIES

VLG3 is a three-phase general purpose variable speed drive suitable for the control of conveyor belts, textile machines, escalators, lifts, pumps, fans, compressors, washers and mixers. The range comprises sizes from 0.4 to 22kW and integrates as standard an EMC suppressor, the braking chopper and an RS485 serial port with Modbus-RTU protocol. On the front panel, there is a keypad with LED display, a potentiometer for frequency adjustment and an RJ45 port for the connection of peripheral devices such as optional remote keypad and PC programming cable. Additionally, it's possible to equip the drive with an Ethernet communication port via optional module.

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### PUSHBUTTONS AND SELECTOR IN KITS SWITCHES PLATINUM SERIES Ø22MM

Simplicity and ease of ordering: the range of Platinum series Ø22mm pushbuttons and selector switches is extended with a selection of codes available in kits that include the most common operators (pushbuttons, mushroom pushbuttons, selector switches, double-touch/triple-touch actuators) complete with mounting adapter and several combinations of contact elements and LED elements that are available in several colors and supply voltages. Kits are available both for LPC plastic chrome type and LPS metal type for fixing on 22mm diameter holes.

**Sec. 8**



### AUTO-MONITORING 1NC CONTACT ELEMENT PLATINUM SERIES

With a new design, the auto-monitoring 1NC contact function is accomplished within the same dimensions of a single contact element, thus with extra slot available to fit further contact elements on the mounting adapter. Additionally, new double contact elements can be used in plastic control stations of the LPZ type.

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# NEW PRODUCTS



## EMERGENCY ILLUMINATED PLASTIC DISK Ø60MM FOR Ø22MM MUSHROOM HEAD PUSHBUTTONS

Completing the range of LOVATO Electric emergency signalling devices are the new illuminated disks. Their main function is to make the emergency button easily recognizable and identifiable in the event of its activation in non-optimal visibility conditions and identifying which actuator is operated in the presence of several emergency mushrooms in the same area. There are 3 different supply voltages (24VAC/DC, 110...120VAC and 220...240VAC), 4 specific markings in different languages and 2 light functions (steady or flashing light).

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## CONTROL STATIONS FOR 40MM PROFILE RAILS

The new LP4 type plastic control stations, with their compact size, are suitable for installation over 40mm profile rails. The units allow for an easy and quick assembly due to the provided metal clip that fits in the slot of the profile rail. The control stations are provided with operators, contact elements and LED elements, connection is performed via built-in M12 connector. Control stations are also available with IO-Link connection, an advanced and versatile solution for controlling and monitoring industrial devices. Through the IO-Link technology, the communication between field devices and the control system allows for a smarter and flexible management of industrial processes.

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## SAFETY RELAYS SRC SERIES

LOVATO Electric has expanded its range of safety relays with the SRC series. The new series is designed up to cat. 4 applications, PLe performance level. The units are compliant with the EN ISO 13849-1 Machinery Directive and are used to monitor and control in a safe way safety circuits in applications including emergency stops, safety access, safety magnetic switches, safety limit switches or electro-mechanical interlocks. Additional versions are available with push-in spring connectors for simpler wiring.

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## MULTIFUNCTION SAFETY RELAY SRAMF21

The new SRAMF21 safety relay is a multifunction module that is designed for applications up to cat. 4, PLe performance level. The relay, compliant with the EN ISO 13849-1 Machinery Directive, includes all the main safety functions in a single product. Thanks to the front selector, the unit can be used to monitor and control in a safe way safety circuits in applications including emergency stops, safety access, safety magnetic switches, safety limit switches, electro-mechanical interlocks, or safety barriers.

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## PROGRAMMABLE SAFETY RELAY SRP SERIES

The SRPMFA164 programmable safety relay is a standalone safety device that is able to handle all safety functions in a machinery or whole system.

The relay is fully configurable via SRPSW01 software that is downloadable free of charge from the website [LovatoElectric.com](http://LovatoElectric.com), thus allowing for simpler wiring and lower costs.

The SRPMFA164 safety module is able to monitor and control safety circuits in applications including: light curtains, photocells, laser scanners, emergency stops, electromechanical interlocks, access interlocks, safety magnetic switches, RFID sensors, sensing mats or edges, two-hand control devices, or maintained-action enabling pushbuttons. Complex systems can be handled through a multiplicity of I/O ports: 16 digital inputs are included, together with 4 single inputs for restart interlock, EDMs or single-input devices, 4 pairs of OSSD safety outputs, 4 status outputs and 4 test outputs.

