

# ENERGY METERS DMR... SERIES



 **Lovato**  
**electric**

ENERGY AND AUTOMATION

## ENERGY METERS DMR... SERIES

The energy meters DMR... series are suitable for active and reactive energy measurement and power monitoring applications. All the models are equipped with a built-in RS485 communication port and Modbus RTU protocol allowing an easy remote communication with supervision softwares.

### Multi-measurement

- Imported and exported active energy
- Imported and exported reactive energy
- Voltage, current, frequency
- Active power, reactive power, apparent power, power factor
- Power max demand

### Fully compliant CE requirements

- IEC standards for safety (EN 61010-1: 2010, EN 61010-2-030: 2010)
- EMC (EN 61326-1: 2013, EN 61326-2-3: 2013)



### Multi-function

- kWh total (T1+T2), kWh(T1), kWh(T2)
- kWh partial, import and Export
- kVAh total (T1+T2), kVAh(T1), kVAh(T2)
- kW, kVA, V, I, Hz, PF, total

### Interfaces

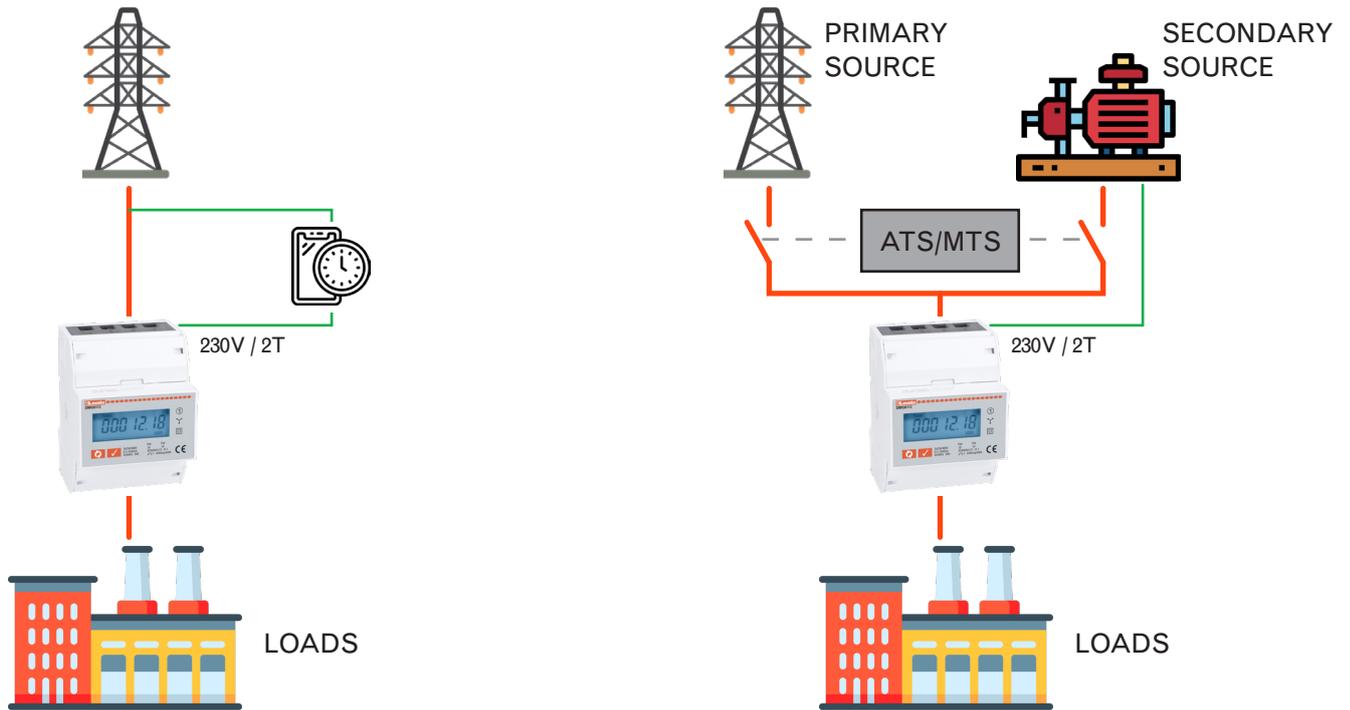
- RS485 communication port with Modbus RTU protocol
- 1/2 programmable pulse outputs
- 2 pulse LEDs on the front (active and reactive energy)
- Dual tariff input (DMR121T2, DMR301T2, DMR330T2)

