



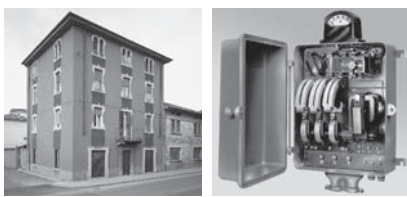
# Products and solutions for machine builders (OEM)





LOVATO Electric S.p.A. - Bergamo - Italy

## Tradition and innovation



### Since 1922

The first LOVATO Electric headquarters founded in Bergamo in 1922: the starting point of the grand industrial adventure.



### Italian design

Highly-qualified design, technical and research staff fully develop and design innovative and reliable products in the Bergamo offices, using state-of-the-art software.



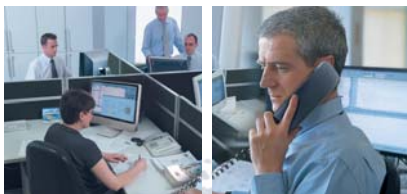
### Most advanced manufacturing facilities

LOVATO Electric manufactures its products with cutting-edge technology.



### Quality and certifications

LOVATO Electric products comply with the major international quality standard requirements.



### Customer care service

The Customer Service team offers prompt and professional assistance for products and applications.



### International presence in over 100 countries

Eight foreign branches and widespread official sales affiliates assure product assistance and availability in over 100 countries worldwide.

**Lovato**  
United Kingdom  
LOVATO (UK) LTD

**Lovato**  
Germany  
DELTEC LOVATO GmbH

**Lovato**  
Spain  
LOVATO ELECTRIC S.L.U.

**Lovato**  
Poland  
LOVATO ELECTRIC SP. Z O.O.

**Lovato**  
Czech Republic  
LOVATO S.R.O.

**Lovato**  
USA  
LOVATO ELECTRIC INC

**Lovato**  
Canada  
LOVATO ELECTRIC CORPORATION

**Lovato**  
Mexico  
LOVATO ELECTRIC DE MEXICO, S.A. DE C.V.

# PRODUCTS AND SOLUTIONS FOR MACHINE BUILDERS (OEM)

## Application fields



### Food industry

Food catering and processing.



### Packaging

Machinery for product packaging, packing and film wrapping.



### Materials movement

Conveyor belts and automatic product stocking machinery.



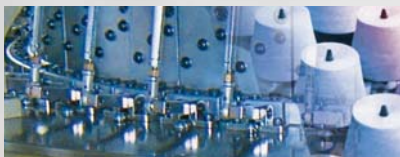
### Lifting systems

Industrial and civil elevators, platform lifts, escalators.



### HVACR

Heating, ventilation, air conditioning and refrigeration.



### Textile industry

Textile and clothing machinery.



### Machine tools

Machinery used in manufacturing and mechanical industries.