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## RFID SAFETY SENSORS SSF SERIES

Provided with RFID technology, these sensors offer a high level of protection up to PLe / SIL 3, also when connecting 16 sensors in series. The SSF series sensors are available with two types of connectors, either M12 or pigtail with 15cm M12 connector, two coding levels (either generic or Teach-in) and then can be easily adapted to the specific needs of the application. The units are versatile and reliable, an ideal choice for a broad range of industrial applications. With a long life and simple use guaranteed, RFID SSF safety sensors offer the highest safety levels achievable.

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### MOULDED CASE CIRCUIT BREAKERS P5 SERIES

The moulded case circuit breakers P5 series with electronic trip units provide high tripping accuracy, wide flexibility when adjusting protection parameters and a wide range of currents covered by a single product code. The adjustable parameters are: the overload protection current, the tripping threshold for short circuit protection and small delay in short circuit tripping. In the four-pole version, the fourth pole can be set up with different switching levels from the main poles. Additionally, specific UL489-approved versions are available for the North American market.

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### SWITCH DISCONNECTORS AND CHANGEOVER SWITCHES GL SERIES UP TO 1000A

The GL series of switch disconnectors and changeover switches now covers applications up to 1000A. The new construction size covers currents of 630A, 800A and 1000A. Switch disconnectors are also available in UL98 versions (600A and 800A). The handles, which are available with the highest degree of protection on the market (IP66, IP69K and NEMA 4X), allow for direct-operated versions or door coupling with the addition of a shaft extension. To complete the range, terminal lugs, auxiliary contacts, terminal covers, phase barriers and captive nut accessories are available.

**Sec. 14**



### MOTORISED CHANGEOVER SWITCHES GL SERIES

The new GLCM type motorised changeover switches are available in three-pole and four-pole versions up to 315A. Additionally, cULus-approved versions are available according to the UL1008 standard with general use current values at 100A and 200A. The motor unit allows for three wide-range supply voltages: 24VDC, 110...125VAC/DC and 208...277VAC. The new motorised changeover switches include a slot for inserting EXP type expansion modules and adding further relay outputs or a RS485/Modbus communication module.

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### SWITCH DISCONNECTORS WITH FUSE HOLDERS TYPE GEF

The new switch disconnectors with fuse holders have a compact modular structure and include 3 different sizes: up to 100A, 125-160A and 250A. These switches are available either in three-pole or four-pole versions and include either NFC type fuse holders from 50A to 125A or NH from 63A to 250A. Additionally, the selection includes several new accessories, such as a new direct control handle, terminal covers and extension shafts for the door coupling handle.

**Sec. 14**



### SWITCH DISCONNECTORS FOR PHOTOVOLTAIC APPLICATION TYPE GLD

The selection of switch disconnectors from LOVATO Electric is now extended with a new type of specific products for photovoltaic applications up to 1500VDC. The new switch disconnectors can be used either with direct control or door coupling and feature a wide range of accessories to cover all installation requirements. LOVATO Electric has filed a patent application for the innovative power pole control technology. The contacts are designed to perform all operations in an extremely quick and safe way and are suitable for use within the DCPV1 category with loads up to 315A at 1500V. These devices are mounted either on a DIN profile rail or on plate with 4 screws with no restrictions of positions. The open or closed status of the power poles can be monitored through transparent windows provided on the front side of the switch disconnector. Specific UL98B-approved versions are available for the North American market.

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### POWER DISTRIBUTION BLOCKS ACB SERIES

The power distribution blocks are accessories that provide a centralised point for routing and distribute efficiently the power supply to the circuits. An electrical panel that is properly arranged offers several advantages, such as higher safety, easy assembly and maintenance, quick troubleshooting and simple modifications. Power distribution blocks play a key role in industrial electrical panel, as they provide a structured, safe and efficient way to connect and handle the wiring. The series includes distribution blocks in single-pole, two-pole and four-pole version with current ratings up to 520A.

**Sec. 15**



# NEW PRODUCTS



## UL APPROVED FUSE HOLDERS WITH STATUS INDICATOR LIGHT

The range of FB01F and FB01G type UL-approved fuse holders is now supplemented with the 2P and 3P versions with status indicator light.

