

THE MUNICIPAL DISTRICT OF WILLOW CREEK NO. 26

#26-Hwy 520, Claresholm Industrial Area, Box 550, Claresholm, Alberta T0L 0T0

Phone: (403) 625-3351 Fax: (403) 625-3886

Email: development@mdwillowcreek.com

NOTICE OF MUNICIPAL PLANNING COMMISSION MEETING

Form B

Application No. 037-18

TO: Landowners 1-mile radius

Notice is hereby given that an application is being made for a development permit with regard to the following:

NAME OF APPLICANT: ROEMMELE FARMS LTD.

TYPE OF DEVELOPMENT:

Installation of a new 147.84kW solar PV array (448 Canadian Solar modules - power supply, ground mount racking system) for irrigation pumps.

LEGAL DESCRIPTION OF SITE: NE 31-13-25-W4M

PLACE OF MEETING: Municipal Administration Building, Claresholm

TYPE OF MEETING: Regular Municipal Planning Commission

DATE OF MEETING: 10:10 a.m., Wednesday, May 23, 2018

This development application and all associated information are available for viewing at the Municipal Office at the address shown above during normal hours of operation, or on our website at www.mdwillowcreek.com.

Any person affected by the said proposal has the right to present a written brief prior to the hearing and/or to be present and be heard at the meeting. Any information submitted will become available to the public and may also be shared with the applicant and appropriate government/other agencies and is subject to the provisions of the Freedom of Information and Protection of Privacy Act (FOIP). If you have any questions, please contact The Municipal District of Willow Creek No. 26.

Persons requesting to be heard at the meeting shall submit a written request to be heard to the development officer not later than:

May 18, 2018 (10 consecutive days from the date of this notice)

DATE: May 4, 2018

SIGNED:

