MERKUR®
CLIMATISATION

SOLMATE® 2019 Series

MERKUR® Solar Air-Cons 48V DC

MERKUR®
GERMAN TECHNOLOGY

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Technical data, dimensions and design reflect todays situation and are subject to change according to the prevailing conditions on production and delivery. They can be changed without prior notice and it is recommended to check the latest data sheets upon finalization of any order.

MERKUR®
CLIMATISATION

Ulrich Scheller
General Manager

For 15 years the **MERKUR**® „RENEWABLE ENERGY" Devision takes care and responsibility for the future of our world by engineering and distributing sustainable energy saving products. Especially for the Arabian and African market were are offering a wide range of green products like solar systems, solar street lighting , solar air-conditioners and on-off grid hybrid energy solutions.

One of the most efficient and convincing green solutions for sunny and warm environments are Solar Aircons. In this segment **MERKUR**® has more than ten years of experience. Our state of the art Solar Aircon Range is not only reasonable and innovative but it is also in line with the need in the market to save on the operating costs. This applies especially for the **MERKUR**® SUNBOOST® series On-Grid Solar Aircons which are offering the best value for money and a very short amortization of the moderate initial investment.

MERKUR® is offering two lines of Solar Aircons:

■ SUNBOOST® SERIES
This is our On-Grid Dual Voltage Solar Air-Conditioning solution for all kinds of buildings. These smart Air-Con-systems are working with dual power: During the day they are running to a large extent with solar-energy produced by the solar panel array directly connected to the Air-Conditioner. If there is not enough Green Energy, the intelligent PCB Controller will either add-on additional power or let the grid completely provide for the power needed to operate the unit. This has the benefit that there is no energy storage needed, which brings the total system cost down significantly. This system can normally not run under off-grid conditions, unless it will be configured in a Hybrid configuration adding inverters and energy storage systems. Such solutions are also available.

■ SOLMATE® SERIES
This range is our first choice for off grid environments. The intelligent systems are storing and managing solar power in a most efficient way. Due to the necessity for Energy Storage of these systems the entire investment for such a system is quite large. For that reason these systems are mainly being used by professional operators such as industries , oil and gas, mining and Telecommunications industries.

■ SOLMATE-PRO® SERIES
Our SOLMATE-PRO® series does therefore incorporate extra alarm features to allow remote control/remote reading for such cases.

MERKUR® is offering assistance during the planning and design phase of your future cooling systems and last but not least you can be sure of a perfect sales and after-sales management.

Get in contact with us – together we can achieve sustainable and economic green Air-Con-Solutions for the benefit of our planet and the future generations
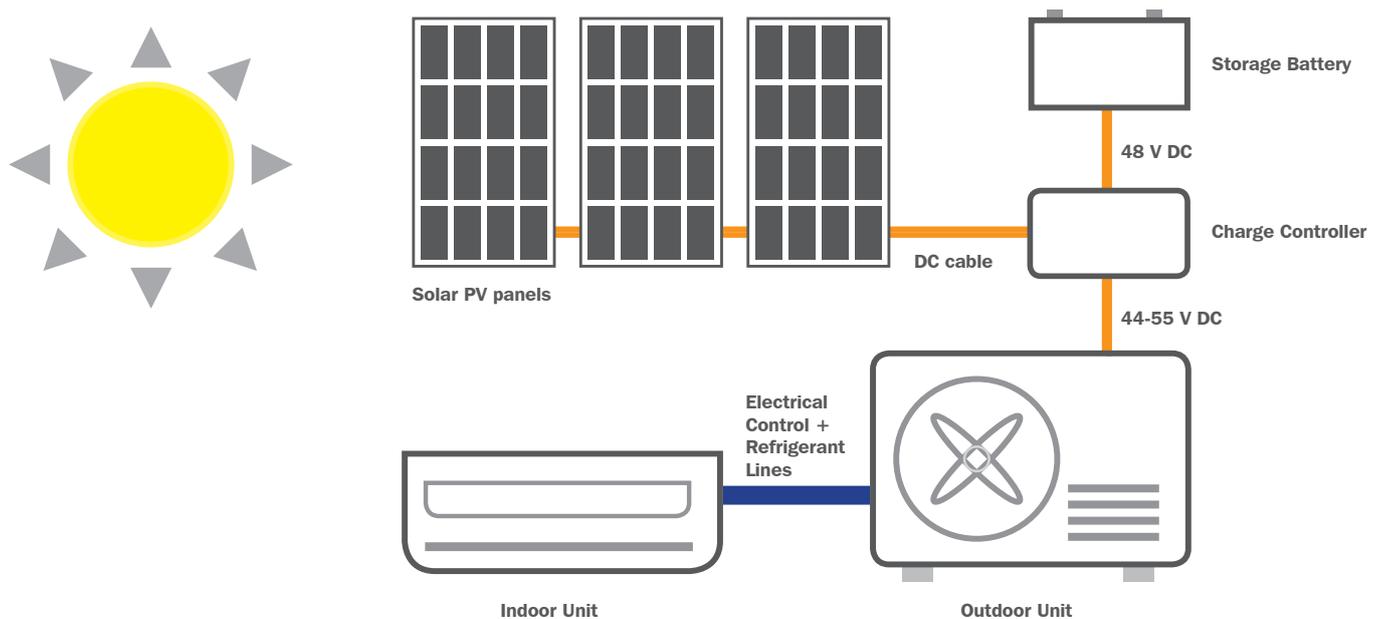
General Manager

