HMI

Human Machine Interface

Lovato electric

Energy and Automation

Simplicity | Reliability | Flexibility

The HMIs (Human Machine Interface) in the LRH series are the best solution for controlling and monitoring all applications that require a cost-effective and functional solutions that are easy to configure. The robust plastic enclosure features a degree of protection of **IP66**, Type 2 and 4X. Rounding off the hardware are the high-resolution colour touchscreen graphic display, the high-performance CPU and the **Ethernet, USB and serial** communication ports. Support for the **Modbus-RTU, Modbus-TCP, OPC UA and Simatic S7 Ethernet** protocols permits integration of the HMIs with the most common fieldbus systems. LRH series HMIs are extremely flexible and can be configured simply and intuitively thanks to the **LRHSW programming software** which offers graphical editors, a large library of preconfigured objects as well as many options for configuration and advanced functions. Typical **pre-configured scenarios** are also available for the most common applications (micro-PLC control, motor drive control, photovoltaic system monitoring, etc.). They can be imported into LRH to permit immediate interface with LOVATO Electric devices or used as an example for editing as desired according to your requirements.

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L R H S W PROGRAMMING
SOFTWARE

■ FUNCTIONALITY

- Simple and intuitive interface
- Extensive gallery of images, symbols and widgets, preconfigured and customisable
- Easy-to-access toolbars
- Data acquisition and display according to real-time trends or graphical gauges
- Vector graphics support
- Data logging
- Client/server architecture based on HTML5 web technology
- User and password management
- Multilingual application support
- Recipe management
- Alarm and event management
- Efficient scripting with JavaScript
- Support for animations, dynamic object properties, TrueType fonts
- Built-in web server
- Off-line and on-line simulation of applications.

powerful, intuitive programming with LRHSW Software!

■ SCENARIOS

- Pre-configured scenarios for typical applications managed with LOVATO Electric products:
  - Control of an LRD series Micro PLC
  - Supervision of a pumping station with VLB3 series variable speed drives
  - Control of motor driven by ADXL series soft starters
  - Monitoring of a photovoltaic system with DME energy meters
  - Monitoring of a power factor system with DCRG8 regulator
  - Supervision and control of a automatic transfer switch panel with ATL 610 controller
- Simple and immediate interfacing between LRH and LOVATO Electric devices
- Can be modified and adapted at will to your requirements
- Available for free download from the www.LovatoElectric.com website.
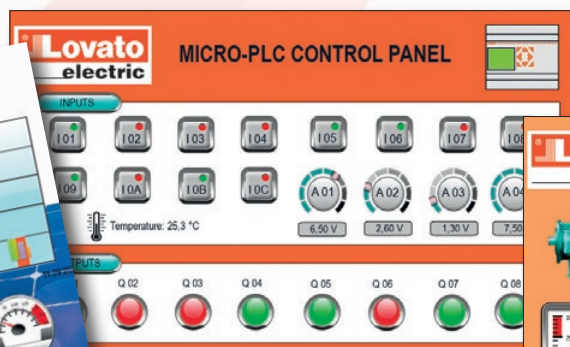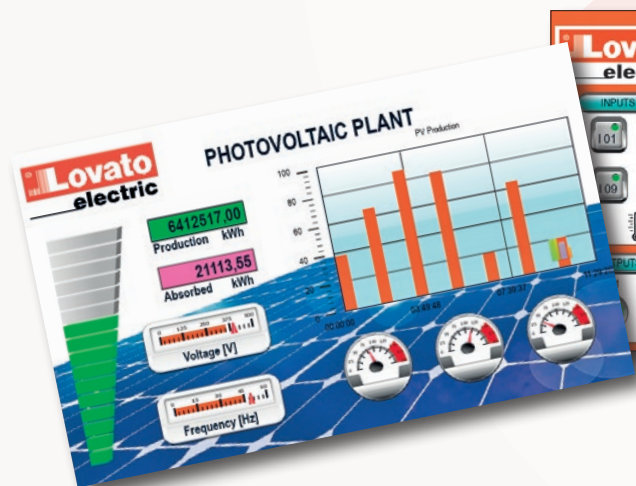
TECHNICAL SPECIFICATIONS

