sendo

FEELING COOL

HEAT PUMPS

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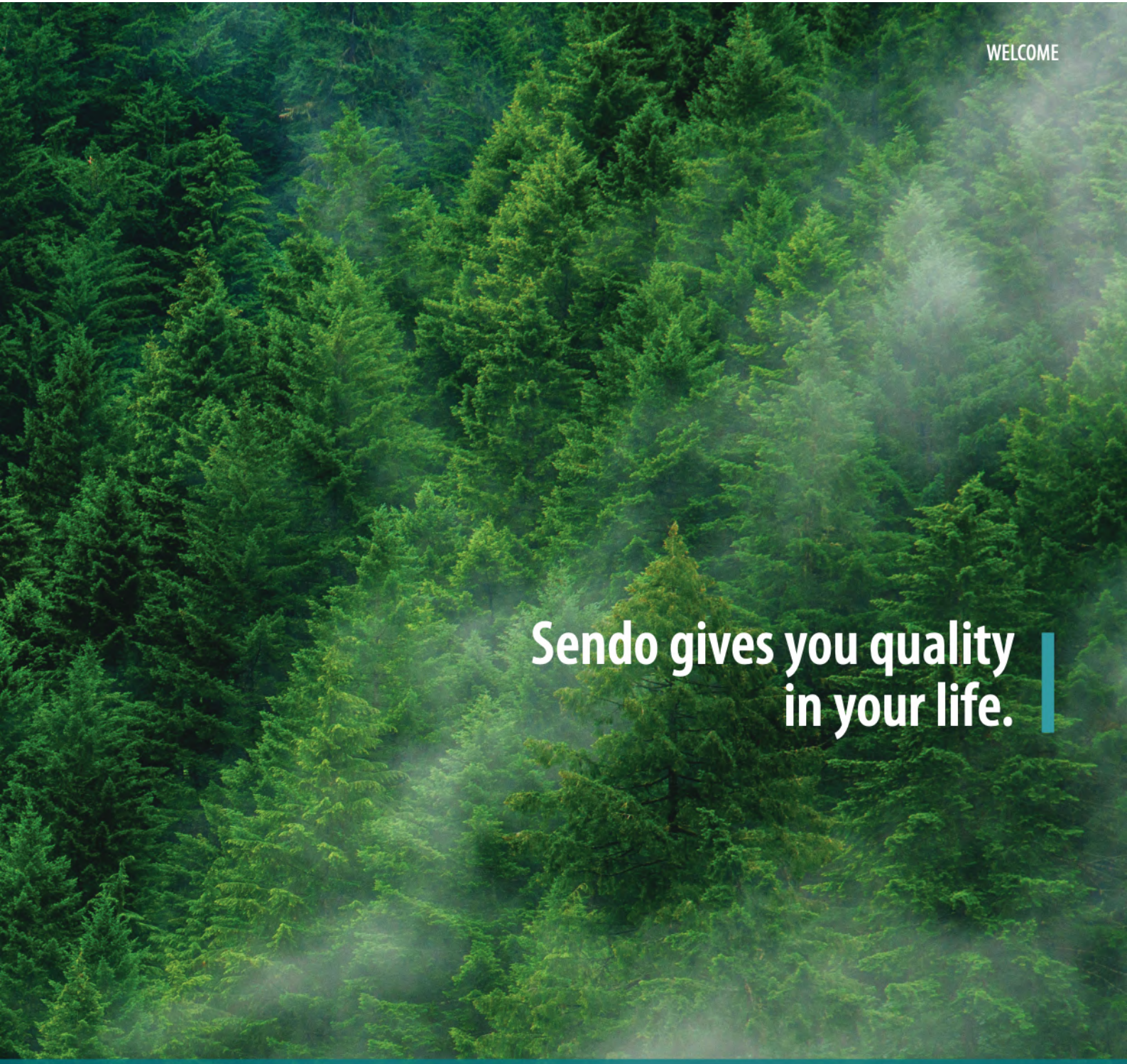
HERE WE ARE AGAIN!