Outdoor Unit

SOLMATE® 2019 series
MERKUR 100% Solar Air Conditioners 48V DC

■ State of the art 48V DC compressors operate powerfully and smoothly with low loads, which results in very long life time

■ Noise reduction achieved by application of off-center blade technology and foam air ducts

■ The optinal heating function makes our Air-Con an ideal application for back up heating during the cold season coming at lesser cost then direct electric heating from grid power.

■ Microcomputer enhanced performance

■ Remote contol or touch panel operation, Wifi-control or computer control optional

■ R410a eco friendly, CFC free

■ Convenient and simple operation

■ Operating at low noise

■ Auto Protect compatibility in case of malfunction and Auto Restart function

■ Easy installation (versy similar to traditional Air-Cons)

■ Self-protection function

WALL Mounting Split Type Off-Grid Solar Air-Con DC 48V

Solar PV panels

DC cable

Storage Battery

48 V DC

Charge Controller

44-55 V DC

Electrical Control + Refrigerant Lines

Indoor Unit

Outdoor Unit

Main Technical Features

■ 100 % solar powerd system

■ 100 % off grid solution driven by renewable energy

■ Direct PV 48V power without conversion process

■ Microprocessor controlled and operating on DC power

■ Compressor driven by special CPU, infinite veriabel speed, high efficiency compressor

■ Low voltage power drive for all electric parts, minimun energy loss

■ Intelligent Defrost Mode, independent Dehumidification Mode, Sleep Mode

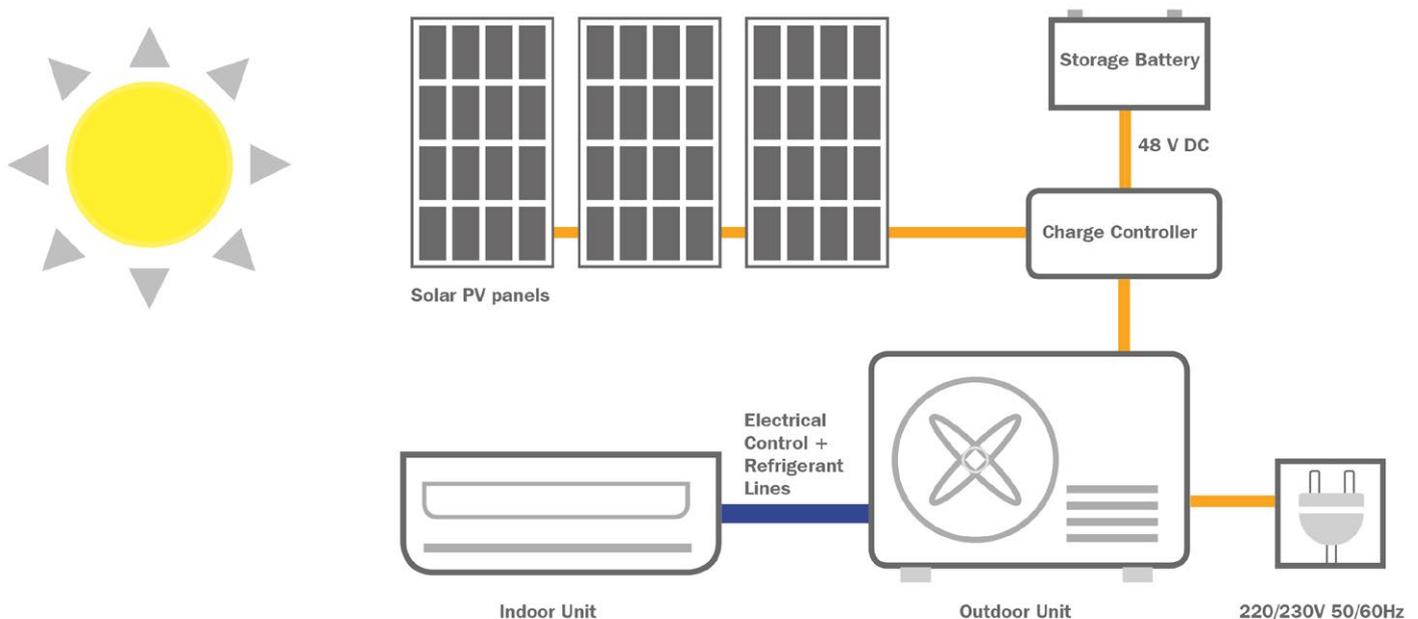■ Optional WiFi Control oder computer centralized control

