

Products and solutions for pumping, irrigation and piping





### **Tradition** and Innovation

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





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



### **Italian design**

Highly-gualified 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.



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











### **Customer care service**

RINA 🔁

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



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



**Czech Republic** 

LOVATO S.R.O.

USA LOVATO ELECTRIC INC

Canada LOVATO ELECTRIC CORPORATION

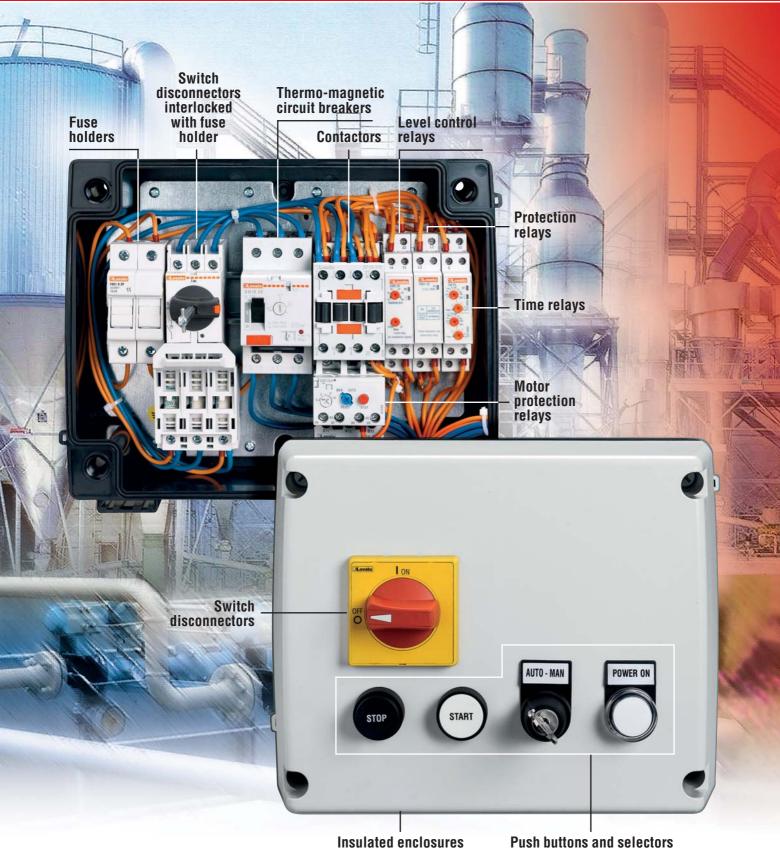
 Spain
 Poland

 LOVATO ELECTRIC S.L.U.
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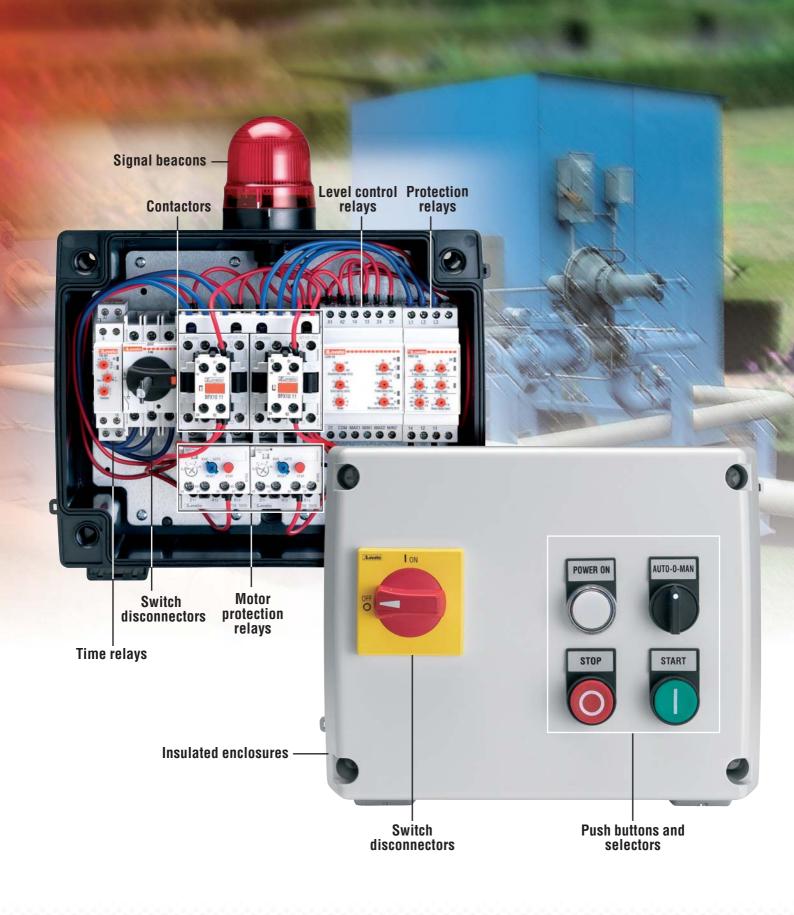


### **PRODUCTS AND SOLUTIONS FOR PUMPS, IRRIGATION AND PIPING**





## PRODUCTS AND





# SOLUTIONS FOR

### **THERMO-MAGNETIC CIRCUIT BREAKERS**

- > Wide adjustment range 0.1 to 100A
- Breaking capacity Icu 50kA (400V) up to 100A
- Suitable for isolation
- > Comprehensive line of accessories.



### 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
- AC or DC control versions
- Low consumption DC versions.



### **ELECTROMECHANICAL STARTERS**

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



### INSULATED ENCLOSURES

> IP65 insulated enclosures for customer-assembled starters.





## UMPING, IRRIGATIO

### **CONTROL AND SIGNALLING UNITS**

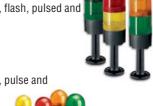
- > Ø22mm push buttons and selectors
- Metal and plastic, quick installation by simple rotation

#### E-stops and pilot lights



### 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, pulse and continuous sound.

Incandescent LED.

### **ROTARY CAM SWITCHES**

- > 16A up to 125A ratings
- Suitable for motor starting, circuit connection, changeover, switching on and off
- > Custom circuit schemes available



### 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
- Phase shift control relays.





### LEVEL CONTROL RELAYS AND ELECTRODES

- Level monitoring for electrically conductive liquids
- Modular and plug-in versions
- Adjustable 2.5-200kΩ sensitivity
- Single and three pole electrodes
- Startup priority change relays.





## ON AND PIPING

### **FUSE HOLDERS**

- Modular concept for 10x38, 14x51 and 22x58 fuse sizes
- IP20 protection degress, 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**

- Digital voltmeters, ammeters, wattmeters, frequency meters and cosphi meters
- Digital expandable multimeters with graphic LCD
- Connection for single, two and three phase systems
- Totally programmable digital outputs
- RS485, RS232, USB, Ethernet communication interface for remote control and data logging.



### **CURRENT TRANSFORMERS**

- Primary current: 40-4000A
- > Solid and split core versions
- Secondary current: 5A.



### 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<sup>®</sup>-RTU and propietary 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.



### **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.







### www.LovatoElectric.com

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