SENDO

by Michalis Gavrilopoulos

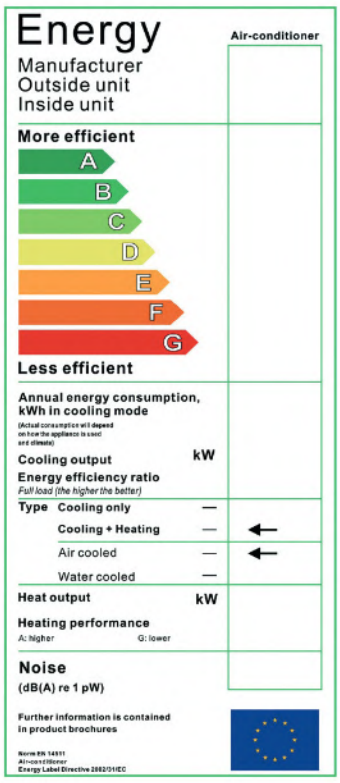
Sendo in Japanese means freshness, and that was our basic inspiration to start working on our dream. The challenge was one from the beginning: how to bring this freshness into your home and workplace. Today Sendo changes the quality of the air that we live in and breathe. Using innovative technology, Sendo's products offers you unique value solutions providing superior air quality to your everyday life.



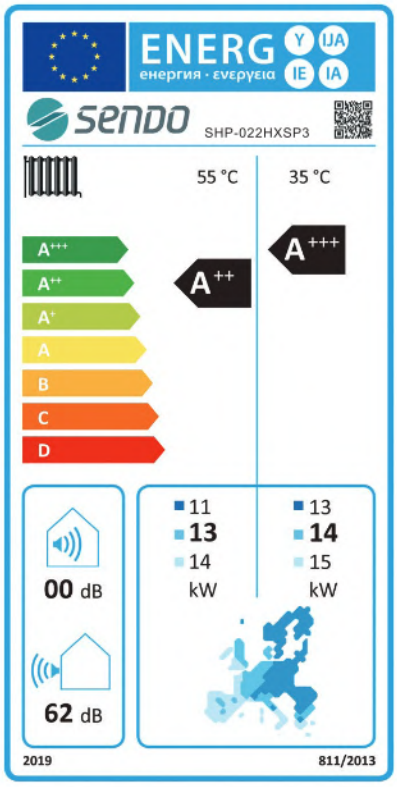
Sendo gives you quality in your life.

ENERGY LABEL

ENERGY SAVING



Old label



New label

New Requirement for Energy Marking (EU) 626/2011

Three climatic zones for heating (The middle zone is necessary, while the hot and cold zones are optional).
Seasonal performance (performance based on multiple partial load calculations). Sound power level.
The nominal performance concerns only one nominal condition.
Seasonal performance concerns a whole heating and cooling period and indicates more accurately the actual operation.

ENERGY CLASSES

Energy Efficiency Class	SEER	SCOP
A+++	SEER ≥ 8,50	SCOP ≥ 5,10
A++	6,10 ≤ SEER < 8,50	4,60 ≤ SCOP < 5,10
A+	5,60 ≤ SEER < 6,10	4,00 ≤ SCOP < 4,60
A	5,10 ≤ SEER < 5,60	3,40 ≤ SCOP < 4,00
B	4,60 ≤ SEER < 5,10	3,10 ≤ SCOP < 3,40
C	4,10 ≤ SEER < 4,60	2,80 ≤ SCOP < 3,10
D	3,60 ≤ SEER < 4,10	2,50 ≤ SCOP < 2,80
E	3,10 ≤ SEER < 3,60	2,20 ≤ SCOP < 2,50
F	2,60 ≤ SEER < 3,10	1,90 ≤ SCOP < 2,20
G	SEER < 2,60	SCOP < 1,90

R290

COMPARISON OF REFRIGERANT'S PROPERTIES:

	R22	R410A	R32	R290
ODP	0,05	0	0	0
GWP	1700	2088	675	3
Toxicity	Non-toxic	Non-toxic	Non-toxic	Non-toxic
Flammability	A1	A1	A2	A3
Availability	High	High	High	High
Charge volume (compare with R22	1,0	0,8	0,56	0,008
[GWP] More enviroment friendly	[CHARGE VOLUME] Less refrigerant			

More eco-friendly

The Global Warming Potential (GWP) of R290 is significantly lower compared to R32, with a GWP of just 3. This makes R290 a far more environmentally friendly option. As a single-component refrigerant, it is also easier to manage and recycle, further enhancing its eco-friendly profile.

Higher Efficiency

Under identical conditions and operating frequency of the compressor, the cooling performance and energy efficiency of R290 are superior to those of R32. This makes R290 products more energy-efficient, ensuring better performance and energy savings compared to R32.

