



Page 26-2

#### EXPANSION MODULES EXP SERIES

- Digital inputs and outputs
- Analog inputs and outputs
- Communication modules (RS232, RS485, etc.)
- GSM/GPRS modem
- Data storage with clock-calendar (RTC)
- Powered directly by the base product
- Plug and play application
- Automatic identification by base product
- Rear base product mounting with no need of tools.



Page 26-3

#### EXPANSION MODULES EXM SERIES

- Digital inputs and outputs
- Communication modules (RS232, RS485, etc.)
- Data storage with clock-calendar (RTC)
- Separate auxiliary power supply
- Base product connection by IR port
- Plug and play application
- Automatic identification by base product
- Side base product mounting.



Page 26-4

#### ACCESSORIES

- RS232/RS485 converter drive
- Protective covers
- Communication devices
- Connecting cables.

**Majestic Global Ltd.**   
**万高宝有限公司**

Tel: (852)2307 8933 或 1500 204 2004(中国热线) Fax: (852)2307 8950  
Email: info@mgl.com.hk Website: www.mgl.com.hk  
Address: 中国香港新界沙田安平街八号伟达中心1207-8室  
香港 | 深圳 | 广州 | 北京 | 上海 | 武汉 | 西安



- Digital inputs and outputs
- Analog inputs and outputs
- Communication interface
- Data storage with clock-calendar
- Communication devices to connect LOVATO Electric products to personal computer, smartphone and tablet
- Connecting cables to link LOVATO Electric products to personal computer, modem and converter drive.

	SEC. - PAGE
<b>Expansion modules</b>	
EXP series .....	26 - 2
EXM series .....	26 - 3
<b>Accessories</b>	
Converter drive .....	26 - 4
Protective covers .....	26 - 4
Communication devices .....	26 - 5
Connecting cables .....	26 - 5

## Expansion modules EXP series for flush-mount products



EXP10...

**new**

Order code	Description	Qty per pkg	Wt
		n°	[kg]
Inputs and outputs.			
EXP10 00	4 digital inputs, opto-isolated	1	0.060
EXP10 01	4 static outputs, opto-isolated	1	0.054
EXP10 02	2 digital inputs and 2 static outputs, opto-isolated	1	0.058
EXP10 03	2 relay outputs, rated 5A 250VAC	1	0.050
EXP10 04	2 analog inputs, opto-isolated 0/4-20mA, PT100, 0-10V or 0...±5V	1	0.056
EXP10 05	2 analog outputs, opto-isolated 0/4-20mA, 0-10V or 0...±5V	1	0.064
EXP10 06	2 relay outputs to increase number of steps	1	0.064
Communication ports.			
EXP10 10	Opto-isolated USB interface	1	0.060
EXP10 11	Opto-isolated RS232 interface	1	0.040
EXP10 12	Opto-isolated RS485 interface	1	0.050
EXP10 13	Opto-isolated Ethernet interface with Web server function	1	0.060
EXP10 14	Opto-isolated Profibus-DP interface	1	0.080
Various functionality.			
EXP10 15	GPRS/GSM modem	1	0.080
EXP10 16	Capacitor bank protection	1	0.080
EXP10 30	Data storage, clock-calendar with backup battery for data logging	1	0.050
EXP10 31	Data storage, with Energy Quality (EN 50160), clock-calendar with backup battery for data logging	1	0.060
		1	0.050

**new**

### General characteristics

EXP series expansion modules can increase the functionality of the LOVATO Electric products, such as:

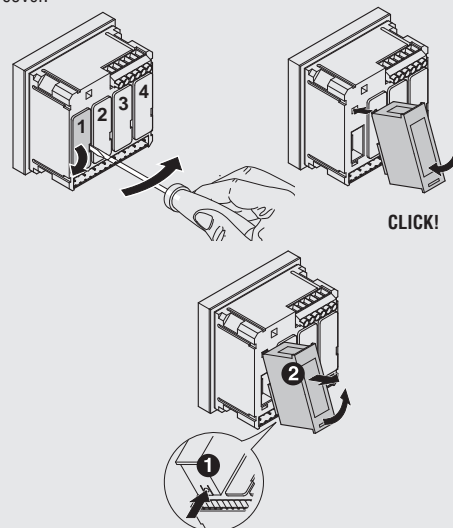
- Digital inputs
- Relay outputs
- Static outputs
- Analog inputs
- Inputs for PT100 temperature sensor
- Analog outputs
- Communication interface
- GPRS/GSM modem
- Data storage.
- Powered directly by the base product
- Automatic identification by the base product
- Rear base product mounting with no need of tools.