### Compressors

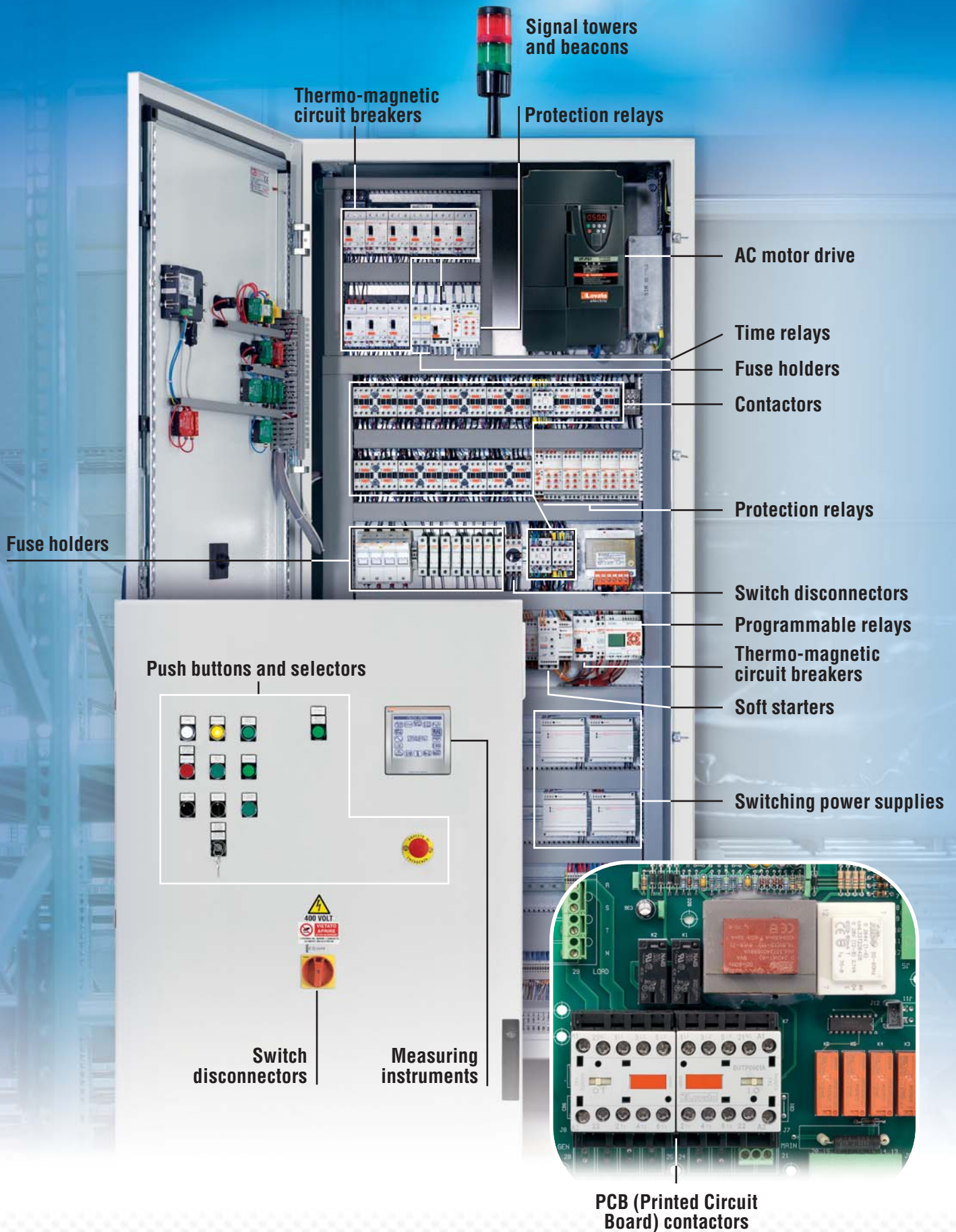
Pneumatic systems for automation, drying, refrigeration.