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## SELECTIVE RESIDUAL CURRENT CIRCUIT BREAKERS

A selective residual current circuit-breaker mounted upstream of normal residual current circuit-breakers or residual current operated circuit breakers allows detachment on the individual faulty plant branch, avoiding the main protection trip.

The intentional delay in tripping of the selective RCDs gives the time to the downstream protections to trip, avoiding simultaneous opening of both general protection and single section protection, thus avoiding disruption of the entire system. They are available in two-pole and four-pole version of 40A and 63A, with type A protection sensitive to both sinusoidal currents and "unidirectional pulsed" currents, with  $I_{\Delta n}$  of 0.3A.

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## SURGE PROTECTION DEVICE WITH INTEGRATED FUSE AND "NO LEAKAGE CURRENT"

The surge protection device SA1F34A275R combines the performance of SPD type 1 and 2 into a single product. The presence of the integrated fuse does not require any backup protection. The "no leakage current" technology allows it to be installed upstream of energy meters as it does not influence the measurement of consumed energy.

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## SURGE PROTECTION DEVICES TYPE 1CA/ OPEN-TYPE 1 UL-CERTIFIED

The SG13PA...RUL surge protection devices have plug-in cartridges and are ideal in all small-size systems for protecting the main switch all down to the terminal equipment. As cULus-approved devices according to the UL1449 standard, 4th edition – Type 1CA / Open-Type SPD, these surge protection devices are suitable for installation in machineries and systems for the North American market.

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## SURGE PROTECTION DEVICES FOR DATA LINES

The range of C2-D1 type surge protection devices for data lines additionally includes the new SASD types, which are suitable to protect 24VDC bus lines (e.g., intercom) and telephone lines (110VDC).

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## SURGE PROTECTION DEVICES TYPE 1, 2 FOR PHOTOVOLTAIC APPLICATIONS UP TO 1500VDC

The selection of LOVATO Electric SPD is extended by a new type 1, 2 model with voltage rating Un 1500VDC.

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### EARTH LEAKAGE RELAYS A TYPE

The offer of type A earth leakage relays from LOVATO Electric is now extended with two new models with display screen. A backlit display with three different backlight options (red, yellow, or green) allows for continuously monitoring the relay status. Other versions with 1 or 2 adjustable switching thresholds are available.

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### EARTH LEAKAGE RELAYS B TYPE

The novel B type modular relay, featuring a display screen, is an ideal solution for applications involving DC leakage currents, such as inverters or UPS. This earth leakage relay has two adjustable switching threshold values: an alarm and a pre-alarm value. Matching toroids with diameters ranging from 35 to 210mm are also available.

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### INSULATION MONITORING RELAY

LOVATO Electric is launching a new insulation monitoring relay, the PMIB1A230 model.

This device allows the monitoring of the insulation to earth in power supply networks up to 230VAC that are insulated from the ground (IT systems). The insulation level can be measured through the detection of the leakage current generated towards the earth. In addition to indications of device status (ON) and low insulation (TRIP), TEST and RESET buttons are provided on the front of the device. The switching threshold can be adjusted via a potentiometer. A changeover contact from a voltage-free relay is available in order to report the low insulation signal remotely.

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### INTERFACE PROTECTION SYSTEMS

The PMVF series of interface protection systems is renewed by the PMVF52, PMVF81, PMVF61 and PMVF71 codes, all suitable for co-generation systems according to the connection requirements to power distribution networks for renewable energy generators specified by the CEI 0-21 (PMVF52), DEWA DRRG and SEC (PMVF61), ENA G98/G99 (PMVF71), VDE-AR-N 4105 and VDE 0126-1-1 standards for low voltage, VDE-AR-N 4110 for medium voltage and VDE-AR-N 4120 for high voltage (PMVF81).

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### BACKUP POWER SUPPLY PMVFUPS02

The PMVFUPS02 unit is able to provide power for at least 5 seconds to interface protection systems and switches when the grid fails, as required (Low Voltage

Ride Through) by the standards applicable to connections to co-generation systems. Since the energy is accumulated in capacitors, no maintenance is required for replacing batteries.

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### PMVF3000 INTERFACE PROTECTION SYSTEM

LOVATO Electric introduces the new PMVF3000 interface protection system according to the CEI 0-16 standard for medium voltage. The new PMVF3000 features a LCD graphic widescreen colour display as well as a built-in Ethernet port that allows the remote monitoring of the protection.