### Certifications and compliance

Certifications obtained: UL Listed, for USA and Canada (File E93601), as Listed Accessory under Auxiliary Devices.

Compliant with standards: IEC/EN 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3 or IEC/EN 61000-6-4 (depending on base product), UL508, CSA C22.2 n° 14.

For overall dimensions, wiring diagrams and technical characteristics, consult the instructions manual online in the LOVATO Electric website; see details on inside front cover.



### EXP series compatibility with LOVATO Electric products

FUNCTIONS	DIGITAL MULTIMETERS		DIGITAL POWER ANALYZERS		POWER FACTOR CONTROLLER	GENSET CONTROLLERS	
	DMG 700	DMG 800	DMG 900	DMG 900T	DCRG 8	RGK 800	RGK 900
EXP10 00	4 digital inputs, opto-isolated	●	●	●	●	●	●
EXP10 01	4 digital outputs, opto-isolated	●	●	●	●	●	●
EXP10 02	2 digital inputs and 2 static outputs	●	●	●	●	●	●
EXP10 03	2 relay outputs, rated 5A 250VAC	●	●	●	●	●	●
EXP10 04	2 analog inputs, opto-isolated, 0/4-20mA, PT100, 0-10V or 0...±5V		●	●	●	●	●
EXP10 05	2 analog outputs, opto-isolated, 0/4-20mA, 0-10V or 0...±5V		●	●	●	●	●
EXP10 06	2 relay outputs to increase number of steps				●		
EXP10 10	Opto-isolated USB interface	●	●	●	●	●	●
EXP10 11	Opto-isolated RS232 interface	●	●	●	●	●	●
EXP10 12	Opto-isolated RS485 interface	●	●	●	●	●	●
EXP10 13	Opto-isolated Ethernet interface with Web server function		●	●	●	●	●
EXP10 14	Opto-isolated Profibus-DP interface		●	●	●	●	●
EXP10 15	GPRS/GSM modem			●	●	●	●
EXP10 16	Capacitor bank protection				●		
EXP10 30	Data storage, clock-calendar with backup battery for data logging		●	●	●	●	●
EXP10 31	Data storage, with Energy Quality (EN 50160), clock-calendar with backup battery for data logging			●	●		

## Expansion modules EXM series for modular products



EXM10 00



EXM10 10

Order code	Description	Qty per pkg	Wt
		n°	[kg]
Inputs and outputs.			
EXM10 00	2 digital inputs and 2 static outputs, opto-isolated	1	0.137
EXM10 01	2 digital inputs, opto-isolated and 2 relay outputs, rated 5A 250VAC	1	0.147
Communication ports.			
EXM10 10	Opto-isolated USB interface	1	0.140
EXM10 11	Opto-isolated RS232 interface	1	0.125
EXM10 12	Opto-isolated RS485 interface	1	0.140
EXM10 13	Opto-isolated Ethernet interface with Web server function	1	0.140
EXM10 20	Opto-isolated RS485 interface and 2 relay outputs, rated 5A 250VAC	1	0.140
EXM10 30	Data storage, RTC with backup battery for data logging	1	0.140

### General characteristics

EXM series expansion modules can increase functionality of LOVATO Electric products, such as:

- Digital inputs
- Relay outputs
- Static outputs
- Communication interface
- Data storage.
- Connection to base product by IR (infrared beam) port
- Automatic identification by base product
- Side base product mounting.

### Certifications and compliance

Certifications obtained: UL Listed, for USA and Canada (File E93601), as Listed Accessory under Auxiliary Devices.

Compliant with standards: IEC/EN 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3 or IEC/EN 61000-6-4 (depending on base product), UL508, CSA C22.2 n° 14.

For overall dimensions, wiring diagrams and technical characteristics, consult the instructions manual online in the LOVATO Electric website; see details on inside front cover.

### Maximum combination



### EXM series compatibility with LOVATO Electric products

FUNCTIONS	ENERGY METERS	DATA CONCENTRATOR	DIGITAL MULTIMETER
	DME D310 T2	DME CD	DMG 300
EXM10 00	2 digital inputs and 2 static outputs, opto-isolated	•	•
EXM10 01	2 digital inputs, opto-isolated and 2 relay outputs, rated 5A 250VAC	•	•
EXM10 10	Opto-isolated USB interface	•	•
EXM10 11	Opto-isolated RS232 interface	•	•
EXM10 12	Opto-isolated RS485 interface	•	•
EXM10 13	Opto-isolated Ethernet interface with Web server function	•	•
EXM10 20	Opto-isolated RS485 interface and 2 relay outputs, rated 5A 250VAC	•	•
EXM10 30	Data storage, RTC with backup battery for data logging	•	•

