
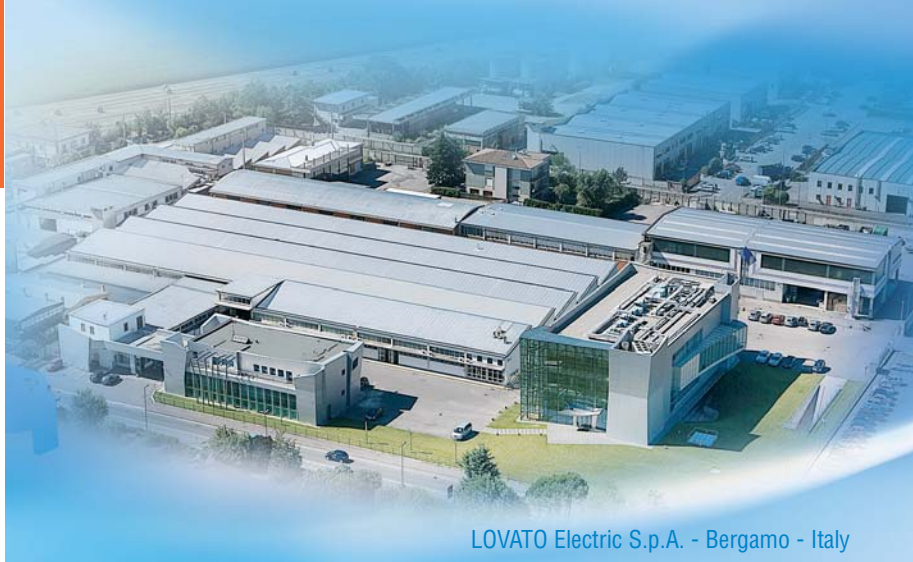




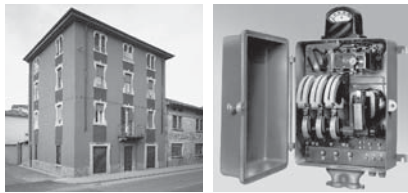
Products and solutions for power factor correction


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.



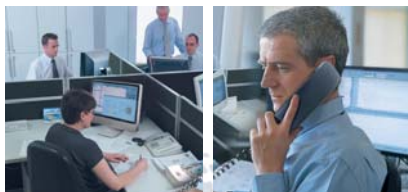
Most advanced manufacturing facilities

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.

- | | | | |
|---|---|---|---|
| 
United Kingdom
LOVATO (UK) LTD | 
Germany
DELTEC LOVATO GmbH | 
Spain
LOVATO ELECTRIC S.L.U. | 
Poland
LOVATO ELECTRIC SP. Z O.O. |
| 
Czech Republic
LOVATO S.R.O. | 
USA
LOVATO ELECTRIC INC | 
Canada
LOVATO ELECTRIC CORPORATION | 
Mexico
LOVATO ELECTRIC DE MEXICO, S.A. DE C.V. |

PRODUCTS AND SOL



Automatic power factor controllers

Fuse holders



Fuse holders

Contactors

L3
L2
L1
⊕

Switch disconnectors



ATTENTION
AVVERTENZA
ATTENCIÓN
ATTENÇÃO

1. Pericolo di morte. Non toccare le parti scoperte. Non toccare le parti scoperte. Non toccare le parti scoperte.

2. Pericolo di morte. Non toccare le parti scoperte. Non toccare le parti scoperte. Non toccare le parti scoperte.

3. Pericolo di morte. Non toccare le parti scoperte. Non toccare le parti scoperte. Non toccare le parti scoperte.

4. Pericolo di morte. Non toccare le parti scoperte. Non toccare le parti scoperte. Non toccare le parti scoperte.

5. Pericolo di morte. Non toccare le parti scoperte. Non toccare le parti scoperte. Non toccare le parti scoperte.

6. Pericolo di morte. Non toccare le parti scoperte. Non toccare le parti scoperte. Non toccare le parti scoperte.

7. Pericolo di morte. Non toccare le parti scoperte. Non toccare le parti scoperte. Non toccare le parti scoperte.

8. Pericolo di morte. Non toccare le parti scoperte. Non toccare le parti scoperte. Non toccare le parti scoperte.

9. Pericolo di morte. Non toccare le parti scoperte. Non toccare le parti scoperte. Non toccare le parti scoperte.

10. Pericolo di morte. Non toccare le parti scoperte. Non toccare le parti scoperte. Non toccare le parti scoperte.

UTIONS FOR POWER F

SWITCH DISCONNECTORS

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



CONTACTORS

- ▶ 7.5 - 12.5 - 15 - 20 - 25 - 30 - 38 - 45 - 50 - 60kVAR ratings at 400V
- ▶ Versions with incorporated limiting resistors
- ▶ Three-pole types up to 630A in AC3 duty
- ▶ Four-pole types up to 1600A in AC1 duty
- ▶ Wide range of accessories



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.