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# NEW PRODUCTS



## PRIORITY CHANGE RELAYS FOR 3 OR 4 MOTORS LVMP30

They manage the alternation between 3 or 4 motors, with the purpose of making homogeneous operating time and wear. They are typically used in pumping systems where there may be more than two pumps to be controlled alternately. The presence of the keypad with display allows to set up the system configuration by selecting the number of motors to control, the setting of motor switch-on and switch-off delays and to monitor useful information such as the number of starts and operating hours of each motor.

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## ATEX-CERTIFIED INDUSTRIAL RELAYS HR80 TYPE

Propane gas is ever more widely used in refrigeration applications due to its high energy efficiency and eco-friendliness. However, this means that the electrical equipment installed in refrigerators containing the gas must comply with the ATEX regulations for potentially explosive atmospheres. HR80 relays are designed specifically for these applications, are rated for a current of 30A and are available for 2 NO contacts or 2 changeover contacts. They are equipped with Faston terminals and suited for screw mounting to the panel.

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## MODULAR SWITCHING POWER SUPPLIES PSN SERIES

PSN is the new series of switching power supplies with single-phase input 100...240VAC, compact dimensions and a housing compatible with modular control panels. Available in versions with 12VDC or 24VDC output and power from 24 to 100W, they are designed for installation in both building automation and industrial sector to supply electronic and electromechanical devices with DC control such as contactors, time relays, sensors, PLCs, displays, SSRs and other equipment.

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## PRE-ASSEMBLED INDUSTRIAL RELAYS HR SERIES

HR series relays are now also supplied already assembled on their socket. This solution combines the reliable performance of HR series relays with practically of a pre-assembled supply, simplifying management thanks to a single ordering code and speeding up the realisation of electrical panel. Each kit includes the relay, socket and retain/release clip. The HRA range of pre-assembled relays is available with screw terminals or push-in terminals and also includes kits with an integrated noise filter.

**Sec. 24**



## MICRO PLC LRK SERIES

Simple but functional, the new micro PLCs LRK series are the ideal solution for managing small automation tasks, both in civil and industrial sectors. The integrated Ethernet port allows programming from either a local PC or remotely and it can also be used for interfacing with a control and supervision system using Modbus-TCP protocol. Furthermore, through the integrated web server, it's possible to monitor the real-time status of the micro PLC and project variables directly from a web browser. The program memory size is doubled compared to the LRD series, enabling the implementation of more complex programs. Base modules with 10, 12, or 20 integrated I/Os are available, with the possibility of expansion via modules LRE type.

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## SWITCHING POWER SUPPLIES PSN SERIES

Switching power supplies designed for DIN rail mounting with single-phase input 100...240VAC and 24VDC output. Their main strength is their extremely compact dimensions, allowing installation in panels with limited space. Available in versions with output power from 120W to 480W, they feature active PFC function (except for the type PSN112024L), ensuring reduced losses and achieving a high level of efficiency. The range is cULus approved for sale in the North American market.

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### ENERGY METERS DMED311

The range of 3-phase energy meters from LOVATO Electric is now updated with the new direct insertion model DMED311, together with its MID-approved version with operating temperature extended to 70 °C. Its main features are as follows: 3-phase meter up to 80A with 4 modules only (72mm), MID-approved up to 70 °C, built-in RS485 communications port and input for rate selection.

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### ENERGY METERS DMED341

The new range of DMED341 energy meters from LOVATO Electric was conceived specifically for the world of charging stations for electric vehicles.

All codes are MID- and MIR-approved up to 70 °C (158 °F). Additionally, the DMED341MID7E codes are approved according to the German Eichrecht calibration regulation. Finally, the DMED341MID7ER code is also MID-approved for exported energy, in addition to imported energy.

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### POWER ANALYSER DMG9000 WITH DC AUXILIARY POWER

The DMG9000D048 power analyser with DC auxiliary power supply is used in applications where an analyser is mounted on board within the machinery, where an auxiliary supply line is provided, typically at 24VDC, or in electric panels of generating set systems, wherein power is usually supplied by 12VDC or 24VDC batteries and finally when a UPS system is provided. The built-in RS485 and Ethernet ports allow for an easy integration in supervision networks. A web server works as an access point for parameter configuration and measurement readout directly via browser, with no dedicated software to be installed on a PC and for managing the built-in memory, where historical data on the most important measures can be stored.