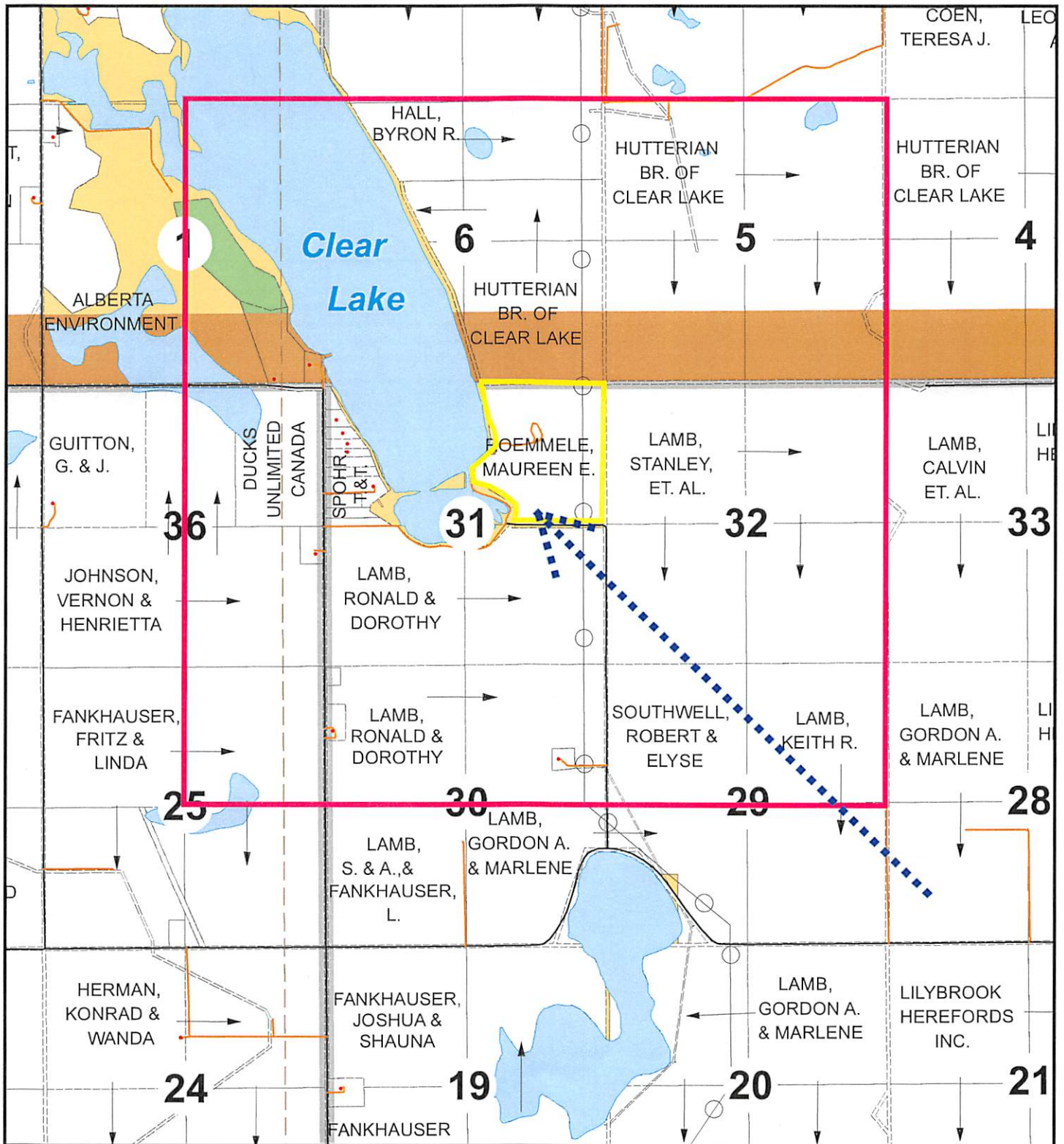


Cindy Chisholm
Development Officer
MD of Willow Creek No. 26



Development Permit No.: 037-18

Location: NE 31-13-25-W4M



Applicant: Roemmele Farms Ltd.

THE MUNICIPAL DISTRICT OF WILLOW CREEK NO. 26

Box 550, Claresholm, AB T0L 0T0

Phone (403) 625-3351

Fax (403) 625-3886

www.mdwillowcreek.com

Roll # 1478.000

FOR OFFICE USE ONLY

May 23/2018 - MPC
@ 10:10

APPLICATION FOR A DEVELOPMENT PERMIT

IMPORTANT: This information may also be shared with appropriate government/other agencies (e.g. Alberta Agriculture, Food and Rural Development; Alberta Environment; the regional health authority), and may also be kept on file by those agencies. This information may also be used by and for any or all municipal programs and services. The application and related file contents will become available to the public and are subject to the provisions of the Freedom of Information and Protection of Privacy Act (FOIP). If you have any questions about the collection of this information, please contact The Municipal District of Willow Creek No. 26.

Form A

APPLICANT: Roemmele Farms LTD

Telephone: _____

ADDRESS: _____

Fax: _____

MUNICIPAL ADDRESS: Sec 3 Tp 13 Rge 25

Bus/Cell: _____

REGISTERED OWNER: Roemmele Farms LTD Maureen Roemmele

Telephone: _____

LEGAL DESCRIPTION: Lot(s) _____ Block _____ Plan _____

OR: Quarter NE Section 31 Township 13 Range 25 W 4 M

EXISTING USE: _____

PROPOSED USE: _____

PARTICULARS OF PROPOSED DEVELOPMENT: Installation of a new 147.84kW array. This will be used to power the irrigation pump.

Additional information or clarification can be helpful in processing the application without delay. You may wish to use the back of this form, or attach a separate sheet with such information. Please fill out the Right of Entry authorization on reverse.

REGISTERED OWNER OR PERSON ACTING ON BEHALF OF:

I/we agree to the collection and sharing of this information contained in this application, and any other information that may be required to verify and evaluate this application as explained above. I have submitted particulars concerning the completion of the proposed development and agree to comply in all respects with any conditions that may be attached to any development permit that is issued and with any other bylaws that are applicable. I am aware that I may be required to pay for all local improvement costs, which include drainage, sidewalks, road construction, street lighting, water and sewer main extensions, utility connection fees and installation costs at the present established rate.

I have read and understand the terms noted on the reverse side of this form and hereby apply for permission to carry out the development described above and/or on the attached plans and specifications. I further certify that the registered owner(s) of the land described above is aware of this application.

