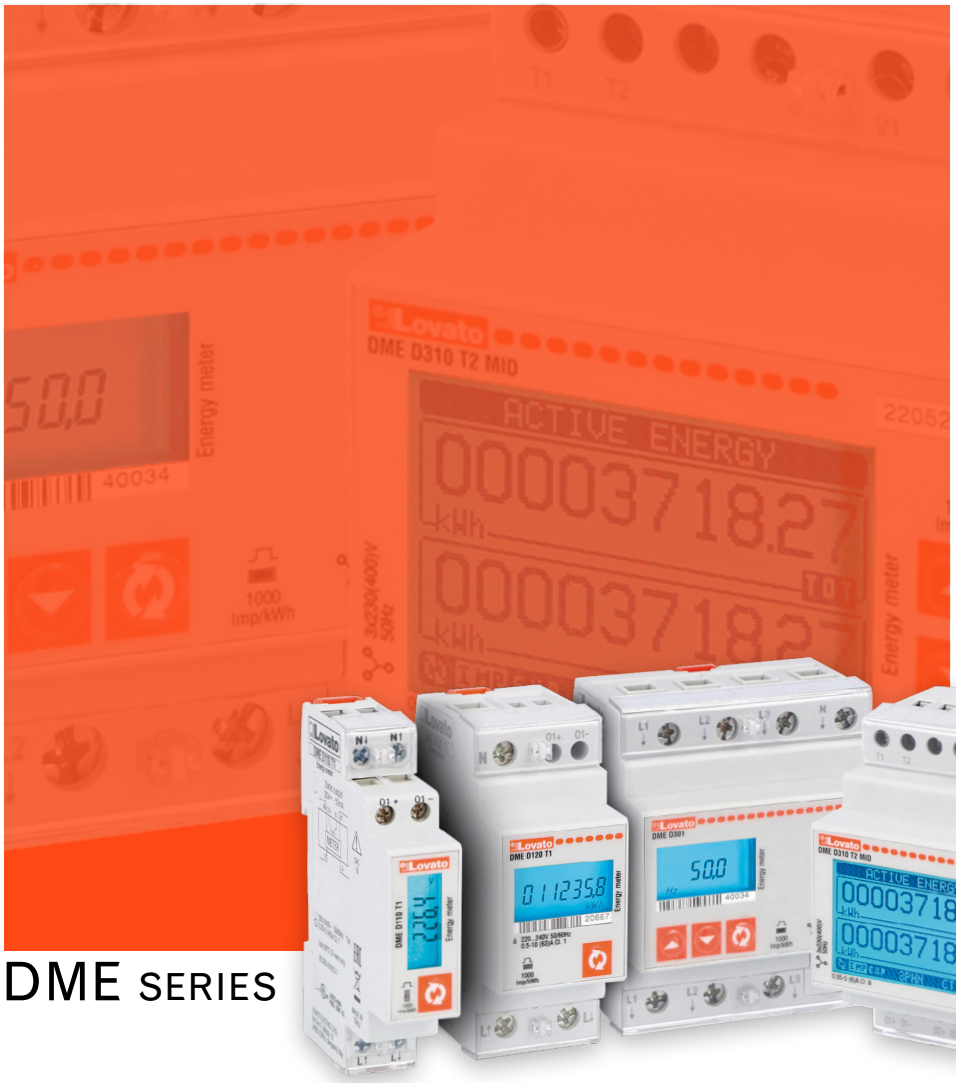
ENERGY METERS



DME SERIES

Lovato electric

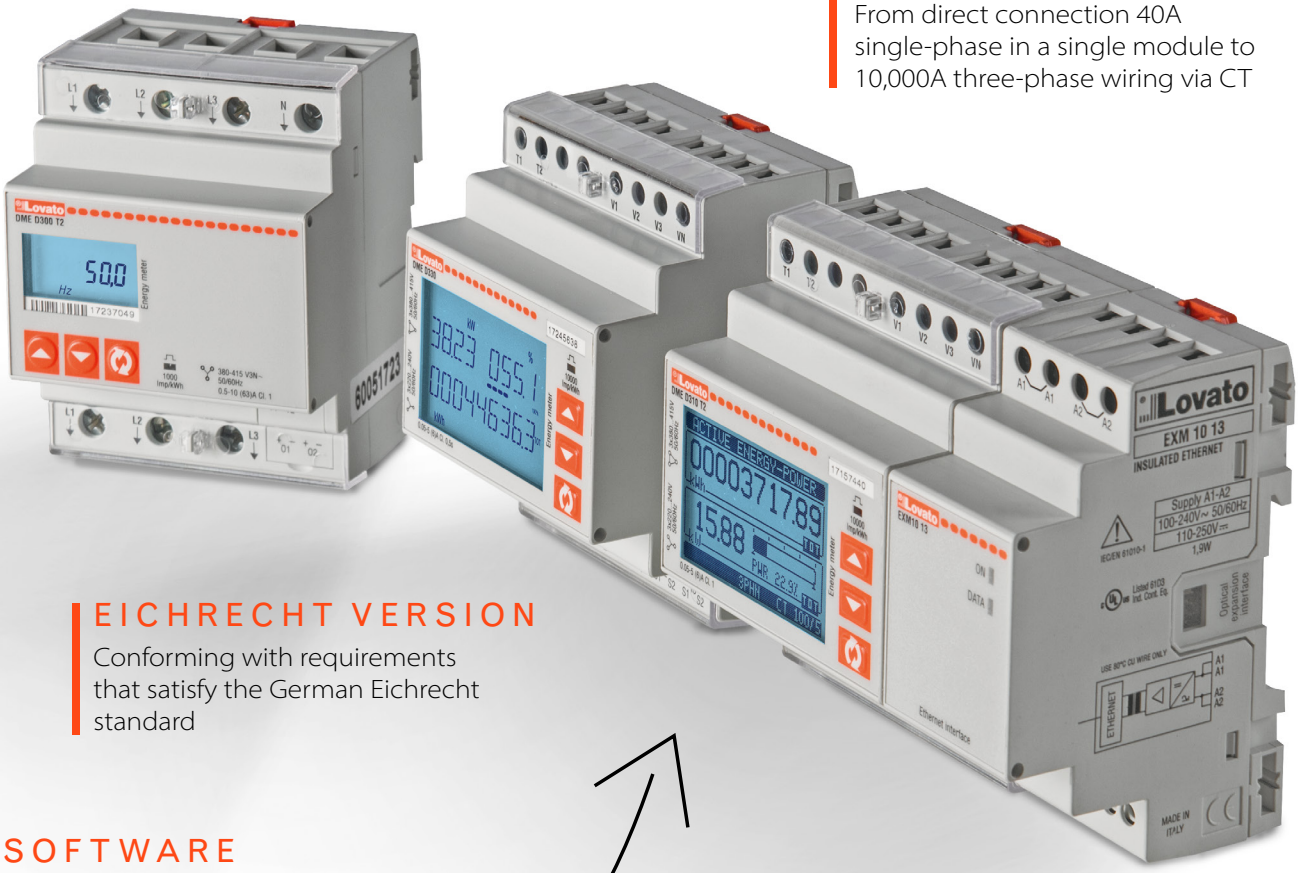
ENERGY AND AUTOMATION

PRECISION

0.5s accuracy class

COMPLETE RANGE

From direct connection 40A single-phase in a single module to 10,000A three-phase wiring via CT



EICHRECHT VERSION

Conforming with requirements that satisfy the German Eichrecht standard

SOFTWARE

Monitoring, configuration and remote control for energy management

Xpress Synergy

Energy Management

DME

MID VERSIONS

Energy meters certified for sub-metering even with extended temperature range (**-25... +70°C**) for outdoor applications

- total and partial energy meters (resettable)
- expandable versions with memory device for data logger, Ethernet communication and relay outputs for load disconnection
- versions with programmable output for energy pulses or alarm thresholds
- tariff input selection
- 4-quadrant measurements.

Photovoltaic

Lovato electric

ENERGY AND AUTOMATION

For efficient management of energy consumption

In a global scenario in which energy must be monitored and managed efficiently, LOVATO Electric presents its updated series of energy meters for single and three-phase systems. Compatibility with the EXM... type expansion modules and the availability of a data concentrator allow LOVATO Electric energy meters to connect with the most common communication systems (USB, RS232, RS485, M-BUS and Ethernet).

EASE OF USE
Backlight graphic display

COMMUNICATION
Modbus via RS232 or RS485, Ethernet or M-BUS

EXPANDABILITY
Input/output and communication modules

DME Series


Street lighting


Retail


Industry


Charging systems

Lovato electric
ENERGY AND AUTOMATION

220...
240
VAC

> SINGLE-PHASE

- rated supply voltage: 220...240VAC
- operating limit: 187...264VAC
- active energy measurement and accuracy:
  - standard version: class 1 (IEC/EN 62053-21)
  - MID-certified version: -25...+55°C class B (EN 50470-3)
  - MID-certified version: -25...+70°C class B (EN 50470-3)
- reactive energy measurement and accuracy: class 2 (IEC/EN 62053-23)
- flashing metrological LED for energy consumption indication
- terminal covers that can be sealed included
- protection rating: IP40 on front, IP20 on terminals
- multi-measurement
- built-in RS485 or M-Bus communication port.