Lower GWP

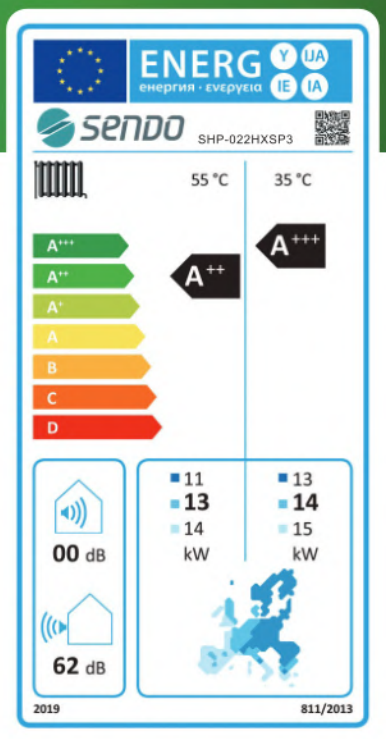
Compared to R32, the R290 refrigerant has a Global Warming Potential (GWP) of just 3.

The European F-Gas Regulation (517/2014) has been in effect since January 1, 2015, and progressively aims to phase out the use of hydrofluorocarbons (HFCs) in future cooling and heating systems. Sendo already offers a new cooling and heating system that operates with R32 refrigerant, which will serve as the alternative to R410A in the coming years.

R290 ENVIRONMENTAL REFRIGERANT

R290 refrigerant is recognized as the refrigerant with the most growth potential in the industry.

SUPER HIGH EFFICIENCY A+++



The HERO XS air-to-water heat pump has been developed with cutting-edge technology and design to meet the highest performance and quiet operation requirements. The HERO XS uses eco-friendly R290 refrigerant and full inverter technology, capable of achieving an A+++ energy efficiency rating, providing users with low energy consumption.

HERO Xs

HEATING - COOLING & DHW

8KW – 22KW

Wi-Fi

INVERTER

R290

A+++

75°C

Integrated circulator

Pressure gauge

Integrated thermostat

Model			SHP-08HXSP1	SHP-12HXSP1	SHP-15HXSP1	SHP-15HXSP3	SHP-22HXSP3
Heating	Thermal Power Range	kW	3.3 ~ 8.3	4.5 ~ 11.4	5.9 ~ 14.8	5.9 ~ 14.8	8.8 ~ 22.0
	Heating Input Range	kW	0.64 ~ 2.18	0.85 ~ 2.95	1.13 ~ 3.83	1.13 ~ 3.83	1.68 ~ 5.77
	COP Range		3.81 ~ 5.17	3.81 ~ 5.17	3.86 ~ 5.22	3.86 ~ 5.22	3.81 ~ 5.24
Cooling	Cooling Capacity Range	kW	2.4 ~ 5.8	3.3 ~ 8.2	4.3 ~ 10.8	4.3 ~ 10.8	6.2~15.3
	Cooling Input Power	kW	0.79 ~ 2.19	1.08 ~ 3.07	1.39 ~ 3.99	1.39 ~ 3.99	1.99~5.60
	EER Range		2.65 ~ 3.04	2.67 ~ 3.06	2.71 ~ 3.10	2.71 ~ 3.10	2.73~3.12
	ErP Level (35°C)		A+++	A+++	A+++	A+++	A+++
DHW	Thermal Power Range	kW	3.7 ~ 7.4	5.2 ~ 10.2	6.6 ~ 13.2	6.6 ~ 13.2	7.8 ~ 17.6
	Heating Input Range	kW	0.79 ~ 2.10	1.10 ~ 2.87	1.41 ~ 3.73	1.41 ~ 3.73	7.8 ~ 17.6
	COP Range		3.52 ~ 4.69	3.55 ~ 4.71	3.54 ~ 4.67	3.54 ~ 4.67	3.51 ~ 4.66
Electric Power Supply			230V/1Ph/50Hz/60Hz			380V/3Ph/50-60Hz	
Operating Ambient Temperature			-25 ~ 43°C				
Refrigerant Fluid			R290				
Noise		(dB(A))	≤47	≤ 50	≤ 52	≤ 50	≤ 52
Water Pressure Drop		kPa	30	35	40	35	40
Water Circulation		m^3/H	1,5	2,2	3,2	2,2	3,2
Maximum Water Head		m	9	9	9	9	9
Pipe Diameter		mm	DNS25	DNS25	DNS25	DNS25	DNS25
Net Dimension (WDH)		mm	1080 x 460 x 820	1080 x 460 x 960	1080 x 480 x 1060	1080 x 480 x 1060	1080 x 480 x 1372
Net Weight		kg	105	115	160	160	166
Operating Water Temperature		°C	20 ~ 75 °C (DWH)				
Operating Water Temperature		°C	20 ~ 75 °C (max) Heating				
Operating Water Temperature		°C	7 ~ 35 °C (max) Cooling				

The company reserves the right to change technical specifications without prior notice.