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WALL Mounting Split Type Off-Grid Solar Air-Con DC 48V

Model			LGS-26HX/EDCQ	LGS-35HX/EDCQ	LGS-50HX/EDCQ	LGS-70HX/EDCQ	LGS-100HX/EDCQ
Power			DC 48V	DC 48V	DC 48V	DC 48V	DC 48V
Capacity	Cooling	Btu/h	9000 (3500-11000)	12000 (3700-14000)	18000 (6200-19500)	24000 (5100-26900)	36000 (6500-37500)
		W	475 (90-1000)	635 (100-1400)	888 (140-1800)	1310 (220-2600)	1980 (350-2600)
	Heating	Btu/h	8500 (3800-11500)	13000 (4000-15000)	19000 (4700-20000)	25000 (5500-30000)	37500 (7000-39000)
		W	462 (120-880)	620 (130-1350)	885 (200-1710)	1285 (260-2089)	2039 (390-2700)
Rated current	Cooling	A	9.89 (1.88-20.83)	13.23 (2.08-29.16)	18.5 (2.92-37.5)	27.29 (4.57-54.16)	41.25 (7.29-54.17)
	Heating	A	9.63 (2.08-20.42)	12.92 (2.08-28.75)	18.43 (2.92-36.66)	26.78 (4.58-53.12)	26.78 (4.58-53.12)
Air Circulation (Hi/Mi/Lo)	m³/h		570/470/370	570/470/370	721/566/458	970/780/590	1370/1200/980
Suitable Area	m²		10~20	15~25	25~40	30~45	42~57
Outdoor air flow	m³/h		1350	1600	2100	2900	3900
Noise Level	Indoor Hi / Mi / Lo	db(A)	41 / 36 /28 / 23	41 /36 / 28 / 23	43.7 / 39.3 /35.1	45 / 36 / 31.5	50.8 / 47.1 / 41.7
	Outdoor	db(A)	< 52	< 52	< 52	< 56	< 64
Operation Temperature		°C	17°C ~ 30°C	17°C ~ 30°C	17°C ~ 30°C	17°C ~ 30°C	17°C ~ 30°C
Ambient Temperature	Cooling	°C	-18°C ~ 52°C	-18°C ~ 52°C	-18°C ~ 52°C	-18°C ~ 52°C	-18°C ~ 52°C
	Heating	°C	-15°C ~ 34°C	-15°C ~ 34°C	-15°C ~ 34°C	-15°C ~ 34°C	-15°C ~ 34°C
Ratet Power Input	W		570	750	1100	1500	1500
Rated Current	A		12	16	23	31	31
Input Voltage	V		44V - 60V DC	44V - 60V DC	44V - 60V DC	44V - 60V DC	44V - 60V DC
			Dimensions				
Indoor Unit	Net	mm	850*185*290	850*185*290	957*213*302	1040*220*327	1259*282*362
	Shipping	mm	950*290*385	805*270*360	1035*305*380	1120*310*404	1340*450*380
Outdoor Unit	Net	mm	835*320*540	835*320*540	835*320*540	910*340*700	946*410*810
	Shipping	mm	900*400*600	900*400*600	900*400*600	1063*480*760	1090*500*860
			Weight				
Indoor Unit	Net/Gross	kg	8.2 / 10.4	8.2 / 10.4	9.5 / 12.5	11.9 / 15.2	21.8 / 27.6
Outdoor Unit	Net/Gross	kg	35 / 40	35 / 40	39 / 44	56 / 62	65 / 73