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### GATEWAY DATA LOGGERS EXCGLB SERIES

The EXCGLB series of gateway data loggers is suitable for energy monitoring in complex systems, for supervising power factor controllers or systems that are actuated by soft starters or by variable speed drives, for remote controlling of micro PLCs and furthermore, in versions equipped with a GPS function, in applications with generating set controllers and when geolocalisation of rented machines is needed. Communications with field devices is done via RS485 serial port or Ethernet, while connections to data collection software can be accomplished via wired Ethernet, Wi-Fi or cellular network. The system is open to accept connections to third-party devices or exchanging information with preexisting supervision software. With a 72mm modular housing, the logger is available in three different radio configurations:

• Wi-Fi • LTE (4G) and GNSS (GPS) • LTE (4G).

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### GATEWAY EXCCON02

The EXCCON02 gateway allows for data on a RS485 network to be transferred to Ethernet, thus favouring integration with serial ports in a corporate network. Through a Modbus-RTU to Modbus-TCP protocol conversion function, the gateway is able to optimize the exchange of data between communication masters and slaves.

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### REMOTE DISPLAY UNIT EXCRDU2

The EXCRDU2 units allows for controlling and monitoring up to 32 drives, either soft starters from the ADXL or ADXNP series or variable speed drives from the VLB series equipped with RS485 port, including mixed configurations. Through the front keyboard with LCD widescreen graphic color display and built-in RS485 port, the operator is able to start or stop motors, monitor their status and survey the main electric measurements. If used for controlling variable speed drives, the unit also allows for regulation of motor frequency, adjustment of PID control setpoint, or inversion of the motor rotation direction. The unit is provided with a RS485 connection cable (3m) and front seal for an IP65 protection level.

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# 1922

## A long tradition of style

We have been managing energy since **1922**: we are in the fourth generation of a family that has led the company from the beginnings of electrical engineering to today's mix of electromechanics, electronics and software.

Our mission is to create **innovative, reliable products** and offer services to satisfy our customers' requirements.



Bergamo - ITALY



# Sustainability

## Responsible industrial development

Since its foundation, LOVATO Electric has operated with **passion and dedication**, according to **values and principles** that have guided the company's management for generations towards the goal of **industrial development that is attentive to people, the environment and society in general**.

A strategic approach to all ESG (Environmental, Social and Governance) aspects has been an integral part of the Company's business model for over 100 years.



# Worldwide

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## International presence

Our successful business in Italy has enabled us to open 14 foreign branches (Canada, China, Croatia, Czech Republic, France, Germany, Poland, Romania, Spain, Switzerland, Turkey, United Arab Emirates, United Kingdom and USA) and set up a network of 90 importers to assure availability of **LOVATO Electric** products in over 100 countries worldwide.

The presence of **LOVATO Electric** in the major world markets is the result of its ongoing strategy of internationalisation.

# The subsidiaries

<b>UK</b>	<b>United Kingdom</b> LOVATO ELECTRIC LTD	<b>D</b>	<b>Germany</b> LOVATO ELECTRIC GmbH
<b>F</b>	<b>France</b> LOVATO ELECTRIC SAS	<b>E</b>	<b>Spain</b> LOVATO ELECTRIC SAS
<b>PL</b>	<b>Poland</b> LOVATO ELECTRIC SP. Z O.O.	<b>CZ</b>	<b>Czech Republic</b> LOVATO ELECTRIC S.R.O.
<b>CN</b>	<b>China</b> LOVATO ELECTRIC (SHANGHAI) CO LTD	<b>TR</b>	<b>Turkey</b> LOVATO ELEKTRİK LTD
<b>US</b>	<b>USA</b> LOVATO ELECTRIC Inc.	<b>CA</b>	<b>Canada</b> LOVATO ELECTRIC Corp.
<b>UAE</b>	<b>United Arab Emirates</b> LOVATO ELECTRIC ME FZE	<b>RO</b>	<b>Romania</b> LOVATO ELECTRIC SRL
<b>HR</b>	<b>Croatia</b> LOVATO ELECTRIC d.o.o.	<b>CH</b>	<b>Switzerland</b> LOVATO ELECTRIC AG

## Production sites

In addition to its historic Italian headquarters in Bergamo, the company has **two factories**: one in the **Czech Republic**, which handles the assembly and testing of some electromechanical products, and one in **Croatia** which designs and manufactures rotary cam switches.