DATE: May 1 / 2018 **SIGNED:** _____

IMPORTANT: See Over

ADDITIONAL INFORMATION: _____

IMPORTANT:

1. Subject to the provisions of the Land Use Bylaw of The Municipal District of Willow Creek No. 26, the term "development" includes any change in the use of buildings or land.
2. Although the Development Officer is in a position to advise on the principle or details of any proposals, such advice must not be taken in any way as an official consent, and is without prejudice to the decision in connection with the formal application. It must be clearly understood that any development by the applicant within 14 days after receipt of a Development Permit is at his own risk.
3. Please submit a plan or drawing showing locations of existing and proposed buildings, roads, services, boundaries, etc. in sufficient detail to ensure proper consideration of the application. Measurements may be metric or imperial units. It is desirable that the plans and drawings should be on scale appropriate to the development, that is:

Site plans – ratio of 1:1000 or 1:1500
Other drawings – ratio of 1:100 or 1:200

or as required by the Development Officer. However, unless otherwise stipulated, it is not necessary for plans and drawings to be professionally prepared.
4. If a decision is not made within 40 days from the date of the receipt of the application in its complete and final form, the applicant may exercise his right of appeal as though he had been mailed a refusal at the end of the 40-day period unless an agreement for a time extension has been entered into with the municipality.

RIGHT OF ENTRY:

I hereby authorize representatives of The Municipal District of Willow Creek No. 26 to enter my land for the purpose of conducting a site inspection in connection with this application.

This right is granted pursuant to Section 542(1) of the *Municipal Government Act*.

DATE: May 1 2018

SIGNED: _____

Registered Landowner(s)