## SOFTWARE

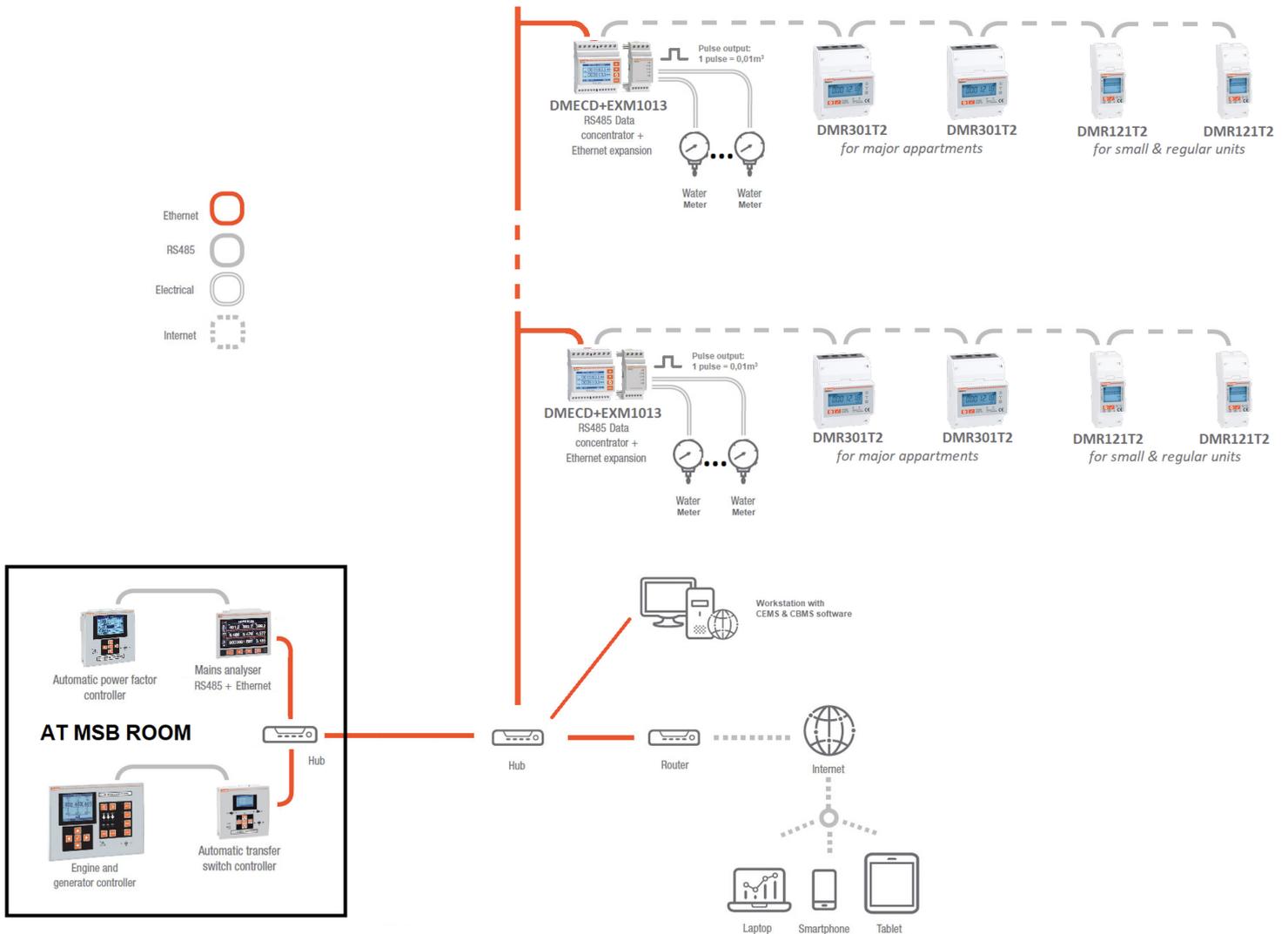
**Synergy** and **Synergy<sup>cloud</sup>**, for supervision and energy management.