Pisek  
CZECH REPUBLIC





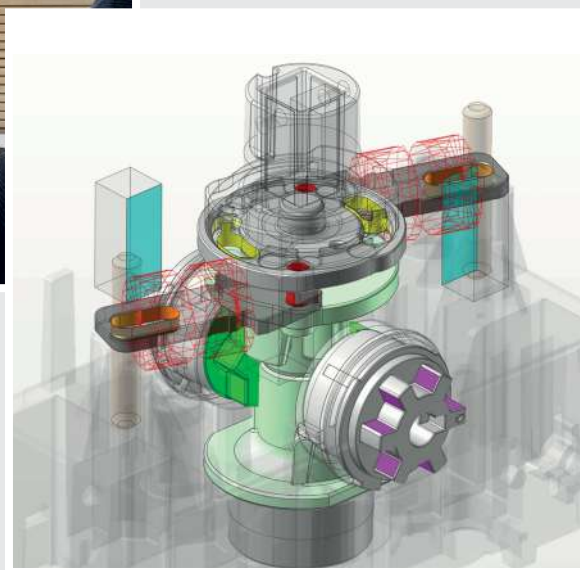
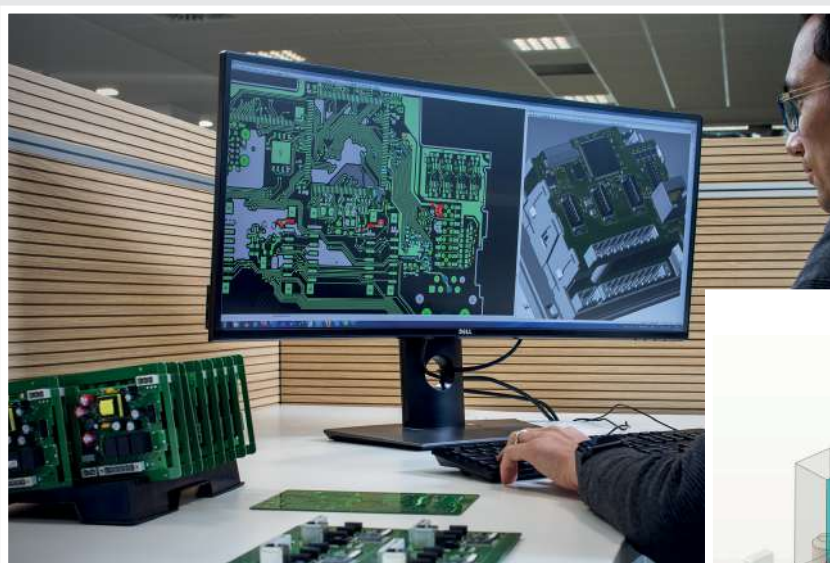
# Italian design

Italian design has always been our hallmark: our designers, researchers and engineering experts work in our Bergamo offices.



# Research and development

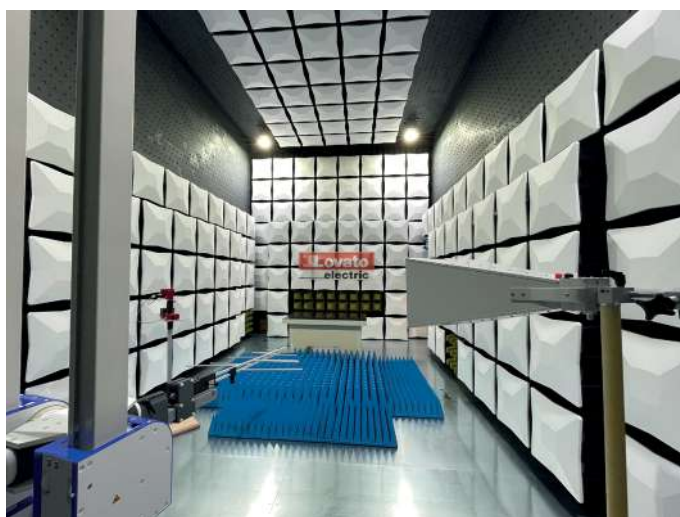
A staff of experienced designers and researchers, based in Bergamo, develop innovative and reliable products using the most modern software available on the market today.