MERKUR® CLIMATISATION

On / Off Grid Hybrid Solar Air-Con

Storage Battery

48 V DC

Charge Controller

Solar PV panels

Electrical
Control +
Refrigerant
Lines

Indoor Unit

Outdoor Unit

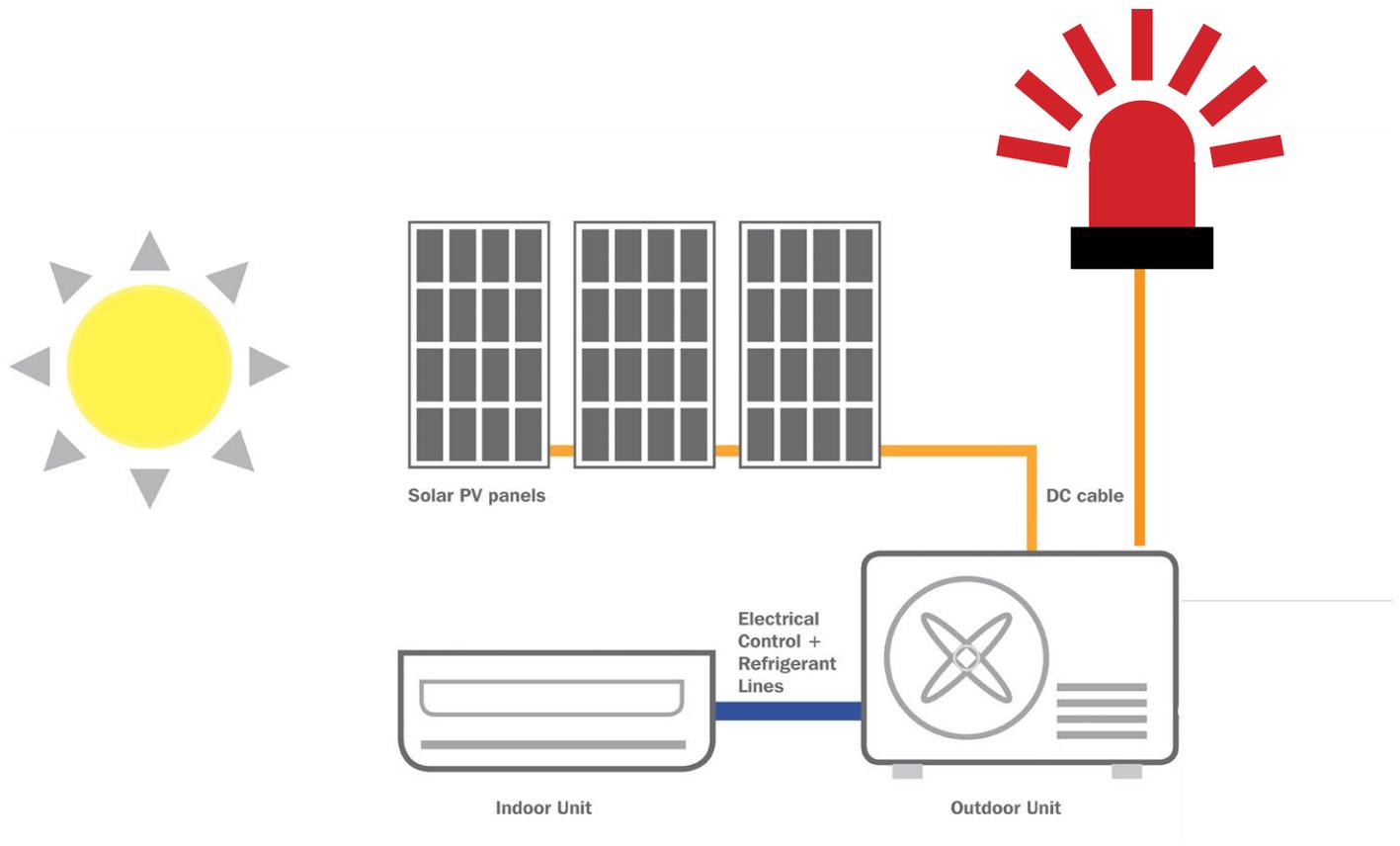220/230V 50/60Hz

Main Technical Features

- 100% solar powered DC system in hybrid configuration to allow usage of AC/grid power, if available.

