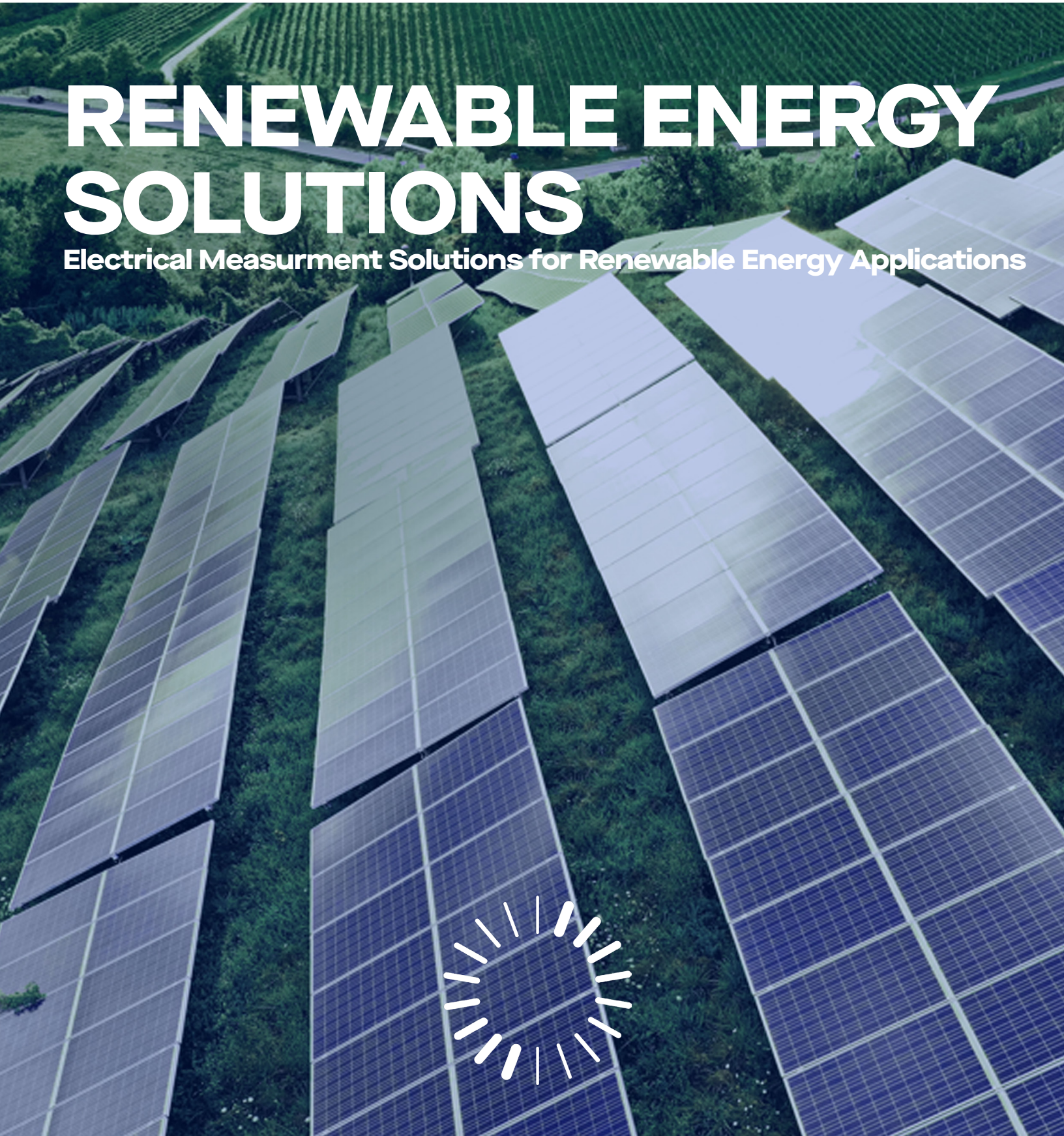
LEM

Life Energy Motion

RENEWABLE ENERGY SOLUTIONS

Electrical Measurment Solutions for Renewable Energy Applications

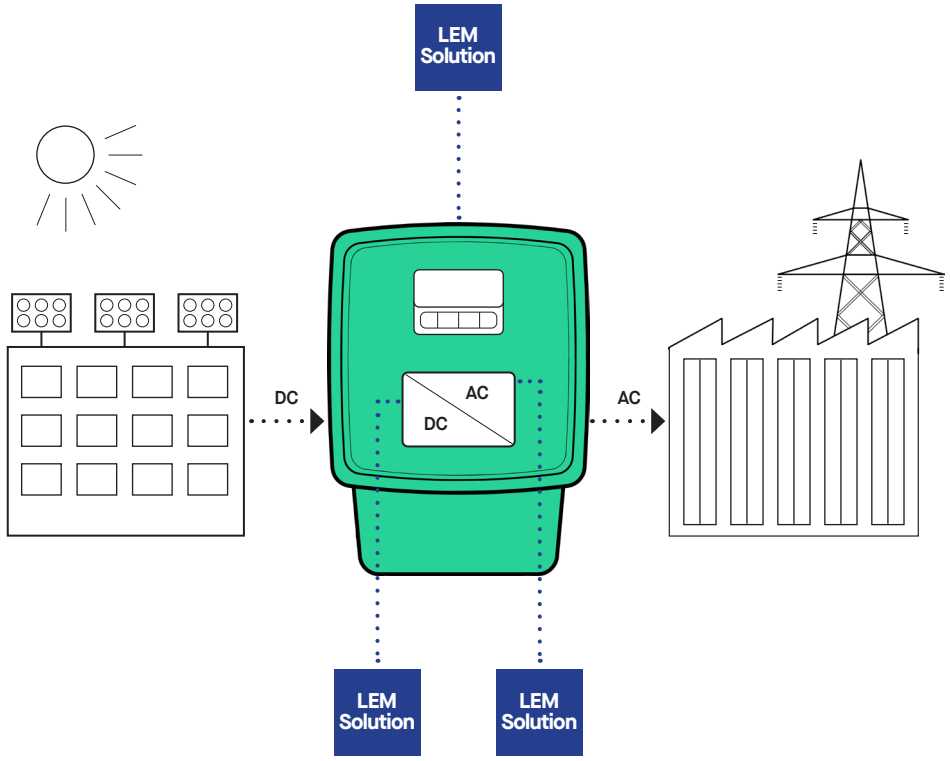


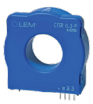
Renewable Energy Solutions

Renewable energy systems harness energy from naturally replenishing sources such as sunlight, wind, water, and geothermal heat. These systems offer sustainable alternatives to traditional fossil fuel-based energy generation, helping to mitigate climate change and reduce dependence on finite resources. LEM's cutting-edge and reliable sensors are designed to control the flow and waveform of energy sent to the grid from these systems. These sensors play a crucial role in efficient operation, monitoring, and maintenance of renewable energy systems, contributing to their reliability, longevity, and sustainability.

Inverters

Renewable energy inverters are utilized while converting DC power generated by renewable energy systems, such as solar panels or wind turbines, into AC power suitable for use in homes, businesses, or