## ■ DUAL TARIFF MANAGEMENT



## ■ TYPICAL RESIDENTIAL EMS LAYOUT



## ORDER CODES

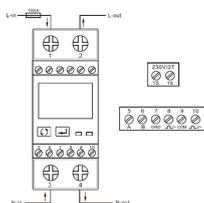
Order codes	Installation type	Modules	Dimensions	Communication	Pulse output	Tariffs	Max current [A]
<b>DMR121</b>	1-ph, direct	2	36x100x63mm	RS485	2	1	63
<b>DMR121T2</b>	1-ph, direct	2	36x100x63mm	RS485	2	2	63
<b>DMR301T2</b>	1/3-ph 2/4W, direct	4	72x100x66mm	RS485	1	2	80
<b>DMR330T2</b>	1/3-ph 2/4W, CT /5A	4	72x94.5x65mm	RS485	2	2	5

## TECHNICAL CHARACTERISTICS

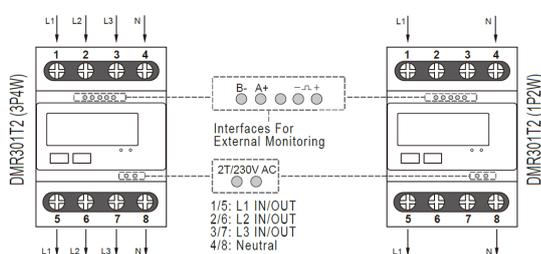
			
	DMR121 / DMR121T2	DMR301T2	DMR330T2
Nominal voltage (Un)	230V	230V/400V~	230V/400V~
Operational voltage	0.8 - 1.2 Un	0.8 - 1.2 Un	0.8 - 1.2 Un
Insulation capabilities - AC voltage withstand	4kV for 1 minute		
Insulation capabilities - Impulse voltage withstand	6kV - 1.2/50µs		
Nominal current (In)	10A	10A	1A/5A
Operational current range	0.04A - 63A	0.04A - 80A	0.04A - 6A
Over current withstand	30 I <sub>max</sub> for 0.01s	30 I <sub>max</sub> for 0.01s	20 I <sub>max</sub> for 0.01s
Operational frequency range	50/60Hz		
Self consumption	≤ 2W/10VA	≤ 2W/10VA per phase	≤ 2W/10VA per phase
Pulse output 1	configurable	1000imp/kWh	configurable
Pulse output 2	1000imp/kWh	–	1000imp/kWh
Display	LCD with backlight		
Maximum reading	999999.9kWh	9999999kWh	999999.9kWh
Operating humidity	≤ 90%		
Storage humidity	≤ 95%		
Operating temperature	-25°C...+55°C		
Storage temperature	-40°C...+70°C		
Active energy accuracy	Class 1 IEC/EN/BS 62053-21		
Protection degree	IP40 on front; IP20 on terminals		

## WIRING DIAGRAMS

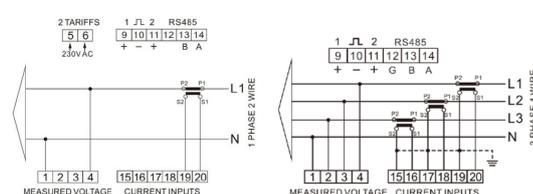
### DMR121...



### DMR301T2



### DMR330T2



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[www.LovatoElectric.com](http://www.LovatoElectric.com)

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