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

- ▶ 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.



AUTOMATIC POWER FACTOR CONTROLLERS

DCRK SERIES

- Digital programming
- 5 or 7 steps (96x96mm housing)
- 8 or 12 steps (144x144mm housing)
- Capacitor overload protection
- Internal panel temperature sensor
- TTL/RS232 programming interface
- Automatic set-up function
- Configurable alarms.



DCRJ SERIES

- Digital programming
- 8 or 12 steps (144x144mm housing)
- Dual display
- Independent voltage measurement input
- Capacitor overload protection
- Internal-external panel temperature sensor
- RS232 programming and supervision interface
- RS485 supervision interface
- Voltage and current harmonic measurement
- Event log
- Automatic set-up function
- Configurable alarms
- Suitable for medium-voltage systems.



DCRJ12F TYPE (static outputs)

- Digital programming
- 11 steps plus 1 alarm output (144x144mm housing)
- Dual display
- Independent voltage measurement input
- Capacitor overload protection
- Internal-external panel temperature sensor
- RS232 programming and supervision interface
- RS485 supervision interface
- Voltage and current harmonic measurements
- Event log
- Configurable alarms
- Real Time Reaction to load variations (40...60ms)
- Configuration with combined static and electromechanical steps.

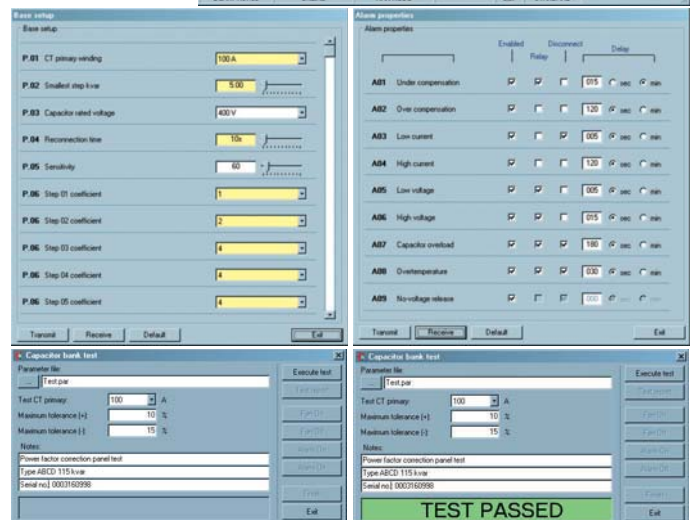
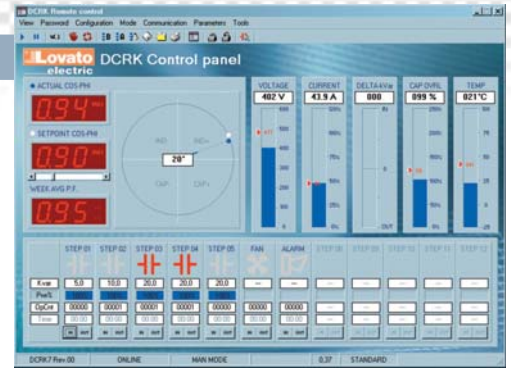


ACTOR CORRECTION

SET-UP AND REMOTE CONTROL SOFTWARE

For DCRK, DCRJ and DCRFJ12F controllers

- **Installation operation control**
 - Graphic and numerical viewing of measurements
 - Controller status
 - Virtual front panel
 - For each step: function - state.
- **Capacitor efficiency control**
 - Current kVAR measurement of each step
 - Counter for number of connections for each step
 - Hour counter register for total connection time of each step.
- **Access to all set-up parameters in 4 languages**
It is possible to:
 - Save, upload, print the parameters
 - Verify the changed parameter values
 - Restore default values.
- **Customising of alarm properties**
 - Alarm enabling
 - Alarm relay activating
 - Disconnection of steps
 - Alarm delay time.
- **Automatic testing of electric panel.**