the electrical grid. Current sensors within these inverters monitor the flow of electricity, ensuring that the output current meets safety standards and matches the load requirements. The choice of inverter type depends on a variety of factors such as system size, grid connectivity, energy storage requirements, and performance objectives.



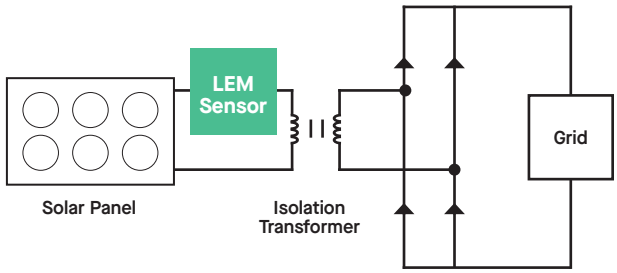





	CASR/CKSR	CTSR	GO SME	GO SMS	HLSR	HMSR-DA
Application	Control/Protection Loop	Leakage Detection	Control/Protection Loop	Control/Protection Loop	Control/Protection Loop	Control/Protection Loop
Bandwidth	300kHz	3.5kHz - 9.5kHz	300kHz	300kHz	90kHz - 450kHz	300kHz
Consumption	15mA	17.5mA	20mA	20mA	19mA	24mA
Current Range Max	20A - 180A	0.5A - 1.7A	25A - 37.5A	10A - 75A	25A - 300A	10A - 75A
Input Voltage	5V	5V	3.3V - 5V	3.3V - 5V	3.3V - 5V	3.3V - 5V
Mounting	PCB	PCB	SMD SOIC 8	SMD SOIC 16	PCB	SMD SOIC 16
Output	Voltage	Voltage	Analog	Analog	Voltage	Digital
Overall Accuracy	0.8% - 1%	1.9%	1.3% - 3%	1.3% - 3%	1%	1% - 3%
Technology	Closed Loop Fluxgate	Closed Loop Fluxgate	ICS	ICS	Open Loop Hall Effect	ICS