SINGLE-PHASE WITH DIRECT WIRING		DME D100 T1	DME D110 T1	DME D111	DME D112	DME D115 T1	DME D120 T1	DME D121	DME D122
Maximum current		40A	40A	40A	40A	40A	63A	63A	63A
Display	Vertical, no backlight	■	■	■	■				
	Horizontal, with backlight					■	■	■	■
Measurement	kWh	■	■	■	■	■	■	■	■
	kW with average and max. demand		■	■	■	■	■	■	■
	kW with average and max. demand, kvar, V, I, Hz, PF, total and partial hour counter		■	■	■		■	■	■
Interface	Pulse output	■							
	Programmable output (pulses/thresholds)		■			■	■		
	Built-in Modbus RTU (RS485)			■				■	
	Built-in M-Bus				■				■
MID version -25...55°C		■	■	■	■		■	■	■
Compatibility with Synergy, Synergy Cloud and Xpress software				■				■	

> THREE-PHASE

380...
415
VAC

- rated supply voltage: 380...415VAC (L-L)
- operating limit: 323...456VAC (L-L)
- active energy measurement and accuracy:
  - standard version, direct connection: class 1 (IEC/EN 62053-21)
  - standard version, connection via CT: class 0.5s (IEC/EN 62053-22)
  - MID-certified version: -25...+55°C class B (EN 50470-3)
  - MID-certified version: -25...+70°C class B (EN 50470-3)
- reactive energy measurement and accuracy: class 2 (IEC/EN 62053-23)
- flashing metrological LED for energy consumption indication
- terminal covers that can be sealed included
  protection rating: IP40 on front, IP20 on terminals
- multi-measurement
- tariff input selection
- built-in RS485 or M-Bus communication port
- version supporting expansion modules.

THREE-PHASE		DME D300 T2	DME D301	DME D302	DME D305T2	DME D330	DME D332	DME D310T2
Maximum current		80A	80A	80A	CT /5 or CT /1	CT /5 or CT /1	CT /5 or CT /1	CT /5
Connection type	Direct	■	■	■				
	Via CT				■	■	■	■
Interface	Programmable output (pulses/thresholds)	■			■			■
	Built-in Modbus RTU (RS485)		■			■		
	Built-in M-Bus			■			■	
Expandability	Communication (RS485, Ethernet, USB)							■
	Relay outputs for load disconnection							■
	Data memory (data logger)							■
MID version -25 ... 55°C *		■	■	■	■	■	■	
Individual phase energy monitoring with separate hour meters		■	■	■	■	■	■	
Accuracy according to ANSI C 12.20		■	■					
Compatibility with Synergy, Synergy Cloud and Xpress software			■			■		■

* UTF-certified versions are available on request

> E-MOBILITY

Models **DMED111MID7** (direct insertion single-phase up to 40A in 1 DIN module), **DMED301MID7** and **DMED341MID7E...** (direct insertion three-phase up to 80A in 4 DIN modules) are designed specifically for use in electric vehicle recharging stations.

- suited to applications with extended ambient temperature ranges
- MID certified in observance of legal metrology and commercial transaction requirements
- integrated RS485 communications port running the Modbus RTU protocol.

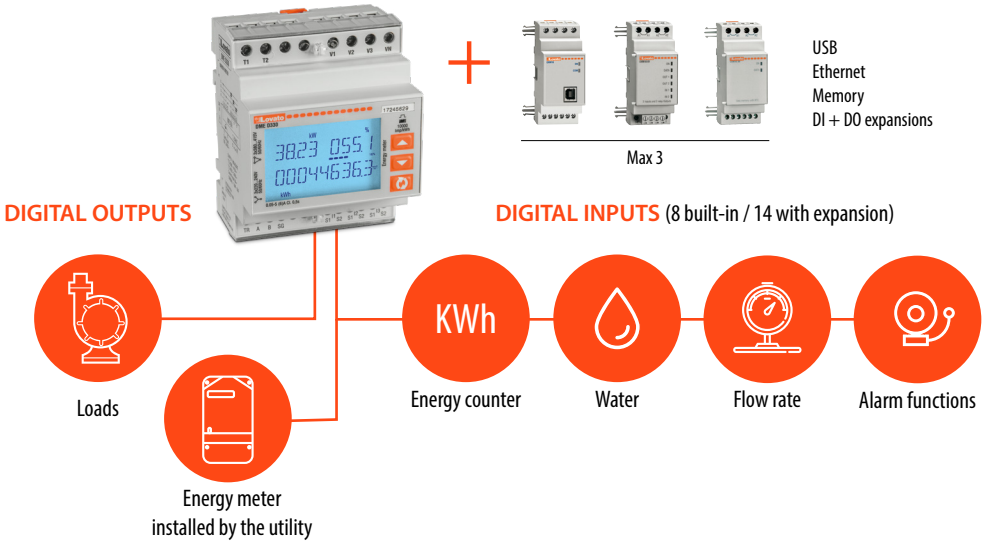
In particular, the **DMED341MID7E** is also conforming with the requirements of VDE-AR-E 2418-3-100, 2020 edition, the standard used by recharging station vendors to comply with the German calibration standard (Eichrecht), MessEG (Mess und Eichgesetz) and MessEV (Mess und Eichverordnung).