### Converter drive



4 PX1

Order code	Description	Qty per pkg	Wt
		n°	[kg]
4 PX1	RS232/RS485 converter drive, galvanically isolated, 220-240VAC power supply (110-120VAC on request)❶. Repeater drive for RS485 bus extention	1	0.600

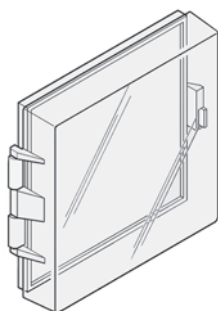
❶ RS232/RS485 opto-isolated converter drive, 38,400 Baud rate maximum, automatic or manual TRANSMIT line supervision, 220...240VAC ±10% power supply (110-120VAC supply on request).

#### General characteristics

The 4 PX1 converter drive can interface "slave" devices connected in an RS485 bus with a "master" equipped with RS232 interface port.

When configured appropriately, it can also be used as RS485 repeater whenever the devices connected to the bus are many or the maximum distance among the bus devices is longer than the allowed.

### Protective covers



31 PACR

Order code	Description	Qty per pkg	Wt
		n°	[kg]
PA 96X48	Front IP65 protective cover	1	0.048
31 PA96x96	Front IP54 protective cover	1	0.077
31 PACR	Front IP54 protective cover	1	0.107

#### General characteristics

Whenever higher IEC IP degree of protection is needed, the covers can be installed for this exact purpose and provide the protection required.

### Communication devices



CX 01

Order code	Description	Qty per pkg	Wt
		n°	[kg]
CX 01	PC ↔ LOVATO Electric product connecting cable, with USB optic connector for programming, data download, diagnostics and firmware upgrade	1	0.090
CX 02	PC ↔ LOVATO Electric product Wi-Fi connecting device for programming, data download, diagnostics and firmware upgrade	1	0.090
CX 03	GSM quad-band antenna (800/900/1800/1900MHz) for EXP10 15 expansion module	1	0.090

#### General characteristics

Communication devices to link Lovato Electric products to:

- Personal computer (PC)
- Smartphone
- Tablet.

#### CX 01

This USB/optical connector, complete with cable, allows to connect compatible Lovato Electric products with a PC without having to disconnect the the power supply from the electric panel.

The PC identifies the connection as a standard USB.

#### CX 02

With a Wi-Fi point connection, the LOVATO Electric products can be viewed by a PC, smartphone and tablet without having to connect cables.

#### CX 03

Compatible with major part of worldwide mobile networks, thanks to the 800/900/1800/1900MHz frequencies.

For overall dimensions, wiring diagrams and technical characteristics, consult the instructions manual online in the LOVATO Electric website; see details on inside front cover.

### Connecting cables



51 C4

Order code	Description	Qty per pkg	Wt
		n°	[kg]
51 C2	PC ↔ LOVATO Electric device connecting cable, 1.8m/2yd long	1	0.090
51 C3	PC ↔ GSM modem connecting cable, 1.8m/2yd long ❶	1	0.210
51 C4	PC ↔ RS232/RS485 LOVATO device connecting cable, 1.8m/2yd long	1	0.147
51 C5	Analog modem ↔ LOVATO Electric device connecting cable, 1.8m/2yd long ❶	1	0.111
51 C6	4 PX1 converter drive ↔ LOVATO device + EXP10 11 connecting cable, 1.8m/2yd long	1	0.102
51 C7	GSM modem ↔ LOVATO Electric device connecting cable, 1.8m/2yd long ❶	1	0.101
51 C8	ADX ↔ remote keypad connecting cable, 3m/3.3yd long	1	0.081
51 C9	PC ↔ analog modem connecting cable, 1.8m/2yd long	1	0.137
51 C11	PC ↔ TTL/RS232 connecting cable for RS232/TTL communication port, 2.8m/2yd long	1	0.090

❶ Consult Customer Service for information; see contact details on inside front cover.

#### General characteristics

Connecting cables to link LOVATO Electric devices to:

- Personal computer (PC)
- Modem
- Bus converter.

For overall dimensions, wiring diagrams and technical characteristics, consult the instructions manual online in the LOVATO Electric website; see details on inside front cover.

Majestic Global Ltd. 万高宝有限公司

Tel: (852)2307 8933 或 1500 204 2004(中国热线) Fax: (852)2307 8950

Email: info@mgl.com.hk Website: www.mgl.com.hk

Address: 中国香港新界沙田安平街八号伟达中心1207-8室

香港 | 深圳 | 广州 | 北京 | 上海 | 武汉 | 西安