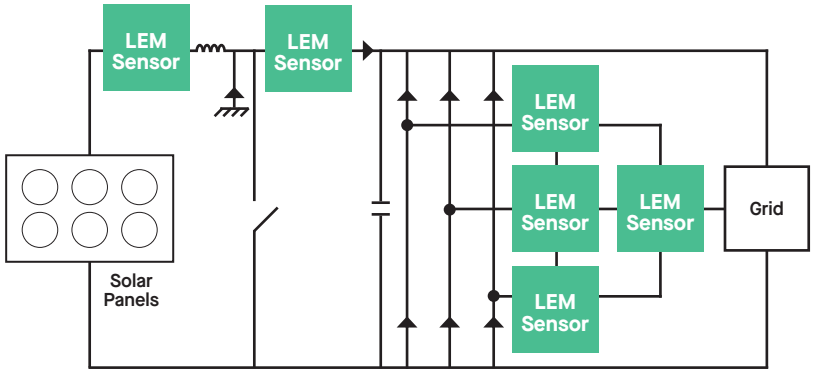
Micro Inverters:

Micro inverters are small inverters installed directly on individual solar panels in a solar PV system. Unlike traditional string inverters, which are connected to multiple panels in a series, micro inverters convert DC electricity from each panel into AC electricity independently.



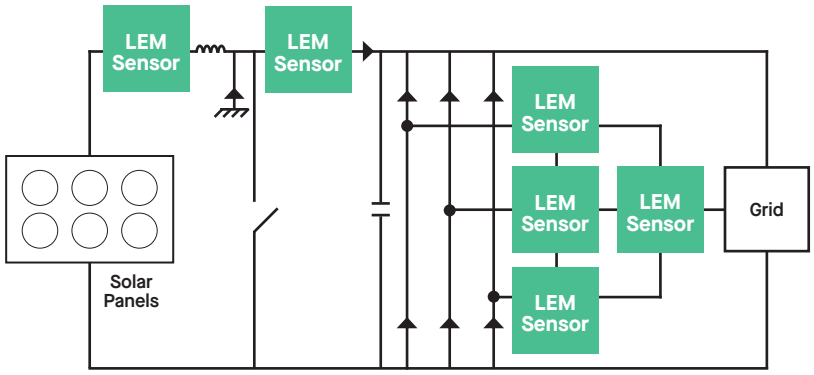
String Inverters:

String inverters are commonly used in grid-tied solar PV systems and are installed at a central location, typically on the exterior of a building or in a dedicated enclosure. They convert DC electricity generated by multiple solar panels connected in the series into AC electricity. String inverters are cost-effective and suitable for medium to large-scale solar installations.



Central Inverters:

Central inverters are utilized in utility-scale systems, such as large solar or wind farms. These inverters are installed at a central location within the farm and are designed to handle high power outputs while converting DC electricity from multiple solar arrays or wind turbines into AC electricity for transmission to the grid.