Finally, the **DMED341MID7ER** is MID certified not only for its energy consumption (import) but also for its energy production (export), an essential requirement for grid parity, as well as being conforming with German law.

		DME D111MID7	DME D301MID7	DME D341MID7E	DME D341MID7ER
Maximum current		40A	80A	80A	80A
Type		Mono-phase	Tri-phase	Tri-phase	Tri-phase
Connection type	Direct	■	■	■	■
	Via CT				
Interface	Programmable output (pulses/thresholds)			■	■
	Built-in Modbus RTU (RS485)	■	■	■	■
	Tariffing input T1-T2		■		
MID certified -25 ... 70°C		■	■	■	■
MID certified -25 ... 70°C also for exported energy					■
Eichrecht				■	■
Compatibility with Synergy, Synergy Cloud and Xpress software		■	■	■	■

DMECD: DATA CONCENTRATOR

Expandable and smart with built-in RS485



Characteristics

- pulse counter
- execution of arithmetic operations between counters
- status from output monitoring (e.g. on/off)
- output relay management with boolean logic
- calculation of derivative measurements
- graphic LCD with backlight
- communication via built-in RS485 or Ethernet (optional) for remote software-based (Synergy) monitoring
- 8 inputs, expandable with EXM10... modules up to 14
- digital signals concerning the consumption coming from utility energy meters are supported.

ORDER CODES

Single-phase

Order code	Maximum current	Size	Accuracy class	Interface
DMED100T1	40A	1U	1	1 pulse output
DMED110T1	40A	1U	1	1 programmable output
DMED111	40A	1U	1	RS485
DMED112	40A	1U	1	M-Bus
DMED115T1	40A	2U	1	1 programmable output
DMED120T1	63A	2U	1	1 programmable output
DMED121	63A	2U	1	RS485
DMED122	63A	2U	1	M-Bus
MID versions				
DMED100T1MID	40A	1U	B	1 pulse output
DMED110T1MID	40A	1U	B	1 programmable output
DMED111MID	40A	1U	1	RS485
DMED111MID7	40A	1U	1	RS485
DMED112MID	40A	1U	1	M-Bus
DMED120T1MID	63A	2U	B	1 programmable output
DMED121MID	63A	2U	B	RS485
DMED122MID	63A	2U	B	M-Bus

Three-phase

Order code	Maximum current	Size	Accuracy class	Interface
DMED300T2	80A	4U	1*	2 programmable outputs
DMED301	80A	4U	1*	RS485
DMED302	80A	4U	1*	M-Bus
DMED305T2	CT /5 or /1	4U	0.5s	2 programmable outputs
DMED330	CT /5 or /1	4U	0.5s	RS485
DMED332	CT /5 or /1	4U	0.5s	M-Bus
DMED310T2	CT /5	4U	1	2 programmable outputs
UL versions				
DMED300T2UL	80A	4U	0.5**	2 programmable outputs
DMED301UL	80A	4U	0.5**	RS485
MID versions				
DMED300T2MID	80A	4U	B	2 programmable outputs
DMED301MID	80A	4U	B	RS485
DMED301MID7	80A	4U	B	RS485
DMED302MID	80A	4U	B	M-Bus
DMED305T2MID	CT /5 or /1	4U	B	2 programmable outputs
DMED330MID	CT /5 or /1	4U	B	RS485
DMED332MID	CT /5 or /1	4U	B	M-Bus
Eichrecht versions				
DMED341MID7E	80A	4U	B	1 programmable output
DMED341MID7ER	80A	4U	B	1 programmable output

* Class 1 according to IEC/EN 62053-21, accuracy measured in the 0.75A-80A range: **0.5%** | **Accuracy according to ANSI C 12.20

Software

Synergy

Software for energy monitoring and efficiency.

Xpress

Configuration and remote control software.

Data concentrator

Order code	Size	Interface	Imput number	Expandibility
DMECD	4U	RS485	8 built-in	max. 3 EXM... expansions

Accessories

DM
Current transformers
50A to 4000A

EXCM4G01
4G Modem/Router

EXCCON02
RS485-Ethernet converter

EXCGLB
Gateway data logger

Certifications

UTF-certified versions are available on request

ENERGY METERS

Lovato electric

ENERGY AND AUTOMATION

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