Micro Generation Solar Array Information

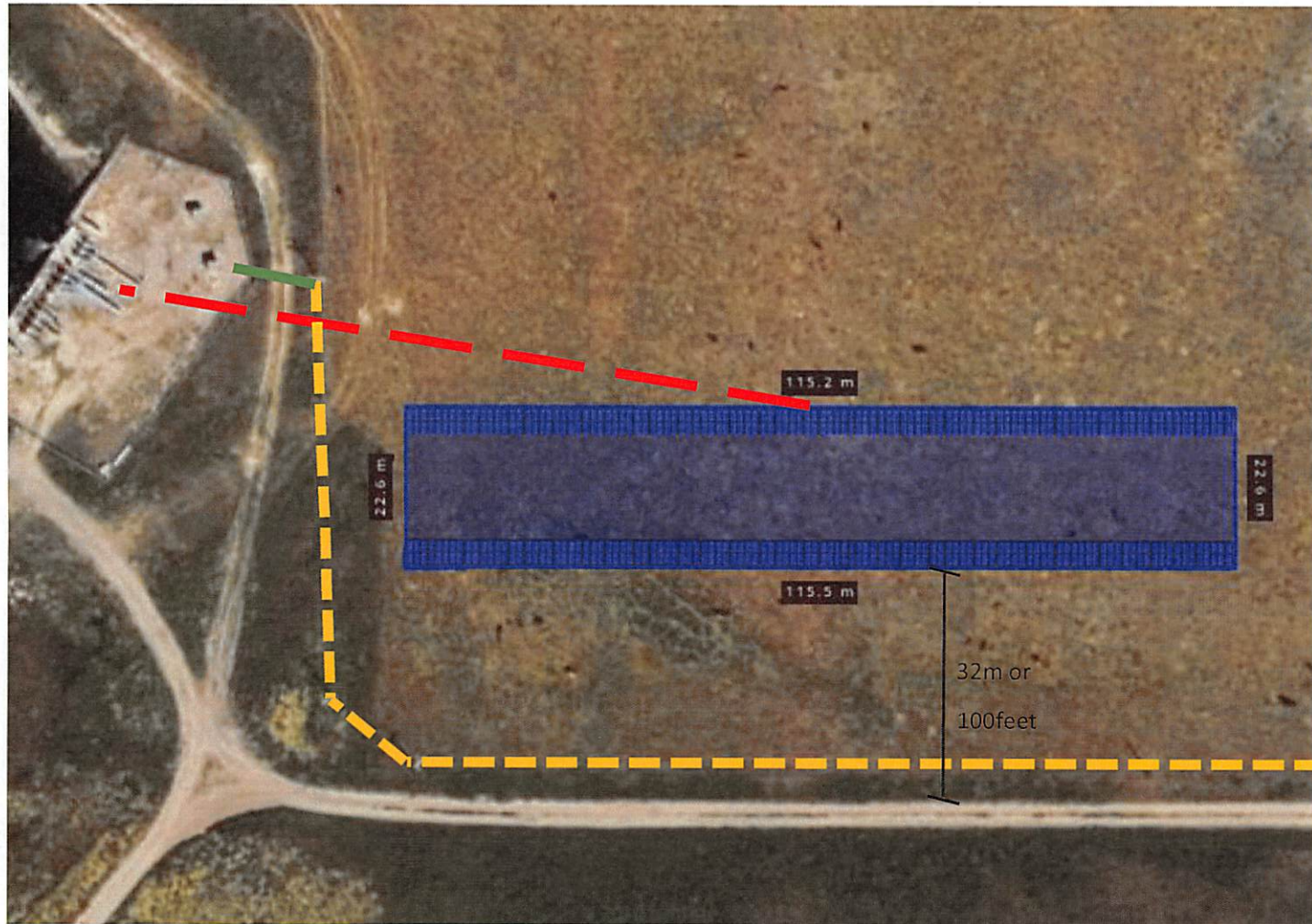
Roemmele Farms

- What is the primary purpose of the proposed development (ie: collection, inversion, storage, distribution of solar energy for electricity generation);
 - The primary purpose of the proposed solar array is to produce electricity to power the irrigation pumps during operating season. This to help offset power consumption using environmentally sustainable technologies.
- Quantity and size of solar panels (height and width);
 - 448 - Canadian Solar CS6U-330P modules, size 1960mm x 992mm
- Total energy being generated by project;
 - 147.84kW DC and 80kW AC power. Projected annual production of 223,000kWh.
- Indicate all structures that will be erected or constructed in relation to the project;
 - No new buildings will be constructed there will be foundations and PV ground mount racking. Engineer seal will be obtained for the racking.
- Land area for proposed development;
 - Solar array will require 2550sqm of land
- Indicate how power will be fed into grid (approval/ confirmation from AESO or ALTALink that you will be able to tie into grid);
 - A Fortis interconnection agreement indicating AUC compliance and ability to tie into grid will be obtained prior to construction. Power flow into the grid will be accomplished by installation of a bi-directional meter to allow electricity to safely flow bi-directionally to the site. As well the inverters are equipped with anti-islanding to automatically shutdown in the event of power loss from the grid. This is to ensure lineman can work safely without power back-feeding from the solar array.
- Indicate how the facility will be operated;
 - The operation of the solar array is achieved via the Huawei sun2000 30kTL inverters and Huawei sun 2000 smart logger. The capabilities of both the inverter and the data manager are attached for reference. If there is ever an error or fault it will automatically be logged in the smart logger and the inverter has capability to shutdown the entire system if required.
- Describe the details of the proposed solar structures (ie: freestanding, materials, anti-reflective);
 - The solar array will be a freestanding assembly. The foundations will consist of precast concrete blocks which are 2.5' X 2.5' X 5'. The racking system will be placed on the concrete foundations with the solar panels being mounted on the racking assembly. The max height of the assembly will be 3378mm or 11.1ft.
- Number of employees that will be onsite during construction;
 - The construction team will have as many as 8 individuals on site at any given time.
- What standards will be used to address aesthetics and/or minimize environmental impacts;
 - To ensure the project is aesthetically pleasing the contractor will ensure that the solar panels are placed in straight rows. If necessary minor grading will be completed to ensure




the adjacent tables of solar panels line up. All above ground cable to be neatly concealed in racking system and all Cabling from solar system to pump site will be buried.

- What standard will be used to address the impact on any wildlife in the area;
 - Proper cable management will be used to reduce the risk of wildlife being able to access live wires. Also the foundations being used will result in the bottom of the lowest panel to be 1381mm or 4.5ft from grade which reduces the risk of smaller animals from accessing the live wires.
- Anticipated years of operational life;
 - The solar panels have a 25year power warranty. It is anticipated that the system operates for 25-30years.
- A plan outlining how the site(s) will be decommissioned and reclaimed, prior to development;
 - Once the project has reached its lifespan the solar modules, aluminum racking, and concrete foundations will be reused or recycled as required.
- Perimeter fencing details (ie: Chain link 6 ft. tall with additional 2 ft. slant barbed wire);
 - 4 foot high 2 wire electric barb wire fencing will be installed around the perimeter of the solar array
- Proposed signage to be posted;
 - Warning labels will be posted to ensure compliance with current electrical code.
- Haul routes to and from the proposed locations (for initial setup of equipment, structures, etc.);
 - See attached map showing the haul route.
- A description of all potential impacts on public safety and health;
 - This project is very remote and as such poses very little risk to the public. Possible concerns would include vandals breaking into property and getting electrocuted if wiring is tampered with.
- Name and brief history of Company undertaking project; and
 - The company undertaking the project will be Western Solar. They have done numerous large ground mount projects in Southern Alberta including one in the MD of Willow Creek namely, the 83kW ground mount system installed at Market Place Commodities.
- Provide any detailed information that you feel may assist in making the decision.