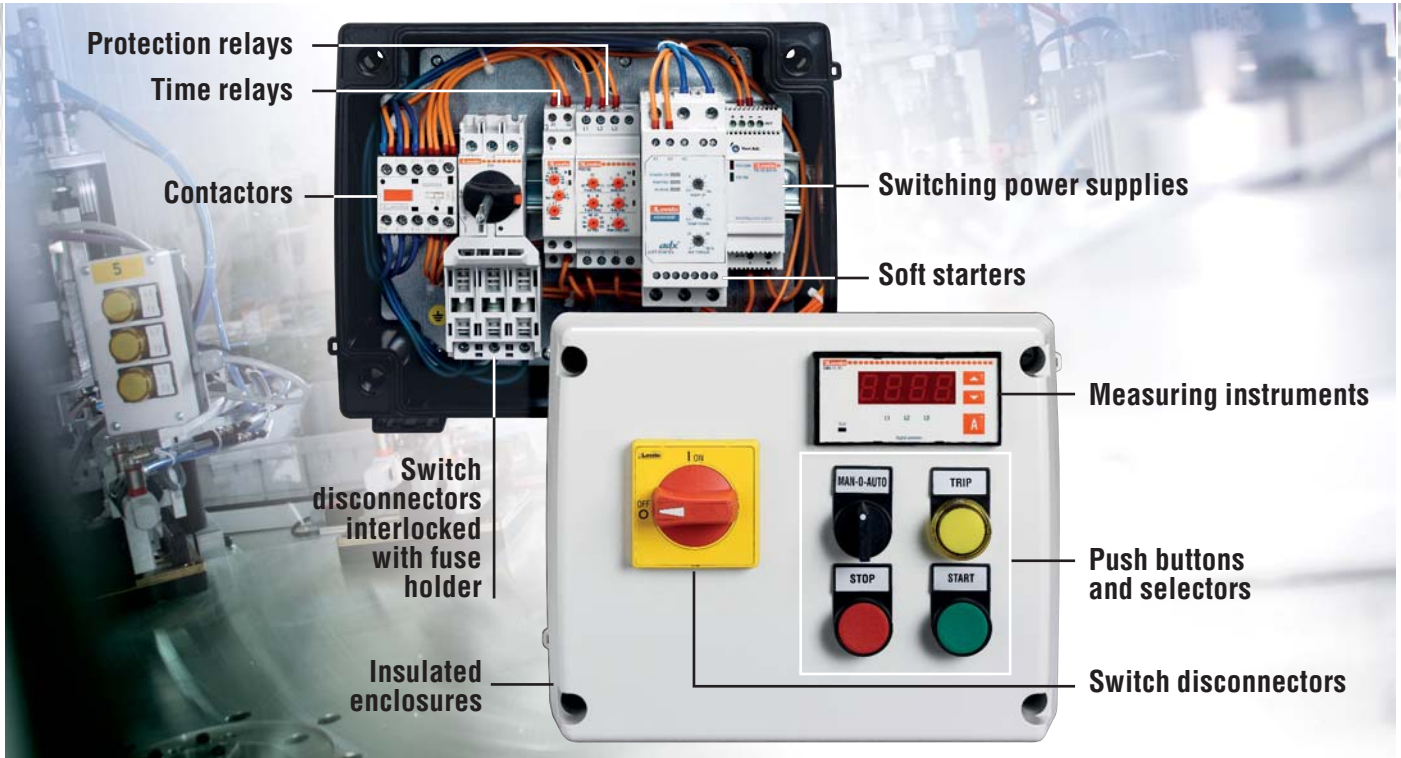


### Welding machines

Industrial welding machines for metals, plastics and other materials.

# PRODUCTS AND





## THERMO-MAGNETIC CIRCUIT BREAKERS

- ▶ Wide adjustment range 0.1 to 100A
- ▶ Breaking capacity  $I_{cu}$  50kA (400V) up to 100A
- ▶ Suitable for isolation
- ▶ Comprehensive line of accessories
- ▶ Wall and flush mount enclosures.



## SWITCH DISCONNECTORS

- ▶ 16A to 1600A ratings
- ▶ Three and four pole types and with fuse holder
- ▶ Versions: direct operating, door coupling and in housing
- ▶ Wide range of accessories
- ▶ Interlocking fuse holder up to 32A.



## CONTACTORS

- ▶ Three-pole versions up to 630A in AC3 duty
- ▶ Four-pole versions up to 1600A in AC1 duty
- ▶ Four-pole versions 2NO+2NC or 4NC
- ▶ Control relays with 1NO+3NC, 2NO+2NC or 4NC contacts
- ▶ Versions for AC or DC control
- ▶ Low-consumption DC versions.



## MOTOR PROTECTION RELAYS

- ▶ Thermal overload relays for current 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 AND INSULATED ENCLOSURES

- ▶ Direct-on-line starters in insulated enclosure complete with or without thermal overload relay
- ▶ Insulated enclosures for customer-assembled starters
- ▶ Reversing and changeover contact or assemblies
- ▶ Star-delta starters, open frame and in insulated enclosure versions.



## CONTROL AND SIGNALLING UNITS

- ▶ **Ø22mm push buttons and selectors**
  - Metal and plastic, quick installation by simple rotation
- ▶ **Ø62mm signal beacons**
  - Steady and blinking light, pulsed and continuous sound.
- ▶ **Ø70mm signal towers**
  - Modular and combinations up to 7 modules
  - Steady or blinking light, flash, pulsed or continuous sound



## LIMIT, MICRO AND FOOT SWITCHES

- ▶ Dimensions to EN 50047 standards
- ▶ Dimensions to EN 50041 standards
- ▶ Versions with interchangeable and rotatable heads
- ▶ Insertable and interchangeable auxiliary contact blocks
- ▶ Safety function versions.



## ROTARY CAM SWITCHES

- ▶ 16A to 125A ratings
- ▶ Suitable for motor starting, circuit connection, changeover, switching on and off
- ▶ Custom circuit schemes available
- ▶ Versions in housing.