- 100 % off grid solution driven by renewable energy

- Hybrid system using DC power as priority

- Direct PV 48V power without conversion process

- Microprocessor controlled and operating on DC power

- Compressor driven by special CPU, infinite veriabel speed, high efficiency compressor

- Low voltage power drive for all electric parts, minimun energy loss

- Intelligent Defrost Mode, independent Dehumidification Mode, Slee Mode

- Optional WiFi Control oder computer centralized control

MERKUR®
CLIMATISATION

On / Off Grid Hybrid Solar Air-Con

Model			LGS-26HX/CQCMB	LGS-35HX/CQCMB	LGS-50HX/CQCMB	LGS-70HX/CQCMB
Power			DC 48V	DC 48V	DC 48V	DC 48V
Capacity	Cooling	Btu/h	9000 (3500-11000)	12000 (3700-14000)	18000 (6200-19500)	24000 (5100-26900)
		W	485 (100-750)	658 (110-1200)	905 (140-1500)	1325 (240-1850)
	Heating	Btu/h	9500 (3800-11500)	13000 (4000-15000)	19000 (4700-20000)	25000 (5500-30000)
		W	505 (120-800)	675 (130-1220)	915 (200-1600)	1345 (260-1950)
Rated current	Cooling	A	10.11 (2.08-15.63)	13.7 (2.29-25.00)	18.85 (2.91-31.25)	27.6 (5.00-38.54)
	Heating	A	10.52 (2.5-16.67)	14.06 (2.71-25.42)	19.06 (4.17-33.33)	28.02 (5.42-40.63)
Air Circulation (Hi/Mi/Lo)	m³/h		570/470/370	570/470/370	721/566/458	970/780/590
Suitable Area	m²		12~18	16~23	24~35	32~47
Outdoor air flow	m³/h		1500	1600	2100	2600
Noise Level	Indoor Hi / Mi / Lo	db(A)	41 / 36 /28 / 23	41 /36 / 28 / 23	43.7 / 39.3 /35.1	45 / 36 / 31.5
	Outdoor	db(A)	< 48	< 50	< 52	< 56
Operation Temperature		°C	17°C ~ 31°C	17°C ~ 31°C	17°C ~ 31°C	17°C ~ 31°C
Ambient Temperature	Cooling	°C	18°C ~ 52°C	18°C ~ 52°C	18°C ~ 52°C	18°C ~ 52°C
	Heating	°C	-15°C ~ 34°C	-15°C ~ 34°C	-15°C ~ 34°C	-15°C ~ 34°C
Ratet Power Input	W		570	750	1100	1500
Rated Current	A		12	16	23	31
Input Voltage	V		44V - 60V DC	44V - 60V DC	44V - 60V DC	44V - 60V DC
Dimensions						
Indoor Unit	Net	mm	805*194*285	805*194*285	957*213*302	1040*220*327
	Shipping	mm	805*270*360	805*270*360	1035*305*380	1120*310*404
Outdoor Unit	Net	mm	850*310*550	850*310*550	850*310*550	910*340*710
	Shipping	mm	900*400*600	900*400*600	900*400*600	1063*457*780
Weight						
Indoor Unit	Net/Gross	kg	7.2 / 9.6	7.2 / 9.6	9.5 / 12.5	11.9 / 15.2
Outdoor Unit	Net/Gross	kg	33 / 39	35 / 40	39 / 49	54 / 59

Solar PV panels

DC cable

Electrical Control + Refrigerant Lines

Indoor Unit

Outdoor Unit

MERKUR SOLMATE® PRO Series: Off-Grid Solar Air-Con with Alarms

MERKUR SOLAMTE® PRO Series ist working with two kinds of alarms:

■ High temperature Alarm":