Roemmele Farms- Site Plan



Legend

-  Proposed Underground Electrical and Communications Cable for Solar Array
-  Existing Overhead Power Lines
-  Existing Underground Power Lines



 **CanadianSolar**



String Inverter (SUN2000-33/36/40KTL-US)



Smart

- 4 MPPTs for versatile adaptations to different layouts
- 8 strings intelligent monitoring and fast trouble-shooting
- Power Line Communication (PLC) supported
- Smart String I-V Diagnosis supported

Safe

- DC AFCI compliant to UL 1699B
- DC disconnect integrated, safe and convenient for maintenance
- Category surge arresters for both DC and AC
- Ground fault protection
- Residual Current Detection (RCD) protection

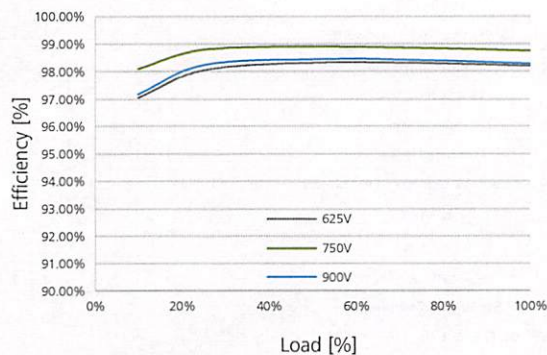
Efficient

- Max. efficiency 98.9%, CEC. efficiency 98.5%

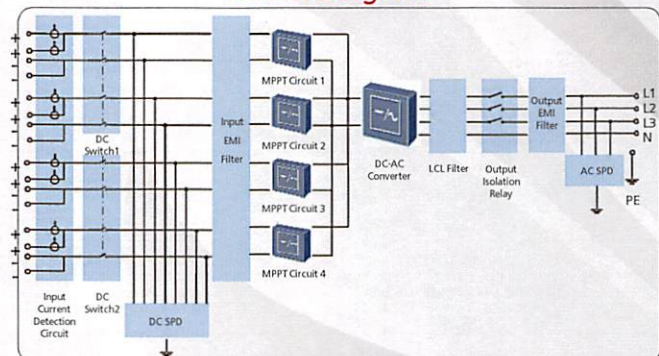
Reliable

- Natural cooling technology
- Protection rating of NEMA 4X

Efficiency Curve



Circuit Diagram



SUN2000-33/36/40KTL-US

Always Available for Highest Yields



www.huawei.com/solar
US 20161020

String Inverter (SUN2000-33/36/40KTL-US)



