
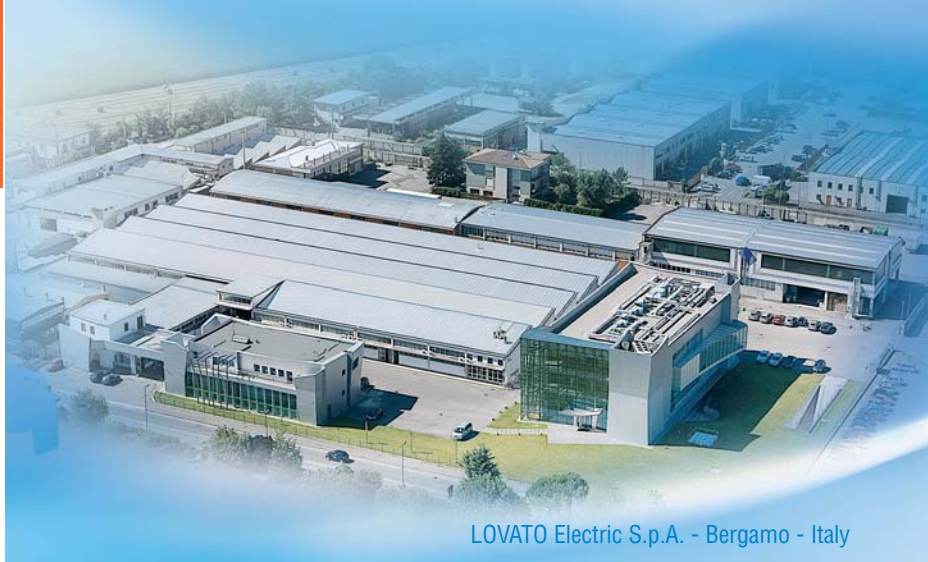




# Products and solutions for lifting systems

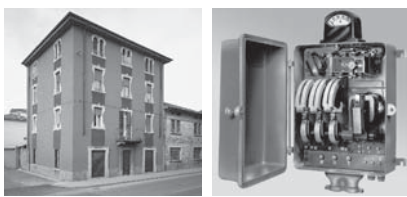
 **Lovato**  
**electric**  
*100% electricity*





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.



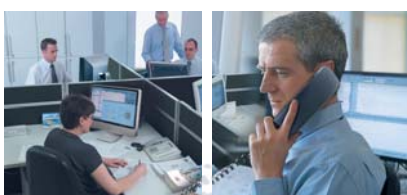
### Most advanced manufacturing facilities

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.

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Poland  
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Canada  
LOVATO ELECTRIC CORPORATION