MODEL	LRHA04	LRHA07	LRHA10
System resources			
Display	4.3" TFT 16:9	7" TFT 16:9	10.1" TFT 16:9
Colours	64K		
Resolution	480×272 pixels	800×480 pixels	1024×600 pixels
Brightness	200Cd/m^2		
Dimming	Yes		
Touchscreen	Resistive		
CPU	ARM Cortex A8 300MHz	ARM Cortex A8 1GHz	ARM Cortex A8 1GHz
Operating system	Linux 3.12		
Flash	2GB	4GB	4GB
RAM	256MB	512MB	512MB
Application memory	60 MB		
Real Time Clock, RTC backup, buzzer	Yes		
Interfaces			
Ethernet	1 (10/100Mbit)		
USB	1 (Host v2.0, max. 500mA)		
Serial port	1 (RS232, RS485, RS422, configurable via software)		
Specifications			
Supply	12-24VDC		
Max. consumption at 24VDC	0.25A	0.30A	0.38A
Battery	Yes (supercapacitors)		
Ambient conditions			
Operating temperature	0...+50°C (vertical installation)		
Storage temperature	-20...+70°C		
Humidity	5-85%, RH without condensation		
Degree of protection	Front: IP66, Type 2 and 4X; Rear: IP20		
Dimensions			
Front panel	147x107mm	187x147mm	282x197mm
Cutout	136x96mm	176x136mm	217x186mm
Depth	34mm		
Certifications	cULus, EAC, RCM		

ORDER CODES

Order code	Description	Quantity per package	Weight
		n°.	[kg]
HMI			
LRHA04	4.3" TFT LCD display	1	0.400
LRHA07	7" TFT LCD display	1	0.600
LRHA10	10" TFT LCD display	1	1.000
Programming software for HMI			
LRHSW01	User licence for LRHSW software (available for download from www.LovatoElectric.com website), valid for 1 unit	1	-
LRHSW01CD	LRH programming software (CD-ROM), including one LRHSW01 licence	1	0.057
RS485 connection cable			
EXCCAB02	RS485 connection cable for LRH, length 3m long	1	0.150
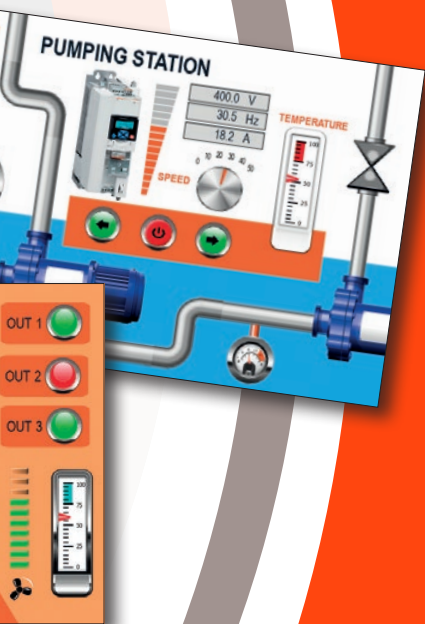
LRH

Instant use thanks to LOVATO Electric scenarios!

■ **SIMPLICITY AND EFFICIENCY**
- Simple design with low energy consumption
- Highly reliable industrial components.

■ **ROBUST**
- Plastic enclosure
- IP66
- Type 2 and 4X front.

■ **CERTIFICATIONS**
- cULus, EAC, RCM.

■ **DISPLAY**
- TFT graphic display
- Resistive touchscreen
- High brightness thanks to LED backlighting
- 64k colours
- Available in the most common formats: 4", 7" and 10".

■ **CONNECTIVITY**
- 10/100Mbit Ethernet port
- RS485, RS232, RS422 serial port configurable via LRHSW software
- USB v2.0 port
- Support for Modbus-RTU Master/Slave, Modbus-TCP Client/Server, OPC UA Client/Server protocols and Simatic S7 Ethernet.

■ **HIGH-PERFORMANCE CPU**
- Linux operating system
- Ample system resources
- Built-in web server
- HW and SW optimised to ensure maximum execution speed.

USB PORT

SUPPLY

10/100MBIT ETHERNET PORT

SERIAL PORT RS485, RS232, RS422

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HMI HUMAN MACHINE INTERFACE

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