## TIME RELAYS

- ▶ Modular version for consumer switchboards
- ▶ 35mm DIN rail mount version
- ▶ Plug-in and flush-mount versions
- ▶ Vast range of functions and time scales
- ▶ Reliable time and repeat accuracy.



## PROTECTION RELAYS

- ▶ Modular versions for 35mm DIN rail fixing
- ▶ Minimum and maximum voltage monitoring relays for single and three-phase systems, with or without neutral
- ▶ Voltage monitoring relays for asymmetry, phase loss and phase sequence control
- ▶ Minimum and maximum current monitoring relays
- ▶ Frequency monitoring relays
- ▶ Phase shift control relays.



# LEADERS (OEM)

## FUSE HOLDERS

- Modular concept for 10x38, 14x51 and 22x58 fuse sizes
- IP20 protection degree, finger safe and sealable cover to increase user's safety
- Version with status indicator to quickly identify the fuse to replace
- UL and CSA certified versions.



## MEASURING INSTRUMENTS AND CURRENT TRANSFORMERS

- Digital voltmeters, ammeters, wattmeters, frequency meters and cosphi meters
- Digital multimeters, expandable, with graphic LCD
- Single, two and three-phase connection
- Totally programmable digital outputs
- Communication interface RS485, RS232, USB, Ethernet for remote control and datalogger
- Data concentrator
- Current transformers up to 4000A.



## SOFT STARTERS

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



## AC MOTOR DRIVES

- Versions for single-phase up to 2.2kW at 230V and three-phase up to 630kW at 400V
- Special functions for pump and fan control using PID algorithm
- EMC suppressor built in all versions
- Selectable motor control mode: V/f, vector, energy saving
- Selectable digital and analog input and output functions
- IP54 versions available on request
- HVAC versions, compliant with IEC/EN 61000-3-12 standards, available on request.



## PROGRAMMABLE LOGIC RELAYS

- 10, 12 and 20 Input/Output base modules
- Expansion modules with 4 Inputs and 4 Outputs
- Maximum configuration: 44 Inputs/Outputs
- RS232 serial interface for PC or program backup memory connection
- HMI terminal.



## SWITCHING POWER SUPPLIES

- Single-phase versions up to 480W output, two-phase up to 100W and three-phase up to 960W
- 12VDC and 24VDC versions
- Modular and DIN rail mount versions
- Output voltage adjustment by front potentiometer
- Versions with configurable parallel connection.





[www.LovatoElectric.com](http://www.LovatoElectric.com)

**LOVATO ELECTRIC S.P.A.**

CONTROL SOLUTIONS FOR INDUSTRY

VIA DON E. MAZZA, 12 - 24020 GORLE (BERGAMO) ITALY

Tel. +39 035 4282111 Fax +39 035 4282200

Email: [info@LovatoElectric.com](mailto:info@LovatoElectric.com)

Sales Department Tel. +39 035 428354 - Fax +39 035 4282400

**LOVATO Electric office in the world**

**United Kingdom**

LOVATO (UK) LTD  
Tel. +44 8458 110023  
[www.Lovato.co.uk](http://www.Lovato.co.uk)

**Czech Republic**

LOVATO S.R.O.  
Tel. +420 382 265482  
[www.LovatoElectric.cz](http://www.LovatoElectric.cz)

**Germany**

DELTEC LOVATO GmbH  
Tel. +49 7237 1733  
[www.DeltecLovato.de](http://www.DeltecLovato.de)

**USA**

LOVATO ELECTRIC INC  
Tel. +1 757 545 4700  
[www.LovatoUsa.com](http://www.LovatoUsa.com)

**Spain**

LOVATO ELECTRIC S.L.U.  
Tel. +34 93 7812016  
[www.LovatoElectric.es](http://www.LovatoElectric.es)

**Canada**

LOVATO ELECTRIC CORPORATION  
Tel. +1 450 681 9200  
[www.Lovato.ca](http://www.Lovato.ca)

**Poland**

LOVATO ELECTRIC SP. Z O.O.  
Tel. +48 71 7979010  
[www.LovatoElectric.pl](http://www.LovatoElectric.pl)

**Mexico**

LOVATO ELECTRIC DE MEXICO, S.A. DE C.V.  
Tel. +52 555 3415662  
[www.LovatoElectric.com.mx](http://www.LovatoElectric.com.mx)