Technical Specifications	SUN2000-33KTL-US	SUN2000-36KTL-US	SUN2000-40KTL-US
Efficiency			
Max. Efficiency	98.9%	98.9%	98.9%
CEC. Efficiency	98.5%	98.5%	98.5%
Input			
Max. Input Voltage	1,000 V	1,000 V	1,000 V
Max. Current per MPPT	22 A	22 A	22 A
Max. Short Circuit Current per MPPT	30 A	30 A	30 A
Min. Start Input Voltage	250 V	250 V	250 V
Full Power MPPT Voltage Range	460 V – 900 V	490 V – 880 V	530 V – 850 V
MPPT Operating Voltage Range	200 V - 1000 V	200 V - 1000 V	200 V - 1000 V
Rated Input Voltage	720 V	720 V	720 V
Max. Number of Inputs	8	8	8
Number of MPP Trackers	4	4	4
Output			
Rated AC Active Power	33,300 W	36,000 W	40,000 W
Max. AC Apparent Power	36,600 VA	40,000 VA	44,000 VA
Max. AC Active Power (cosφ=1)	36,600 W	40,000 W	44,000 W
Rated Output Voltage	277V / 480V, 3W+PE / 3W+N+PE	277V / 480V, 3W+PE / 3W+N+PE	277V / 480V, 3W+PE / 3W+N+PE
Rated Output Current	40.1 A	43.4 A	48.2 A
Rated AC Grid Frequency	60 Hz	60 Hz	60 Hz
Max. Output Current	44.1 A	48.2 A	53 A
Adjustable Power Factor	0.8 LG ... 0.8 LD	0.8 LG ... 0.8 LD	0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion	< 3%	< 3%	< 3%
Protection			
Input-side Disconnection Device	Yes		
Anti-Islanding Protection	Yes		
DC Reverse-Polarity Protection	Yes		
PV-array String Fault Monitoring	Yes		
DC Surge Arrester	Category C		
AC Surge Arrester	Category C		
Insulation Monitoring	Yes		
Residual Current Detection	Yes		
Communication			
Display	LED Indicators		
USB / Bluetooth +APP	Yes		
RS485	Yes		
PLC	Yes		
General			
Dimensions (W×H×D)	36.6 x 21.7 x 10.2 inches (930 × 550 × 260 mm)		
Weight	121 lb. (55 kg)		
Operation Temperature Range	-13°F ~ 140°F (-25 °C ~ 60 °C)		
Cooling	Natural Convection		
Max. Operating Altitude Without Derating	16,404ft. (5,000m)		
Relative Humidity	0 ~ 100%		
DC Connector	Amphenol Helios H4		
AC Connector	Waterproof PG Terminal + OT Connector		
Protection Rating	NEMA 4X		
Internal Consumption at Night	< 1 W		
Topology	Transformerless		
Standards Compliance			
Safety /EMC	UL 1741, UL 1699B, UL 1998, CSA C22.2 #107.1-01, FCC Part 15		
Grid Code	IEEE 1547, IEEE 1547.1		

Always Available for Highest Yields



www.huawei.com/solar
US 20161020



Smart

- MODBUS-TCP for connections to Huawei NetEco
- IEC60870-5-104 for connections to third-party monitoring systems
- USB and embedded web for data reading and software upgrade
- Automatically detecting equipment and assigning RS485 addresses
- Remote control of active & reactive power

Simple

- Up to 80 inverters feeding into one Smart Logger
- Up to 30 devices per RS485 bus
- Easy to install on walls, tabletops and rails mounting

Stable

- Max. reliable communication range of 1000m
- Remote configuration, automatic set-up of RS485 addresses

Technical Specifications	Smart Logger
	Device Management
Max. Number of Devices	80
Communication Interface	3 x RS485
Max. Communication Range	1000 m (3,280 ft)
	Display
LCD	3.5 inch Graphic LCD
LED	3 LEDs
Web	Embedded Web
	General Data
Power Supply	100 V ~ 240 VAC, 50 Hz / 60 Hz
Power Consumption	Typical: 3 W, Maximum: 7 W
Memory	32 MB flash memory, expanded to 16 GB with optional SD card
Language	English, Chinese, German, Italian, Japanese, French
Dimensions (W/H/D)	225 x 140 x 50 mm (8.9 x 5.5 x 2.0 inch)
Operating Temperature Range	-20 °C to +60 °C (-4 °F to +140 °F)
Relative Humidity (Non-condensing)	5 - 95%
Degree of Protection	IP20
Installation Option	Wall mounting, Tabletop, Rail mounting
Safety / EMC	EN 55022:2010, CISPR 22:2008, EN 55024:2010, CISPR 24:2010, AS/NZS CISPR22, IEC/EN 61000-3, IEC/EN 61000-6, IEC/EN 60960-1
	Interface
Ethernet	10 / 100 M, Modbus - TCP, IEC60870-5-104
RS485	Modbus - RTU
USB	Yes
Number of Digital Inputs	4
Number of Analog Inputs	2
Number of Relays	3





Smart

- Easy data accesses on mobile devices
- Proactive reports of yields and alarms

Simple

- One-click installation on PC
- Fault alarms via SMS and E-mail

Stable

- Hierarchical management
- Up to 25 years data storage with CSV files

Network Structure