MULTIPLE UNIT PARALLEL CONNECTION

MASTER UNIT

Parallel connection capability for up to 8 units, with the first unit operating as the Master and the subsequent ones as Secondary units. All units are controlled via a single controller, with a maximum combined capacity of 176 kW.

Secondary Units (max. 7)

ELECTRIC HEATER

Electric heating cable-resistance on the lower surface of the coil, as well as an electric resistance belt for the compressor. This ensures compressor protection from harsh weather conditions and prevents ice formation on the coil.

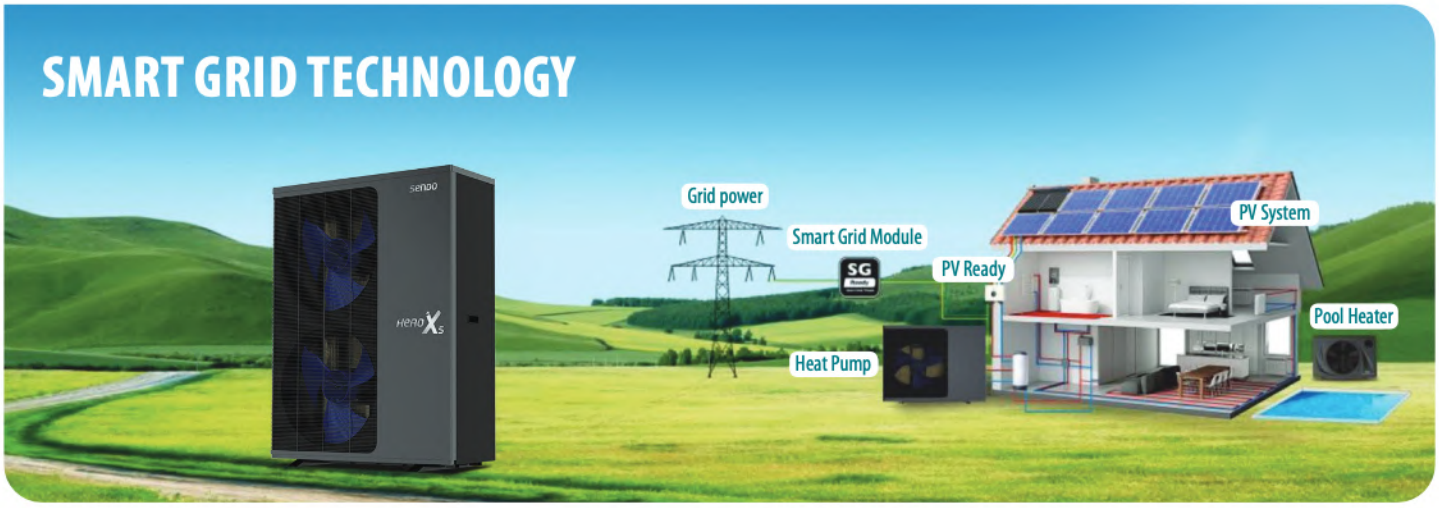
AUXILIARY POWER SOURCE

There is the option to add and control an additional heater for the DHW (Domestic Hot Water) boiler to achieve rapid and immediate water temperature, as well as an auxiliary heater to increase the temperature of the circulating water.

LOW NOISE LEVEL

The entire refrigerant and hydraulic circuit is fully insulated. This design minimizes energy losses, enhances energy efficiency, and further reduces noise levels.

SMART GRID TECHNOLOGY



The smart grid connects to the heat pump via the SG and EVU switch interface. The heat pump detects the grid power status through the SG and EVU interfaces and adjusts its operating mode according to the various grid conditions.

Smart Grid: The SG unit detects and determines the current status of the power grid (low power consumption, peak energy demand), converts the current status into an SG signal, and sends it to the heat pump. The heat pump then adjusts its operating mode according to the SG signal to achieve optimal energy savings.