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

**PRODUCTS AND SOLUTIONS FOR  
LIFTING SYSTEMS**

**Application  
fields**



**Hoists**



**Elevators**



**Service and goods lifts**



**Automotive hydraulic lifts**



**Platforms**

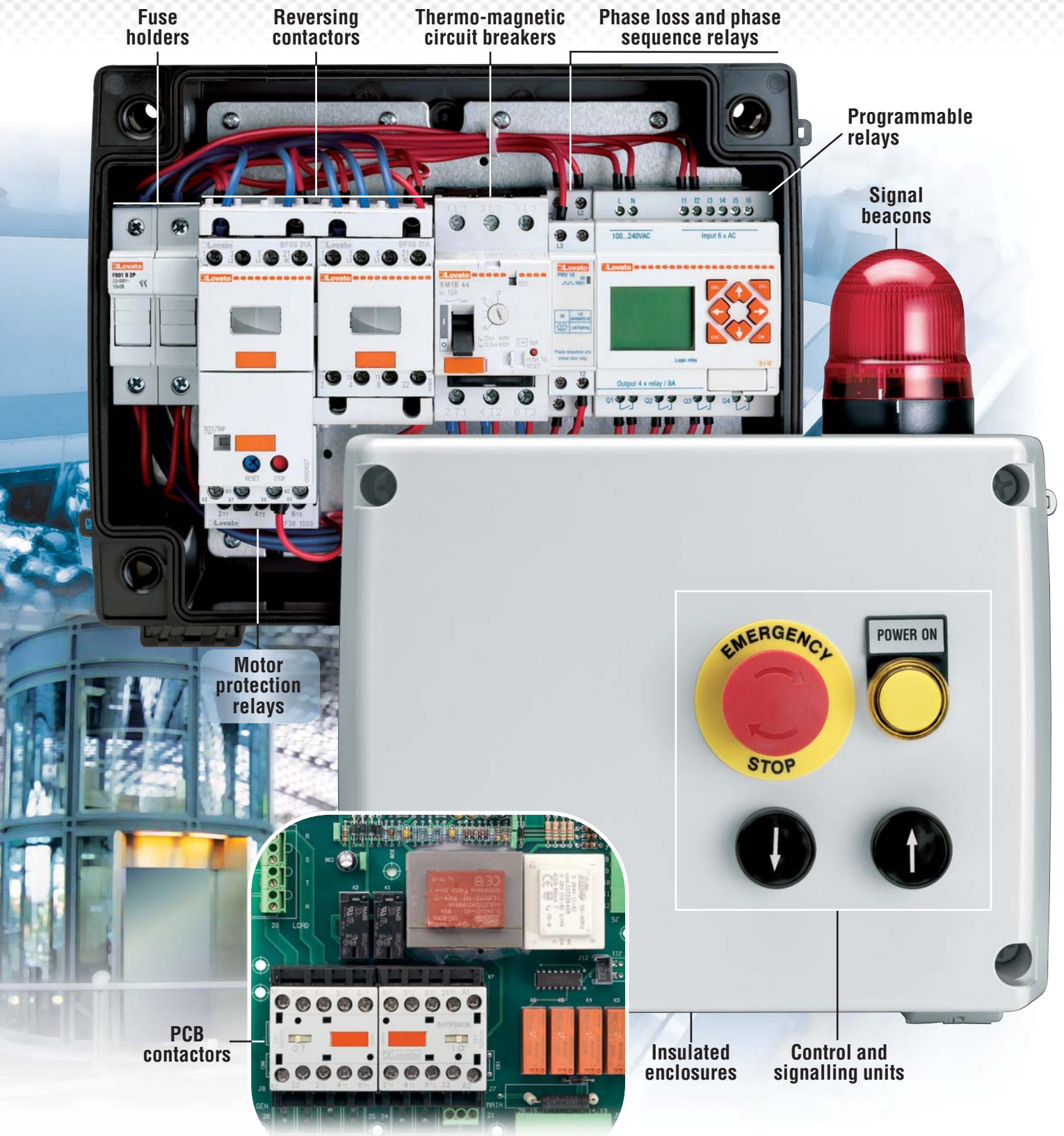


**Overhead cranes**



**Escaladors**

# P R O D U C T S



# A N D S O L U T I O N

## 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 with 2NO+2NC or 4NC up to 38A in AC3 duty
- ▶ AC or DC control versions
- ▶ Low consumption DC versions
- ▶ Printed circuit board (PCB) 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

- ▶ Direct-on-line starters in insulated enclosure, complete with or without thermal overload relay
- ▶ Reversing and changeover contactor assemblies
- ▶ Star-delta starters, open frame and in insulated enclosure versions.



## INSULATED ENCLOSURES

- ▶ IP65 insulated enclosures for customer-assembled starters.



## CONTROL AND SIGNALLING UNITS

- ▶ **Ø22mm push buttons and selector switches**
  - Metal and plastic, quick installation by simple rotation
- ▶ **E-stops and pilot lights**
  - Metal and plastic, quick installation by simple rotation



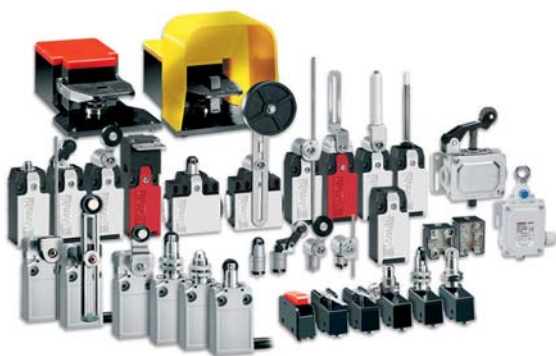
## SIGNAL TOWERS AND BEACONS

- ▶ **Ø70mm signal towers**
  - Modular and combinations up to 7 modules
  - Steady and blinking light, flash, pulsed and continuous sound
- ▶ **Ø62mm signal beacons**
  - Steady and blinking light, pulsed and continuous sound.



## LIMIT, MICRO AND FOOT SWITCHES

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



## 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, also 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.



## 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.



# G S Y S T E M S

## 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 inputs and outputs
- ▶ 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 port for PC or program backup memory connection
- ▶ HMI terminal.



## SWITCHING POWER SUPPLIES

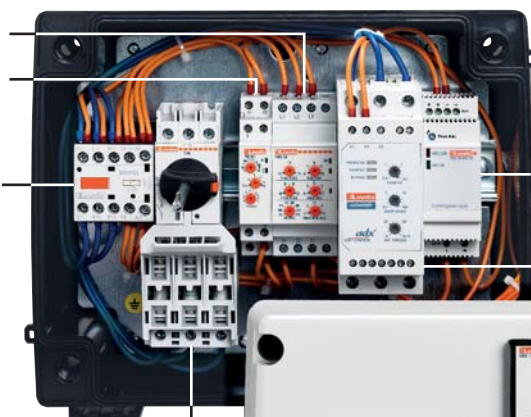
- ▶ Single-phase versions up to 480W output, two-phase up to 100W and three-phase up to 960W
- ▶ 12VDC and 24VDC versions
- ▶ Modular and DIN rail mount versions
- ▶ Output voltage adjustment by front potentiometer.



Protection relays

Time relays

Contactors



Switching power supplies

Soft starters

Switch disconnectors interlocked with fuse holder

Insulated enclosures



Measuring instruments

Push buttons and selectors

Switch disconnectors



Present in over 100 countries

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

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

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