HMSR SMS

LDSR

LESR/LKSR

LF 210/310/510

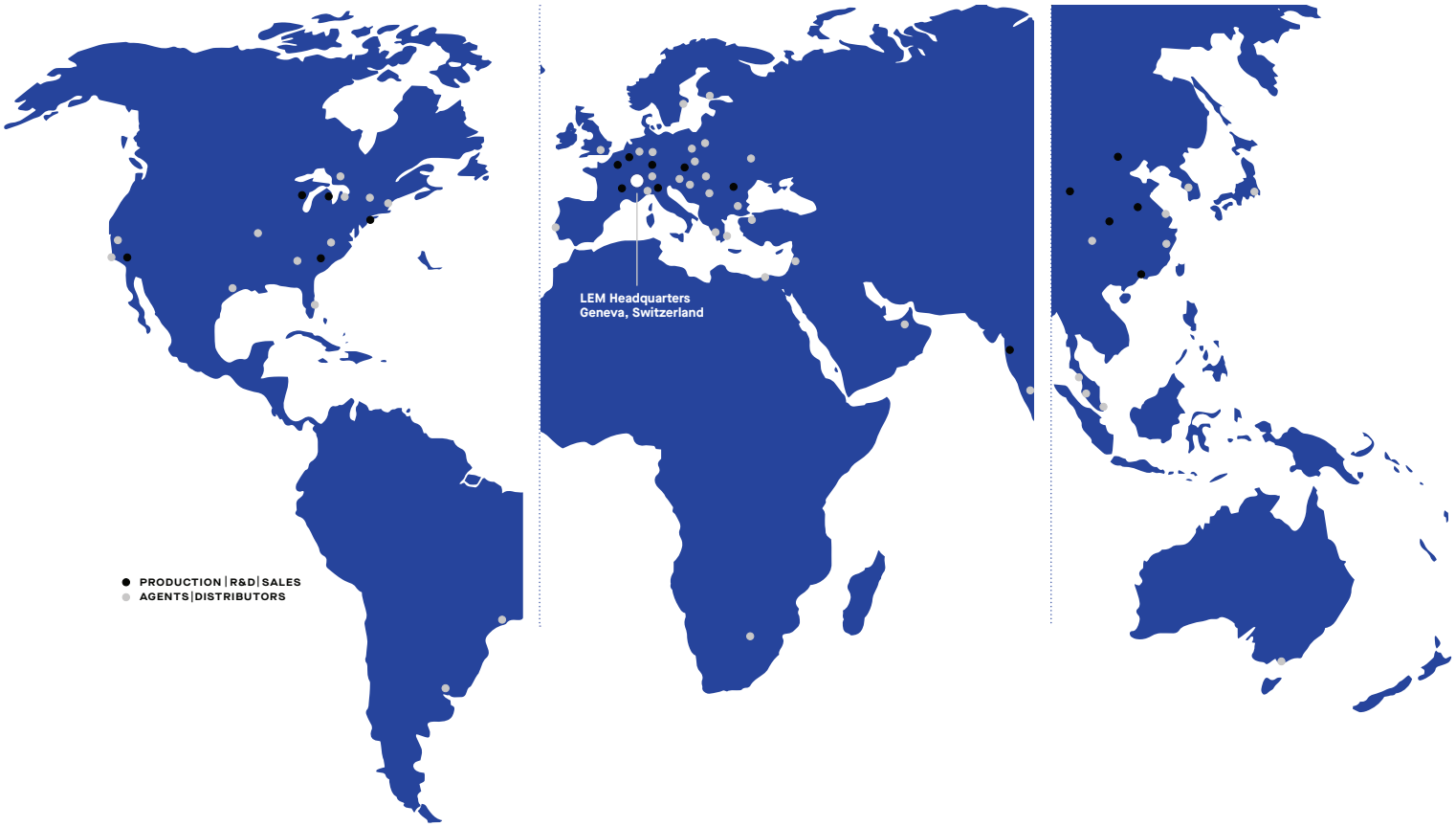
LF 1010

LF 2010

OLCI FRS

Control/Protection Loop	Leakage Detection	Control/Protection Loop	Control/Protection Loop	Control/Protection Loop	Control/Protection Loop	Control/Protection Loop
300kHz	2kHz	300kHz	100kHz - 200kHz	200kHz	200kHz	1000kHz
20mA	18mA	20.5mA	33mA - 49mA	49mA	49mA	80mA - 140mA
15A - 75A	0.9A	20A-150A	200A 1920A	2700A - 3400A	2700A - 3400A	9000A
3.3V - 5V	5V	5V	12V - 24V	15V - 24V	15V - 24V	12V - 24 V
SMD SOIC 16	PCB	PCB	Panel	Panel	Panel	On Primary Fastening
Analog	Voltage	Voltage	Current	Current	Current	Voltage
1% - 3%	13.3%	0.5% - 0.7%	0.2% - 0.6%	0.4%	0.3%	0.5%
ICS	Closed Loop Hall Effect	Closed Loop Hall Effect	Closed Loop Hall Effect	Closed Loop Hall Effect	Closed Loop Hall Effect	Coreless

Global Support Network



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