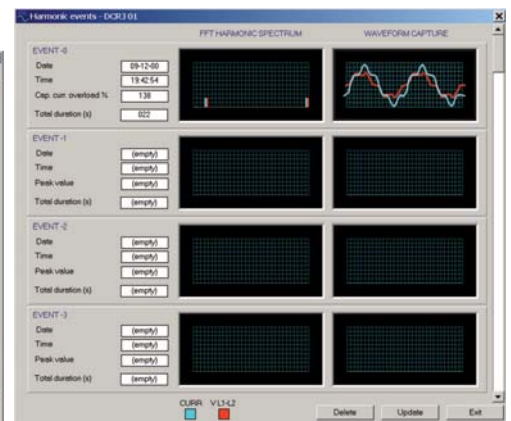
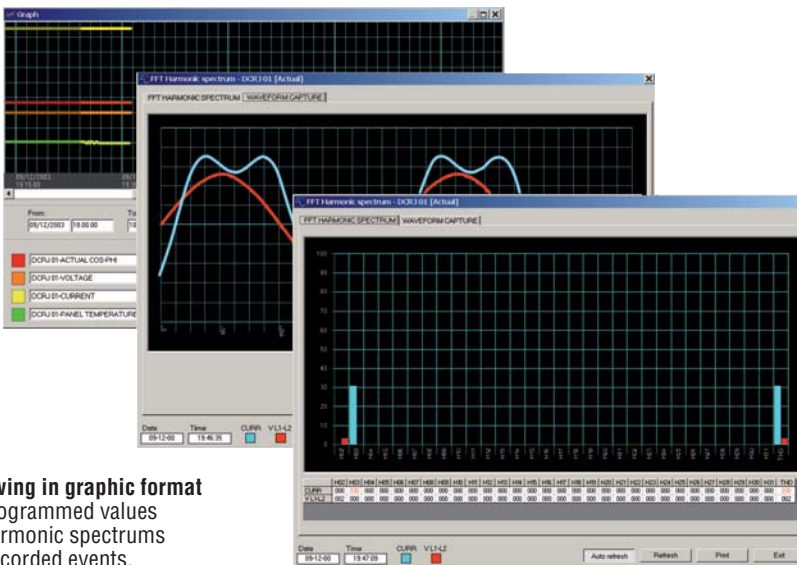
DCRJ-DCRJ12F SOFTWARE

- **Data collection (data logging)**
- **Event recording**
- **GSM modem support with SMS or email messaging**
- **"AUTOCALL" function for automatic PC connection**

Date	Time	EL-COS-PH	EL-VOLTO	EL-CURR-PA	EL-TEMP
09/12/2003	19:23:23	0.94 PFC	399	477.50	21
09/12/2003	19:23:26	0.94 PFC	399	477.50	21
09/12/2003	19:23:29	0.94 PFC	399	477.50	21
09/12/2003	19:23:32	0.94 PFC	400	478.10	21
09/12/2003	19:24:11	0.94 PFC	400	478.30	21
09/12/2003	19:24:21	0.94 PFC	399	478.30	21
09/12/2003	19:24:24	0.94 PFC	400	478.00	21

Date	Time	Event
12-09-03	19:29:02	[001] - Auxiliary power on
12-09-03	19:29:04	[016] - Remote communication active
12-09-03	17:55:40	[018] - Access to setup menu from remote control
12-09-03	17:55:40	[015] - System reset (warm boot)
12-09-03	17:55:42	[016] - Remote communication active
12-09-03	18:00:23	[015] - System reset (warm boot)
12-09-03	18:00:24	[016] - Remote communication active
12-09-03	18:04:44	[017] - Remote communication breakdown
12-09-03	19:03:17	[016] - Remote communication active
12-09-03	19:08:06	[017] - Remote communication breakdown
12-09-03	19:10:53	[016] - Remote communication active
12-09-03	19:12:01	[017] - Remote communication breakdown
12-09-03	19:16:31	[016] - Remote communication active
12-09-03	19:17:37	[017] - Remote communication breakdown
12-09-03	19:24:39	[018] - Remote communication active
12-09-03	19:40:15	[018] - Access to setup menu from remote control
12-09-03	19:40:15	[015] - System reset (warm boot)
12-09-03	19:40:16	[016] - Remote communication active
12-09-03	19:42:24	[006] - Switched to AZT mode

- **Viewing in graphic format**
 - Programmed values
 - Harmonic spectrums
 - Recorded events.





Present in over 100 countries

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

Sales Department: Tel. +39 035 4282354 - Fax +39 035 4282400

LOVATO Electric office in the world

United Kingdom

LOVATO (UK) LTD
Tel. +44 8458 110023
www.Lovato.co.uk

Czech Republic

LOVATO S.R.O.
Tel. +420 382 265482
www.LovatoElectric.cz

Germany

DELTEC LOVATO GmbH
Tel. +49 7237 1733
www.DeltecLovato.de

USA

LOVATO ELECTRIC INC
Tel. +1 757 545 4700
www.LovatoUsa.com

Spain

LOVATO ELECTRIC S.L.U.
Tel. +34 93 7812016
www.LovatoElectric.es

Canada

LOVATO ELECTRIC
CORPORATION
Tel. +1 450 681 9200
www.Lovato.ca

Poland

LOVATO ELECTRIC SP. Z O.O.
Tel. +48 71 7979010
www.LovatoElectric.pl

Mexico

LOVATO ELECTRIC
DE MEXICO, S.A. DE C.V.
Tel. +52 555 3415662
www.LovatoElectric.com.mx