HERO XS R290 FULL DC INVERTER

7" Touchscreen Display Controller

High-efficiency Hydrophilic Heat Exchanger (Gold Fin)

Panasonic Twin-Rotary Compressor with EVI Technology

High-Quality Plate Heat Exchanger

Shimge Water Pump

BLDC Motor

Smart Electronic Management System

High-Quality, Durable Four-Way Valve

At low ambient temperatures, the performance, heating capacity, and operational stability of standard heat pumps can be limited. The SENDO HeroXs R290 FULL DC INVERTER heat pump operates reliably and efficiently in extremely cold regions, down to -25°C, without the need for EVI technology, while maintaining a high COP and delivering hot water at +75°C.

Wi-Fi Connectivity

HERO XS R290
FULL DC INVERTER

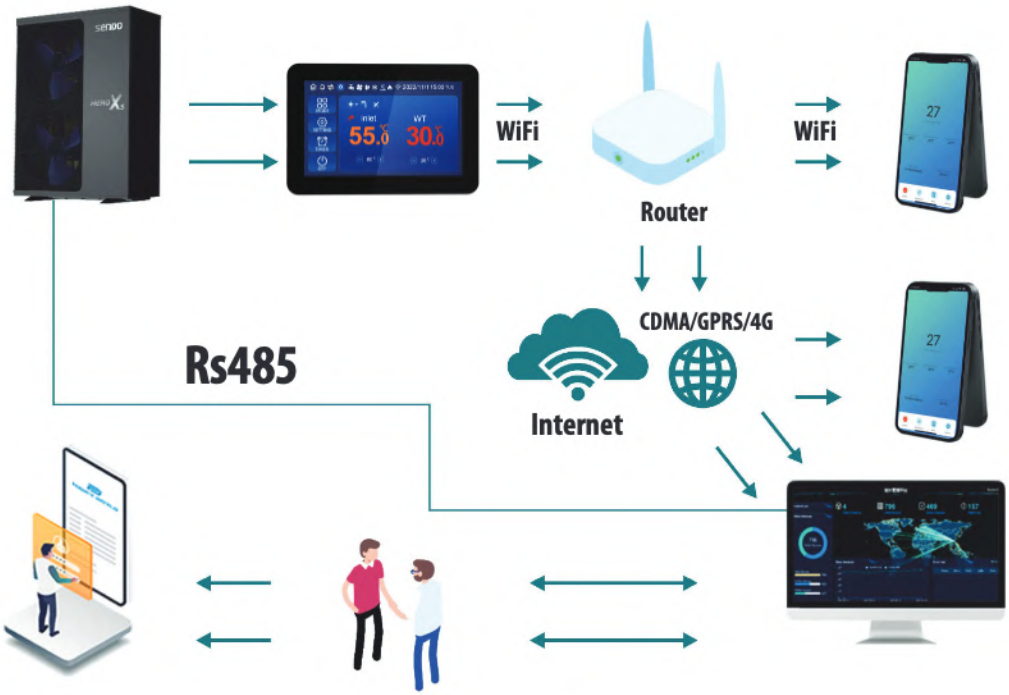
FULL CONTROL

User-friendly multilingual touch controllers for easy management of heat pumps. Provides access to a wide range of functions for improved management and energy savings.

PROGRAMS

1. **"Smart"** - Energy-saving mode.
2. **"Silent"** - Quiet operation mode.
3. **"Power"** - High-performance mode.
4. **"Vacation"** - Vacation mode.

iCLOUD



Available on the App Store

GET IT ON Google Play

VOICE CONTROL

alexa

Google Assistant

INCLUDED ACCESSORIES FOR INSTANT COMFORT

Comfort isn't optional with the HERO XS heat pump. Each unit comes with a range of accessories included at no extra cost, all designed to boost efficiency and maximize comfort in your space. These accessories are carefully crafted to integrate seamlessly with the system, providing a complete, ready-to-use solution.

Accessori	Incluso
Anti-vibration kit	✓
Gold Fin coil treatment	✓
Deaerator filter	✓
10-meter sanitary probe	✓
10-meter connection cable	✓
Anti-freeze cable	✓
Cascade management software	✓
7-inch touchscreen display	✓
Wi-Fi module	✓
Smart grid ready	✓
Sendo smart app	✓

Notes

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As we strive for continuous improvement, the product features described in this catalog may change without prior notice.
The company is not responsible for any typographical errors.

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