This alarm actives when:
- Temperature setting cannot be maintained by the cooling of the Air-Con after a time period of 2 hours. It means the room temperature is always above the setting at the Air-Con and cannot be maintained
- And the room temperature is max. +5 C above the temperature setting on the Indoor Unit
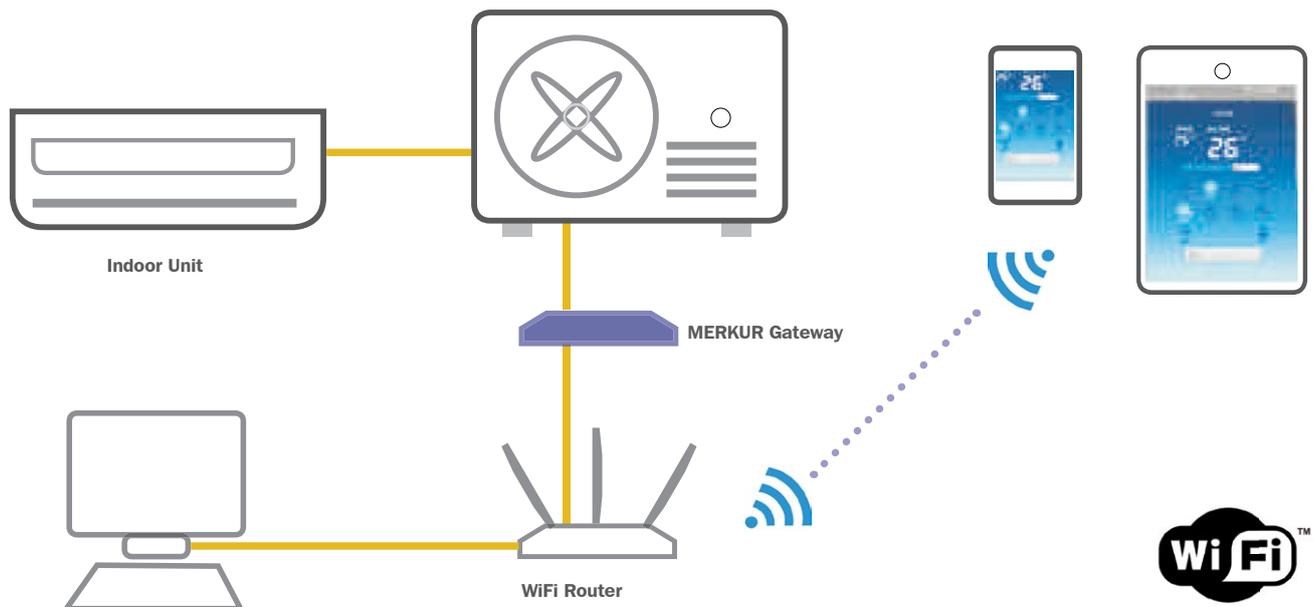
■ Malfunction Alarm":

This alarm activates when:
- Compressor or the electronics are not working or/and
- In case of over or under pressure or/and
- Fan failure or/and
- Input Voltage out of Range (under 44VDC or above 60VDC)

SOLMATE® WiFi Remote Control

Indoor Unit

MERKUR Gateway

WiFi Router

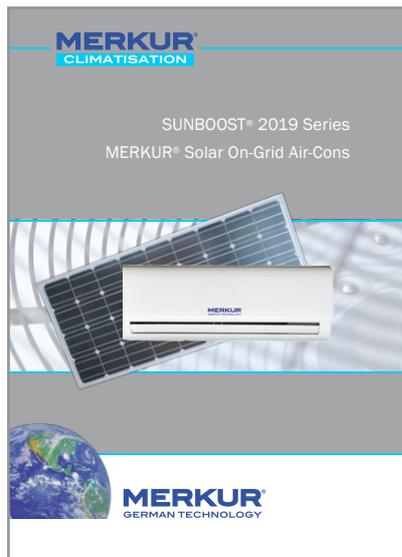**SOLMATE® Series WiFi Remote control**

MERKUR's WiFi Remote control allows to control your **SOLMATE®** Air-Con by computer, laptop, smarthpone or tablet.

- Intelligance smart home solution

- Control the **SOLMATE®** -System from anywhere with your samrtphone or laptop connectet through 3G/4G or WiWi

- Comfortable and easy to use App

- Central control of all parameters

- Control every unit in your house from any room

- Aditional to standard remote control

- Easy to install

MERKUR Air-Con Range 2019:

Our product range also includes the following air conditioners:

SUNBOOST® 2019 Series
MERKUR® Solar On-Grid Air-Cons

SUNBOOST® 2019 series
On Grid Air-Conditioners 220V/240V AC

■ SUNBOOST® series air conditioners 220/240V AC on grid – equipped with solar DC inverter to make use of solar energy boost, achieving enormous energy savings

SOLMATE® PRO Series
MERKUR® Solar Air-Cons 48V DC

SOLMATE® PRO 2019 series

■ SOLMATE-PRO® series
Our SOLMATE-PRO® series includes all kind of SOLMATE® Air-Cons incorporate extra alarm features to allow remote control/remote reading for professional environments.

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