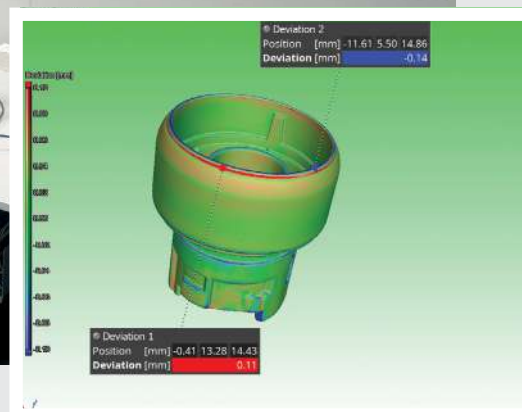


Products that are designed for the most diverse applications and installed all over the world need to meet high standards of reliability and stringent certifications. The research and development laboratory is outfitted with modern equipment and works together with our design offices to reduce time to market for new products and grow our company know-how. The **LOVATO LAB** is recognised as a Customer Testing Facility by IMQ and is classified as a laboratory codified by ACAE for performing tests to obtain Certificates of Conformity according to international standards.



# Quality

LOVATO Electric, striving for continuous improvement, invests in the professional growth of its employees and in advanced quality control instrumentation and software. Modern measurement systems are used to meet the most varied and stringent quality control requirements, and employ product validation (PPAP), risk analysis (FMEA) and problem solving (8D) methods to guarantee reliability and continuously improve our processes and products.



**ENERGY  
MANAGEMENT**  
(SGE) ISO 50001: 2018



**ENVIRONMENTAL  
MANAGEMENT**  
(ISO 14001: 2015)



**MANAGEMENT OF  
HEALTH AND SAFETY  
AT WORK**  
(ISO 45001: 2018)



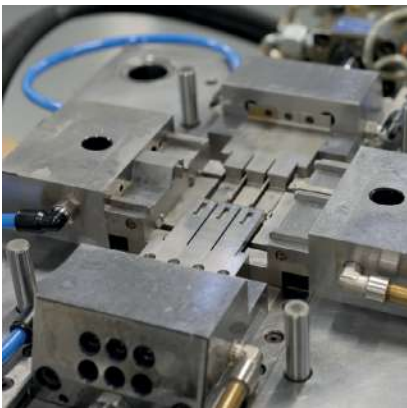
**QUALITY  
MANAGEMENT**  
(ISO 9001:2015)



# Production

## Mould construction

Our tooling department designs and fabricates the moulds we use to make our plastic components. The department, thanks to the know-how of its staff, automation and synergy with the design office, makes numerous new moulds every year.



## Plastic moulding

The moulding department has always been one of the company's strategic resources. We have numerous presses, from 50 to 300 tons (both electric and bi-component), working 3 eight hour shifts around the clock.





## Electronic board construction

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**LOVATO Electronic** is a state-of-the-art department dedicated to the production of electronic boards (SMT). It covers an Electrostatic Protected Area (EPA) and consists of intelligent warehouses with a capacity of more than 2,500 reels, static warehouses with humidity control for sensitive components and PCBs (printed circuit boards) alongside a board assembly line equipped with Pick & Place and 3D inspection machines for solder paste and board deposit control after remelting. An ICT (in-circuit test) station with 6 mobile probes and a system for complete traceability of electronic components complete the department's equipment.



## Assembly

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Our assembly department is housed in a large area. It features the most advanced assembly and testing lines. The machines are connected to the company computer system to enable continuous performance monitoring, production programming in line with the Industry 5.0 philosophy, and registration of tests and tracking data for each individual product.



# Training



## Experience and expertise

To meet the growing demand for technical training of industrial automation and energy management professionals, LOVATO Electric provides a full programme of courses through the LOVATO academy.

The offering includes, among others, courses on: micro PLCs and HMIs, **energy management**, electric motor starting and control, and surge arrestors.



# **ACADEMY**

**LOVATO Academy** manages the technical training programme for the company's partners and customers.

Located at our Bergamo offices, the classroom is equipped with the most recent audiovisual aids and **interactive training benches**, and is the ideal place to learn about the use of our products and their programming and monitoring software.



LOVATO Electric's training uses various methods for delivering content in a blended learning approach, combining conventional methods with the teacher in front of the class with remote synchronous training and online tutorials.

For more details on our training programme, go to **academy.LovatoElectric.com**.



Register with our YouTube channel to see the latest video tutorials and videos about our company.

